RURAL DEVELOPMENT

Dr. Batani Raghavendra Rao
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CHAPTER 1

DETERMINING THE ROLE AND OBJECTIVE OF RURAL DEVELOPMENT

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Abstract:

A rural development plan is a strategy for improving the economic and social wellbeing of rural communities. The problem why the study is conducted is to find out the significance and information about the rural development. The purpose of the study is to determine the role and objective of rural development. The outcome of the study provides rural development role and significance and analyses of the development of the rural areas. In future, the study of the rural development provides the growth for the rural area.

Keywords:

Agricultural Economics, Rural Development, Rural Area, Rural Economics, Sustainable Rural.

INTRODUCTION

Rural development refers to the method of enhancing the standard of living and financial security of residents in rural communities, which are frequently secluded and sparsely populated. Agriculture and forestry are two land-intensive natural commodities that have historically been the focus of rural development. However, the nature of rural regions has altered as a result of changes in global industrial networks and rising urbanization. Resource exploitation and agriculture are increasingly being supplanted by rural tourism, specialist manufacturing, and leisure. Instead of just encouraging agricultural or resource-based enterprises, rural towns now need to approach progress from a wider viewpoint, which has increased attention on a variety of development goals

Approaches to development

Local or local authorities, regional agencies, NGOs, national governments, or international development organizations have implemented top-down strategies for rural development. However, a crucial "organization gap" disconnect between national organizations and rural communities that was highlighted in the late 1960s resulted in a strong emphasis on community involvement in rural policy initiatives. This was frequently accomplished through political decentralization policies in developing nations, which were particularly popular in African nations, or through policies that transferred the authority of cultural decision-making and indeed the election of legislators to local governments from centralized governments. As an outcome, local communities can also initiate endogenous development-related projects

Scope of Rural Development

The phrase "rural development" focuses on the steps taken to develop rural regions and boost their economies. However, there are just a few sectors that require fresh efforts and more concentrated attention:

1. Education
2. Health Promotion and Sanitation
3. empowerment of women
4. Infrastructure development (electrical, irrigation, etc.)
5. Facilities for agricultural research and extension
6. The accessibility of credit
7. Workplace possibilities

Importance of Rural development

Rural development focuses on enhancing the standard of living and financial security of residents in rural regions, which are frequently remote and sparsely populated. Traditionally, the utilization of land-intensive mineral wealth like agriculture and forestry has been the main focus of rural area development. However, as a result of urbanization and shifts in global manufacturing networks, rural regions have altered. Tourism, specialist manufacturing, and leisure have progressively displaced resource extraction and agriculture as the main economic drivers. Instead of just supporting agricultural or resource-based enterprises, a wider variety of development goals are now being prioritized since rural communities must approach development from a wider viewpoint. Education, business, infrastructure, and public programmed are essential for the development of rural communities. Rural regions are very different from era are several unique rural development strategies used globally. The term "rural development" is quite wide. In essence, it concentrates on initiatives for the ecotone another, in contrast to metropolitan areas, which have numerous commonalities. As a result, thionic growth of regions outside of the dominant metropolitan economy[1].

One of the most crucial elements in the expansion of the Indian economy is the strengthening of the rural sector. A substantial portion of the Indian income is centered on agriculture. In India, the agricultural sector contributes to around one-fifth of our GDP. To encourage the expansion of agriculture, the Indian government has established a variety of projects for rural development in India. The Department of Rural Development is the leading organization for developing policies, rules, and laws again for improvement of the rural sector of India. Agriculture, crafts, fisheries, chicken, and dairy products make up the majority of rural enterprises and economies.

Regarding its emphasis, techniques, strategies, and programmed, rural India's development has seen a number of changes throughout the years. These developments have led to a fresh perspective and understanding of rural development. Rural development can only evolve into something deeper and more meaningful when its clients are involved. Rural development is predicated on people's engagement, just as implementation is the litmus test of planning. From a methodological and philosophical perspective, one of the most important requirements for a successful growth process is the participation of the people. Different rural communities should be included in the plans in order to make them participatory, according to those in charge of development planning and administration[2].

Today, around 75% of India's population (or the whole nation) resides in rural areas. Data from the Census Bureau show that 68.84% of people reside in rural regions. These regions have traditionally grown economically far more slowly than the rest of the country. Agriculture continues to be a major source of income for rural communities. The livelihood of more than half of Indians comes from agriculture. Therefore, agriculture's expansion will contribute to the betterment of rural regions and people. Rural regions are where the great bulk of poor people live. As a consequently, they are unable to obtain basic requirements like food, medical attention, sanitization, etc.

Rural disparities in India are a cause of the rise of rural dissatisfaction, polarisation, and unrest. Nearly half all Indonesian population, comprising four out of every five residents who are below the poverty line, lives in rural regions. The majority of India's rural areas are characterized by acute poverty. Rural populations also typically have fewer access to important services like healthcare, education, and other necessities. Human rights violations are frequently seen in the cultivation and distribution of agricultural goods including coffee, tea, bananas, and palm oil, in addition to agricultural production and distribution[3], [4].

The planet's health receives insufficient protection under the existing paradigm of rural development. Rural communities frequently have issues with the depletion, deterioration, and contamination of land and water. Climate change is made worse by the ongoing loss of wilderness and forests, which also raises the risk of zoonotic. Agriculture and rural economy are suffering increasing negative consequences as an outcome of climate change, creating a vicious cycle. The rural economy of India is a crucial facet of the national economy. By offering soul and wage employment programmed, providing drinking water, power generation, highway interconnection, health, housing, and educational facilities to rural dwellers, strengthening Panchayats, and strengthening community infrastructure, rural development aims to improve the quality of life for rural residents. Rural development is crucial for a country's overall economic development as well as for the majority of its residents who live in rural areas. The development of rural areas is becoming a more essential process than it has been in the past as the nation changes.

Literature Review

Laura Tolnov Rudolph,[5] et al. explained renewable energy for sustainable rural development: synergies and mismatches which Energy transformation is widely seen as a viable possibility for rural economic development. This option is linked to the placement and (co-)ownership of decentralized (small-scale) renewable energy infrastructure. The underlying productive relationship, on the other hand, has been assumed rather than theoretically and practically nurtured. As a result, although renewable energy-based agricultural production has been identified as a desirable byproduct of energy transitions, its promise has generally gone unrealized. The purpose of this study is to shed light on the confusing interaction between renewables and rural development in the context of current energy transition trajectories. In doing so, we first investigate the various ways in which renewable energy can contribute to rural development, as well as how the synergetic conflation of renewable energy and rural development has played out in Denmark and Scotland, two countries that have pioneered the use of renewable energy in rural areas. Second, we draw on our respective experiences to critically discuss policy misalignments that impede a more efficient contribution of renewable energy to rural development, and sketch out some ideas about the importance of including rural issues and

rural communities in the discussion if the interconnections between energy transition and rural development are to be taken seriously.

Scoones, Ian [6] explained livelihoods perspectives and rural development which In the last decade, livelihood views have become essential to rural development thought and practice. But where do such viewpoints originate from, what are their intellectual underpinnings, and what forces affected how they have emerged? This study provides a historical overview of significant periods in rural livelihoods discussions, outlining the conflicts, ambiguities, and problems of such methods. A number of key difficulties have been highlighted, all of which revolve on the need to incorporate more extensive analysis into the heart of livelihood views. This will strengthen livelihood views' ability to address significant gaps in current talks, such as concerns of knowledge, politics, size, and dynamics.

According to the Philip Phillipson,[7] et al. expertise in rural development which Understandings of socially dispersed expertise as critical to living, understanding, and acting in the world are becoming more prevalent in development narratives, often referring to knowledge exchange across multi-stakeholder partnerships. This drive towards expertise democratisation challenges science's ideological claim to be the exclusive source of objective knowledge, proof, and discovery upon which informed judgements and technological progress should be founded. But, if that assertion is rejected, what are the ramifications for how stakeholders learn, organise, and transfer information and skills, and solve problems? How, however, do science and expertise intersect in economic narratives and practises? Authors examine the shifting interaction between scientific, professional, and non-professional competence in rural development to answer these concerns. To begin, we examine the evolution of rural development and knowledge generation models over the past decades and introduce the concept of vernacular expertise, which is the highly skilled that people have and develop that is place-based but crucially nourished by outside sources and agents and which underpins neo-endogenous development models. Second, we unpack the composition of vernacular expertise as a merging of field/place generated and site focused knowledge, and consider how it can be better recognised and enhanced in development processes and policy agendas by drawing empirical evidence on qualitative research with rural advisory experts who support grower decision making.

Kusio, Tomasz And Fiore Mariantonietta [8]stated the stakeholders' sector matters in rural development which In the age of COVID, economic recovery looks to be a must, and rural regions may play an important part in this framework. The issue of population dispersion and low density, as well as the flight of rural residents to larger metropolitan areas, have all had a negative impact on rural development. Rural isolation becomes a higher order product, providing a better level of protection in a pandemic scenario for people seeking sanctuary from city crowds. Rural regions supply food, natural settings, and resources that support vocations, development, and wealth patterns, as well as cultural heritage preservation. As a result, rural areas are important for a variety of reasons, and it is critical to concentrate on the topic of rural development, particularly since a lack of rural development prevents dialogue about development on a regional and/or national scale. This study explores the influence of stakeholders on rural development, taking into account the expanding involvement of stakeholders as well as the distinctiveness of the varied goals sought by these organisations. Because there are several stakeholder groups, attention was drawn to them in a sectoral manner, classifying them as corporate, sciences, governmental organisations, and society. Where there was a need to differentiate between these sectors' categories of stakeholders in more depth, such

identification occurred, for example, in respect to social leaders. The study of the questionnaire survey findings conducted in 2020 sought to achieve the paper's stated goals. The CAWI approach was used to conduct an online survey in southern Poland among persons from all stakeholder groups. The findings of the inquiry show the importance of business in the development of rural regions, with the ability to provide added value and impact the rise of entity potential.

Lal, Tarsem [9] measuring impact of financial inclusion on rural development through cooperatives which The goal of this article is to assess the influence of banking services on rural development through cooperative. Design/methodology/approach: Purposive sampling was used to obtain primary data from 540 beneficiaries of cooperative banks in three northern Indian states, namely J&K, Himachal Pradesh, and Punjab, from January to June 2016. For scale purification and data analysis, exploratory factor analysis, confirmatory factor, ANOVA, t-test, and structural equation modelling were utilised. The study's results demonstrated that financial inclusion through cooperatives has a direct and substantial influence on rural development. Furthermore, the findings support the notion that financial inclusion is an inclusive growth strategy; however, inclusive growth is a subset of a larger set of inclusive development, which means that the benefit must reach all, particularly women and children, minority groups, the extremely poor, and those pushed below the poverty line by natural and man-made disasters. Research limitations/implications: The study has several unavoidable limitations. First, due to time and resource restrictions, the study's in-depth examination is limited to three northern Indian states exclusively. Second, the research is limited to the perceptions of financial inclusion beneficiaries, which might be expanded in the future to include the perceptions of other stakeholders such as SHGs, banking correspondents, and so on. Third, the potential of subjective interpretation cannot be ruled out in certain instances. Originality/value: The study contributes to the literature on financial inclusion in relation to sustainable rural development and, to some degree, fills a research vacuum by examining the influence of financial intermediation on rural development via cooperatives.

Bjärstig, Therese and Sandström, Camilla[10]discussed the public-private partnerships in a swedish rural which In the European setting, public-private partnerships (PPPs) have become a prominent method for controlling rural development. PPPs are often promoted as key solutions for boosting the efficacy (problem-solving capability) and legitimacy (participation and responsibility) of sustainable rural government. In Sweden, where PPPs have previously played a minor role, they are currently gaining traction as a model for the administration and natural resources management in rural regions as a result of EU cohesion policy. Previous study indicates that the state remains critical in overseeing the process of administration via partnerships, particularly in rural settings as compared to urban settings, where the state continues to have an active role in starting, constructing, funding, and regulating partnerships. Is this an example of something like the state attempting to balance the rising influence of the private sector, or the inverse - that is, an effort to eliminate social exclusion and promote participation by encouraging private players' involvement in local development processes? Our research looks at the state's important role in these collaborations. We concentrate on authorities in charge of resource management and rural development, and we analyse the authorities' enabling role in rural regions with a weak or scattered private sector. Empirical data is gathered via group interviews during a workshop attended by relevant officials from the government. Highlight a number of possible obstacles connected with PPPs in a rural environment, and in

light of this, we define how authorities participate in various forms of contractual relationships, as well as their ability to enable these partnerships, in order to improve sustainable rural development.

DISCUSSION

Agricultural economics and rural economics

Agriculture economics has traditionally focused on the economics of agriculture as a sector. The farm is the fundamental unit of analysis. The key subjects of examination include farm production, agricultural commodity marketing and food demand, the performance of product and factor markets, the links between agriculture and other sectors of the economy and indeed the rest of the world, resource sustainability, and agricultural and food policy.

Rural economics and the formulation of rural policies to promote rural development are larger subjects than agricultural economics, having a geographical rather than a sectorial definition. The home is the basic unit of study, with farming being a typical subset of economic activity. Rural economics applications include resource allocation by households and their income strategies, the emergence and performance of agrarian institutions, income levels attained by specific categories of citizens, poverty and inequality, income and food security, the satisfaction of basic needs (particularly access to public goods and services such as health and education), intergenerational equity, and the broad characterization of rural economies. Because the causes of wellbeing are so diverse in rural economics, it is critical to concentrate on the variety of rural communities that occupy a certain location.

Who produces in agriculture important for efficiency and welfare in rural development, such as smallholder's vs big commercial farms It also affects where agricultural output takes occur, for example, in better-endowed versus marginal regions. What non-farm sources of income exist in certain locations, and which specific types of families are able to engage in them, is significant for determining family incomes?The effectiveness of rural institutions and their capacity to cooperate in the provision of public goods and the appropriation of common pool resources is explained by how households aggregate in communities and the quantity of social capital they contain. And the size of the local links between farm and nonfarm activities, especially the multiplier effects produced by farm income spending, important for the establishment of nonfarm incomes that complement farm family incomes and offer job possibilities for rural nonfarm families.

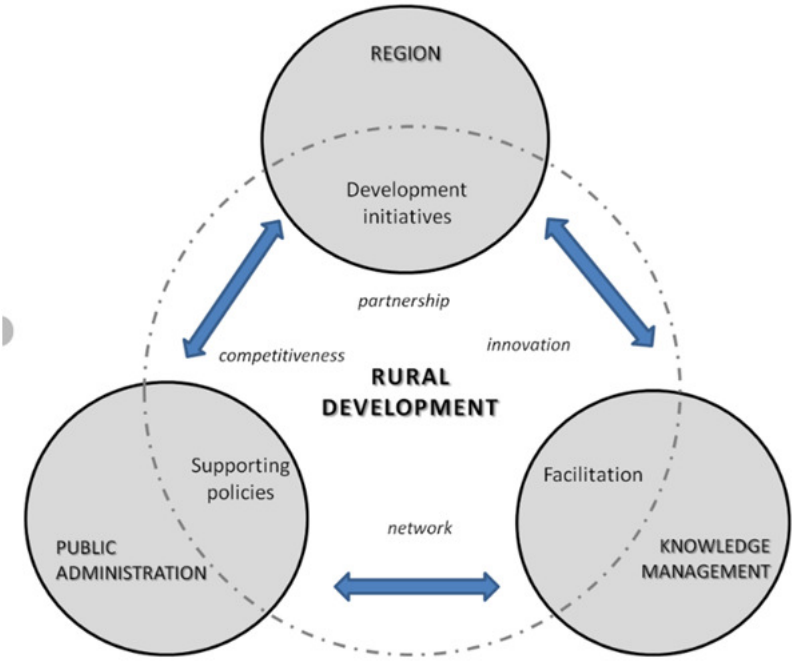

Figure 1. Represents the rural development processes.

Despite their relevance, rural economists are an uncommon species in the economic profession when compared to agrarian economists. As a consequence, rural society assessments have been performed more commonly by sociologists, anthropologists, and geographers than by rural economics, and by extension agents rather than academic faculties. Despite the many insights gained from these research, the paucity of rural economists presents two significant gaps. The first is a scarcity of strong economic theories that explain the drivers of behavior in families and communities, as well as the logic of agricultural institutions. This is counterproductive to performing rigorous empirical research.

The second issue is a lack of policy intent in the study, since these other humanities are more engaged in positive rather than normative analyses. Systematic primary data, especially long series panel data required to assess multiple rounds of reaction to change while controlling for several non-observables, have also been sparse. Interdisciplinary approaches using rapid and participatory rural appraisal methods are hugely potent in revealing actors' perceptions and identifying new hypotheses, but they are a poor basis for economic policy formulation due to a lack of representatively and quantification. As a consequence, rural policy has far too frequently been predicated on a misunderstanding of the material and behavioral drivers of family, community, and organizational responses. Heroic debates in peasant anthropology, for example, between formalists and substantivizes have now been primarily founded on misreading of the structural environment within which families exercise their choices. The enormously complicated trade-offs between rural policy's multifaceted aims are still inadequately evaluated. And prescriptions for rural development have all too often accompanied simplistic bandwagon ideas, where the presumed silver bullet for success failed to recognise the heterogeneity of households and communities, as well as the complexities of behavioural determinants, resulting in waves of enthusiasm and disillusionment.

Agricultural policy that encourages investment and productivity improvements is an essential, though not sufficient, condition for rural development since agriculture remains a significant source of dynamism for rural regions, even if the sector directly contributes only a tiny proportion of regional revenue. In most LDCs (less developed countries), agricultural policy, whether implemented at the macro level through the exchange rate and intersectoral terms of trade for agriculture, or at the sectoral level through commodity-specific trade interventions, taxes, and subsidies, has worked against rural development Krueger, Schiff, and Vald6s (1988). By discriminating against agriculture, legislation has created disincentives to invest in agriculture and devalued natural resource protection. As a result, not only has agricultural policy ignored rural policy, but it has often been its biggest adversary, fostering widespread scepticism among rural development advocates about economists' capacity to give effective prescriptions for rural development improvement.

However, significant developments have happened in recent years, with significant improvements in rural economics and the construction of new methods to rural development. From a theoretical standpoint, these changes result from advances in home and community economics, agricultural institution theory, and understanding the value will be determined of regional development. From the standpoint of empiricism, large data bases have enabled the discovery of patterns and the testing of innovative ideas for land reform in ways that were previously impossible. In terms of rural development practice, a current financial, organizational, and political backdrop that evolved predominantly in the 1990s has opened up the possibility to experimenting with fresh methods to rural development, some of which show clear potential. The purpose of this chapter is tobMap these developments, examine their contributions to rural development, and highlight critical gaps that must be remedied.

The less developed countries

Rural underdevelopment is a major factor of overall underdevelopment in LDCs. Rural regions are home to over three-fourths of the world's poor, who survive on less than one dollar per day. Three-quarters of the world's 800 million undernourished people reside in rural regions. Despite rising urbanization, the bulk of the world's impoverished and undernourished will stay in rural regions for the foreseeable future. And poverty is generally considerably deeper in rural regions. In 1994, for example, the poverty headcount ratio in 19 Latin American nations with data was 55 percent in the rural areas compared to 34 percent in the urban sector.

Furthermore, the rural sector had a 33 percent prevalence of severe poverty compared to just a 12 percent incidence as in urban sector. Because of typical governmental underinvestment in rural regions, along with greater delivery costs, fundamental demands for facilities such as health, education, drinkable water, and sanitation are also lower in rural areas than in metropolitan areas. This persistent poverty in rural regions has often resulted in reaction against the economic models advocated by national administrations. Rural violence has often been a cause of political instability in Peru, Colombia, Antigua, and Mexico, as well as in numerous African countries, with severe macroeconomic consequences.Rural poverty may also have major negative externalities on the urban population of a nation. Rapid migratory movements drive out urban inhabitants in non-farm labour markets, displacing rural poverty to urban slums and increasing urban welfare expenditures.

And environmental abuse connected with rural poverty pressures adds to national and global externalities such as siltation, depletion of subsurface water sources, desertification,

deforestation, biodiversity loss, and climate change. Smallholders are an important source of agricultural supplies in many nations.In this scenario, the issue of rural development is mixed up with the problem of agricultural development. This is especially true in Sub-Saharan Africa, where smallholders farm the majority of the land. With the population forecast to quadruple by 2025 and many staples having limited tradability, food security is jeopardised. To meet this problem, it is critical to increase rural families' production and efficiency in resource usage, as well as their abilities to safeguard the environment. In other countries, particularly in Latin America, agriculture remains an important source of revenue for many rural poor households, despite the fact that the national food security problem can be addressed through trade or production in a large sector of commercial farms (making the problem one of agricultural rather than rural policy). In this context, employing rural development interventions to enhance these families' access to productive assets and their productivity of energy use should be a major goal of rural policy.

The more developed countries

Poverty is also more prevalent and severe in rural parts of MDCs (more developed countries) than in urban areas, necessitating rural development measures. Per capita rural earnings in most OECD nations are substantially below national levels, and in many instances are going further. Until 1980, the wage disparity between non-metropolitan and metropolitan counties in the United States was growing, and it has been about steady since then. In 1994, non-metropolitan counties had a per capita income that was 26% lower than metropolitan counties [United States Department of Agriculture, Economic Research Service. Rural regions (non-metropolitan counties) contain 21% of the national population but only 18% of the employment, earn 14% of national revenue, and house 30% of the impoverished [Duncan and Tickamyer (1988). In 1986, the poverty headcount ratio in non-metropolitan counties was 18%, compared to 12% in metropolitan counties. Poverty impacts various social groups differently: 43 percent of all rural blacks, 59 percent of children in rural female-headed homes, and 83 percent of black children in rural female-headed households are poor. Rural communities often lack a middle class because medium-income and better-educated persons have moved to urban areas with more numerous options. Poverty is strongly concentrated by area, resulting in social isolation and a poverty culture comparable to that seen in urban ghettos.

Many rural areas suffer from the following economic disadvantages: (1) low-density settlements and geographical isolation, insinuating poorly funded public sectors and costly provision of basic needs services; (2) a lack of diversification in economic activity, implying high income exposure to sudden displacements of employment; (3) a low-skilled labour force employed in low-wage traditional industries that face increased foreign competition as globalisation progresses; and (4) declining employment. These disadvantages have resulted in greater rates of unemployment, bigger decreases in real wages, worse returns to schooling, and increased difference among rural regions, which is mostly determined by their degree of economic integration with urban areas.

CONCLUSION

Improving the rural population's quality of life. Rural infrastructure needs to be improved. To minimize unemployment by creating job possibilities. To provide clean water, education, energy, and effective communication. These include agricultural development, the establishment of economic and social infrastructure, high pay, as well as housing for the homeless, hamlet planning, public health, functional literacy and education, communication.

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CHAPTER 2

AN OVERVIEW ON NEED OF RURAL DEVELOPMENT

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Abstract:

Rural development is the process of enhancing people's quality of life and economic well-being in rural regions, which are generally remote and sparsely inhabited. Traditionally, rural development has focused on the exploitation of land-intensive natural resources such as agriculture and forestry.

Keywords:

Education, Rural Areas, Rural Development, Smart Village, Village.

INTRODUCTION

The rural population in India needs regular programmed for rural development in areas like farming, education, and health. Thus, it is feasible to bring growth in remote landmasses that will withstand the test of time by using the proper procedures and precautions. Prior to all of this, it is crucial to identify which regions in India are considered rural. It is now simpler to identify the areas that require improvement in all types of economic and over non-economic activity thanks to this concentrated analysis.

Rural Areas

The term "rural" is ambiguous and can signify different things to various individuals, groups, and governments. It might be difficult to define "rural" in a country with diverse topography and shifting demographics. For individuals who are concerned with rural concerns, a specific definition of rustic is crucial. A definition that is both clearly defined and up to date in its interpretation is necessary for both federal and state policymakers, donors, service providers, and researchers. In addition to the apparent definition, there is much more to learn about precisely which regions represent rural India. Students will be able to identify between economic activities taking place in various geographical locations by understanding what it means to be in a rural environment.

According to the Indian Planning Commission (PCI), rural areas are those where there are at least 15,000 Indians living there. Additionally, it might be a region with a 400 person per square kilometer population density. As a result, these places are typically classified as Tier 3 through Tier 6 cities. In addition to the apparent definition, there is much more to learn about precisely which regions represent rural India. Students will be able to identify between economic activities taking place in various geographical locations by understanding what it means to be in a rural environment as defined by the Planning Commission of India (PCI), rural areas are those where

there are at least 15,000 Indians living there. Additionally, it might be a region with a 400 person per square kilometer population density. As a result, these places are typically classified as Tier 3 through Tier 6 cities[1].

Objectives of Rural Development in India

Let's discuss the objectives of rural development now that the term has been clarified. First and foremost, decision-making bodies make sure that a rural area's economy is boosted by beneficial, long-lasting reforms. As a result, committed communities will have a sustained growth pattern that's also probably going to lower poverty rates.

However, the following are the main goals of rural development: to encourage economic growth among rural residents by ensuring their access to sufficient amounts of food, shelter, clothes, education, and jobs. People living in rural locations will indeed be able to obtain equal opportunity for income alternatives if metropolitan areas have the same opportunities as they have.

1. To implement contemporary agricultural methods in rural regions in order to boost production. Therefore, establishing sustainable and economical technology to boost output in a national market is a function of rural development.
2. To make sure India's rural infrastructure is consistently developed. Additionally, this approach has to include all of the nearby rural people. They will thereby acquire the power to influence major economic choices that result in localized financial development.
3. To fill the gap between regional and national governments in order to improve economic communication. Additionally, rural development intends to provide panchayats executive authority to implement the expertly formulated policies

Factors that Affect Rural Development in India

Several variables contribute to India's urban growth. In-depth understanding of information and knowledge growth, on the other hand, would undoubtedly assist students comprehend the components of rural progress. As a consequence, students will be able to identify the characteristics of elements that have direct impact on regional development[2].

Infrastructure

The infrastructure status of a rural region is directly related to its level of development. Infrastructure mostly consists on pucca roads, a continuous supply of energy, and transportation availability. Governing authorities have already been able to alleviate connection challenges in certain locations by utilizing these elements. As a result, the efficiency of agricultural output supplied to mainland markets across India has increased. As a result, the earning opportunities for rural populations grow.

Education

It is apparent that education plays an important part in the overall development of rural communities. To begin with, education exposes one to fresh and inventive ideas for improving one's social situation. Early education of the rural population guarantees that there is no prejudice between urban and rural populations. As a result, individuals have access to a plethora of job options in a variety of areas and businesses.

Healthcare

Healthcare is a key component of India's rural development. The native area is frequently vulnerable to illnesses that might be prevented with appropriate treatment. Furthermore, this immediately helps to their productivity. As a consequence, they would be able to take part in healthy market contests. Proper medical systems also minimize the death rate, therefore assuring a healthy and fulfilling life.

Technology

The influence of technology towards rural development is undeniable. First of all, contemporary production techniques in many industries may actively enhance their rates of production, which enables for a spectacular development in the size of business activities in rural regions. On the other side, the technique decreases irrigation and quality difficulties greatly. As a result, the availability of proper technological tools such as pumps and tractors is a make-or-break issue in rural development.

To guide rural-specific scholarship, policies, and activities, various government bodies have developed thorough and complex definitions of rural. These categories also allow for some flexibility, allowing users to choose between several levels of rurality, for example. In an effort to better meet the requirements of the rural population, organizations providing rural health care will keep adapting their criteria.

LITERATURE REVIEW

According to the Salazar, Pamela S. [3] the professional development needs of rural high school principals which Since the enactment of the No Child Left Behind Act in 2001, there has been a greater emphasis on standards-based school accountability, placing critical attention on the professional development of school leaders and their capacity to address the difficulties of increasing student outcomes. While rural public schools suffer many of the same concerns as metropolitan school districts, rural school administrators have distinct obstacles. Professional growth that meets the special requirements of rural school leaders, on the other hand, may create critical leadership capability that promotes school success. The findings of a research on the professional development needs of rural high school administrators for school improvement are discussed in this article. These results point the way forward for the creation of professional development programmers that will improve the leadership abilities required for principals to manage school change and achieve better levels of student accomplishment.

Alen Nikolić [4] et al. explained needs with agricultural and rural development policies which A broad variety of uncertainties impact rural youth's personal and professional development. Rural youth, particularly rural NEETs, are particularly susceptible and suffer increased risks of labour market, social, and economic isolation. During the 2009-2019 period, this paper aims to examine the determinants of the dynamics of rural NEETs in three post-transitional countries (Bosnia and Herzegovina, North Macedonia, and Serbia) compared to the EU-28 average and to Wales as an example of an established EU member state with over 50% of its population living in rural areas that can serve as a benchmark for effective policy implementation to address the challenges of marginalized youth. Analysis of macroeconomic and socioeconomic determinants, as well as particular employment-related indicators disaggregated by gender and degree of urbanization, reveals the dynamic of rural NEET status and the efficiency/adaptability of regional

programmes. The comparative research reveals inadequacies in post-transitional nations' regional development plans as well as the possibility to apply current European techniques and policies to improve the condition of rural NEETs.

According to the Zhang, Xiaojuan and Zhang, Zhengang [5] in china, the sustainability of rural communities faces several issues. The Chinese government has identified smart village building as a key technique for achieving sustainable rural development. In this work, we describe a smart village as a rural approach to development that fully uses information and communication technology (ICT) solutions to enhance the village's sustainable development on the basis of identifying the features and demands of rural development. We present a theoretical foundation for the smart village system based on general system theory. We examined smart village strategic planning and smart village practice in China using the theoretical framework of the smart village system. According to the study's findings, the creation and establishment of intelligent villages in disadvantaged rural regions is the best option for long-term rural development in China. The Chinese government's involvement in encouraging smart village building has been to promote the strategic subsystem of the smart village system to increase the development of smart rural regions via a unified overarching strategy and relevant supportive policies. The top-down smart village development model that China is now using is dictated by China's political and economic structure, which is following observations were made in the centralization of authority and the dominance of the public economy.

S. J. Desai [6] et al. explained a comparative study of community perceptions regarding the role of roads as a poverty alleviation strategy in rural areas which Apartheid's past in South Africa created various obstacles to the new democratic South Africa, such as poverty, inequality, and insufficient access to essential services. These issues are particularly prominent in rural regions, necessitating rural development initiatives aimed at alleviating poverty and empowering rural populations. Due to insufficient rural road infrastructure, rural residents often experience limited access to financial and social possibilities. According to empirical research, poverty is intimately related to isolation, inaccessibility, and inadequate infrastructure development. As a result, appropriate rural roads must be constructed. The purpose of this research was to evaluate and compare rural populations' perspectives of the function of roads as a poverty alleviation method. The purpose of this research was to investigate the impact of rural roads on the socioeconomic situations of rural communities. Furthermore, the study looked at the effects of poor rural road infrastructure on rural residents' access demands. As a result, the research seeks to investigate problems concerning rural road infrastructure and its influence on poverty reduction. The study was carried out in two rural areas in KwaZulu-Natal: Ntshaseni and Njane. The study used a mixed-methods approach, including both quantitative and qualitative research methodologies. The study's results demonstrated a link between the provision of suitable rural roadways and increased access to essential services. According to the study results, there are socioeconomic inequalities between a community with greater access (Njane community) and a community that is isolated (Ntshasheni community) owing to poor road infrastructure. Furthermore, study results found that deficient road infrastructure is an indicator of the poor's lack of access to fundamental services such as health care and education.

Dangmei, Jianguanglung [7] explained social entrepreneurship and Social Net- Works For Sustainable Rural Development In India which Social entrepreneurship has arisen in recent years as an important tool for social development and economic growth. Institutions have, to some degree, failed to address the socioeconomic challenges and requirements of rural communities.

In this approach, social entrepreneurship provides a new foundation for rural India's socioeconomic growth. It is past time to consider it as an alternate answer to rural people's issues. Until recently, there has been a less comprehensive endeavor to define the range of social entrepreneurship to rural inhabited regions, and a new development strategy is required to explore approaches to support social innovations at both the local and regional levels. As a result, the purpose of this article is to begin filling this vacuum by investigating the ramifications of social enterprises and social networks in enabling more sustainable rural development. This report also stated that social innovation is a separate method to achieving sustainable rural development, and recommendations for assuring the success of social entrepreneurship in India were provided.

Valeria Citto [8] et al. proposed the methodology for the energy need assessment to effectively design and deploy mini-grids for rural electrification explained To effectively deploy a significant number of decentralized energy systems in developing nations, effective approaches and processes for creating off-grid/mini-grid systems must be standardized of Because the energy requirement assessment offers inputs and assumptions for data preparation and mini-grid design, the accuracy of its conclusions has a direct impact on the technical and financial feasibility studies. Thus, the idea of using a validated technique for assessing rural communities' energy needs is targeted at acquiring trustworthy input data for mini-grid construction. This contributes to reducing both financial challenges by mitigating the uncertainties in electricity needs and technical challenges by contributing to appropriately sizing off-grid power generation systems, with the goal of boosting towards a common overall goal of mini-grid optimization methods and tools. As a result, given that target communities' requirements and background circumstances vary, the proposed study offers an inclusive technique that may be tailored on a case-by-case basis. It offers an efficient applied solution to the absence of established instructions from developers or literature, prioritizing data gathering techniques capable of achieving a broad representative sample of the market, with great accuracy in predicting energy consumptions from electricity alternatives.

DISCUSSION

Rural Development in a Historical Perspective

While the problem of rural underdevelopment has persisted, the design of rural policies to address it has evolved significantly over time as the context for development has changed, modifying the opportunities for and limitations on success, and as ideas about growth in general and rural development in particular have evolved. To summarize the evolution of rural development philosophy, we may contrast ideas based on the relative weight they place on economic forces, the role of the state, as well as the role of civil society.Certain equilibrium between market, state, and civic institutions. In what follows, we categories thought schools based on which of those three elements receives the most normative weight. Each school of thinking on economic growth correlates to a perspective (or, at the very least, an inference) on rural policy. Analyses just the most prominent schools of thought that help explain earlier efforts at regional development and will help us describe contemporary endeavors.

Role of the state in rural development

Following World War II's devastation and the development of the challenge of fast growth in the occupied Asian nations, two schools of thought instantly clashed over the responsibilities of the

market as well as the state in catching up. Modernization theory proponents examined the history of successful industrialization in the West and proposed an evolutionary method that would replicate similar accomplishments in the environment of market economies. Economies were to go through a series of phases "normal patterns" of structural change to achieve the structure of advanced economies. For rural policy, this meant encouraging the dissemination of innovations in order to replicate Western economies' technology, institutions, and behavioral patterns.However, relying on markets to catch up faced significant opponents. The recent experience of running war economies through strong state interventions, the success of the Marshall Plan in rebuilding Europe, the powerful role of the state under Cold War tensions, the exceptional talent of the Soviet experience with central planning, the emergence of the Third World movement as an alternative to both market capitalism and state the ownership of the tools of production, and the role of the Bretton Woods institutions. The prevailing paradigm in macroeconomics was concerned with the role of market imperfections in preventing catching up, as well as the role of the state in compensating for these failings. This took the form of proposing collectivization, centrally planned, and delinking from the world market in radical dependence theory. Rural policy mandated collectivization of land and the forcible extraction of an agricultural product for heavy industrial funding (Figure 1).

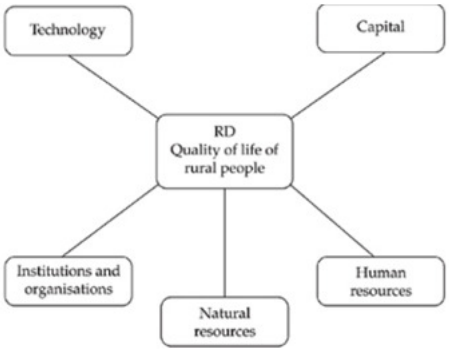

Figure 1: Represent the need for the rural development

The first development decade (1960-70) witnessed tremendous success in encouraging economic growth, not only in East and South East Asia's newly industrialised nations (NICs), but also in several Latin American and African countries. The fundamental lesson for agricultural policy from this time was the need of technical progress in agriculture. This was advocated by neoclassical economic development theories such as Schultz's (1964) "poor but efficient" farmers for whom technological change was the only option for higher incomes, Jorgenson's (1961) dual economy model where full employment implied the need to use technological change in agriculture to keep nominal wages for industry low despite labour transfers, and Hayami and Ruttan's (1985) induced technological innovations where advances in technology were induced by changes in technology. The role of technological change in agriculture was also central to development economics theories: this is captured in dual economy models of Fei and Ranis (1964) and Lele and Mellor (1981), where technological progress in agriculture allows for lower nominal wages for industry despite surplus labour and constant real wages.

While neoclassical economic growth was based on ideal markets, development economics of market imperfections was based on technological transformation. Agriculture has emerged as a dynamic source of development for business. With agricultural technologies that increase yields being essentially public goods, the state was to serve as the primary supplier of these required

technical advancements. Rural policy was heavily influenced by agricultural policy rationale, with the Green Revolution's accomplishments and dissemination among smallholders seen as vital tools for rural development. Land reform, more often of the modernising (i.e., using the threat of expropriation to induce modernization) than redistributive variety), was also used as a policy tool to promote the diffusion of technological progress in agriculture and thus lead to the achievement of industrial policies through cheap food and expanding domestic markets.

Restoring the role of the market

The gradual exhaustion of import-substitution industrialization policies, the eruption of the debt crisis in 1982, the need to implement stabilisation and adjustment policies under IMF and World Bank conditions, ideological shifts against the pervasiveness of government intervention, and critiques of the urban bias in agricultural policy all contributed to a frontal attack on the role of the state in development, dubbed the neo-liberal resurgence. The success of open economy industrialization (OEI) was contrasted with the deadlocks of import-substitution industrialization (ISI), frequently forgetting [Edwards (1993)] that ISI was an essential step towards OEI in allowing entry into activities characterised by economies of scale and learning-by-doing [Rodrik (1996)]. A fresh set of concepts and theories showed the limitations and frequent wrongdoing of government involvement in assuming duties that the market might complete and perverting the market's allocative functions. The state's inability to solve incentive and informational problems [Hayek (1989)], to defeat rational expectation responses of companies committed to policy interventions, and to counter the logic of rent seeking all provided arguments for those calling for a downscaling of the state's role and a restoration of market forces. In agricultural policy, Krueger, Schiff, and Vald6s (1988) calculated the extent of price distortions, while Cavallo and Mundlak (1982) assessed the catastrophic impacts on high - achieving of pricing policies persistently biassed against agriculture.

Stabilization and adjustment measures resulted in a substantial reduction in the role of the state, considerable trade and financial deregulation, and adoption of the Washington Consensus's additional recommendations.This combination of measures implies, in terms of rural policy, a lessening of the urban bias in price formation, as well as the elimination of a number of explicit or implicit subsidies and public services to farmers and rural regions. Agricultural commodities programmes, as well as area and regional development programmes, have been frequently criticised in the United States as wasteful and regressive. Parastatals that have served agriculture, sometimes at significant societal expense, were closed or privatised in most of the undeveloped nations. Subsidies for loans provided by development banks were withdrawn. From then on, the laws of market competitiveness would decide rural development success or failure. Where the state had previously stifled individual initiative, the new freedoms achieved by rural families, such as the family responsibility system in China and the freeing of the ejido from state regulations in Mexico, might lead to significant one-time improvements in production. However, in most locations, market incentives were matched by extensive agricultural de-institutionalization, making it hard for smallholders to adjust to the new competitive standards. This era was therefore one of rural development regression, but it was also one of laying the stage for new approaches to rural development in terms of economic incentives and new responsibilities for civil society.

New Context for Rural Development

Following the general failures of state-led initiatives such as community development, redistributive land reform, and integrated rural development, as well as the retrogression of rural areas as a result of adjustment policies and descaling of government action, the question for rural policy is whether there are new perspectives for rural development in the context of the recovery of growth after years of debt crisis and structural adjustment.The answer seems to be a circumspect yes. To argue this, we first outline the backdrop for poverty alleviation that evolved in the 1990s in this section. Then we'll go through what recent theoretical developments have to offer as tools for better understanding rural families, communities, organizations, and growth. This, in turn, will help us to identify rural economic development that are compatible with this new environment and recent theoretical breakthroughs, as opposed to the previous attempts we have examined.

Role of the market

Globalization

The most notable shift in the role of something like the market for rural development in the 1990s was the quick progress towards competitive globally. Trade and international capital flows have been greatly liberalized as a result of the advancement of GATT and various regional agreements, as well as the adoption of adjustment programmers. This means a homogeneity of the rules of the game for rural development across families and communities, with the requirement to attain competitiveness for smallholders to thrive in markets dominated by international competition.This, in turn, implies the need for these smallholders to modernize and diversify their cropping patterns, identify market niches, particularly for non-traditional exports (organic foods and coffee, exotic forest products, quality and social origin labelling of products), and strategize to access international markets (for example, through contract farming).

The history of the design of rural development projects funded by IFAD (the International Fund for Agricultural Development) demonstrates the underlying imperative of attaining competitiveness. This Report Of the international rural development bank was established 20 years ago in the wake of the oil and food crises with the goal of protecting smallholders from market harshness, primarily by assisting them in achieving food security via increasing food self-reliance. This mindset has evolved into the search for market possibilities to sell cash or food crops. The proposed techniques emphasize the production of atypical export commodities and contract farming with agroindustry.The goal is to attain financial stability and, as a result, food security, without necessarily pursuing higher economic self at least within the unique options afforded by food markets and their associated transaction costs[9].

Deregulation in the United States has removed a number of implicit subsidies for rural communities in transportation, telecommunication, and banking. Except for a few commodities such as sugar and milk, the Federal Agricultural Improvement and Reform Act of 1996 separated agricultural income assistance from commodity prices. With these subsidies removed, market forces determine family farms' competitiveness in agricultural output. Smallholders' access to international markets opens up new possibilities while also posing new hurdles for rural development. Economic recovery in nations with low domestic savings is connected with foreign capital inflows, which raise the real exchange rate, undercutting incentives to spend in agriculture. International commodity markets, in which smallholders with limited risk tolerance

are lured, are notoriously volatile and often laden with new kinds of protectionism in importing nations. Due to low quality assets, market failures for credit and insurance, limited access to new technologies and information, and high transaction costs on markets, large segments of smallholders are clearly at a disadvantage in facing the challenges of modernization and competitiveness in comparison to commercial farmers. Globalization harms unskilled labor-intensive companies in more developed nations, which generally relocated to rural regions in search of cheap, unskilled labor before globalization transferred comparative advantage to unskilled workers in less developed countries. With little diversification of industrial job sources in most rural towns, the migration of these enterprises to LDCs may have disastrous consequences for rural populations.

Need for Rural Development

Rural development is critical in the context of India's overall economic growth and development for the following reasons:

1. A large proportion of the population resides in rural regions, and their development and participation are very beneficial to nation-building efforts. Rural India cannot be improved while remaining backward.

2. The rural economy provides drinking water, milk, food, and raw materials to the urban sectors. As a result, the rural sector's backwardness would be a substantial hindrance to the economy's overall advancement.

3. Village improvements in education, health, and cleanliness might assist to prevent many urban issues such as begging, rack picking, and roadside slumming.

4. Agriculture and related activities must be developed in order to provide meaningful employment in rural regions and improve total food production.

5. Rural development may mitigate the negative effects of brain drain and rural-urban mobility.

6. The rural economy must be developed in order to effectively use unused and underutilized resources.

7. In terms of infrastructure supply, rural development should strive to close the gap between rural and urban regions. Outgoing President Abdul Kalam dubbed it PURA.

8. To strengthen the nation's standing in the global arena, economic metrics such as the Human Development Index (HDI), Women Empowerment Index (WEI), Gender Disparity Index (GDI), Physical Quality of Living Index (PQLI), and Gross National Happiness Index (GNHI) should be prioritized.

Importance of rural development

1. Rural development is vital not just for the rural majority of the people, but also for the nation's total economic growth. Rural development is seen as more important in the country today than it was in the past throughout the nation's history. It is a strategy intended at generating better productivity, more socioeconomic equality and aspiration, and security in social and economic growth.
2. The major purpose is to reduce famine, which affects around 70% of the local population, and to provide enough and healthy food.
3. The secondary responsibility is to guarantee that clothes and footwear are accessible, that the surroundings and home are clean, because medical treatment is available, and that leisure possibilities are available[10].

CONCLUSION

Rural regions house a major part of the population, and their growth and contributions are immensely valuable to nation-building efforts. Agriculture and allied activities must be expanded to provide jobs in rural regions and increase total food production. Based on years of experience and detailed know-how, GIZ delivers regionally specific methods to protect the right to food and to turn rural development a generator of economic success. Rural development need both economic progress and broader social reform. Rural people's chances will be improved by more involvement in rural development programmers, decentralization of planning, stronger enforcement of land reforms, and expanded access to financing.

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CHAPTER 3

ANALYSIS OF MAJOR ISSUES OF RURAL DEVELOPMENT IN INDIA

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Abstract:

The obstruction occurred in the phase of rural development is known as issue of rural development. The problem why the study is conducted is to bring out the information about the issues which are related to the rural management. The purpose of the study focuses in the analysis of major issues of rural development in India. The outcome of the study focuses on the major issues and its analysis. In future, the issues have to be solved to signify the rural development.

Keywords:

Developing Nation, Health, Poverty, Rural Development, Supply Chain,

INTRODUCTION

The process of raising the standard of living and economic prosperity of rural residents is known as rural development. However, agricultural productivity and labor participation are the main sources of rural income. Since 88.84% of Indians live in villages, according to the 2011 census, the growth of agricultural India is essential to the country's overall development and its ability to reach its goal of a $5 trillion economy. However, a third of rural Indians continue to live in poverty, which is now the biggest obstacle to the economy's overall growth

Poverty Alleviation

With the bulk of the impoverished in India living in rural regions, poverty continues to be primarily a rural issue. Lack of sanitary conditions, health problems, inadequate nutrition, and inadequate education are all due to poverty. The World Bank's most recent assessment predicts that COVID-19 would cause India's poverty rate to rise by 12%. Widespread poverty is therefore a key problem for rural development.

Development of Healthcare Initiatives

Rural India still has very poor health infrastructure. Healthy living depends on having access to healthcare, yet rural communities frequently confront these barriers. The lives of the country's rural people are still in risk due to poor access to the villages, a lack of health facilities, and a shortage of qualified medical personnel.In order to address health issues in rural India, the Indian government introduced the Ayushmann India Pradhan Mantri Jan Yojana (PM-JAY) in 2018. This programmer is also largest government-funded health insurance programmer in the world. These benefits are available to more than 50 crores of low-income and vulnerable people.

Development of productive resources

The most significant productive resource for rural development in the rural economy is agricultural land, which is also crucial in determining the rural population's means of subsistence and a barrier to the expansion of the rural economy. For better and more reasonable access to healthcare, sanitary facilities at work and at home, and education for all, people should be encouraged to engage in productive non-farm enterprises including food processing, dairy development, organic farming, fisheries, and animal husbandry.

Development of infrastructure

Infrastructure is a nation's backbone, and rural India is no exception. It contributes significantly to the creation of major jobs in addition to playing a crucial part in the growth of infrastructure. For Aatmnirbhar Bharat, adequate infrastructure in the rural areas is urgently needed, including power, irrigation, transportation, village road development, schools, and universities[1], [2].

Development of Human Resource

All other developmental efforts must follow the growth of human resources. All forms of development, including social, economic, technical, cultural, and agricultural ones, are ultimately intended to benefit the populace by raising their level of enjoyment through higher living conditions. The growth of human resources is also closely correlated with the success of government projects and programmes. Due to a shortage of schools and institutions, the literacy rate in rural India is just 68.91%.The backbone of the Indian economy is rural India. In order to turn India to Aatmnirbhar Bharat with the cutting-edge amenities accessible to any developed society, rural development must include human development of many different kinds, including a well-developed mental quality of the rural people. Therefore, the endeavor to turn rural India into "rurban" on the basis of a sustainable and fair model would be crucial to the growth of the Indian economy and help it get closer to its target of $5 trillion in GDP.

Basic Elements of Rural Development

The "real" definition of rural development is thought to consist of at least three fundamental components that are illustrated below:

Basic Necessities of Life:

People require some things in order to exist, because without it would be difficult or impossible. Basic necessities include things like food, clothing, and shelter, reading skills, access to primary healthcare, and the safety of people and their property. All might refer to a situation as "absolute underdevelopment" when any one of or all of are missing or seriously deficient. All economy, whether they are capitalist, communist, or hybrid, have the main obligation to provide for everyone's basic needs. In this view, we may say that economic progress is a prerequisite for rural development, which is an increase in the "quality of life" of rural residents.

Self-Respect

Every person as well as every country aspires to some degree of honor, decency, or self-respect. Lack of growth is indicated by the absence or denial of self-respect.

Freedom

Political, ideological, and economic freedom as well as freedom from social shackles are all examples of freedom. The goal of "progress" cannot be said to have been attained as long as

society is constrained by the subservience of man to nature, knowledge, other men, institutions, and dogmatic beliefs. Any form of servitude is a sign of underdevelopment.

The role of NGOs/non-profits in developing countries

Decentralization policies gave local governments more authority over development challenges, which allowed non-governmental organisations (NGOs), charities, and other international players to have a larger role in how these problems were addressed. For instance, the abolition of statist methods to development led to a massive increase in the amount of NGOs operating in Africa, as well as their assumption of more significant responsibilities. As a result, organisations and NGOs play a significant role in meeting needs in developing nations and are increasingly important in promoting rural development. Many academics contend that NGOs are an inadequate remedy for the decentralization plans' lack of development leadership. Susan Dicklitch, a human rights specialist, cites the colonialism's historical backdrop, organisational restrictions, and government restrictions as obstacles to NGOs' good intentions. "NGOs are rapidly being reduced to service providing and gap-filling tasks as by the receding state," marcel observes, but these supportive roles are not matched by rising political potency. Agriculture and forestry are two land-intensive natural commodities that have historically been the focus of rural development. However, the nature of rural regions has altered as a result of changes in global industrial networks and rising urbanization. Resource exploitation and agriculture are increasingly being supplanted by rural tourism, specialist manufacturing, and leisure. Instead of just encouraging agricultural or resource-based enterprises, rural towns now need to approach growth from a wider viewpoint, which has increased attention on a variety of development goals.

LITERATURE REVIEW

Sudhanshu Singh, [3] et al. explained the sustainable agro-food supply chain practices which The purpose of this research is to determine the variables affecting the adoption of sustainable agribusiness practises in India, as well as to investigate the most pressing challenges of sustainable farmer chains and their management. The study's components were discovered via two sequential stages that included a review of literature and tractor trailer interview with supply chain facilitators and intermediaries (traders, public officials, local mandis or local marketplaces) in the Uttarakhand area of India. Semi-structured interviews were used to gather data from 1100 supply chain organisations (including agri-farmers, partners, and facilitators across the supply chain). Twenty-five components appeared as substantially impacting farmers' adoption of sustainable agricultural methods, branching out of five criteria. Furthermore, limited adoption capacity and a lack of unified sustainable agricultural policy were identified as the key challenges raised by respondents. Identification of variables impacting sustainable agribusiness adoption in Uttarakhand, India, may be a helpful tool for agribusiness regulators (government agencies including the Department of Sustainable Agriculture), intermediaries, and farmers. The investigation of significant topics, with an emphasis on primary assistance needed, adoption barriers, key advantages of sustainable agribusiness operations, and most prevalent sustainable practices, is intended to give a fresh knowledge of sustainable agribusiness-based concerns in India. The purpose of this research is to determine the variables affecting the adoption of sustainable agribusiness practices in India, as well as to investigate the most pressing challenges of healthy agri-supply chains and their management. The study's components were discovered via two sequential stages that included a review of literature and tractor trailer interviews with supply chain facilitators and intermediaries (traders, government officials, local mandis or local marketplaces) in the Uttarakhand area of India. Semi-structured interviews were used to gather

data from 1100 supply chain organisations (including agri-farmers, partners, and facilitators across the supply chain). Twenty-five components appeared as substantially impacting farmers' adoption of sustainable agricultural methods, branching out of five criteria. Furthermore, limited adoption capacity and a lack of unified sustainable agricultural policy were identified as the key challenges raised by respondents. Identification of variables impacting sustainable agribusiness adoption in Uttarakhand, India, may serve as a guiding aid for agribusiness regulators (government agencies including the Department of Rural Development), intermediaries, and farmers (traders, NGOs, etc.). The investigation of significant topics, with an emphasis on primary assistance needed, adoption barriers, key advantages of sustainable agribusiness operations, and most prevalent sustainable practises, is intended to give a fresh knowledge of sustainable agribusiness-based concerns in India.

Pradnya Vishwas Bhoyar, [4] et al. explained India is the world's second most populated country. Rural regions are home to the majority of the people. The agriculture industry employs more over half of the workforce. Nonetheless, this industry accounts for just around 19% of the country's GDP. India is dealing with a slew of developmental difficulties, including poverty, unemployment, sewage, water, education, and health concerns. Societal entrepreneurship, a major element of twenty-first-century society, provides new solutions to such serious social issues. Social companies use principles that are simple to grasp and easy to execute. They recruit local change agents. They grasp possibilities that others pass over. Social Entrepreneurship in Rural India: India is home to 40% of the world's impoverished. According to the Human Development Index, it ranks 130th out of 188 nations (UNDP, 2015). In India, social entrepreneurship began in the 1950s with cooperative, community-owned company concepts such as Amul and Fabindia. Ashoka, a worldwide social entrepreneur support organisation, coined the phrase "social entrepreneur" in 1981. The majority of social companies provide direct employment to underprivileged communities. They often give skill development to disadvantaged communities. The Indian social entrepreneurship ecosystem includes a number of sophisticated intermediaries, including as accelerators, incubators, and consultants. Rural India lags behind in terms of basic amenities such as clean water, toilets, education, and related to healthcare. In India, the female child is similarly marginalised in terms of academic chances, health, and nutrition. Due to the traditional notion of women as family nurturers rather than business leaders, very few women get promoted to top positions. The researchers want to learn how social companies may help farmers, rural craftspeople, and females. The researchers interviewed a couple of entrepreneurs from Symbiosis Institute of Management Studies (SIMSs) EDP, including Mr. Mustafa Harnesswala, Mr ≤ 0.05 Gayakwad, with Ms Prasanna Rajiv Reddy (of Saree Story for helping skilled weavers fleeced by middlemen). They also used secondary sources to research how social businesses may help rural India. The Importance of the Study: A study of real-life social companies that are advancing rural India and women will inspire more entrepreneurs to undertake the task.

Madhuchhanda Singh [5] et al. explained non-vaccine strategies for cholera prevention and control: india's preparedness for the global roadmap which the World Health Organization's worldwide task force on cholera control has issued a global roadmap for cholera prevention and control. We assess the readiness of current government non-vaccine initiatives and cholera preventive and control methods in India. We also discuss the global roadmap's merits and weaknesses in the context of execution. We analysed the strengths and weaknesses of the Government of India's major anti-cholera and ante-diarrhea initiatives under the Integrated Disease Surveillance Program (IDSP), National Rural Health Mission (NRHM), and other

influenza surveillance platforms by reviewing published literature on non-vaccine based techniques for prevention and control of cholera in India. The IDSP has tackled the first goal of the WHO global roadmap, namely readiness for early identification and epidemic control. By concentrating on sanitation, health, nutrition, and clean drinking water, NRHM supplements IDSP initiatives. We determined that stronger case classifications and data validation processes were required. The multi-sectoral approach to cholera prevention and re-occurrence emphasizes identifying hotspots and adopting transmission-dynamics-based measures. We advocate for the creation of comprehensive models that use data sources other than government initiatives to reduce cholera hotspots in India. Due to structural concerns with health systems and health programmes, implementing the third recommended approach in the global roadmap, coordinated technical assistance, resource mobilization, and partnerships at the local and global levels, poses significant obstacles in India. Even in the presence of a solid public health infrastructure, the lack of a national cholera programme may have resulted in a lack of particular emphasis and coordinated efforts for cholera prevention and control in India. A National Taskforce for Cholera Control must create an India-specific "National Cholera Prevention and Response Road Map" with a suitable administrative and budgetary structure for its execution.

According to the Raman[6] Financial inclusion is emerging as the new economic development paradigm. Financial inclusion is crucial in moving poverty out of the nation. Access to finance refers to the provision of financial services to the general public, including both affluent and disadvantaged individuals, under reasonable terms and circumstances. It not only increases the total financial intensity of agriculture, but it also aids in the expansion of rural nonfarm activities, which leads to the growth of the rural economy and the improvement of people's economic conditions. The three key components of financial intermediation are (i) access to the financial market, (ii) access to the credit market, and learning about financial problems. The Reserve Bank of India and the government both play critical roles in fostering financial inclusion for economic development. The government and the RBI have taken numerous initiatives to enhance banking penetration in the country, including nationalization of banks, the construction of RRBs, the introduction of SHGs, and the one-person-one-account approach for accessing the financial market. Accessing credit facilities, lowering interest rates, and implementing a straightforward KYC procedure are important tasks since over 80% of the Indian population lacks life, health, and nonlife insurance coverage. The RBI has also implemented two techniques to raise knowledge and broaden the reach of financial services, which are known as empowered and protection. The purpose of this study is to get access to the Indian experience via descriptive and empirical investigations of accessible statistical data, as well as the role of the RBI in fostering financial inclusion. According to some publications, there seem to be 403 million mobile subscribers in India, of whom 54% have a bank account. In rural India, the average adult population is 39%, compared to 60% in urban India. Himanchal Pradesh is the only state that has achieved complete financial inclusion. The study also discusses other potential, scope, and problems for financial inclusion. The report indicates that financial inclusion has a significant influence in moving poverty out of the nation. In India, the day will come when every Indian will have a bank account and would participate in financial inclusion.

The internal migration has increased significantly in India in recent decades, vastly outpacing foreign migration, although receiving substantially more attention in literature and government policy. Seasonal migration is another increasing topic in India that has gotten the slightest attention till recently. The study's goal is to demonstrate the severity of short-term morbidity and major morbidity among rural and urban internal migrants, as well as how such disease loads have

impacted the health for regular/permanent and temporary/seasonal migrants. This study was created using data from the India Human Development Study (IHDS-II), 2011-2012, to determine the levels of short-term morbidity and people with serious mental among rural and urban migrants, as well as the health status of seasonal migrants. In the IHDS-II, 2011-2012, a total of 3,288 migrants (of whom 1,136 rural migrants and 2,152 urban migrants) were polled about the persistence of various forms of short-term morbidity within the migrant class. Two-sample (rural and urban migrants) "t" test for mean difference with unequal variances with null hypothesis - H0: diff = 0, and alternative hypothesis - Ha: diff 0; Ha: diff > 0 where diff = mean (rural) - mean (urban) has been performed. A sample of 41,424 migrants, including 2,691 seasonal migrant workers and 38,733 non-seasonal migrant workers, were polled in IHDS-II, 2011-2012, to determine their health status. The character of migratory workers has been studied using OLS regression on the number of medical treatments received in a month. In the regression analysis, socioeconomic indicators (such as adult literacy) and basic facilities essential for a healthy lifestyle (such as indoor piped drinkable water, a separate kitchen in the family, a flush toilet, electricity, and daily meal consumption) are included as control variables. The morbidity analysis findings in this research reveal that morbidity patterns among migrants vary with regional variations. The relatively brief morbidity and major morbidity indicate that rural and urban migrants are more susceptible to illness. Seasonal migrants, on the other hand, are more vulnerable to illness than regular migrants and have the potential to pose health problems. In addition, the absence of essential amenities has a significant influence on the health of seasonal migrants. The research is based on secondary data and so lacks various significant health concerns of migrants in rural and urban sectors that might have been obtained via a primary data survey. Migration and migration are important issues efforts of migrant laborers, since the majority of Indian laborers work in the informal sector, with the bulk of employees coming from the migrant class. Social implications: Migrants' contributions to economic growth are dependent on their productive potential, hence the health of this population group is important. This research is focused on the morbidity pattern of regular and seasonal migrants, as well as their vulnerability in different geographical regions and the supply of basic facilities [7].

DISCUSSION

Ergonomics and rural development

There are several benefits to rural development "It has a variety of definitions, but it typically is the process of transformation in rural civilizations or communities. It is widely assumed that three major aspects, economic, social, and human, drive rural development and interact to effect change. It is claimed here that technical variables that improve the effectiveness of rural production technologies should also be regarded a significant contribution to the development process. In order to foster development, all four parts must be evaluated separately but, more significantly, interactively[8].

The connection of social and economic forces is widely established, which gives rise to the discipline of socioeconomics. Nonetheless, the "The significance of other aspects' interactions, notably the human technical connection, has been buried or neglected. This is obvious from the many incidents of botched technology transfer, in which the technology was unsuitable for the intended consumers.According to Sutton development is about people as much as it is about technology, and technology is for people to use; it serves little use on its own. The relative levels of attention paid to the different relationships between the components (Figure 1) [9].

Modeling household responses

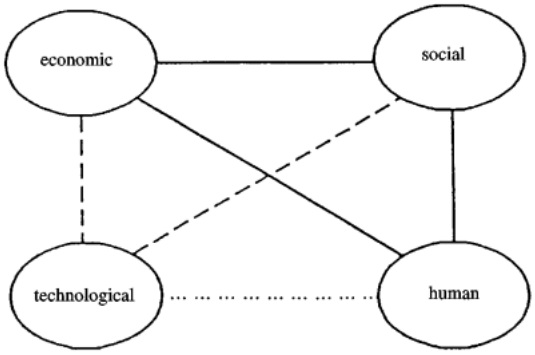

Figure 1:Represents the elements of rural development.

While there are some parallels between rural and industrial growth and the associated ergonomics demands, improvements in workplace practices and quality of life resulting from ergonomics applications are expected to have a stronger effect and bring about broader benefits in the rural sector. Dy (1979) said that agricultural labour has a greater influence on life than factory employment since industrial work is done outside the home as a distinct activity that is clearly separated from leisure and family life. In terms of development, the rural sector requires a different approach than the industrial sector because technological change is more alien, sociological and anthropological factors are relatively more important, and more assistance is needed in terms of knowledge transfer and technical skill training.

Ergonomics achievements in developing countries

Ergonomics and its applications seek to harmonies work and the working environment in order to increase productivity and efficiency while also promoting individual well-being by optimizing the effort of a worker or user. Much ergonomics research in developing nations has concentrated on improving productivity in the industrial sector; little ergonomics work has been done in small-scale or poverty agriculture. It is a neglected region, but one with significant promise for increasing and preserving quality of life.

Future needs of ergonomics

Ergonomics has previously contributed to IDC development, but it has been uncontrolled and sporadic. Many research mentioned in the literature concern ergonomics in developing nations' industrial sectors. However, considering that agriculture employs the bulk of the people in developing nations, greater emphasis should be paid to agriculture. The following are some opportunities for future study in developing-country agriculture.

Technology transfer

As technology progresses, emerging nations will have more desire for access to achieve the maximum benefits of improving technology, it is critical that technology transfer from one nation to another be done with prudence and that the &people' aspect is recognized at all phases of transfer. If adaption to new technologies is insufficient, technological gains are lost, and issues like as accidents, occupational illnesses, and poor productivity predominate. If technology is to be transferred effectively, the compatibility of imported technology with the characteristics of

the users and the overall effect on the community must be considered. Warned of the potentially negative effects of using new technology in underdeveloped nations without first conducting a full ergonomics review. One example is the transfer of harmful agrochemicals to developing nations without regard for farmers' understanding of their safe usage Agricultural workers are vulnerable to pesticide poisoning due to their near proximity to concentrated forms of the hazardous compounds.

Pesticide application (mixing, loading into sprayers, and spraying) or other actions such as maintaining crops immediately after they have been treated may cause exposure. Adult education levels in underdeveloped nations, however, are lower than in industrialized ones, which may impair the capacity to interpret safety information Errors and mishaps will occur if users do not grasp the symbols and terminology used in instructions and manuals. To avoid accidents and mistakes, future study should focus on the design and production of instructions and operating instructions for imported technology that use icons, symbols, and language.

The needs of women in work organization

Women work significantly longer hours than males in the "eld" and constitute the primary labour force. Providers of water and fire wood fodder collection, animal watering and milking, and residential services such as child care.Women's efforts and duties in agriculture may have major effects, such as backache, chest pains, and miscarriage. Given this, one may argue that the effect of employment on family life is stronger for women than for males and that women bear a disproportionate amount of the toil and pain associated with rural development.

Ergonomics may address women's drudgery and misery, for example, by analyzing women's transportation patterns and providing easy remedies. According to many agricultural programmers are generally focused at males with the notion that they would inevitably benefit women. Since a result, larger efforts must be made to target women, and more equipment must be created specifically for female usage, as they undertake the bulk of agricultural labor. To ensure that women's needs are taken into account in the design or transfer of equipment in the future, good knowledge of anthropometric and physical characteristics of women is required, as is participation of women at the design stage, participation of women in training programmers, and access to credit or saving schemes to enable women to purchase any equipment.It is a slow and laborious procedure that takes a whole day to process 100 kg of paddy. A group of landless women were given a paddy thresher to help develop trade and create money via the project's savings and credit system. The ladies earn money by renting out the rock crusher to landowners. They are also allowed to continue working as day laborers. As a consequence, their daily earnings have more than quadrupled. The landowners benefit as well. They can thresh 400500 kg of paddy in a day, freeing them time and energy for other operations.

Emerging Issues

It is critical not to overestimate the variety of conditions on the ground or the power of simple narratives. Having said that, contemporary arguments provide significant insights.

The new consensus on poverty

The World Development Report on Poverty, released in the fall of 2000, bridges agency gaps and advances the debate: Poverty is defined as'multi-dimensional' (including access to social services, self-esteem, and autonomy); participation is viewed as critical, not just in the sense of having listened but more proactively; and an appropriate strategy will combine aspects of

opportunity (meaning growth), empowerment, and security. There is a lot to say about hunger and WDR. There are probably six major issues in rural development policy:

(a) Recognize the multidimensional goal.

(b) Build on ideas about the importance of assets and asset vulnerability in poor people's livelihoods.

(c) Note WDR's strong statements on the dangers of liberalizing markets if the institutional pre - requisites are not met.

(d) Respond to the equally strong call for measures that reduce asset and income inequality.

(e) Find practical ways to make rural institutions more responsible.

Diversification

Diversification is affected by the spatial dimension. Poor individuals strive to diversify their livelihoods, whether locally or across great distances: the phenomena of multi-locational families is becoming more common. However, diversification is not a panacea. The poor may end up in a capsulized labor market, effectively 'hunting and gathering' for employment, with low rewards, great vulnerability, and limited opportunity for accumulation. This kind of diversity may be necessary for survival, but it does nothing to alleviate poverty. There is a U-curve of diversification in many locations, with non-farm activities concentrated among the poor.

Local diversification would be only possible in rural regions if there is a strong growing sector with high potential for connections. The essentials in impoverished regions include infrastructural and human capital investment, as well as 'activation' of credit, money, and land markets. Priorities beyond the fundamentals include the development of industrial "clusters" and growth hubs, as well as the promotion of urban linkages. Pro-poor labor markets help with diversity.

Technical change

Agriculture, despite diversification, remains an important source of revenue, both directly and indirectly. Technical advancement is central to post-Green Revolution agricultural plans, which often begin by highlighting the slowing pace of technical progress in developing-country agriculture and mounting environmental challenges. However, global technological advancement is accelerating; particularly in agriculture, the industrialized world is seeing significant changes in biological information, mechanical, and chemical technology. The private sector is mostly driving technological advancement in the North. Technical progress may be prejudiced towards the South, particularly small farmers. Policies that reflect the previously described geographical variety, as well as the reality that, due to diversification, many farmers are truly part-time, are required (and therefore need labor-saving, not labor-using technologies.Most new technologies may be classified as either extremely specialized (for certain habitats, situations, or markets) or information demanding (requiring farmers to learn new management skills). In these circumstances, if new agricultural technology is to contribute to rural development, it must address three challenges:

(a) Identifying the most efficient ways for providing information to farmers.

(b) Developing technology development policies that differentiate between different types of rural households.

(c) Identifying a clear mandate and long-term support for public research.

The private sector may help, but governmental backing for research and information dissemination is critical; however, public sector research and extension services are frequently.

Shocks and vulnerability

Social protection is another tenet of the post-Washington consensus, particularly but not exclusively in the context of market liberalization:

The WDR is unequivocal about the 'obligation' to protect the losers, and it could have been even stronger if it had taken into account the current debate about economic and social rights. Rural people are often more vulnerable to risk than urban people, and they are less able to rely on government action to minimize or alleviate the impacts of risk. Rural livelihood vulnerability may indeed be growing as a result of rising inequality, increased HIV/AIDS prevalence, civil strife, more extreme weather occurrences, and the negative repercussions of globalization.

Some claim that community-based national insurance has historically supplied a sufficient safety net and will continue to do so in the future. The evidence is inconclusive. Community initiatives were never equipped to cope with large-scale, communitywide 'covariate' risk, and the ‘moral economy' on which they were founded has been eroding. Thus, public intervention is justifiable, and public transfers may offer both a safety net and, with proper design, a trampoline out of poverty, for example, via job programmers. There may also be opportunities for public-private cooperation, such as in insurance. Meeting the monetary expenses of social protection is a major concern.

Conflict is a particularly challenging issue. It has a long history and is widespread in many nations, wreaking havoc on the poor's possessions and livelihood alternatives. Conflict-affected nations' governments often get bad ratings in Country Policy and Institution Assessments (CPIAs). Donors are sometimes caught by outmoded concepts of a relief-to-development continuum. Intervention to protect and help the poor is required, yet it is loaded with ethical and political quandaries.

The paradox is that the bulk of the poor continue to reside in rural regions, despite a drop in donor funding for agricultural and other rural development. Rural and urban lives are interdependent, and there is seldom a strong geographical barrier between rural and peril-urban areas. Rural development initiatives must include metropolitan connections and context[10].

Diversified sources of income. As families seek multi-functional and multi-spatial livelihoods, there are fewer full-time farmers: support for the non-farm rural economy and migration is as crucial as agricultural assistance.

Small-holder farming in underserved areas faces new challenges: more households are part-time farmers, work smaller plots, and are led by the elderly, young, and women, resulting in severe credit and input limitations; access to subsidies and extension services has decreased; market changes increase the need for specialist techniques, quality standards, information-intensive technologies, and marketing with high transaction costs - factors that provide larger f

Where small-scale farming may be competitive, targeted help is required; otherwise, small farmers need excellent exits from farming.Reverse state compression: a powerful state is required to support the market and allow for the growth of the private sector. Public interventions are required to promote impoverished people's access to new possibilities agricultural or nonfarm, as well as to construct the institutional framework for efficient market development.

Technological targeting:

Output gains based on the Green Revolution's seed-fertilizer concept have paused. New technologies will most likely be crop and location specific, as well as information-intensive. Technical progress is skewed against the poor. Policies aimed at certain technologies must be location-specific.

Public participation is especially important in designing technology and communication channels that are acceptable for disadvantaged farmers. Rethinking institutional capacity and governance: Many proposed rural development approaches will be ineffective unless sufficient capacity building and institutional support are provided. Decentralization should be encouraged in certain sectors to reinforce favorable tendencies towards higher accountability. However, in other regions, governments are dysfunctional for example, war zones or debilitated for example, high HIV prevalence, and second best remedies would be more beneficial than efforts at business as usual.

Growing disparity between low and high potential locations: low potential areas have quite different demands than high potential places where modernization is already underway. They still need agriculture-based growth, are less likely to benefit from globalization prospects, and will provide poorer returns due to intrinsic drawbacks (remoteness, poor soils etc). Policy must be context-aware.AIDS affects home structure, social interactions, and economic capability. More than one-tenth of the population in 16 nations is HIV-positive. Services and policies must evolve to fit changing family arrangements, an increasing number of teenage and senior household heads, a rising labour shortage, and diminished skills and expertise within rural institutions and private firms.

Rural hazards and vulnerability: As natural catastrophes become more common and economic development becomes more fast, the rural poor confront new threats. In general, external assistance for risk-mitigation and coping methods is minimal. The public and private sectors' responsibilities in supporting insurance and risk management must be improved, which is dependent on the budgetary load being handled.Conflict prevention and management: Conflict has a devastating effect on rural livelihoods, and rising levels of conflict jeopardize the attainment of poverty reduction objectives. Donors will need to break free from the conceptual and programmatic confines of a linear relief and development strategy.

Modalities of assistance:

Rural development, as a concept, aligns well with ideas about the Comprehensive Development Framework and Poverty Reduction Strategy Papers. However, it clashes with Industry Wide Approaches, which are difficult to execute in the agriculture sector. Reaching the rural poor in low-performing nations will provide significant challenges.

CONCLUSION

Rural development is the process of enhancing the standard of living and financial security of residents of rural communities, which are frequently secluded and sparsely populated.

Agriculture and forestry are two land-intensive natural commodities that have traditionally been the focus of rural development. Rural communities continue to face difficulties such as poverty, poor literacy rates, and a lack of essential infrastructure like as schools and hospitals. As a consequence, young people are flocking to cities in quest of fresh possibilities.

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CHAPTER 4

PRIME MINISTER PLAN FOR DEVELOPMENT IN RURAL AREAS IN INDIA

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Abstract:

Plans which are executed with development of rural areas by the prime minister. The problem the study is conducted is to determine the information about the prime minister plan and determine the value of Prime Minister Plan. The objective of the study focuses on the Prime minister plan for development in rural areas in India. The outcome of the study contains the analysis of the prime minister plan which are executed in the India. In future, Prime Minister Plan will help the growth of rural development.

Keywords:

Agriculture, Climate Change, Rural Area, Sustainable Development, Village Industries.

INTRODUCTION

The Pradhan Mantri Fasal Bima Yojana (PMFBY), an extensive agricultural subsidy insurance programmer, was introduced in 2016 with the intention of protecting farmers. The National Agricultural Insurance Scheme (NAIS), the Weather-based Crop Insurance Scheme, and the Modified National Agricultural Insurance Scheme (MNAIS) were three earlier initiatives that were replaced by this flagship programmer, which was created in accordance with the One Nation-One Scheme. It improved the insurance services available to farmers by combining their best qualities and removing their inherent weaknesses. The Agriculture department, Cooperation, and Farmers' Welfare, which is part of the Ministry Agriculture, as well as authorized general insurance firms, are in charge of running this programmerThe programmer covers all crop-related challenges, including those that arise before sowing, throughout harvest, and in the middle of the growing season. By extending coverage, it protects farmers against monetary losses brought by unforeseen occurrences such crop failure owing to regional risk, post-harvest loses, natural disasters, excessive rain, crop diseases, and insect infestations. The initiative's main objectives are to ensure prompt claim settlement and lessen the financial burden of premiums on farmers[1].

Pradhan Mantri Krishi Sinchayee Yojana

The primary goals of PMKSY are to coordinate irrigation investments at the field level, increase cultivable land under guaranteed irrigation, increase adoption of precision irrigation and other water-saving technologies so much crop per drop, improve aquifer recharge, and introduce sustainable water management practices by investigating the viability of reusing municipal

wastewater silage. The Accelerated Irrigation Benefit Program (AIBP) of the Department of Agriculture and Cooperation (DAC), the Integrated Watershed Management Program (IWMP) of the Department of Land Resources (DoLR), and the On Farm Water Management (OFWM) of the Ministry of Water Resources, River Development & Ganga Rejuvenation have been combined into the PMKSY (DAC). The Ministries of Agriculture, Water Resources, and Rural Development will carry out the plan. The Rural Development Department is primarily responsible for doing projects like building agricultural ponds, minor check dams, water harvesting structures, contour bonding, etc[2].

Paramparagat Krishi Vikas Yojana

The National Mission on Sustainable Agriculture's (NMSA)-1 Centrally Sponsored Scheme (CSS) includes an expanded component of soil health management called the Paramparagat Krishi Vikas Yojana (PKVY), which was introduced in 2015. The goal of PKVY is to encourage and promote organic farming, which will enhance the health of the soil.The programme supports Participatory Guarantee System (PGS) For India (PGS- India)-2, a locally relevant, mutually trusted kind of organic certification that requires both producer and consumer participation. PGS - India works outside of the "Third Party Certification" system[3], [4].

National Watershed Development Project for Rainfed Areas (NWDPRA)

About 57% of the 140.30 million hectares of land that are cultivated in the nation are in rainfed regions. Low input utilization and production are hallmarks of rainfed agriculture. Variability in rainfall causes yields to vary greatly and become unstable. The majority of rural poor people reside in rainfed areas. As a result, the Government of India gives the holistic and sustainable redevelopment of rainfed regions using a watershed development method the greatest priority.The National Watershed Development Project for Rainfed Areas (NWDPRA) initiative, which was founded on the dual principles of integrated watershed management and sustainable agricultural methods, was introduced in 1990–1991 in 25 States and 2 Union Territories. The plan was expanded under the IX Plan to include the three newly created States of Uttaranchal, Jharkhand, and Chhattisgarh. From 2000 to 2001, the NWDPRA plan was included into the Program for Macro Management of Agriculture (MMA). Currently, 28 States and 2 UTs are implementing this programmer as part of the Centrally Sponsored Scheme of Macro Management of Agriculture. On the basis of the approved annual work plan, funds are disbursed to the States. Current implementation of the Scheme is based on the Common Guidelines for River Development Projects.

National Mission for Sustainable Agriculture

The quality and accessibility of environmental assets like soil and water are essential for maintaining agricultural output. By encouraging preservation and long-term use of these limited natural resources through suitable site-specific methods, agricultural expansion may be maintained. About 60% of India's net planted land is still devoted to rainfed agriculture, which produces 40% of the nation's food supply. So, the growth of rainfed agriculture along with resource preservation holds the key to supplying the nation's rising grain needs. The National Mission for Sustainable Agriculture (NMSA), which focuses on integrated farming, water usage efficiency, managing soil health, and synchronizing resource conservation, has been developed to this end with the goal of increasing agricultural production, particularly in rained regions.

The Sustainable Agriculture Mission, one of the eight Missions included in the National Action Plan on Climate Change Change, is where NMSA gets its authority (NAPCC). The Mission Document's strategies and programmers of actions (POA), which received "in principle" approval from the Prime Minister's Council on Climate Change (PMCCC) on September 23, 2010, aim to promote sustainable agriculture by focusing on ten key dimensions of Indian agriculture, including "Improved crop seeds, farm animals and fish cultures," "Water Use Efficiency," "Pest Management," "Improved Farm Practices," and "Nutrient Management."

Through the adoption of a sustainable development pathway, the NMSA will address the key dimensions of "Water use efficiency," "Nutrient Management," and "Livelihood Diversification" by gradually moving toward environmentally friendly technologies, adopting energy-efficient tools, conserving natural resources, integrating farming, etc. Additionally, the NMSA seeks to advance improved agronomic practices that are specific to a given geographic area through the management of soil health, improved water use efficiency, prudent chemical use, and mixed cropping, progressive adoption of agricultural farming systems, and approaches like agricultural, agro-forestry, fish, etc.Converging, combining, and incorporating all existing and newly proposed activities/programs linked to sustainable agriculture with a focus on soil and water conservation, water usage efficiency, managing soil health, and developing rained areas was how the NMSA architecture was created. The goal of NMSA will be to promote community-based approaches that judiciously utilize commons resources.

LITERATURE REVIEW

F. Anggo et al. [5]explained about the national development plans and rural development in Nigeria. The environmental situation which National development planning includes mechanisms that guarantee policies and plans are implemented, as well as that development at all levels of the government and society is completely integrated into nation-building. From the colonial through the postcolonial periods, Nigeria has launched several development initiatives and schemes. This research examines the contributions of Nigeria's National Development Plans from 1960 to 1985 to rural development. It claims that the National Development Plans failed to bring meaningful development to rural areas due to a variety of factors such as corruption and mismanagement, faulty top-down planning rather than bottom-up planning, and the pursuit of colonial and neocolonial relying economic and social policies, among others. It advises the government to use a bottom-up and rural-based approach to development, particularly in economic development, in order to achieve quick and sustainable rural development. Rural regions, which are important sources of Nigeria's huge natural wealth and home to half of the country's population, should not be left with a disproportionate share of the income created by the exploitation and management of these resources. As a result, increased budgetary allocation and socioeconomic facilities for rural regions are required.

Paula Gabriela Michelet al.[6]stated the rural women's invisiblework in census and state rural development plans: the *Argentinean patagonian* case which Over time, the invisibility and acknowledgement of rural female employment in Argentina's Patagonian area. The analysis is based on (a) the systematisation of research publications, (b) a historical study of polls, and (c) the systematisation of relevant rural development programmes. The essay has an ecofeminist stance. The findings have been divided into four areas. (1) An outline of later Patagonian integration; (2) the historical labour of Patagonian women; (3) census identification of rural output; and (4) Patagonian family farming. We discovered that metaphors relating to women and

the land are utilised to reject both rural female labour and family land usage. Patagonia has been one of the most impacted by extractivism as a result of one of its repercussions. We end by analysing the many types of economic and political acknowledgment that may be used in future planning.

Moulogianni, Christina and Bournaris, Thomas explained assessing the impacts of rural development plan measures on the sustainability of agricultural holdings using a pmp model which Measures under the Rural Development Plan (RDP) assist farmers in enhancing the sustainability of their agricultural holdings. The implementation of these policies has economic, social, & environmental consequences that are tracked ex-ante, ongoing, or ex-post, as required by the European Commission impact assessment standards. In this context, the purpose of this article is to examine the effects of RDP initiatives on agricultural holdings' sustainability. As a result, a positive mathematical programming (PMP) model was created and deployed, together with a set of economic, social, & environmental indicators. The model was used to examine the ex-post effects of the Greek RDP 2007-2013 measure named 'Modernization of agricultural holdings'. This study was done on a sample of 219 arable estates in a northern Greek area. The effects were tested by changing the crop plan on agricultural land. According to the findings, the measure has a favourable economic effect, a negative social impact, and a negative impact on the majority of environmental indicators. The findings also highlight the importance of the impact assessment process in assisting policymakers to understanding the consequences of their policies.

Lucia Maat, et al. explained mainstreaming climate change adaptation into rural development plans explained Because of the interdependence of climate change and development, development organisations are increasingly interested in incorporating adaptation into government economic development programmes in a manner that successfully promotes resilience at the local level. However, the nature of climate change resilience is extensively contested in the literature, and there is a knowledge vacuum about the optimal strategy to handle adaptation as part of mainstreaming at the interface with development goals. The purpose of this research is to fill this knowledge gap through a case study of a community-based Climate-Smart Agriculture (CSA) initiative in Vietnam. The case study method was used, with fieldwork at one project site supplemented by semi-structured interviews with government stakeholders, important specialists, and project directors from adjacent companies. The analysis identifies five key factors that improve rural resilience in a smallholder agricultural context: (i) involving local governments as partners, (ii) taking into account broader landscape issues such as markets, (iii) providing farmers with assistance to facilitate the adoption of CSA practises, (iv) fostering neighbourhood capacity building, but also (v) promoting adaptive management and scenario planning to address uncertainty. The research indicates that resilience is complex and does not fit neatly into any of the prominent techniques in the literature.

María Angeles Izquierdo, [7] et al. explained increasing the use of evaluation through participation: the experience of a rural sustainable development plan evaluation which The use of evaluation has been a major issue for both and practitioners, and there has been significant debate in the evaluation literature. Different assessment perspectives may influence how evaluation results are utilised, and stakeholder engagement influences evaluation's contribution to individual and organisational growth. Our key premise in this study is that stakeholder engagement raises evaluation importance, ownership, and use, and hence participatory evaluation methodologies improve programme governance. We concentrate on the assessment of the Basque Country's Rural Sustainable Development Plan, a setting that exposes an institutional

network (at the regional and municipal levels) with a limited evaluation heritage. To broaden the scope of participatory evaluation, this article: (i) briefly reviews the theoretical discourse on evaluation utilisation; (ii) describes the assessment context (rural development policy and its governance); (iii) presents the assessment method as applied to the mid-term evaluation of the Basque Rural Livable Development Plan; and (iv) analyses the use of evaluation findings and processes across four dimensions, namely information generation, information dissemination, information dissemination, and information dissemination. Finally, we provide advice on how to increase understanding about evaluation usage, involvement, and good governance, all of which may be seen as fundamental instruments for strong institutionalization of sustainable development initiatives.

DISCUSSION

Village Industries Development

According to the KVIC Act., 1956, a village industry is any industry located in a rural area that produces any items or renders any service with or without the use of power and in which the fixed capital investment per head of a weavers or a worker does not exceed or such other sum as the Central Government may specify from time to time by notification in the official gazette; provided, however, that any industry any other non-manufacturing unit established only for the purpose of promoting, maintaining, aiding, servicing (including mother units), or administering any local industry. In 1935, Mahatma Gandhi, the Father of the Nation, became interested in Village Industries. As a consequence, the All India Village Industries Association was formed (AIVIA). Thus, in 1935, the village industries as a group were subjected to a methodical development procedure. There was no particular description provided to village industry at the time. "Village Enterprises" are rural industries that process local raw materials for local markets using modest processes and equipment. Since time immemorial, traditional village businesses like as GhaniOil, Pottery, Leather, Beekeeping, Carpentry and Blacksmithy, Butter, Agarbatti, Papad, Pickles, and so on have thrived in rural India[8].

The Village Industries throughout the nation operated on a self-sustaining basis, with the underlying principle of using local raw resources and local talents to create local manufacturing while also providing job opportunities for locals. Every community had its fair number of potters, cobblers/tanners, carpenters, and blacksmiths. Beekeepers, oil-crushers, and others who use traditional skills to create unique goods not just for local use but also for export to metropolitan markets.Because of the falling trend in new job creation prospects in the agriculture sector, village industries in the non-farm sector are playing an essential role in bridging the shortfall in rural employment. With the expanded reach of microfinance, village industries' potential to give livelihood to rural jobless people is improving. With comparably minimal per capita investment and the use of relevant skills and technology, Village Industries has played an admirable role as a job source in rural regions.

Built-in-strength of village industries

Village industries are an important source of rural employment in India. Because per capita investment in big and medium sectors is quite high, only a tiny percentage of the labour population could be accommodated. Because agriculture cannot offer work for everyone, village industries are particularly vital for all emerging economies. The definition of village industries is

rapidly evolving, and it now includes any industry, with or without the use of electricity, that may be built in villages using proper technology.

Rural industries give immediate large-scale employment while also guaranteeing a more equitable distribution of national revenue. Rural industries enable the efficient mobilisation of resources, money, and expertise that would otherwise go unutilized[9].Some of the problems that uncontrolled industrialization tends to cause will be avoided by the construction of small industrial production centers around the nation. The development of small-scale industry is considered as a means of achieving the following goals.

1. Job creation;
2. Income distribution that is fair.
3. Capital mobilization.
4. Ability to be an entrepreneur.
5. Industrial Dispersal on a Regional Scale.

Historical Perspectives of Village Industries in India

Initially, the KVIC was in charge of planning, coordinating, and executing village industries; however, 96 enterprises became eligible for aid under the commission's development programmer over time. In this regard, Prof. P.C. Mohalnobis has said that there is no potential of producing much employment via the factory-industry, i.e. the huge enterprises, in the near term. Household or cottage industries, on the other hand, need extremely little capital for any given investment, and employment opportunities are ten, fifteen, or even twenty times more in contrast to similar industrial businesses.In India, like in other developing countries, cottage & village industries have been the mainstay of settlements since prehistoric times, in addition to agriculture. Agriculture cannot employ everyone, and since per capita investment in big and medium businesses is quite expensive, only a tiny percentage of the overall labour force can be accommodated. Small scale industries and development of rural are mainly of two types in developing countries:

Traditional cottage industries

Modern small industries are mostly concentrated in towns and cities, but they have a tendency to disperse in rural areas for a variety of reasons, including tax breaks in rural areas, cheaper land and labor, local raw material availability, ready market, special materials, special environment favorable to the industry, or the presence of a clustered localization of a particular industry in that area due to the availability of specialized skills.Traditional cottage industries, on the other hand, operate both in urban cottages and in villages, utilizing basic tools and needing little capital. In rural locations, village industries provided to the people' basic requirements, primarily or entirely.On an exchange basis traditional minor industries in India include khadi linens and handloom textiles, village industries, handicrafts, sericulture, and so on. To increase a growing country's national wealth, it is vital to assist small and village enterprises, which give an outlet for people's creative abilities and inventiveness. Village industries can help the enormous number of jobless people make a decent life[10], [11].

Prime Minister's Employment Generation Programmed

The Prime Minister's Employment Generation Programme (PMEGP) was created in the fiscal year 2008-2009 (September, 2008) by combining the previously established Rural Employment Generation Programme (REGP) by KVIC and the Pradhan Mantri Rojgar Yojna (PMRY) by DICs. This is a 'credit related subsidy programme' for creating job possibilities via the formation of micro firms in both rural and urban regions.

Implementing agencies

The Ministry of MSME, Government of India, has designated KVIC as the "National Nodal Agency" for the scheme's implementation, with the active involvement of banks, state Khadi & Village Industries Boards, and state government DICs. In rural regions, the plan is executed through KVICs (Khadi Village Industries Commissions), State KVIBs (State Khadi & Village Industries Boards), and DICs (District Industries Centres), whereas in urban areas, only DICs are involved. The maximum proj6ect cost under the plan is Rs.25.00 lakhs in the manufacturing sector and Rs.10.00 lakhs in the service sector.

Industries under PMEGP

Any industry, including coir-based projects (except those mentioned in the negative list), that produces goods or provides services with or without the use of power and in which the fixed capital spending per head of a full-time artisans or worker, i.e. Capital Expenditure on workshop/work-shed, machinery, and furniture of the project does not exceed Rs.1.00 lakh in plain areas and Rs.1.50 lakh in hilly areas.

Negative list of activities

Any industry/business associated with slaughtered meat, such as processing, canning, and/or serving items made of it as food, production/manufacturing or sales of psychoactive drug items such as Beedi/Pan/Cigar/Cigarette, etc., any hotel or dhaba with a sales outlet serving liquor, preparation/production of tobacco as raw materials, tapping of toddy for sale.Any industry/business associated with crop/plantation cultivation such as Tea, Coffee, Rubber, Sericulture (Cocoon raising), Horticulture, Sericulture, Animal Husbandry such as Pisciculture, Piggery, Poultry, Harvester machineries, and so on. Manufacturing of polypropylene carry bags with a thickness of less than 20 microns, as well as manufacturing of recycled plastic carry bags or containers for storing, transporting, dispensing, or packaging food and other items that pose environmental difficulties. Industries that benefit from the Khadi initiative include the processing of Pashmina wool and other items such as hand spinning and hand weaving.

Prime Minister's Rural Development Fellowship Programmed

The Prime Minister's Rural Development Fellowship (PMRDF) is a programme of the Government of India's Ministry of Rural Development (MoRD), undertaken in partnership with state governments. The program's primary goal is to alleviate poverty and improve people's lives in rural India. The PMRDF initiative was officially established in September 2011 with the following goals: Providing short-term catalytic assistance to district administrations in IAP districts in order to enhance programmer delivery.

Creating a cadre of dedicated and skilled creation and management and facilitators who will be accessible as a long-term resource for rural development. Collaborating with a wide range of

stakeholders, including the government, public sector organizations, and civil society actors, to improve the effectiveness of social protection programmers.The PMRD Fellows are chosen via a pan-India procedure that includes the All India Common Entrance Examinations (AICAT), a written test, and personal interviews. During the two-year fellowship, PMRD Fellows collaborate closely with the District Collectors of the Integrative Action Plan (IAP) districts to improve programmer delivery and engage with marginalized populations in order to reduce developmental and governance weaknesses. After completing the two-year fellowship, a PMRD Fellow is obligated to serve one year in public service as a paid full-time employee of the State Rural Livelihood Mission in the state to which she/he is allocated.

The initial class had 140 Fellows from 11 states, including Andhra Pradesh, Bihar, Chhattisgarh, Jharkhand, Odisha, Maharashtra, Madhya Pradesh, Uttar Pradesh, and West Bengal. The fellowship was extended in 2014 to encompass seven more states in the North-eastern region, as well as Jammu and Kashmir.TISS, as MoRD's knowledge partner, offers Fellows with comprehensive assistance to gain the knowledge, professional skills, and competencies needed to participate in transformational development work with people, state, and non-state organizations. The Institute has established PMRDF Support Cells in Delhi, Raipur, Hyderabad, Varanasi, and Mumbai to assist Fellows in the districts and with their academic work.

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CHAPTER 5

AN OVERVIEW ON THE TWENTY POINT PROGRAMMED

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Abstract:

The twenty-twenty programmed is the development program which related to the development of rural areas. The problem why the study is conducted is to find out the significance and information about the twenty program. The purpose of the study is analysis of twenty point program. The outcome the study provides deep knowledge about the twenty programmed. In future, the twenty point programmed helps to increase the development of rural development.

Keywords:

Employment Generation, Health Program, Rural. Twenty Point Programmed.

INTRODUCTION

Prime Minister Indira Gandhi first introduced the Twenty Point programmed in 1975. It was subsequently reorganized in 1982 and once again in 1986. It was eventually reformed in 2006 with introduction of new policies and programmed, and it is now in operation. The goals outlined in the National Common Minimum Programmed, the United Nations Millennium Development Goals, and the SAARC Social Charter are all supported by the programmers and schemes under TPP-2006

Objective of Twenty Point program

The main goals of the 20-Point programmed are to end poverty and enhance the standard of living for the nation's underprivileged and destitute citizens. The programmer addresses a number of socio-economic issues, including those relating to poverty, employment, schooling, housing, nutrition, agricultural and land changes, irrigation, drinking water, security and empowering of underprivileged groups, consumer protection, the environment, and more. The twenty points are illustrated as follows:

1. Power to the people to end poverty
2. assistance for farmers
3. Worker welfare
4. food safety
5. clean water for drinking
6. Housing, healthcare, and education are all provided.
7. Welfare of minorities and SC/ ST/ OBC
8. women's rights
9. kid safety
10. Development of Youth

11. renovation of slums
12. Forestry and environmental protection
13. Security benefits
14. Country Roads
15. Activation of rural regions
16. Growth of underdeveloped regions
17. e-government and IT-enabled

The Ministry of Statistics and Program Development, Government of India, has been tasked with overseeing the initiative at the center. The Ministry established a management information system for Twenty Point that includes a periodic Progress Report (MPR) and an annual Review of the Programmed, Argument, Item-wise, and State-wise. The Yearly Analysis provides an analytical review of an execution of all the items under the plan. The Monthly Report analyses progress on the execution of the plan for 20 key aspects for which there are pre-set physical goals.

Twenty-five of the previously listed 20 criteria and 66 items are checked on a monthly basis. According to the proportion of successes against goals of 20 ranking items or characteristics, the Central Nodal Department prepares and publishes Monthly Progress Reports that rate the States (in case of West Bengal). This Department has so far received and provided consolidated MPR for the January month 2008 in the required format. For better understanding of the topic, the following list of ranking elements and related physical written reports against objectives is provided.

Minimum Needs Programmed

Up to this point, growth alongside social justice has been the primary objective of Indian development strategy. The succeeding Five Year Plans were the primary tool used to try to realize this. It was realized in the early 1970s and late 1960s that not all of society's poorest segments reaped the advantages of growth. More than half of the rural population was subsistence-level at the time the Fifth Five-Year Plan was really being developed in the early 1970s. As a result, the plan gave the idea of minimum needs a formalized form. It was designed to be a crucial instrument for rural development.

The Concept of Minimum Needs and Basic Needs

Although it was publicly stated in the Fifth Five Year Plan in 1974, the minimal necessities idea was not wholly new. The Fifteenth Indian Labor Assembly had advocated that minimum wages be determined by necessity back in 1957. Pitamber Pant oversaw the Planning Commission's preparation of a paper in 1962 that established the need for the minimal consumption level to achieve a minimal goal growth rate. Additionally, it outlined how to define a minimal standard of living or set of requirements. The Minimal Needs Programmed (MNP) was established in the first year of the Fifth Five Year Plan (1974–1978) in order to meet a number of fundamental minimum requirements and raise people's conditions of life. The community's social and economic development, with a focus on the impoverished and neglected people is its stated goal[1].

The basic needs idea was formally introduced in 1976 by the International Labor Office (ILO) during the Joint committee World Conference on Work, Income Distribution, and Social Progress. The ILO publication Employment, Growth, Basic Needs: A One World Problem,

released in 1977, also outlines the basic needs idea. The ILO defined basic needs fulfilment as meeting two components.Meeting a family's basic needs for food, housing, and clothes as well as some domestic furnishings, access to essential services like safe drinking water, cleanliness, and public transportation, healthcare, and education items for social consumption are all included in this. The ILO also cites the importance of including people in decision-making processes, situating basic needs within the larger context of fundamental human rights, achieving full employment, accelerating economic growth, improving employment standards and working conditions, and redistribution based on social justice considerations. In India, the approach paper to the Fifth Five Year Plan recommended a distinct National programmer for Minimum Needs and emphasized that eradicating poverty required a multifaceted approach. It was noted that employment would not be sufficient to allow the poor to purchase all the necessities for a minimal level of existence. Consequently, social consumption and investments in the area of education, health, diet, potable water, shelter, communications, and other areas would need to be added to job and revenue production strategies. The ILO's basic needs programmed is more comprehensive since it addresses human rights, people's involvement, employment, including growth with justice in addition to private and public consumption. Social consumption is the main emphasis of minimum requirements

The Minimum Requirements programmer was introduced in the fifth Five-Year Plan (FYP) in order to improve living standards and supply people with a few essential minimum needs. India was one of the first countries to recognize the necessity for public spending on social consumption requirements, such as food grains at discounted prices, education, health, water supply, and sanitation, in order to raise people's living standards. The following three significant initiatives focus on enhancing the nutritional and food security of the poor:

1. Public Distribution System, Integrated
2. Child Development Program, and Midday
3. Meal Program

LITERARTURE REVIEW

Choudhury, Satrajeet and Ghosh, Anupam [2]stated the economic development through Prime Minister Employment Generation Programme In India which Gandhiji often said that rural economics differs from industrial economics and that the country can only advance when the villages are self-sufficient. As a result, the rural sector of the Indian economy is receiving more attention. The Government of India places a high value on the Khadi and Village Industries programmes, which are the backbone of our country's rural economic growth. In this article, we examine the success of the Prime Minister Job Generation Programme in the Indian economy as well as Jharkhand State during the 11th Five-Year Plan (2007-2012) in terms of project start-ups, production, sales, employment, and earnings. The commission uses an exploratory as well as descriptive research approach to collect data on the production and employment created by village industries in India, which is well divided into six zones (East, West, North, South, Central and North East). The correlation study in India reveals a fairly strong association between the chosen variables. However, in the case of Jharkhand, there is a strong correlation between the number of village industries started and the product produced and the sales of those products, but the correlation between the project started and the employment generated from those industries and the employment generation and the earnings from those employment is very weak, indicating that, while the number of industries increased under the PMEGP scheme, there is still a lot of room for growth.

Kaur, Amandeep and Kaur, Sawinder [3] analyzing the performance of prime minister employment generation programme which The Prime Minister Employment Generation Programme, a credit-linked programme, is the most successful government-run initiative for self-employment and rural industrialisation in both urban and rural regions. The study's goal is to examine PMEGP performance. The data was gathered between 2012 and 2016 in terms of job creation, events, and bank contributions to the PMEGP implementation. Throughout the research period, the study demonstrates a downward tendency in margin money, production, sales, job, earnings, awareness camps, exhibitions, and so on. It is advised that the government conduct additional camps to educate and raise public knowledge about this initiative.

R. Hassan [4]explained performance of khadi and village industries in jammu and kashmir under prime minister employment generation programmed which The KVIB is working hard to provide employment possibilities for the underprivileged and rural artisans. In 2008, the Ministry of MSMEs relaunched a credit-linked subsidy programme called as the Prime Official's Employment Generation Programme. KVIC has been designated as the scheme's national nodal agency for implementation, with KVIB serving as the implementing agency in J&K. In the current research, it was discovered that the accomplishment of KVIs was considerable in terms of the number of cases sanctioned, the amount of money released, production, and sales, but not in terms of employment. KVI performance might be improved further by providing financial and technical aid, as well as training, support, monitoring, and creation of promotion activities and marketing arrangements.

Kumar, Surendra [5] explained the perspective of entrepreneurial concept in prime ministers' employment generation programme which Prime Ministers Employment Generation Programme (PMEGP), a programme developed by the Government of India to promote self-employment, with a focus on Uttar Pradesh. For this research, 102 recipients whose projects were funded under this plan were chosen at random. The findings indicated that the self-employed sector has a higher level of attractiveness than other forms of work such as waged and salaried jobs. The findings also show that the credit related subsidy programme (PMEGP) is a key source of capital for SMEs. However, an unreasonable approach has been used thus far in funding projects under this plan, and the approval procedure for the projects takes a long time, resulting in de-motivation and loss of vitality among potential entrepreneurs. The analysis also found that the whole process has to be reorganised in order for this approach to be implemented effectively. Introduction The encouragement of entrepreneurship provides a chance to diversify job and income-earning options for a wide portion of the population. Entrepreneurship is a critical component in creating wealth and employment as well as preserving economic vibrancy (De Soto, 1989). Self-employed persons accounted for more than half among all micro-enterprise employment in the developing world (Mead and Liedholm, 1998), and they become self-sustaining economic juggernauts that considerably contribute to the macro-economy (Pisani and Patrick, 2002). Because of the potential of entrepreneurship in terms of job creation and resource discovery, the Government of India (GOI) has implemented a number of self-employment programmes that give credit-linked subsidies to people who take the initiative in self-employment/entrepreneurship. Among these programmes were the Prime Minister's Rozgar Yogana (PMRY) and the Rural Employment Generation Programme (REGP). Both plans, although being the result of much thinking, had certain drawbacks when implemented at the grassroots level. Because of this, the GOI was compelled to combine both programmes in order to provide maximum advantages to potential entrepreneurs. In the beginning of 2008, the GOI established a new plan called the Prime Ministers Employment Generation Program (PMEGP) to

address the grass roots requirements of potential entrepreneurs and deficiencies in the preceding listed programmes. The scheme's major goals were to create jobs in rural and urban regions, to bring together widely scattered traditional artisans/rural and urban jobless youth and offer them with self-employment/entrepreneurship chances, and to provide continuous and sustainable work prospects. Under this plan, the credit linked subsidy for urban is 15% and for rural is 25% of the total project cost for general category beneficiaries, while the subsidy for special category beneficiaries (SC/ST, Women's, and Minorities, etc.) is 25% and for rural is 35% of the whole project cost. Beneficiaries must, however, pay 10% of the total project cost in the event of the general category and 5% in the case of the special category. The recipient must be above the age of 18, and there is no income limit. If the project costs more than 10.0 lac in the manufacturing sector and more than 5.0 lac in the service sector, the recipient must have a middle pass certification. Only new business initiatives are eligible for financial help under this plan. This plan has been delegated for implementation to the Khadi and Village Industries Commission (KVIC), Mumbai, a statutory body established by the Khadi and Village Industries Commission Act, 1956, and the national nodal agency. The plan is administered at the state level through State Directorates of KVIC, State Khadi and Village Industries Boards (KVIBs), and District Industries Centers (DICs) in rural regions.

DISCUSSION

Twenty-five years of programmed in the health sector

Health care decisionmakers within geographically defined regions referred to her generically as regional health authorities, or RHAs need a framework that analyses both results and costs paid by alternative uses of these RHAs' limited resources to help in the priority-setting process. Program budgeting and marginal analysis are two approaches that have been used (PBMA). Its starting point is to look at how resources are presently being spent before concentrating on the incremental advantages and cost of changes in that spending through comparison across or within programmers.Researchers who work closely with RHAs, especially those engaged in the priority-setting process, are aware that PBMA has gotten a great deal of attention in terms of both practical application and research endeavour during the previous 25 years. The method was first used in health settings in the UK in the 1970s. 2–4 since then, PBMA has been utilised in various forms, for various purposes, and in various locales. Exercises in PBMA have taken place in England, Scotland, Wales, Australia, New Zealand, Ghana, and, most recently, Canada. 5–11 Despite this activity, many people believe that PBMA is "old hat" and that "it didn't work in the 1970s, so why should it now?" Furthermore, the literature on PBMA has never been classified, and the immediate and long-term effects of PBMA have never been studied.

In general, PBMA may assist RHA managers in allocation resources in such a way that the effect of health care on satisfying the health requirements of the local community is maximised by resolving efficiency problems. Furthermore, by allowing for the examination of who obtains resources, similar evidence provides for the consideration of equality concerns. The framework is built on core economic concepts such as opportunity, cost, and marginal analysis, and it has the additional benefit, in comparison to certain methodologies such as cost-effectiveness analysis, of pragmatically balancing research findings with local facts and expert opinion.PBMA is often used to identify the best mix of a certain set of services from such a given pool of resources. This planning tool may be used inside programmes of care (for example, maternity services) or across programmes of care. The former is known as'micro PBMA,' while the latter is

known as'macro PBMA.' At any level, the framework may be operationalized by asking four questions about resource utilisation:

1. How many resources are there in total?

2. How are these resources presently being spent?

3. Who are the key prospects for more resources, and how successful would they be?

4. Are there any areas of care where the same degree of efficacy might be delivered with lower resources, freeing up those resources to finance candidates?

5. Are there areas of treatment that, although beneficial, should get lower resources because a suggestion from (3) is more effective (per dollar spent). The first two questions are about PB, whereas the latter three are on MA. PB is essentially a way of defining how resources are distributed within a certain RHA or programmed of care. Such information may be useful in revealing areas of expenditure that may not be in accordance with specific regional goals, as well as pointing to crucial areas for more extensive investigation. The second step of the framework includes such additional analysis, in which anticipated marginal net benefits are assessed via probable resource adjustments.

An implementation of PBMA would typically need the definition of the specific programme area and goals. Then, a programme budget may be created to map the appropriate activity and cost data. An expert group comprised of important stakeholders such as management, physicians, and perhaps the general public should then be convened to suggest areas for service growth and resource release. The panel may then provide suggestions for possible re-design of the set of services in issue based on extensive information about the contenders' costs and benefits. In this manner, resource adjustments may be made to maximise benefit (or health result) for the available set of resources. The importance of evaluation over previous allocation cannot be overstated. The apparent slow growth of PBMA by the mid-1990s has caused some to wonder if the process of decision-making has changed,or whether PBMA is really a viable framework at all.

However, since RHAs must identify how to optimally allocate resources in an environment where the number of resources necessary to address all needs exceeds the amount available, PBMA should have the capacity to help in the priority-setting process. Furthermore, although the purchaser-provider separation may have started PBMA's "second life" in the UK, such a division is unnecessary. Rather, a climate in which issues about how to prioritise health care are aired is essential. Within a regionalized framework, such an atmosphere is likely to be a key cause for recent PBMA action in the UK National Health Service (NHS), as well as in the Australian and, more recently, Canadian health care systems.

Although academics have reported on specific PBMA studies, little work has been done to describe the general usage and effect of PBMA globally. One of the important difficulties that has not been investigated is that, despite seemingly strong underlying ideas, doubts well about effect of PBMA in real contexts have emerged. Previous work, from a sociological standpoint, proposes reasons for economists' difficulties in getting analytical tools accepted in practice, such as the so-called "paradox of applied rationality," in which challenges are encountered when applying a rational framework in what is essentially a political and seemingly irrational environment. 15 While this research on using economics in general offers an essential context, it was decided that a formal assessment specific to PBMA would be beneficial.

It was commonly said that high-level 'champions' are necessary for PBMA to have a significant long-term influence in pursuit of strategic decision-making and planning. For example, as a consequence of separate PBMA exercises, resources were reallocated in the South Australian Health Commission and new objectives were chosen in the Territory Health Service, with major leadership from top management. While high-level support may be required, it is definitely not a sufficient condition for the PBMA framework's good effect. Such assistance existed, for example, at the Grampian Department Of health in Scotland, but since rapid results were not obtained, other challenges developed and surpassed PBMA in the 1990s. A related problem was the significance of including a (often university-based) health economist and the excitement for process that such a person brought to RHA decision-makers. Furthermore, Grampian emphasizes the need of staff continuity in the strategic planning process[6].

Personnel changes resulted in a lack of support for the PBMA process in several Australian districts, such as the South Western Sydney Area Health Service. Respondents stated that this was also the explanation for the Tayside Health Board's and Newcastle Health Authority's little long-term effect. Lothian's exercise got very politicized and dragged out. Although an initial actually decreased seminar explaining the framework's concepts and consequences was well accepted, a high turnover of personnel meant that few of those participating in the original session were eventually involved with in PBMA implementation. As a consequence, there was a misunderstanding regarding PBMA, which contributed to its failure in this health board.

In evaluating the particular comments relevant to the short- and long-term effect of PBMA in the RHAs, a new trend emerged: gauging result not only in terms of resource re-allocation and service delivery re-design, but also its influence on organizational thinking. For example, PBMA exercises inside Grampian's entire fundholding practice encouraged a shift towards more extensive economic assessments, suggesting that PBMA is more than a tool but a way of thinking that, if established in the organization's culture, may lead to pretty detailed evaluation-driven planning. Similar findings were observed at the Glasgow Health Board, where PBMA continues in a shortened form, but more crucially, a culture that regards health economics as a key activity and element in decision-making is emerging. Obviously, attributing such cultural changes to specific PBMA exercises is difficult; further research is needed to find some of these extra impacts.

The issue of attribution arose in the Highland Health Board in Scotland, where the impact of work on stroke and diabetes was reported as twofold: the creation and promotion of recognition of the need to set priorities; and the use of PBMA, due to its inherentmulti-disciplinarily, to bring different groups together in the priority setting process. As a consequence, the PBMA activities served as the foundation for the diabetes and asthma services strategic plan. However, it is unclear if the adjustments were done as a result of PBMA. While this is difficult to quantify in the absence of a well-defined evaluating mechanism, PBMA activity continues throughout the business.

Overall, 59% of the PBMA exercises for which respondents knew the outcome were reported to have had a positive short- or long-term effect, indicating that either priorities were defined or resources were repositioned as a result of applying the PBMA framework. With this poll, it was not feasible to establish the overall influence of PBMA on changes in regional thought. Surprisingly, the effect of PBMA does not seem to be dependent on the availability of appropriate utilization or costing data, and just one respondent said that a national order would be necessary for PBMA to be widely implemented in the UK.PBMA is not a new concept in

health care. This priority-setting methodology has been utilised in at least RHAs in ve rich nations and at least two developing countries during the past 25 years. According to the information presented here, PBMA has been utilized in a vast number of health zones across the globe, and its usage is increasing with time. Furthermore, it has been observed that the PBMA has had a significant influence on priority-setting activities in many jurisdictions. Despite earlier research indicating that this method has achieved minimal progress

20-point programmed

The findings provide some light on this, particularly in terms of the environment necessary to encourage the usage of a framework like PBMA. Clearly, the effective implementation of PBMA is dependent on staff continuity and/or the engagement of a PMBAchampion. The idea of an outside health economist collaborating closely with internal people looks to be critical to PBMA's long-term success. Furthermore, in order for PBMA to be assimilated into the organizational culture, the exercise should be generally congruent with existing management operations. Expecting managers to change their methods to accommodate an external framework in an often reactive and stressful setting is unrealistic. Not only is it vital to emphasize that PBMA-like activity may already be ongoing, avoiding the paradigm change that managers may first believe is needed, but it is also critical to build on the edibility of PBMA and adapt to specific management requirements. A clear and speedy PBMA exercise, with genuine and relevant information broadly shared inside the RHA, may be a good beginning point.

Another key discovery is that the character of the health care system seems to have a role in the adoption of PBMA. Because the majority of PBMA exercises were conducted after 1991, it is possible to conclude that the regionalized context created by internal market reforms in the UK and the establishment of health regions in Australia and Canada in the 1990s provided an environment in which decision-makers attempted to maximise benefit for a given population within the resources available[7].

The Relevance of Policy Instruments to Trace Policy Change

Since the inception of the analysis of public policies, the study of policy instruments has been a source of concern. Every public policy is executed using one or a combination of specified instruments, such as laws, taxes, prizes, fines, licences, prohibitions, access, and limits. The variety and complexity of instruments varies substantially depending on the policy field, hence there are several options for categorising policy instruments. Hood's "The Tools of Government," published in 1983, was a seminal book in this field. He distinguished two categories of instruments early on: those used to acquire information and those intended to modify behaviour. Additionally, he defined policy instruments according to the existence of four essential social resources named "nodality", "authority", "treasure" and "organisation". In a nutshell, Hood's method refers to the state's existing capacities to deal with a problem: knowledge, legal authorities, money, and organisational ability.

McDonnell and Elmore (1987) described "standards," "economic incentives," "institutions," and "authority" according to the government's intervention method and employing four categories. Unlike Hood (1983), these authors investigate the interpretation of the problem and determine what the solution for each instrument of public policy entails; 6once expressed, these assumptions explicitly state the relationship between problem and policy as well as the basic conditions for successful implementation.

Schneider and Ingram (1990) created an analytical framework to particularly investigate explicit and implicit behavioural assumptions present in laws, rules, and programmes. "A core premise underpinning our approach is now that public policy nearly always strives to encourage individuals to do things they may not otherwise do; or it allows them to accomplish things they could not have done otherwise," write these authors. If people do not undertake particular activities, there are five causes that lead to the installation of five distinct instruments: authority, incentives, capacity development, symbolic instruments, exhortation, and learning tools[8].

Schneider and Ingram's classification differs from McDonnell and Elmore's in its starting point - the former focuses on an explanation based on individual behaviour, the latter on state capabilities - but both agree on the identification of three components: laws, economic incentives, and capacity building (institutions). This triad resembles a traditional policy division adopted by Vedung based on the ways in which the government seeks to influence the behaviour of the individual subject and the degree of "obligation": regulation, subsidies, and information campaigns, a designation popularly known as "sticks, carrots, and sermons".

As noted above, there are several typologies in the extant literature, each with its own set of criteria for defining and characterising a policy instrument. This paper attempts to analyse a policy that is simple to categorise since, as the name implies, it is an incentive instrument. However, depending on the actor targeted by the policy instrument, the incentive might take multiple shapes. Different tools may be recognised in the context of academic or scientific equipment. "What motivates scientists to set up inscription devices, write papers, make things, and hold distinct positions?" ask Latour and Woolgar (1986). In other words, these writers are curious in what drives scientists. They contend that they want "credit," in the sense of credibility. The concept of credibility allows for the exchange of money, data, status, qualifications, issue areas, arguments, publications, and so on.

According to Knorr-Cecina, scientists want the imposition, growth, and monopolisation of "resource-relationships". According to the author, resource connections are at risk when a scientist fills a post, when money is transferred among scientists or groups of researchers, when a speaker is selected for a scientific presentation, or when a scientist's finding is integrated into the study of others. Resources may take several forms, but they are basically defined as coming not just from the community of specialization, but also from extra-disciplinary peers, implying that the author totally erases the boundary between cognitive and social factors. According to Pierre Bourdieu's theoretical theory, "all scientific procedures are aimed at acquiring source of authority (prestige, recognition, and reputation"[9], [10].

Bourdieu describes society as a massive space organised under several sections known as "fields". Science, by this logic, is also a field, namely a field of symbolic creation. The scientific field has many characteristics with the other disciplines, but it has one distinction: the sort of capital at risk, scientific capital. It may be translated as scientific authority, which, under specific circumstances, can be amassed, communicated, and even reconverted into other types of capital. The power to impose the definition of science best suited to the scientist's specific interests, i.e. the definition most likely to enable him/her to occupy the dominant position in full legitimacy, by attributing the highest position in the hierarchy of scientific values to the scientific capacities which s/he personally or institutionally possesses, is at stake in this struggle.

CONCLUSION

In 2006, the Cabinet approved the Twenty Point Programme (TPP)-2006 restructuring. The 65 things that make up these 20 Points are in sync with the activities and schemes that are run by the various Ministries and Departments of the Government of India. The monitoring system started working in April. The twenty poverty, employment, education, housing, health, agriculture, land reforms, irrigation, potable water, protection and empowerment of weaker sections, consumer protection, ecology, e-Government, and other socioeconomic factors are addressed in the programmed.

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CHAPTER 6

ANALYSIS OF MINIMUM NEEDS PROGRAM IN RURAL DEVELOPMENT

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Abstract:

Minimum need program is the program which fulfills the public need. The problem why the study is conducted is to find the significance and role of minimum need program. The purpose of the study depends upon Analysis of Minimum Needs Program in Rural Development. The outcome the study provides need and requirement of the minimum need program. In future, the minimum need program helps in the growth of the rural development.

Keywords:

Education, Food Work, Health Program, Rural, Water.

INTRODUCTION

Evolution of the Minimum Needs program (MNP)

MNP is not a distinct or singular programmer. Rather, a comprehensive set of objectives, strategies, and targets have helped to formalise the idea of minimum needs. The MNP programmers are included in the various programmed in question; additional sectoral outlays do not exist for the MNP. The MNP's goals for the Fifth Plan included:

1. Providing facilities for universal primary education for kids up to age 14 in areas that were close to their homes.
2. ensuring that rural public health services, such as those for preventive care, family planning, nutrition, early diagnosis of morbidity, and referral services, are at a minimum uniformly available in all regions.
3. providing drinking water to troubled villages who have a persistent lack of reliable water sources
4. Constructing all-weather roads in every village with at least 1,500 residents.
5. Newly constructed housing for rural farmworkers who lack land.
6. Improving the environment in urban slums.
7. Ensuring that 30–40% of the rural population is covered through electrification in remote regions.

The MNP and the idea of minimal needs were basically seen as investments in the development of human resources in the sixth Five Year Plan (1980–1985). According to the Plan, the MNP would increase the poor's consumption levels, boosting employees' productivity. MNP was therefore viewed as both a consumption type identification and a nutrition identity. Thus,

nutrition was a distinct element. A further Rs. 5807 crore was also spent, of which Rs. 4927 crore went to state plans and Rs. 833 crore to the central plan[1].

National Food for Work Programme

On November 14, 2004, the Ministry of Rural Development, the federal government, inaugurated the National Food for Work Programme (NFWP), 2004 in 150 of India's most underdeveloped districts, with the goal of creating supplemental wage employment. All underprivileged Indians who are willing to perform manual, unskilled labour under a sponsored programme are eligible. Food grains are freely given to the United States. However, the States will be in responsible of paying the shipping costs, handling fees, and tariffs on food grains. It's always been preferable to give people food grains for free rather than give them money. To accommodate families who are both below the poverty line (BPL) and over the poverty line (APL), the qualifying requirements were loosene.

India is a thriving country, yet there are many underdeveloped, isolated sections of the country where food and water are scarce. However, India has continually worked to improve these sectors, and as a result, in 1977, the Indian government introduced the food-for-work programmed. According to the name of the programmer, food was given to unskilled workers as payment. The program was started by the federal government, which also covers the cost of the food, but the state governments are responsible for paying for transportation, handling, and other fees. This program first began in India's most underdeveloped regions with the primary goal of employing residents in underdeveloped areas. However, several states cut the cost of food grains for residents of these underdeveloped regions, but it was later discovered that merchants had purchased these grains at a discount from the impoverished and were reselling them in the market at a higher price. The nicest thing about this programmer is that those who are over the poverty line may also profit from it; it is not just for those who live in poverty.

Objectives of launching the Food for Work Programme

One of the major goals of this program was to provide free meals to those in need in India's underdeveloped regions. In the beginning, food was given to unskilled workers instead of pay at their place of employment. This plan's main goal at the time was to preserve the lives of the poor who were on the verge of starvation while also involve them in nation-building. However, when this program joined with NREGA, workers began to get payment for their efforts in addition to food. The district collector is designated as the nodal official under this program to ensure that the feed for work program is successfully implemented in his area[2].

Advantages of the Food for Work program

Many individuals living all around India found the Food for Work program to be highly beneficial, and some of its key benefits are noted here.

1. No matter if they have a BPL (Below Poverty Line) of APL (Above Poverty Line) card, everyone is hired under this scheme.
2. Beneficiaries used to get both a pay and food when the Bread for Work Programme and NREGA joined forces.
3. Anyone may sign up for work through this programme, regardless of education level, skill level, or lack thereof.
4. The Food for Work Plan helped individuals start finding work in their communities, which reduced the movement of laborers from other states.

Limitations of the Food for Work Programme

The food for work program has helped a lot of individuals, yet it still has several drawbacks, some of which are listed below:

On how to register workers under this statute, the government has not published any guidance.

1. The food for work program only offers temporary employment, and even then, only for one family member.
2. The major drawback of this plan is the absence of statutory minimum wages. As a result, it has been discovered that contractors frequently take advantage of their employees.
3. Since there was no good scope under this scheme for the workers' safety, employees were forced to do their duties while risking their lives.
4. Under the Food for Work Program, negligence turned out to be the main constraint, and initially, everything went smoothly. But over time, government employees began acting carelessly, which led to the abuse of these underprivileged people.

Data collection

The state government must receive a monthly, quarter, and yearly report on the feed for work programmed from the district's collectors or DM.

Monitoring Committee

A committee of 5 to 9 people is constituted for the effective monitoring and assessment, and at least one SC/ST candidate and one female candidate are required. This committee's responsibility is to oversee and guarantee the correct operation of Food for Work Program.

Survey

To assess the implementation of the Food to Work Program in a district, the central Indian government used to conduct surveys on a regular basis in a few randomly chosen districts.

LITERATURE REVIEW

According to the White, Easton R. [3] minimum time required to detect population trends: the need for long-term monitoring programs which Long-term time series are required to better understand population dynamics, determine the conservation status of species, and make management choices. However, demographic data is sometimes costly and time-consuming. What is the shortest population time series necessary to detect substantial abundance trends? I begin by providing an outline of the theory and previous work that has attempted to answer this subject. I then study 822 vertebrate species populations as a test of these methodologies. I demonstrate that in order to acquire a high degree of statistical power, 72% of time series needed at least 10 years of continuous monitoring. The high diversity across populations, on the other hand, calls into question frequently used simple thumb rules such as those used by the IUCN Red List. I contend that statistical power should be evaluated more often in field sampling. Short time spans are most likely weak and may be deceptive.

Ghangus, Sumit [4] discussed pradhan mantri gram sadak yojana which Rural roads are a fundamental infrastructural necessity and play an important part in the rural community's socioeconomic progress. They provide a substantial contribution to rural development by offering access to commodities and services in adjacent villages, large cities, and market areas. Increased mobility of personnel and materials promotes economic progress, which aids in

poverty reduction and general social development. Rural road development got a big boost during the Fifth Five Year Plan (1974-79), when it was included into the former Minimum Needs Program (MNP). Even during Fifth and Sixth Plans (1980-85), 65,000 communities with populations of 1,500 or more were linked. From the Seventh Plan (1986-1990), the goal was to link communities with populations of 1,000 or more. The MNP was integrated with the Basic Minimum Services (BMS) programme in the last year of the Eighth Plan (1992-97).

Meesapya, Kitikorn [5] discussed quality of life and the basic minimum needs program in thailand which Describes the concept and use of basic minimal need (BMN) indicators in Thailand's village-based social development by the National Rural Development Committee. The techniques employed at the village level and the approaches for detecting community concerns are discussed. The use of BMN in a nationwide effort to enhance Thai people's quality of life is detailed, as are the aims of the government's succession of 5-year plans for economic and social growth.

Usann Kromeyer-Hauschild, [6] et al. gives overview on the current guidelines for obesity prevention in childhood and adolescence which A literature search was conducted in Medline through PubMed, and relevant papers were examined. Programs to reduce childhood obesity have mostly been school-based, with modest success. Analyses by age cohort reveal that preventative strategies work best for young children. Evidence-based guidelines for children in pre-school and early elementary school point to the need for interventions that target both parents and teachers. School-based treatments were most successful throughout adolescence when teenagers were addressed directly. Until far, obesity prevention efforts have mostly focused on behavior-based prevention. The German Alliance of No communicable Diseases has proposed recommendations for community- or environment-based prevention, which include a minimum of 1 hour of physical activity at school, promotion of healthy food choices by taxing unhealthy foods, mandatory standards for meals at kindergartens and schools, and a ban on unhealthy food advertisement aimed at children. Long-term impacts of behavior-oriented preventive interventions were modest. Current initiatives do not successfully reach some people at risk of developing obesity. Although generally accurate conclusions cannot be taken due to the variability of current research, it is obvious that integrating behavior-based programmes with community-based prevention to counteract an 'obesogenic environment' is critical for future obesity prevention programmes' long-term effectiveness.

DISCUSSION

Development and Quality Of Life

A basic minimal requirements approach aims to improve the living conditions of the impoverished. It is often not concerned with delivering consumer items for immediate use. Rather, it attempts to create "human capital," which will ultimately serve as the foundation for economic prosperity. Concerns are generally raised about education and health, with the reasoning that those who are healthy work well than those who are not. As parents' living circumstances improve, they become more optimistic about the future and more inclined to have their children educated.Poverty, in a larger sense, refers not only to a lack of food, clothing, and shelter, but also to living situations that have a direct impact on one's quality of life. Thus, economic and human development are two sides of the same coin, and no endeavour to alleviate poverty can be maintained until all components of poverty are developed concurrently. It also considers the fundamental goal of development, namely, progress with social fairness (Figure 1).

To achieve this goal, numerous programming activities were launched, starting with the First Five-Year Plan. Initially, it was expected that because of the 'trickle-down effect,' increased economic expansion would naturally spread to all segments of the population. Furthermore, Community[7].

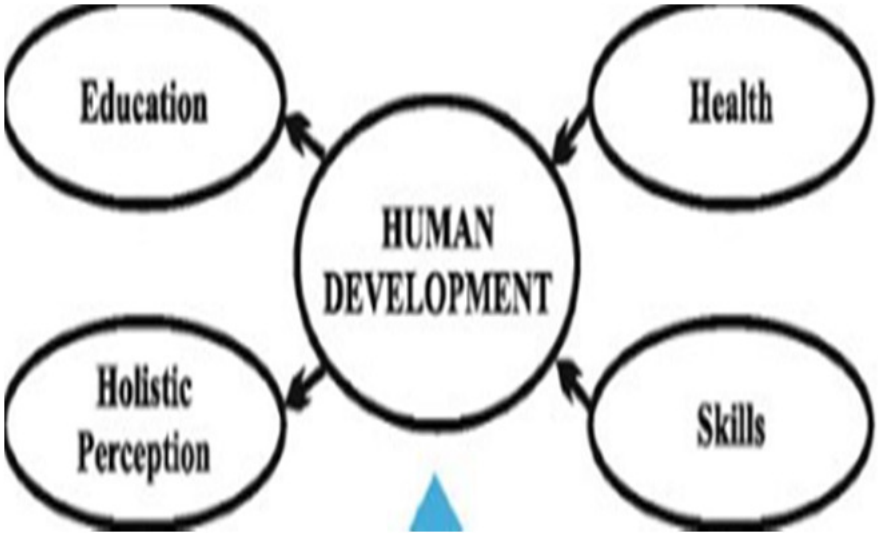

Figure 1: Represent the Development and Quality Of Life.

Development programmes, land reforms, special agricultural development programmes, cooperatives, and other initiatives were deemed to be the most effective means of stimulating rural economic growth. An evaluation of these programmes during the Five Five-Year Plan indicated that, although we were able to attain self-sufficiency in agricultural output, there was a need to expand social services to boost living circumstances in rural regions.As a result, the notion of Minimum Requirements was developed to address specific needs of rural people in general, and the impoverished in particular, and the Minimum Needs Programme (MNP) was established as an essential approach for rural development. This unit will teach you about this idea, its components, and the aims and targets that go with it. The notion of Minimum Needs referred to increasing social consumption via improved poverty earnings on the one hand, and enhancing the availability and quality of social services to the people at reasonable rates on the other.According to the strategy document for the Fifth Plan, poverty reduction needed a multi-pronged approach, and a distinct National programmed for improving social services in connection to fundamental necessities was proposed. "Even with improved work prospects, the poor will be unable to purchase all of the fundamental commodities and services that should feature in any fair idea of a minimal quality of life," it remarked. There is a need to complement the measures for giving increased job possibilities and resulting growth in income of the poorer parts and investment in social sectors including education, health, nutrition, drinking swatter, housing, communications and power[8].

The first phase in the creation of the Minimal Needs programmed (MNP) as described in the Fifth Five-year Plan (draught) was "to identify the key areas of social consumption and to put out for each of them a minimum standard for accomplishment by the end of the Fifth Plan Period". It was noted in the reasoning for MNP that social consumption requirements have received poor attention, especially in economically underdeveloped areas. There was minimal integration or convergence of infrastructure and amenities, and financial restrictions had a negative impact on

these program. The Fifth Plan consequently recommended MNP "with the purpose of building a network of basic services and facilities of social usage in all regions up to nationally accepted norms within a predetermined time period. The initiative was created to help raise living standards and reduce regional inequities in development.The ILO publication Employment, Growth, and Basic Needs: A One-World Problem (1977) officially introduced the notion of basic needs during the Tripartite World Conference on Employment, Income Distribution, and Social Progress (1976). The statement claimed that "The establishment of a list of fundamental requirements, representing a minimal quality of life, identification of the poorest groups and offer concrete targets to aid them and to monitor progress"[9].

Evolution of MNP

The MNP was implemented in 1975-76 as part of the Fifth Five-Year Plan. The MNP was not a single programme with a single budget, but rather a collection of intersectoral components with financial investments in their respective areas. Thus, MNP is a collection of many programmes designed and conducted by several sectoral departments. It is therefore a merger of facilities and services, aims, targets, and outlays of multiple sectoral agencies' programmes aimed largely at the poor.

Components of MNP

The MNP's primary components are as follows:

1. Adult education to enhance literacy among those over the age of 15.
2. Construction of rural public health centers. Preventive medicine, family planning, hygiene, early identification of morbidity, and referral services are examples.
3. Provision of drinking water in problem communities who have a persistent lack of clean water sources.
4. Construction of all-weather roads in all settlements with a population of 1500 or more people.
5. Development of houses or home grounds for the homeless in rural regions.
6. Slum environmental improvement.
7. Electrification of rural areas.

Though these services were designed to meet a range of requirements, they were intended to be administered in a coordinated way. Water, electricity, and connection roads were to be delivered to communities with primary health care centers or schools. The inference was that comprehensive decentralized planning and execution would take place.Through service convergence, the individual aspects of MNP were seen as "integral pieces of a package of facilities" in a specific unit area. The proposal also indicated the necessity for norm-based flexibility.

Though the programmes featured in MNP were previously being implemented in previous Plans, they were placed under MNP as an integrated concept launched in the Fifth Plan. The Fifth Five-year Plan allocated Rs. 2,803 crores for MNP, compared to Rs. 1,056 crores for such programmes in the Fourth Plan, indicating that the MNP approach provided a thrust to improve the services under the programme with an assured investment, to prevent diversion of funds, and to monitor progress.Following then, various other goods were brought under MNP. Rural household cooking energy, rural sanitation, and public distribution systems, for example, have been included to the list. Similarly, the standards established for multiple elements at the time the

programme was launched were amended from time to time.There was no dedicated funding for MNP. The various things under MNP were handled by various departments/ of the Central and State Governments, which were supposed to allocate precise sums for the goods in question. Elementary and adult education, for example, were under the Ministry/Department of Education; primary health care was under the Ministry of Health; and rural housing, drinking water, and sanitation were under the Rural Development Department. Rural electrification was the responsibility of the Ministry of Energy and Energy, whereas nutrition was the responsibility of the Ministry of Food[10].

Progress of the Different Components of MNP

Elementary Education

The level of literacy in a nation is a significant measure of its growth. At the time of independence, little over 16% of the population was literate. Literacy improvement was therefore an apparent goal for development initiatives. As a result, one of the main areas of national development strategy was primary education for children aged 5 to 14. Different Five-Year Plans established aims for reaching 100 percent literacy, but the results were not satisfactory.

Unit 1 of Block 4 of the MRD-101 course is on Elementary Education and the Total Literacy Campaign (TLC). You must have read in that lesson that the number of elementary schools expanded more than thrice from 1950-51 to 2001, while the number of upper primary level increased fifteen fold. Primary school enrollment has increased from 19.2 million in 1950-51 to 113.83 million in 2000-01. Despite this, we were able to accomplish the required breakthrough. A variety of new programmed and initiatives are being launched to address the issue of basic requirements.

Adult Education

Aside from basic education, it was important to educate a huge number of adults, who form the backbone of labour force. As a result, on October 2, 1978, the Government of India began the National Adult Education Programme (NAEP). The Seventh Plan set the goal of reaching 100% coverage of people aged 15 to 35 via non-formal education by 1990. As a result, the target date was pushed back to 1995. The National Literacy Mission (NLM) was established in 1987-88 to make a concentrated effort to eradicate illiteracy among adults. By 2001, different literacy programmes had reached around 96.64 million individuals. Currently, 163 of the country's 593 districts are covered by the Total Literacy Mission (TLC), 264 by the Primary Literacy Campaign (PLC), and 30 by the Rural Functional Literacy Programme. The new programmes' principal goal is to reach a sustained threshold literacy level of 75% by 2005.

Rural Health

Health for all is the primary goal of Primary Health Care, and to attain it, target dates and standards have been set and updated several times. The most recent requirement was to complete it by the year 2000 AD. As a result, basic health facilities were extended further, with a focus on preventative and promotional health care. The new MNP standards for enhancing the three-tier system of health facilities, which includes Health Sub-Centres (HSCs), Primary Health Centres (PHCs), and Community Health Centres (CHCs), are as follows:

1. In 1990, establish one sub-center for a population of 5,000 in the plains and 3,000 in tribal and mountainous regions (100 per cent coverage).
2. By 1990, establish one primary health care (PHC) for a population of 30,000 in the plains and 20,000 in tribal and mountainous regions (100 per cent coverage).
3. iii) Establishment of one community health centre (CHC) or one community development block for a population of 100,000 by 1990.
4. The nation now has 1, 37,271 Heath Sub-Centres, 22,975 Primary Health Centres, and 2,935 Community Health Centers.
5. There are also 5, 435 Family Welfare Centres in operation.

Rural Water Supply

Another focus area of national policy under the Minimum Needs Programme was safe drinking water for rural communities. Previously, the village was the entity in charge of providing this service. During the process, it was discovered that, although the main village was covered by the water supply project, numerous hamlets were left out. According to the 1994 National Habitat Survey for Drinking Water, there were 14, 30,543 rural habitats with no clean drinking water at all. To address the issue of drinking water in rural areas, the Government of India launched the Technology Mission on Drinking Water in Rural communities and Related Water Management in August 1986 with the following specific objectives: i) to cover all residual problem villages by 1990; ii) to supply potable water at 40 liters per capita per day (lpcd) generally and 70 lpcd in Rajasthan desert areas (to include cattle needs); iii) to evolve. To accomplish the aforementioned goals, 50 Mini-Missions and 5 Sub-Missions were launched. Voluntary organizations were also active in the development and operation of rural water delivery projects, as well as in raising public awareness. The Gram Panchayats were granted the obligation to create and manage drinking water infrastructure in villages after the 73rd Constitution Amendment. In keeping with these trends, the Swajal Yojana was first implemented in 60 districts and has now expanded to encompass the whole nation.

Rural Roads

The Sixth Plan set a goal of reaching all villages with populations of 1,500 or more, as well as 50% of villages with populations of 1,000-1,500, with all-weather roads during a ten-year period ending in 1990. While linking villages with populations more than 1,000, it was planned that villages with populations less than 1,000 would be taken up once the first target was met, and that while building road links, attempts would be made to link as many minor villages route as feasible.

Rural Electrification

Rural electrification is a symbol of rural modernization in India, as well as a way of delivering electrical electricity to communities for household, agricultural, and commercial usage. The program's most recent goal is to attain complete rural electrification. The priority areas for Rural Electrification under MNP have been identified as follows:

All the North-Eastern cliff side states (Meghalaya, Tripura, Assam, Manipur, Nagaland, Sikkim, Arunachal Pradesh and Mizoram) and the Union Territories; Districts in other jurisdictions with less than 65 per cent of electrification, the districts having the least percentage of electrification to be covered first; and iii) All areas included in the Tribal Sub-Plans. By the end of 2000, over

500,000 villages had been electrified. However, just 31% of rural households have access to power. So far, 12.5 million wells in agriculture have been revitalized.

Nutrition

More than half of all newborn infants are underweight, and another half are malnourished. There are three techniques to addressing nutritional deficiency: (i) dietary variety, (ii) dietary supplementation, and (iii) food fortification. The third strategy to addressing the issue of nutritional inadequacy in children, pregnant and breastfeeding women is both cost effective and sustainable. The Special Nutrition Programme (SNP) and the Mid-day Meal Programme make up the nutrition component of MNP (MDM). Preschool children under the age of six, pregnant women, and nursing moms are all covered by SNP. For 300 days each year, the plan offers additional feeding (300 calories with 8-12 grammes of protein per kid and 500 calories with 20-25 grammes of protein per mother). The MDM programme is designed for school-aged children aged 6 to 11. For 200 days a year, it provides supplementary food with 300 calories and 8-12 grammes of protein per kid. SNP and MDM are also being linked to other inputs such as health, water availability, hygiene, and sanitation.

Rural Domestic Cooking Energy

Non-commercial energy sources are the most often utilised for cooking in rural regions (firewood, crop waste, animal dung, etc.). 75.5 percent of total home cooking energy demands are provided by fire wood and chips, and 10.6 percent by dung cake. As a result, more than 86% of overall demand is satisfied locally. The supply of these sources is quickly depleting, and according to the study of the Fuel Wood Committee (1982), the availability of frying energy may soon become a larger limitation than the availability of food itself. As a result, in 1985-86, the two projects of rural fuel wood planting and upgraded chulhas, which were in operation during the Sixth Plan, were combined with and formed an extra component of the MNP Programme for Domestic Cooking Energy. Approximately 9.7 million upgraded chulhas and almost 2.6 lakh hectares got covered by the fuel wood planting programme during the Ninth Plan era.

CONCLUSION

The Minimum Demands Programme (MNP) was established during the inaugural year of the Fifth Five Year Plan (1974-78) to meet certain fundamental needs and enhance people's living conditions. It aims at Economic development of the community, especially the impoverished and neglected people.

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CHAPTER 7

DEVELOPMENT OF RURAL WATER SUPPLY IN RURAL AREAS

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Abstract:

Rural water supply is the water supply system which helps to provide transmission of water to the rural areas. The problem why the study is conducted is to provide information how water supply system works in the rural areas. The purpose of the study is development of rural water supply in rural areas. The outcome of the study provide deep knowledge and analysis about the water supply, system. In future, the rural water supply system is help to the development of the water supply system.

Keywords:

Nutrition, Rural Development, Rural Areas, Rural Electrification, Water supply.

INTRODUCTION

Another focus area of the national strategy under Minimum Needs programmed was safe water supply for rural communities. Previously, the community served as the delivery unit for this plant. It was discovered throughout the procedure that, even though the main village was many hamlets weren't covered either by water delivery project and were left exposed. According to the 1994 National Footprint Survey for drinking water, there were 14,30,543 rural habitats, and more over 4,00,000 of them lacked any access to safe drinking water. The Government of India initiated the Technology Mission on Drinking Purposes in Villages and Relevant Water Management in August 1986 with the contains a central goals in mind to address the issue of drinking water in rural areas:

1. To provide potable water at a rate of 40 litres per capita per day generally and 70 LPCD in Rajasthan's desert regions.
2. To supply potable water at a rate of 70 by 1990.
3. To develop cost-effective digital mixes to meet these goals within the constraints of Plan allocations.
4. To implement conservation measures for a sustained supply of drinking.

Five sub-missions and fifty mini-missions were launched to accomplish the aforementioned goals. Additionally, voluntary organizations were active in raising public awareness and carrying out the implementation and operation of rural water delivery projects. The Gram Panchayats were assigned the duty to provide and maintain drinking water infrastructure in the villages after the 73rd Constitutional Amendment. In response to these changes, the Stajan Yojana was originally launched in 60 districts before being expanded to the entire nation

Rural Roads

In the 10 years leading up to 1990, the Sixth Plan set a goal of providing all villages with such a population of 1,500 or more and 50% of villages with a population of 1,000 to 1,500 with all-weather roads. When developing road links, attempts would be made to connect as many small villages as feasible along the way while linking communities with a number of more than 1,000. Villages with a population of less than 1,000 would also be taken up after attaining the first target[1], [2].

Rural Electrification

Rural electrification in India is a sign of rural modernity as well as a way to supply electrical power to the villages for household, agricultural, and commercial usage. The program's most recent goal is to completely electrify all rural areas. The following areas have been designated as the top candidates for rural electrification under MNP:

1. all of the North-Eastern highland states (Meghalaya, Manipur, Assam, Manipur, Nagaland, Sikkim, Arunachal Pradesh, and Mizoram);
2. district is located in other states with less than 65% electrification, with the districts with the lowest electrification percentage to be covered first
3. all of the regions covered by the region

Environmental Improvement of Urban Slums

The Environmental Rehabilitation of Urban Slums programmer has not yet offered alleviation to the target group, which numbers over 17.5 million people. The Seventh Plan set a goal of 9 million slum inhabitants, with the condition that all would be reached either by Eighth Plan. Additionally, it was planned to take action to give slum inhabitants security of tenure so they would have a role in preserving and enhancing their environment. However, increased migration from rural regions results in the creation of new slums, making it exceedingly challenging to get 100% coverage of the target demographic at any given moment[3].

Nutrition

More than 50% of newborn children are underweight and 55% are malnourished even now. Three methods are available to counteract nutritional deficiencies: dietary diversity, food fortification, and medication supplementation. The third strategy, which addresses the issue of nutritional inadequacy in children, pregnant women, and breastfeeding moms, is both economical and long-lasting. The Special Nutrition Programme (SNP) and also the Mid-day Food Programme make up the MNP's nutrition component (MDM). Preschoolers under the age of six, pregnant women, and nursing moms are all covered by SNP. The programme offers 300 people with supplemental meals each day (300 calories with 8–12 grammes of protein for each kid and (500 kcal with 20–25 grammes of protein for each mother.

Rural Domestic Cooking Energy

In 1987–1988, the Rural Sanitation Program was added as one of the elements of the Minimum Needs Program. In order to improve the quality of life in rural areas, the Rural Sanitation programmed would supplement the measures taken under the varied Central and State Sector Programmed by providing sanitation services in country places through the construction of agricultural sanitary latrines for individual households.

Public Distribution System

Food security is a key primary goals of the Public Delivery System (PDS), and as a result, it was added as one of the MNP's significant components in 1987–1988. The PDS is responsible for making sure that the population, particularly the most disadvantaged segments of society in both urban and rural regions, has access to basic daily necessities at fair pricing. Grains, rice, sugar, imported oil products, paraffin, soft coke, and regulated cloth are the seven key goods supplied under PDS. The states purchase and provide all of these goods for distribution through their network of fair pricing stores. The food grains are really being sold at reduced costs as a way to assist the BPL households. The elderly and/or those in need are given 10 kg of free rice, wheat, or both under the Annapurna programme, which was started in 2000.

Adult Education

In addition to basic education, it was essential to teach reading to a sizable number of adults who make up the labour force. As a result, on October 2nd, 1978, the Indian government introduced the National Adult Education Programme (NAEP). The Seventh Plan established a goal of providing non-formal education to every adult between the ages of 15 and 35 by the year 1990. The target was later changed to 1995. The National Literacy Mission (NLM) was established in 1987–1988 to make a concentrated effort to eradicate illiteracy among the adult population. By 2001, 96.64 million individuals were enrolled in one or more literacy programmers.

LITERATURE REVIEW

Weikun Gao et al. [4] explained development and technology of rural drinking water supply which Access to clean drinking water in rural places is a fundamental human necessity. Since 2000, China has made major investments in enhancing rural drinking water safety across the country as a vital step to reduce poverty and promote rural development. China met the millennium development objective (MDG) of reducing the proportion of the population without access to clean drinking water by 2015 in 2009. The four key variables in assessing drinking water safety are water quality, water quantity, assured likelihood of water source, and ease of water acquisition. During the past 20 years, technology and novel equipment for water filtration and disinfection, construction models, and management technology and institutions have been created to assist large-scale construction and administration of rural drinking water supply projects. This report describes the technological development and experience gained in the building and administration of China's rural drinking water supply.

Kerstin Jaskolski, et al. [5] explained the nexus approach to solar technology for energy and water supply for sustainable rural development in Egypt which Our assessment is based on the United Nations Sustainable Development Goals (SDGs) and their connections in developing countries in general, and in Egypt in particular. Issues of energy and water supply, connected to agriculture in rural regions, include many of the SDGs. The present state of solar photovoltaic (PV) energy generation and water delivery technology in rural regions is critically reviewed, with a forecast on future advances offered. The framework of the water-energy-food national strategy and its relationship to the SDGs globally, in the MENA region, and in Egypt is presented, and recommendations on institutional governance and research and development are made to overcome silos and improve sector collaboration at all levels as a prerequisite for achieving the SDGs. The most recent technological advancements in PV and water technologies, as well as their potential for rural development, are discussed. With instances from Egypt,

combined technological solutions are illustrated. Specifically, existing systems in different rural locales are given, together with their benefits and drawbacks.

M. Gutter, et al. [6]explained impact of regional water supply, sanitation et hygiene (wash) program in senegal on rural livelihoods and sustainable development which Senegal benefitted from the African Development Bank's (AfDB) Rural Water Supply and Sanitation Initiative (RWSSI), a WASH sub-program for 17,100 families in the Louga, Ziguinchor, and Kolda regions. The AfDB Independent Development Evaluation (IDEV) performed a project outcomes assessment in 2016 to determine the sub-program effects on community living conditions. This approach enabled the measurement of project impacts based on comparative pre- and post-intervention data, as well as beneficiary and non-beneficiary groups, taking into account collected quantitative data (963 households, 38 schools, 23 health centres, and 46 GPS infrastructure points) and qualitative information (31 individual interviews and 4 focus group discussions). To establish the project's outcomes indicators as well as their overall impacts, many analyses (descriptive statistics, correlative analysis, effects and evaluation using Average Treatment Effect (ATE) and cartographic treatment) were performed. The findings demonstrate that 73% of beneficiaries have access to drinking water, compared to 6% of non-beneficiaries, and 72% have access to sanitation (improved latrine) in the treatment areas, compared to 33.7% in the control regions. In sub-program emphasis regions, there was a 157-liter increase in water consumption per home, a 0.072-dollar decrease in water price, and a 65-minute decrease in time required to deliver drinking water. Also, it was noted a reduction in arduousness of carrying water by 2 km from the supply point, an increase in the schooling rate of children, especially girls, in revenue activities, a decrease in the number of sick people avoided by 2 persons and increase in medical treatment avoided were noted. The project's achievements show that improving access to water, sanitation, and hygiene is one of the main drivers and levers of change and transformation of rural households' living conditions, often explaining the priority given to this area of intervention in the implementation of the MDGs and SDGs.

Padawangi, Rita et al. [7] explained community-driven development as a driver of change which Is a community-driven development (CDD) approach to rural water delivery effective? Some theoretical benefits of CDD approaches include: (1) community choices are more responsive to local needs; (2) sustainable O&M is more likely; (3) social capital is built; (4) increased participation results in better oversight and less corruption; and (5) communities get to be active partners in development, which is a worthy goal in and of itself. Using quantitative and qualitative data from a water supply and sanitation project in Punjab, Pakistan, the study finds that the CDD approach, consistent to expectations, must have done well in extending water supply, drainage, and sanitation coverage to the poor rural communities, and demonstrated outcomes that only include achievable through CDD - including water tariff and cultural changes. The initiative was also successful in encouraging local engagement and ownership, notably among women's organisations, and is therefore expected to have long-term operation and maintenance (O & M). This research reveals two components of CDD in water supply and sanitation as means to an end: political change, by suggesting implementation techniques of decentralization; and cultural reform, by presenting a way to dismantle cultural obstacles. The human development index in municipalities with the integrated rural sanitation system which the human development of eight rural municipalities in Ceará with the Integrated Rural Sanitation System (SISAR) and 170 without. The analysis was created using data from the 1991, 2000, and 2010 Demographic Censuses and was built on the Municipal Human Development Indicators (MHDIs) included in the Atlas of Human Development. The statistical studies were carried out

using the R programme. The overall MHDI findings revealed a substantial disparity in the means of the two groups, which did not exist when the income, longevity, and education dimensions were examined. In summary, it was established that, in general, constructing water supply systems leads to boosting human development levels, although this concept was not statistically proved in terms of the more particular aspects.

Mohammad A. Rahman [8] et al. discussed suitability of roof harvested rainwater for potential potable water production which Sustainable solution for rural drinking water supply at a cheap cost, especially connected to two of the United Nations' Sustainable Development Goals: G3. Good health and well-being and clean water and sanitation are priorities for the G6. In this regard, the goal of this scoping review is to assess the technical, financial, and acceptability aspects of a small-scale rainwater harvesting system in order to determine whether it can meet the demand for drinking water at the household level in rural communities at a low fee and in a sustainable manner. We have reviewed recent studies on rainwater harvesting systems to investigate: i. Whether a small scale system is financially and technically viable at rural community level, ii. Whether the quality of rainwater tanks meets standards for drinking water, iii. Why rainwater harvesting system hasn't evolved into mainstream water supply system as yet and iv. how climate change may impact the reliability of a small-scale rainwater harvesting system. When particular processes and risk assessment methods are followed in developing and maintaining the system, a small scale roof linked rainwater harvesting system is determined to be economically and technically viable. It has also been discovered that captured rainwater requires thorough treatment before being consumed by humans. Public perceptions, capital costs, a lack of knowledge about rainwater harvesting systems, mixed information about rainwater quality, risks associated with the system due to climate change, degradation of stored water quality over time, and, in some cases, insufficient policies all obstruct widespread adoption of rainwater harvesting technology. The globe may witness a major shift in socio-economic development of many rural places when a sustainable drinking water supply system is developed through a rainwater collection system.

DISCUSSION

Trends in Rural Water Supply

Urbanisation, along with growing living and educational standards, is causing an inevitable increase in the aspirations of rural water consumers, who desire even if they cannot or will not pay more than the very minimal levels of service given by traditional community management. At the same time, these tendencies undermine the type of community cohesiveness and volunteering that constitutes an underlying assumption for community management. The recognition by the UN General Assembly (2010) of access to clean water and sanitation as personal freedoms has likewise provided an important standard for what the global community deems an acceptable level of service.These developments provide a significant challenge to emerging nations' rural water sectors. This topic has been understood, to yet, largely in terms of a need to confront the sustainability of water supply infrastructure. We will argue that while hardware sustainability (or functionality) is certainly a challenge, we need to go further than this, and to recast our approach to rural water supply in terms of the provision of a lasting service against defined and measurable indicators - what we refer to as a service delivery approach. This entails first determining what quality of service is desired by consumers and required by

government, and then specifying them in (gradually increasing) norms or standards. Furthermore, it entails the existence of a set of officially defined service delivery models that enable the fulfilment of specified service standards.In many situations, this entails expanding the communal management model from its present one-size-fits-all approach to a broader range of models for various circumstances. These may still be founded on community management principles, but with a greater degree of professionalization or external assistance to community-based service providers; however, alternative models, such as delegated management or self-supply, are also necessary. Finally, it entails the adoption of financing for all service costs across the whole life cycle, with a special emphasis on financing capital maintenance (asset management) and direct support expenses, typically integrating financing from several sources.

In this article, we will present further instances of these issues and trends, as well as argue that the transition to a service delivery model is already happening. The papers in this special issue demonstrate many of the steps required for implementation and report on an expanding number of tools and approaches created to enable it. The change in focus that we detect in this article is both continuing and, at least in part, evolutionary. The rural water sector must change dramatically, but this can and should be accomplished by building on and maintaining current reform initiatives while respecting local conditions. Oversimplification is always a problem in a research like this that strives to find commonality across very different realities. We are aware that there are significant differences in the way rural water is supplied across countries, with some countries having achieved a high amount of insurance and transitioning to a more service-oriented approach, while others are still in a phase characterized primarily by infrastructure development.

Past Approaches to Rural Water Supply

The history and evolution of modern methods to rural water delivery in poor nations have been thoroughly recorded, possibly most completely by Harris and Reed (2006), and this brief overview depends significantly on their work. The majority of contemporary methods to rural water delivery in developing nations can be traced back to the 1980s and the World Decade for Drinking Water and Sanitation, when a concentrated wave of activity was launched to quickly enhance access to rural water and sanitation. During the decade community management arose not just as the dominant management model, partly as a response to the failure of centralized government service delivery but also as a by-product of the 'project approach' of most NGOs and funders. Under this, infrastructure was delivered to communities by external organizations, while it was believed that maintenance and operation (O&M) would be taken up by communities after 'hand over' of the infrastructure at the conclusion of a project. Community management is founded on a set of explicit and implicit principles, which include:

1) community engagement in the creation of the water system;

2) community ownership of the system; and

3) community willingness and capacity to carry out O&M.

These concepts are based on a set of underlying (sometimes implicit) assumptions, such as community cohesion, ‘sense of ownership' as a meaningful substitute for rightful possession, and the desire and capacity to build institutions and donate time to maintain technological systems. These preconceptions, which are founded on cultural idealized version of rural areas, have been shown to be falsehoods.

In the late 1990s, the demand responsive strategy supplemented the community management approach (DRA). Strongly supported by the World Bank (and therefore deeply rooted in the neoliberal thinking of the time), the DRA was intended to underpin community management by ensuring that the type or level of water supply provided was appropriate to, and the demand (in the sense of economic demand or willingness to pay) of, the community - with demand manifested by notions of informed involvement in technology choice, community contribution to the investment costs, and assumption of re (World Bank, 1998). By the early 2000s, the combination of content production with the DRA became the default option for rural water supplies in most of the developing world[9].

Increase World Coverage in a Rapidly Changing

At the macro level, this method presents a stunning success story, with the World Health Organization/United Nations Children's Fund (WHO/UNICEF) Joint Monitoring Programme (JMP) showing substantial worldwide improvement on access to rural water services. The objective for worldwide access to clean water was fulfilled five years early, and only a small number of countries are predicted to fall short by 2015 (WHO/UNICEF, 2012a). Globally, the proportion of rural people having improved water sources climbed from 62% in 1990 to 81% in 2010.Behind the raw numbers for increased access, there is also an increase in the level of service delivered to rural residents. The percentage of rural residents having a water supply piped directly into their properties increased from 17 to 28% between 1990 and 2010 (WHO/UNICEF, 2012b). This was driven in part by a number of wider developments in the globe, the most significant of which are briefly considered in the following paragraphs. These factors have far-reaching ramifications for the future of rural water provision in general.

A first significant cause for changes of rural water is urbanization. In 1980, both Asia and Africa had urban populations between 25 and 30%. Africa will rank 42, Asia will rank 48, and Latin America will rank close to 80% in 2015. (UN DESA, 2011). While this is mainly related to urban expansion, it also has an influence on rural places. Urbanisation is not restricted to big cities; it also involves fast expansion in smaller towns (in 2011, 60% of persons living in urban regions lived in cities with less than 500,000 inhabitants and rural growth centres). As a consequence, historically 'rural' regions with scattered patterns of habitation are increasingly exhibiting a mix of small towns, rural development centres, villages, and hamlets.

A second significant factor is economic development and poverty alleviation. Since the turn of the century, these three continents have had substantial and persistent economic development, with poverty falling sharply in Post Africa (58 to 47%), South Asia (45 to 36%), and Latin America (46 to 31%). (World Bank, 2013). This economic expansion is resulting in not just a reduction in general poverty, but also the fast rise of new middle-classes: more well-educated

individuals with discretionary incomes and swiftly rising aspirations. There are several markers of changes in lifestyle and expectations in the poor world, but none is more obvious (or extensively documented) than mobile phone availability. According to a recent World Bank study, access to mobile phones was about 70% in South Asia in 2011, 60% in Sub-Saharan Africa, and nearly 100% in Latin America (World Bank, 2012).

This mix of urbanisation and rising lifestyle and expectation levels is echoed in the rural water sector, where both water consumers and governments are aiming for improved standards of service. This need may be observed in the widespread adoption of self-supply solutions, where families fund and create their own water supply (Sutton, 2004) both in locations where there is no service and to segment basic services. It is also reflected in the adoption by governments of higher service levels - most typically in the form of a move away from hand pumps and towards piped supplies. As rural settlements grow into bigger villages and small towns it becomes more technically and financially feasible to have piped supplies with higher levels of service.For example, under India's most period of five plan, there is an express intention to move towards delivering rural water services via taps (ideally in homesteads), with hand pumps only being used in especially challenging places.

In their analysis of relative increase in piped supplies in the rural areas of the developing World for the period 1990-2010, Smits and Moriarty (2013) found that piped supplies typically start being put in splice from coverage levels of around 50%, subsequently showing fairly steady (though by no means uniform) acceleration. Coverage increase in nations with greater levels of overall coverage more than 70%starts to depend more on higher levels of service delivered via piped systems into households. Even while many nations in sub-Saharan Africa and South Asia have so far depended on point sources, it is thus anticipated that, now that they are attaining coverage rates of approximately 70%, there will be a shift towards piped supplies at the premises.

In summary, the combination of community management and DRA has enabled many rural people to get access to basic water supplies, whilst urbanization and increasing wealth are increasing the number of people living in largely rural areas who enjoy greater service levels (sometimes through community supplies, sometimes through self-supply. Taken as a whole, this paints a wide picture of success (Figure 1).

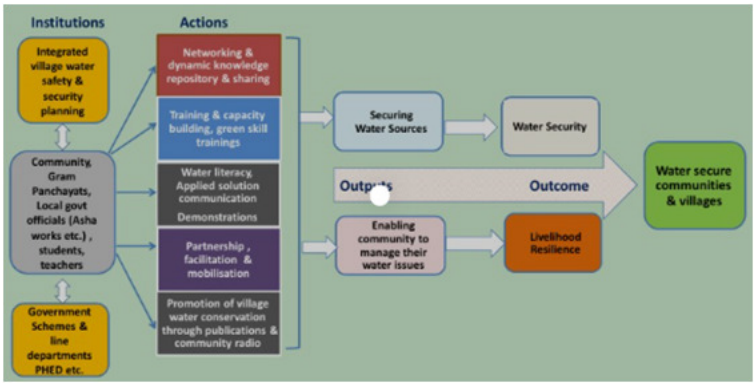

Figure 1: Represent the water supply system in rural areas.

Evolutions in Rural Water Supply

Communities have proven that they can cope with many elements of managing basic supplies (Schouten and Moriarty, 2003; Harvey Reed, 2006; Bakalian and Wakeman, 2009), but struggle with others - particularly with those relating to longer-term sustainability and unavoidable asset replacement. Despite judging most systems as functioning well, Bakalian and Wakeman (2009) found that money management was typically inadequate and that most communities were solely concerned with day-to-day operations (if that). There was little or no systematic accrual for day-to-day repairs, capital maintenance, or system expansion - with the previously noted, and unexpected, outcome that many individuals were resorting to dangerous sources at least portion of the time in all schemes. Some of the publications in this special issue mirror these conclusions. According to Smits et al. (current issue), just approximately half of the 40 community-based service providers examined in Colombia could be classed as performing adequately. Fogelberg (this issue) thinks that only around 80% of the water systems in her research region in Bolivia arelikely to be sustainable.Recognizing the possibilities and possible constraints of community management, three sets of answers have arisen in rural water supply over the past decade or so, each of which is commented on below:

1. Support for community-based service providers
2. Professionalization of community management
3. Self-supply

As people get richer, and water systems become more intricate, experience reveals that more professional management is required to cope with tasks such as water treatment, catchment protection and auditable accountancy. For example, Smits et al. (this issue) explain that how Colombia, middle-income country with community management of relatively complex piped systems delivering household water supplies, community management regulations allow for the hiring of paid staff, such plumbers or administrators, and require these to be certified by training institutions. The Government of Colombia's Programa de Cultura Empresarial (business culture programme) sought to professionalise community-based service providers by promoting good business practises and the hiring of paid staff In some cases professionalisation may go as far as fully outsourcing some or most service provision tasks to private operators - the difference with full privatisation being that some authoritative function and asset ownership remain with the community or, more typically, local government.

In essence, professionalization is holding service providers more systematically accountable for their work, against predetermined performance measures, and involves the use of regulation.While more and more nations have regulators enforcing strong performance and management practices in their utilities in urban areas, this is still mainly missing in rural regions). Where it does exist, many community-based service providers fail to satisfy the performance indicators that have been established. In the lack of a formal regulator for rural water services, regulatory tasks must be incorporated in other actors, most often local government as a service authority. A second set of remedies to the limits of community-based management centred on the notion of service delivery assistance. It was recognised in the early 2000s that the majority of community-based service providers are unable to manage their water

supply without external assistance. In actuality, as revealed by Whittington et al. (2009) in the previously cited World Bank research in Bolivia, Ghana, and Peru, and repeated by Smits et al., the great majority of community-based service providers do get some external funding (this issue). While this is often offered ad hoc, if and when a problem arises, we refer to the more formal relationships between communities and support agents, who come and provide help on a regular basis and are therefore able to predict difficulties. Such structured support can be provided by a variety of entities, and the last decade has seen a variety of institutional mechanisms for establishing this, including: support from local governments as the mandated water service authority; support from specialized entities such as a private company or utility; and support from national government agencies Gibson a Jones (this issue) also contrasts the various packages of assistance supplied by Water6Aid in Mali to what is generally provided by the Mali government[10].

There is growing evidence that such assistance has a positive influence, particularly on the performance of community-based service providers in their O&M and administrative duties (. Simultaneously, proof of influence on real service delivery has been minimal (e.g. Smits et al., this issue. This is not unexpected given that support is not a simple on/off switch (either there or absent]. Indeed, we suspect that direct support, like other aspects of service provision, is subject to threshold effects: below a certain level of support, there will be no visible impact, and there will only be a correlation between money and effort put into support and service improvement once the threshold has been met.

Dispersed villages that are exceedingly costly to supply by piped networks or even boreholes and hand pumps. As the majority of the rural population gains coverage, these final pockets will become an increasingly challenging and costly group of individuals to serve in the push to reach universal coverage. For them, the only possible medium-term option is self-supply, but self-supply recognized and backed by the state and its agencies, or what Butterworth et al. (this issue) refer to as self-supply acceleration. At the other end of the scale, fast-growing small towns and rural growth points are too large and heterogeneous and their demands for liquid too technically complex to be met by a model of community management based on it and ad-hoc money collection to address repairs or breakdowns.

CONCLUSION

To sum up, water is crucial for all Earth's living things. Water is consumed by not just humans but also by animals and plants. Water is a fascinating element that nourishes life in our incredible planet. This precious resource has to be protected and kept for the future. Freshwater is a fragile and restricted natural resource and, increasingly, much of it is contaminated, by both pathogenic bacteria and chemical toxins. Human need for freshwater is rising; specifically, water is needed to irrigate crops in order to feed the world's fast-growing population.

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CHAPTER 8

ANALYSIS ON THE HUMAN RESOURCE DEVELOPMENT

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Abstract:

Human resource development program is the procedure providing resource which are needed by the human. The problem why the study is conducted is to provide information about the human resource development. The purpose of the study is analysis of human resource development. The outcome of the study provide the special information about the human resource development. In future, the human resource development will help to restore the rural areas.

Keywords:

Rural Areas, Human Resource Development, Human Resource, Job Shadowing.

INTRODUCTION

In order to improve the knowledge, skills, training, and talents of their employees, businesses offer a wide range of opportunities for training and advancement. The process of human resources development frequently starts when a new employee is hired and lasts the duration of that individual's employment with the company.Many workers enter an organization with just rudimentary knowledge and experience, thus they require education in order to perform their tasks well. Others could be qualified for the position already, but they lack information specific to that company. The purpose of HR development is to provide workers with the knowledge they need to successfully integrate into an organization's culture[1].

Purpose of Human Resource Development (HRD)

In some aspects, human resource development is comparable to how a coach sees his squad of athletes. Although a coach may choose individuals who possess some talent and ability, the goal of ongoing practice is to hone those qualities and develop players into even better athletes.Making better workers is the same objective of HR development. The goal of Continuous improvement is to give employees the "coaching" they need to expand and reinforce the expertise, skills, and talents they currently possess. The purpose of training and development is to improve employees' performance.The process of HRD is continual and constant. Human Resource Development consistently offers education and training to help employees improve all kinds of talents from the moment they start working for the company until they retire. HRD is a methodical procedure that is meticulously prepared for the entire development of a workforce inside a business. All industries, including those in manufacturing and services, are subject to HRD. HRD does not simply concentrate on a single behavior or the beginning of a worker's

talent. By concentrating on the employee's behaviors, technical skills, communication skills, management abilities, etc., it focuses on the employee's total growth[2].

The major purpose of human resource development is to offer the education and training required to boost labour productivity and assist management and organisations in achieving their intended objectives, ambitions, and missions.Employees' professionalism and the amount of work they can handle grow as a result of ongoing training and development, which also makes them more adaptable to the continuous changes that are made inside the business.Human resource management makes sure that there isn't discrimination among the organization's workforce by ensuring that the cultural behaviour of the organisation is advantageous to the other new joining workers or the employees who may join in the future. The staff all exhibit identical conduct, etc.

Types of Human resource development

Human resource development starts as soon like an employee is employed and continues for the duration of the individual's employment with the company. HRD can take many different forms, such as classroom or online instruction, textbook or online instruction, growth opportunities, and adherence instruction.

On-the-job training

One type of training offered at the workplace is on-the-job training. Employees grow used to the working atmosphere they will be a part of during the training. Additionally, workers receive practical training in operating various pieces of machinery, tools, materials, etc.

Job shadowing

Employees follow a more seasoned colleague during a job shadowing training session to see how they carry out their duties. It is a fantastic opportunity to pick up helpful tips and tactics from seasoned individuals. This is a very efficient teaching approach that enables students to express questions and receive responses in real time.Normally, this is completed before the person reports for duty. The jobs that new recruits are shadowing are clear to them. It is the best technique to determine whether they are the proper candidate and qualified for the position. Colleagues can learn the abilities they require by observing and coaching one another.

Intellectual or professional development

Intellectual or professional growth, which comprises college or certification coursework, training program tailored to certain jobs, and training programmers designed to help employees do their jobs more effectively. Include seminars. To increase employees' knowledge and abilities, many businesses make significant investments in their training and development.It’s also provide face-to-face training or education with other subject-matter experts at conferences and seminars. With the advent of online learning, the majority of this learning is also accessible via webinars and online courses. Participation is a popular trend.

Compliance training

Employee understanding of all pertinent laws, rules, and domestic laws that control how the business operates is ensured through compliance training. Make sure they comprehend both why and how to follow it at work. Employee may offer your workers with the direction they require

by providing them with effective training that gives them examples of how ethical and compliance concerns relate to their jobs in the workplace.Effective compliance training promotes staff growth. They are capable of working effectively without much supervision since they are aware of their duties and restrictions. When confronted with novel circumstances that put their ethical discipline to the test, they also know how to respond and what to do.

The process of HRD is continual and constant. Human Resource Development consistently offers education and training to help employees improve all kinds of talents from the moment they start working for the company until they retire. HRD is a methodical procedure that is meticulously prepared for the entire development of a workforce inside a business. All industries, including those in manufacturing and services, are subject to HRD. HRD does not simply concentrate on a single behavior or the beginning of a worker's talent. By concentrating on the employee's behaviors, technical skills, communication skills, management abilities, etc., it focuses on the employee's total growth.

LITERATURE REVIEW

Udin, Udin [2] et al. discussed the renewable energy and human resource development: challenges and opportunities in Indonesia Fostering tight collaboration between HRD experts and stakeholders both within and outside the company is a critical necessity for SHRD. HRD must be able to determine the expectations of various stakeholder groups and incorporate these expectations into overall HRD objectives. This begs the issue of who decides priority setting and the prioritization of overall HRD objectives. According to Paauwe (2004), this is part of the "dominant coalition," the makeup of which varies every organisation. Line managers, senior managers, and owners, as well as customers and suppliers, may be included. The major players in HRD partnerships are referred to as the "HR triangle" by Jackson and Schuler (2003b). According to Freeman and McVea (2001), SHRD must use a multi-stakeholder approach. Such an approach acknowledges SHRD's dynamic, multidimensional, and multi-level character. It assists us in understanding the role of stakeholders in SHRD, policy, and practise, the impact of SHRD on stakeholders' actions and perceptions, and the role of stakeholders in how SHRD is assessed and measured. As a result, SHRD should create mechanisms that allow it to engage with stakeholders. Owners and investors.

Nguyen Hanh, [3] et al. explained the factors affecting human resources development of SMEs: evidence from the fourth industrial revolution employing survey data from labours who worked in SMEs in Thai Nguyen, Vietnam, the variables impacting human resource for small and medium-sized firms (SMEs) in the Fourth Industrial in Vietnam. Using exploratory factors and multivariate regression analysis, it then experimentally investigates the link between human resources planning and a variety of variables. According to the findings, six factors have a greater impact on SMEs human resource development in Industry 4.0, including SMEs human resource development policy, the system of training and vocational institutions, the advancement of science, state and provincial policies for SMEs human resource development, business managers, and individual employees. In Vietnam, the most significant element on human resource development in Industry 4.0 is state and provincial policies for SMEs.

Katunian, Alina [4] explained sustainability as a new approach for the human resource development in tourism sector which Human resource management and human resource development concerns in the tourist industry include: low-skilled personnel, inexperienced employees, seasonal labour shortages, a lack of staff enthusiasm, and frequent employee rotation,

among other issues. The application of the sustainable approach to human resource development is examined in light of the aforementioned problems. Sustainability should not only be seen as a paradigm for environmental governance and social sustainability, but it must also be applied to human resource development. The goal of this paper is to look at the theoretical assumptions of durability as just a new approach to human resource development in the tourist industry. The scientific procedures employed to attain the stated goal were analysis, synthesis, and generalisation. Sustainable development may be thought of at three levels: social, organisational, and individual. Human resource development that is sustainable may lead to the overall growth of the company and society. Tourist corporations, government, public institutions, educational establishments, and international organisations all have a role in the long-term development of human resources in the tourism industry. Inter-organizational cooperation may help to ensure the long-term development of human resources in the tourist industry.

Kumpikaite, Vilrmante [5] stated the human resource development in learning organization which prior exploration on human resource development in a learning organization, including theories about a learning organization, its features, human resource development and learning styles in organizations. The main aim of this paper is to explore human resource development and learning styles in organizations. The author introduces results of the survey covering 37 Lithuanian organizations selected from various industries ranging from a newspaper and transportation, insurance and radio station, to those in trade and manure production. The research shows that mostly explored organizations have a formalized approach to learning and has only a few features of a learning organization.

Parameswaran, Hima [6]stated human resource development professionals' shifting roles and functions as a result of social, economic, political, and technical changes pave the way for strategic HRD practises in businesses. In today's industrialised environment, this word refers to achieving competitive advantages by matching organisational objectives and priorities with organised and future-oriented operations. A strategic HRD study may help a company minimise stumbling blocks via logical planning and people development with an emphasis on predictability and consistency. This study not only illuminates the significance of strategic actions, but it also improves individual creativity, information sharing, career planning, and individual competences among personnel in industrial sectors. It focuses on employee perceptions of organizations' SHRD practices, which is a critical aspect in employee satisfaction, performance, and the need for socio-technical systems. As a result, the research is centred on Dubai, UAE, and is titled "Strategic Human Resource Development - A Manoeuvre for Future Competencies," with a sample size of 300 from diverse firms using both qualitative and quantitative methods. As a result, four independent factors have been statistically shown to have a favourable link with strategic HRD activities. In addition, it determines the degree to which the chosen firms offer HRD and associated work-life elements. The survey results produced a vital model and framework for SHRD, making a major contribution to the organization's ability to face future difficulties.

DISCUSSION

Strategy, Structure, Culture, and Leadership

SHRD is influenced by the firm's internal environment. Focus, orientation, and practices, as well as strategic orientation, organizational structure, organizational culture, and leadership, are specific characteristics of internal environment that influence HRD.

Strategic Orientation

Strategic direction is very important. The strategic direction of the business will impact the SHRD procedures used, as well as their priority and significance. Firms implementing cost-cutting measures often priorities skill development, which boosts productivity and efficiency. organization's with a cost orientation are much less likely to invest in management and leadership development, as well as more transformative SHRD methods like as business partnership, organizational development, including knowledge management. HRD professionals concentrate on executing regular and transactional type duties in these organizations. Cost-conscious businesses must be mindful with expenses and therefore source the bulk of their HRD operations domestically. According to cost-conscious organizations may outsource HRD operations that provide immediate savings and advantages. The majority of enterprises with cost-oriented operations undertake their HRD activities using internal resources[7].Firms that pursue innovative strategies often try to promote change and develop change capability. They must have the internal competence to be adaptable and responsive to change. According to Leak, Bartok, and Erhardt (2005), these businesses should employ HRD methods such as development of management and leadership organizational transformation, career planning and development, organizational development, and knowledge management. Its acquisition, development, and retention of management talent are critical concerns for creative businesses.To obtain the cutting-edge competences required for technological innovation, innovator organization's usually go outside for top-tier personnel.

Organization Structure

The organizational structure of the company is an essential aspect of its internal context. One important aspect of the firm's structure is whether it is local or worldwide. Enterprises with local structures have more options for SHRD practices, but their practices and systems are less complex than those of firms with global structures. Individual division or units usually have less options in terms of the sorts of SHRD practices employed when global organization's embrace more corporate wide methods.Another structural trait is alignment. Semler defines structural alignment as the degree of congruence between organizational processes and the setting in which SHRD methods generate behaviours consistent with these processes. Vertical structural harmony is accomplished when the goals, objectives, and tactics of distinct organizational activities are compatible with one other. Horizontal alignment is concerned with the degree to which SHRD procedures elicit the proper behaviours required to accomplish corporate objectives. SHRD helps to achieve horizontal alignment via skill development, retraining, empowerment, and performance management.

Firm Culture

The ethos of the company guides the creation of integrated and coherent SHRD systems. According to Pfeiffer, vision and principles serve as touchstones for HRD experts and other stakeholders to assess the internal coherence of SHRD activities.Cultural alignment is defined by Truss and Gratton as the amount to which SHRD contributes to an organisational culture that supports organisational strategies, goals, and objectives. Vertical alignment examines how well ideas and values complement corporate objectives. The degree of congruence between the organization's culture and environment is highlighted by horizontal alignment. The term "climate" relates to daily feelings of morale. SHRD helps to horizontal alignment by addressing employee learning expectations and desires.

Leadership

Leadership is essential for executing vision and ideals as well as building culture. Leaders determine the organization's agenda and provide credibility to SHRD operations. The effect of company leadership is sometimes seen in HRD professionals becoming concerned with proving bottom-line outcomes and assuming business partner responsibilities. Organizational leaders increasingly demand HRD effectiveness and expect it to contribute to a variety of areas, including profit maximization, human capital enhancement, employee commitment and loyalty, organisational sustainability and continuity, and the establishment of fit between overall company strategy and HRD strategies. Collins and Clark show that SHRD improves business performance by encouraging executives to create internal and social networks that they may employ to boost the financial bottom line.

Job Value and Uniqueness

The concept that the sorts of HRD methods deployed change depending to the judgements companies make about the value of various employment patterns is a core principle of SHRD. According to Lepak and Snell, companies develop many kinds of employment. These modalities represent variations in human capital. Different employment models have varying strategic importance and distinctiveness.

The potential of the employee behavior to contribute to corporate performance is referred to as strategic value. The uniqueness dimension relates to how scarce, specialised, and firm-specific human capital.Jobs vary in terms of their worth and individuality. Firms will choose which SHRD practices to implement based on the significance they place on the work. Becker, Huselid, and Ulrich (2001), for example, argue that SHRD should concentrate on strategic employee behaviours since they are critical to strategy execution. Ostroff (2000) discovered that higher-level employment in firms are connected with more transformative and high-commitment SHRD practises. Wood and deMenezes (1998) discovered that disparities in the use of HRD practises were deliberate, with more advanced SHRD methods applied to occupations with greater value and distinctiveness.

Individual Expectations, Employability, and Careers

Individual employee expectations and company actions towards those individuals regarded to be stars, according to the psychological contract and talent-management literatures, impact SHRD practices and the amount to which they are strategic. Kanter contends that in a postentrepreneurial environment, the greatest source of security for individuals is a guarantee of their employability rather than a particular job or company. She suggests that in order to manage a career, employees must have a willingness to keep learning, a belief in oneself rather than in the power of a position alone, the ability to collaborate and become connected with new teams in various ways, and a commitment to the intrinsic excitement of achievement on a specific project that can show results. The study data on how businesses react to employability is few and conflicting. Martin, Staines, and Pate discovered that, although the business "talked up" HRD, it was offered in firm-specific areas and did not supply the abilities and skills that workers saw as required to safeguard their future. The firm's discourse did not correspond to approve SHRD procedures. Hendry and Jenkins emphasize the importance of psychological contracts and the degree to which people may force an agreement on others. These numerous transactions have

repercussions for the sorts of SHRD activities that workers anticipate and that the business provides.

SHRD must react to context with a suitable mix of tactics, as well as an orientation that assures horizontal alignment with the different context components. HRD efforts might be focused on short-term or long-term problems, on specialized or general competence development, and on operational rather than strategic goals.

SHRD Focus

According to Espedal and March, enterprises must use a combination of exploitation and exploration strategies. SHRD techniques that are focused on efficiency or exploitation are often short-term and concentrate on internal competency development. SHRD, which incorporates techniques like as socialising, skill training, and performance management, may be utilized to improve firm-specific capabilities and skills. SHRD should also help with adaptable capabilities. This symbolises an emphasis on discovery. It is accomplished via the use of change-focused SHRD tactics. They stress tacit learning and knowledge-management activities, as well as the support of experimentation and risk taking.

Another aspect of SHRD emphasis is the extent to which its operations are horizontally connected with SHRM activities. According to Jackson and Schuler (2003), synergies may be realised when horizontally aligned bundles of HRD and HRM approaches contribute to a specified set of behaviours and performance objectives. According to Guest and Peccei (2006), functional and process integration are as significant as horizontal integration. Functional integration underlines the need of having a high-quality HRD department in order to maximise SHRD effect. It is concerned with both the quality of experts and their placement within the company. Process integration focuses on the delivery processes employed by the firm; their quality and \slevel of customer attention[8], [9].

SHRD Orientation

The rising delegation of HRD tasks to line managers and the trend towards decentralization point to a shift in the role of HRD experts. According to Schuler and Jackson (1992), HRD professionals will be involved in linking HRD issues with business challenges, shaping the firm's strategic direction, developing innovative solutions and approaches to obtain effective, and enabling line management to ensure that things happen. As according Ulrich (1996), HR practitioners may adapt to up to four different orientations. Human resource development professionals usually adopt a conventional mindset and apply transactional HRD strategies such as induction, skills training, and training courses. These exercises are intended to improve performance. HRD experts usually take an employee viewpoint and execute initiatives aimed at increasing workers' competence and commitment. Both are operational in nature and are less likely to be performed out by a strategic HRD department. Strategic partnership and organizational change agent attitudes are reflected in a strategic approach. A strategic partnership perspective necessitates the translation of strategic priorities into SHRD objectives and activities by the HRD professional. An organizational change orientation necessitates that the HRD professional participate in actions that prepare the organization for big change in order to adapt to environmental unpredictability.

Ulrich (1996) expects HRD professionals to exhibit all four orientations, although data shows that HRD professionals will have a dominating orientation. HRD professionals' orientation will influence the sorts of activities performed, as well as how they are delivered and assessed. HRD practitioners with employee champion and conventional orientations, according to Lepak, Bartol, and Erhardt (2005), participate in transactional HRD activities like as induction training, skill building, and competence profiling. Activities connected with strategic partners and organisational transformation, on the other hand, approaches are more long term, transformative, and strategic in emphasis.

D Strategies, Systems, and Practices

Gilley and Maycunich-Gilley present a useful framework for understanding the SHRD domains. Organizational performance, organisational learning, and organisational transformation are examples of these. The organisational performance domain places a premium on efficiency and performance enhancement. Skills training, task analysis and competence modelling, management and leadership development are examples of typical activities. DuGay, Saleman, and Rees found support among organisations for the implementation of competence frameworks. Managers appreciated that HR specialists worked to discover what attributes managers and workers should have in order to function well. When fast track development was implemented, HRD experts were twice as likely to judge management development as having a high organisational effect.

The organisational learning domain is concerned with actions that promote organisational learning. Critical reflection, action learning, tacit learning, and knowledge sharing are examples of these practises. SHRD's ability to concentrate on organisational learning activities is reliant on its ability to promote an open environment with information accessibility and engagement of personnel at all levels of the organisation. The organisational change area focuses on organisational transformation at various intensities and levels. Career planning and management, cultural change, empowerment, talent and succession are examples of these activities. The management, and feedback systems. According to Baruch and Peiperl, these actions were strongly connected with organisations that were classified as dynamic, open, and proactive.Other classifications of Strategy implementation exist. Lepak, Bartol, and Erhardt define prospective HRD activity into three categories: transactional, conventional, and transformative. This paradigm is used into classify SHRD activities in organisations. According to this concept, Gilley and MaycunichGilley's organizational performance category belongs to the conventional category, whereas their two other domains belong to the transformational category. Transactional HRD activities have limited strategic relevance. They contribute little to the organization's strategic objectives. The distinction between conventional and transformative practices is determined by how SHRD techniques are used[10].

Stakeholder Satisfaction with SHRD

Fostering tight collaboration between HRD experts and stakeholders both within and outside the company is a critical necessity for SHRD. HRD must be able to determine the expectations of various stakeholder groups and incorporate these expectations into overall HRD objectives. This begs the issue of who decides priority setting and the rating of overall HRD objectives. According to Paauwe (2004), this is part of the "dominant coalition," the makeup of which varies every organisation. Line managers, senior managers, and owners, as well as customers and suppliers, may be included. The major players in HRD partnerships are referred to as the "HR triangle" by Jackson and Schuler (2003b). According to Freeman and McVea (2001), SHRD

must use a multi-stakeholder approach. Such an approach acknowledges SHRD's dynamic, multidimensional, and multi-level character.

It assists us in understanding the role of stakeholders in SHRD, policy, and practise, the impact of SHRD on stakeholders' actions and perceptions, and the role of stakeholders in how SHRD is assessed and measured. As a result, SHRD should create mechanisms that allow it to engage with stakeholders.

CONCLUSION

The process of workforce planning is critical in analyzing an organization's present and future people requirements in terms of number and quality. It is a key mechanism that connects human resource operations to corporate goals and strategies.The improvement of human resources is a means to an aim. Getting superior outcomes from the company, teams, and individuals is often recognised as the means to that purpose. This is done by comprehending performance and controlling it inside a predetermined framework of set goals, objectives, and standards.

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CHAPTER 9

CONCEPTS AND CONNOTATIONS OF RURAL DEVELOPMENT

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Abstract:

Rural development is a dynamic process which is mainly concerned with the rural areas. These include agricultural growth, putting up of economic and social infrastructure, fair wages as also housing and house sites for the landless, village planning, public health, education and functional literacy, communication etc.

Keywords:

Connotations, Growth, Evolution, Rural Development,Village.

INTRODUCTION

'Development' is a subjective and value-laden concept, so there can be no agreement on its meaning. The term is used in a variety of contexts. It essentially means 'unfolding, revealing, or opening up' something latent. When used, to humans, this entails unfolding or opening up their potential powers. In general, the term development connotes a desirable change. Because what is desirable at one time, place, and culture may not be desirable at another time or place and in the same cultural milieu, it is impossible to think of a universally acceptable definition of development. However, development can be broadly defined as a set or vector of desirable societal objectives or a development index that does not decrease over time (Pearce et al. 1990: 2-3). The following are some of the objectives that are typically included in the set:

1. Increase in per capita real income (economic growth).
2. Increase in income distribution (equity).
3. Economic and political liberty.
4. Equality of access to resources, education, health care, job opportunities, and justice.

Thus defined, the concept is applicable at all levels, from individuals to communities, nations, and the entire world. Development is valued by all individuals, communities, and nations, regardless of culture, religion, or geographic location. Sustainable development has recently become a buzzword. The World Commission on Environment and Development (WCED) defines sustainable development as "development that meets the needs of the present without jeopardising future generations' ability to meet their own needs." This definition emphasises the need for society to ensure economic sustainability in the sense that the current generation does not consume so much that future generations are unable to enjoy at least the current level of consumption and well-being. Simply put, sustainable development refers to a process in which

the set of desirable societal objectives or the development index does not diminish over time. Natural capital stock stability (including natural resources and the environment) is a prerequisite for sustainable development. Thesufficient conditions' set includes an appropriate[1].

At both the national and international levels, an institutional framework and governance system for the implementation of sustainable development policy are in place. Rural development refers to the overall development of country. With a view to enhance the living conditions of rural people. In this sense, it is a broad and multifaceted concept that includes the development of agriculture and related activities, village and cottage industries, crafts, socioeconomic infrastructure, community services and facilities, and, most importantly, human resources in rural areas.

Rural development can be thought of as a process, a circumstance, a strategy, or a discipline. As a process, it entails the long-term involvement of individuals, communities, and nations in the pursuit of their desired goals. Rural development is a phenomenon that results from interactions between various physical, technological, economic, socio-cultural, and institutional factors. It is a strategy aimed at improving the socioeconomic and well-being of a specific group of people, namely the rural poor. It is a multidisciplinary discipline that brings together agricultural, social, behavioral, engineering, and management sciences. According to Chambers (1983: 147):

Rural development is a strategy that enables a specific group of people, poor rural women and men, to obtain more of what they want and need for themselves and their children. It entails assisting the poorest among those seeking a living in rural areas to demand and control a greater share of the benefits of rural development. The group consists of small-scale farmers, tenants, and landless people.

Thus, the term "rural development" can refer to any of the aforementioned connotations. To avoid ineffective floundering among the myriad definitions, we will define rural development as 'a process leading to sustainable improvement in the quality of life of rural people, particularly the poor'.This process typically involves changes in popular attitudes and, in many cases, customs and beliefs, in addition to economic growth. In a nutshell, the process of rural development must represent the entire range of changes through which a social system progresses from a 'unsatisfactory' state of life to a materially and spiritually better state of life. The rural development process can be compared to a train, in which each coach pushes a one ahead of it and is pushed in turn by the one behind, but it takes a powerful engine to move the entire train. The key to rural development success is identifying and, if necessary, developing a suitable engine to attach to the train. There are no generally recognised blueprints for identifying appropriate rural development engines, if any exist at all. It is a decision influenced by time, space, and culture[2], [3].

Basic Elements of Rural Development

Whatever a society's geographic location, culture, or historical stage of development, there are at least three basic elements that are thought to constitute the "true" meaning of rural development. The new view of development considers poverty, inequality, and unemployment to be important indicators of development. Seers addressed the fundamental question of development's meaning succinctly when he wrote:

The following are the ways to consider about a country's development: What has happened to poverty? What has happened to the unemployment rate? What has happened to inequality? If all three of these have dropped from high levels, the country has unquestionably entered a period of development. If one or two of these central issues have gotten worse, especially if all three have, it would be a disaster.

Growth versus Development

While economic growth is an important component of progress, it is not the only one, because development is more than just a financial phenomenon. In the end, it must include more than just the material and financial aspects of people's lives. As a result, development should be viewed as a multidimensional process involving the reorganization and realignment of both economic and social systems. It entails radical changes in addition to improvements in the level and distribution of income and output.

In institutional, social and administrative order, and values and ethos of individuals and communities. Consider the Indian states of Punjab and Kerala to demonstrate the distinction between economic development and economic growth. The former ranks higher than the latter in terms of economic growth as measured by average per capita income alone, but the latter ranks higher than Punjab in terms of development as measured by literacy rate, infant mortality rate, sex ratio, and law and order situation, in addition to per capita income. Finally, while development is typically defined in a national context, widespread implementation may necessitate fundamental changes to the international economic, social, and political systems The Vedic prayer sarve bhavantu sukhinaha, sarve santu niramayaha, which means "May everyone (in this universe) be happy and healthy," emphasises the global and multifaceted nature of development [4].

Expectations and Development Are Increasing

In India, as in other developing countries, the common man expects a higher standard of living for himself, his family, his community, and his nation. Particular expectations vary from person to person and region to region, but the expectation of a considerable improvement in material conditions of life is universal.People desire and expect better food, clothing, housing, education, a secure life, and freedom from servitude. This is the expectation revolution that has swept through the third-world countries.

There are numerous explanations for this occurrence. To begin with, the demonstration effect of the rural elite, urban rich, and foreign tourists engaging in ostentatious consuming of exotic and luxurious goods has distorted the poor's consumption and utility functions. Second, films, radio, television, and advertising have exposed the general public to modern gadgets and lifestyles, raising their expectations. Third, state and federal politicians have promised the rural poor modern conveniences if they vote for them. Fourth, central governments have repeatedly stated that poverty eradication is their primary policy goal. The common man first learned about new products, gadgets, and services through these media, then came to want them, and now demands them.

Most developing countries' economies (including India's) will be unable to meet these expectations in the near future, and there will be a collision between rising expectations and economic principles. The outcome will vary by country, but it will almost certainly include

disillusionment, demoralisation, agitations and political upheavals, violence, and a variety of other antisocial activities such as theft, murder, smuggling, and drug trafficking. This is why rapid agricultural and economic development is a national priority in India in order to bridge the gap between rising wages and economic reality[5].

Evolution and Change

Change is both a cause and an effect of development. They have a two-way relationship in which development influences and is influenced by change. A physical, technological, economic, social, social, attitudinal, organizational, or political change is implied by the change. While all manifestations of development can be traced back to a change somewhere, not all changes result in development. A change can be for the better or for the worse. In the context of rural development, a 'change' can be thought of as a tool that can be used to promote rural development. The introduction of technological changes in India in the mid-1960s (new high-yielding crop varieties, fertilizers, improved farm machinery, and pesticides) resulted in the so-called Green Revolution in agriculture. Similarly, technological innovations such as modern milk processing but instead feed processing plants, artificial insemination of dairy animals, and organizational innovations including the Annand-pattern are examples of organizational innovations.

Dairy cooperatives, which were introduced on a large scale in India in the early 1970s as part of the Operation Flood (OF) programme, made significant contributions to the modernization and development of the country's dairy industry. Other countries, such as Taiwan and the People's Republic of China (PRC), have seen significant agricultural development as a result of institutional reforms, particularly land reforms and advances in technology. Karl Marx was a leading proponent of revolutionary (socioeconomic) change as a tool for development. A change can occur naturally or artificially, or it can be induced. A development manager can speed up development by provoking a desirable change in a given system as well as properly directing autonomous change. Ex ante, the likely effects of a proposed change on various segments of society must be carefully evaluated (before the change is introduced[6], [7].

DISCUSSION

Human Beings as the Cause and Consequence of Development

Humans both are the cause and the result of development. The human factor is the pivot of the development process. Though the study of a human being is fundamental to the study of development, it must be of human beings in relation to their fellows, or of humans in society and in their environment.The creation of conditions, both material and spiritual, allows the human being as an individual and humans as a species to be at their best. Those who control a person's livelihood control a person. When a person is dependent on others for the right to work and the right to eat, his freedom is illusory. A nation is also not independent if its economic resources are controlled by another country. Political independence is meaningless unless a country controls the means by which its citizens earn a living.

In other words, human development follows only if economic development is achieved on the basis of equality and human dignity for all parties involved.Human dignity cannot be bestowed upon a person by the kindness of others. Indeed, it can be destroyed by acts of kindness, because human dignity entails equality, freedom, and mutual respect among humans; it is dependent on

responsibility and a conscious participation in the life of the society in which a human being lives and works.As a result, the entire structure of national and international societies is relevant to human development. Few societies in the world can be said to serve this function. Few, if any, accept and organize to serve social justice in what has been dubbed the Revolution of Rising Expectations.

Capitalism has resulted in the greatest advancements in technology and economic growth. However, decisions about what goods to produce and how to produce them are made by a small group of people with control over land and capital. The determining factor in their decision-making is whether the activity will bring them profit, power, or prestige as land or capital owners. Human needs are considered only secondarily, if at all[8].

There is no profit in building cheap houses, so none are built; there is "no money" for schools and hospitals, but plenty for five-star hotels, modern shopping malls, and luxury apartments. As a result, a few people live in luxury, utilising human wealth for their own grandeur and to ensure with their own power.Simultaneously, millions of men, women, and children are reduced to beggary, squalor, and the humiliation of that disease—the heart insecurity that results from their forced poverty.To be clear, if we are interested in a human being as an individual, we must also be interested in the society of which those individuals are members, because humans are shaped by their surroundings. They could well act like animals if they are treated like animals. They will act accordingly if their dignity is violated. If they are only treated as a disposable means of production, they will become soulless 'hands,' for whom life is all about doing as little work as possible and then escaping into the illusion of happiness but instead pride through vice.

Some Dilemmas in Development

The development literature is rife with quandaries and dogmas, such as rural versus urban development, agricultural versus industrialisation, capital primacy versus labour primacy, and natural/autonomous versus induced/planned development. A brief examination of these quandaries appears to be necessary in order to clarify some of the issues.

Rural Development vs. Urban Development

Economic development in Western countries has been linked to increased urbanisation, as evidenced by the growing proportion of the urban population. As a result, economists have a tendency to view urbanisation as a measure of development. Growing urbanisation is undoubtedly a result of the increasing concentration of infrastructure networks and capital-intensive industrial enterprises in urban areas.

This type of concentration has resulted in what is known in the literature on development economics as 'dualism,' or the coexistence of two separate economic subsystems in an economy, particularly in many developing countries. On the one hand, there is a small but highly modern and developed urban subsector in the economy that absorbs the majority of the material, financial, and educated and talented manpower resources. On the other hand, there is a large but traditional and underdeveloped rural subsector that accounts for the majority of the population and is characterised by widespread poverty, unemployment, and low productivity. Both subsectors coexist in many developing countries, but without the linkages that were once the main factors that contributed to the development of today's developed countries.

On the other hand, another dogma that is rapidly emerging in many developing countries is that rural development is a prerequisite for overall development and thus deserves the highest priority

in terms of resource allocation. In their eagerness to promote the cause of rural development, proponents of this school of thought frequently ignore or downplay the links between the rural and urban subsectors of the economy. What is required is a new approach to development that explicitly recognises the interdependence and complementarity of the rural and urban subsectors and provides for their complete integration.

Agricultural Development vs. Industrial Development

The dogma that industrialisation alone can modernise agriculture and thus raise agricultural productivity, wage rates, and provide job to the labour displaced by mechanisation of agriculture is closely analogous to the rural versus urban development dilemma. As a result, many development economists have linked development to industrialization. Following this dogma, many developing countries have established capital-intensive and sophisticated industrial enterprises comparable to those found in developed countries. Such efforts, however, have frequently resulted in bitter disappointment when the desired outcomes did not materialise. Such projects are merely showcases, and their contribution to development is negligible, if not negative, because they are built at the expense of enterprises that meet people's basic needs. Nations with high agricultural potential allocate massive amounts of money on agricultural imports and rely heavily on imported technology, capital, and management.

Simultaneously, local agriculture stagnates, and nutritional standards remain significantly lower than in advanced countries. The income distribution is skewed in favour of industrialists over farmers, workers, and consumers.Agriculture fundamentalism, on the other hand, holds that in the early stages of development, when per capita incomes are low, agriculture alone can serve as a development instrument, and that increased agricultural productivity is a prerequisite to increased income and industrialization. Proponents of this dogma argue that agriculture should be given more resources and attention than industry. They fail to recognise, however, that agriculture cannot develop alone, and that concurrent development of industry and supporting infrastructure is required not only for national economic growth, but also for agricultural advancement. The non-agricultural sector must be developed to the point where it can supply the agricultural sector with new farm inputs and services critical to its development, as well as absorb the surplus labour generated by increased agricultural labour productivity.

Agricultural fundamentalism has generally led to growth without development, owing to a lack of linkages between the agricultural and non-agricultural sectors, as well as a skewing of income distribution in favour of large landlords. The establishment of small, less capital-intensive industrial enterprises in rural areas, combined with the introduction of new agricultural technology, is likely to forge links between agriculture and business. It is worthwhile to emulate Israel's strategy of integrating agricultural and industrial sectors. In Israel, industrial enterprises were established in rural areas, along with the opening of more efficient agricultural production methods. Initially, industrial enterprises primarily included services and industries related to agriculture, such as feed mix plants, factories for processing agricultural produce, and factories for manufacturing tools and various accessories. The farmers themselves owned the majority of these businesses, either entirely or partially. Over time, the scope of industrial enterprises expanded to include activities that had nothing to do with agriculture, such as jewellery industrial production and ceramics.

Capital versus labor dogma

This is a legacy inherited by today's development economists from their forefathers in developed countries, who saw capital as the primary tool for development. The Harrod-Domar model is a good example of this dogma. The rate of growth in this model is expressed as the mixture of the savings rate and the output-capital ratio. Capital becomes the overriding constraint on economic growth if capital and labour cannot be substituted for each other and labour is in surplus supply. This dogma was reinforced by techno-economists who held that all advanced innovation is embodied in capital.

Capital fundamentalism has now been blindly accepted by developing-country economists and planners. This has resulted in a number of policies being implemented in these countries, all aimed at increasing savings, redistributing income from workers to capitalists, granting monopoly rights to national and multinational corporations, transferring resources from the private to the public sector, increasing reliance on foreign aid and loans, and underpricing of capital, particularly foreign exchange for capital goods. This has had a number of negative consequences for the economies of these countries. Underpricing of foreign exchange for capital goods, for example, has killed the incentive to develop labor-intensive technologies tailored to domestic needs and circumstances, resulting in premature and excessive mechanisation in a number of sectors, resulting in labour unemployment and underutilization of other domestic resources.

Human capital formation is now included in capital fundamentalism. Most developing countries heavily subsidise higher education, resulting in millions of college and university graduates joining the ranks of the unemployed white collar proletariat each year. In India, massive investments have been made in higher education institutions, particularly in the fields of engineering, technology, agriculture, medicine, and management. Many graduates of these institutes dislike the work environment and pay rates in their home country and seek employment abroad. As a result, the country loses the scarce resources invested in their education and training. At this stage of India's economic and technological development, it appears that more institutes for barefoot agricultural and other contractors, engineers, doctors, and rural managers are needed than institutes for advanced training[9].

One might wonder why we should produce more college and university graduates than we need in fields such as arts, commerce, agriculture, and veterinary sciences. Higher education demand could be reduced to match job availability by pricing it at its true resource cost, which is significantly higher than the current cost.Most students in the United States of America (USA) and other Developed powers finish high school and go into business for themselves. However, their training is broad-based, highly practical, and contextually relevant, resulting in high school graduates who are capable and confident of starting and managing their own small businesses or taking on wage-paid jobs. We should use this experience to improve our education so that it is less expensive to produce and more relevant to our needs. Our current education policy, that is outdated and irrelevant in the context of our changing environment, requires a thorough overhaul. More emphasis should be placed on vocational education.

Induced Development vs. Autonomous Development

Every country experiences some natural or autonomous development over time, but the level and pace may not be sufficient to maintain a reasonably satisfactory standard of living. In such cases, some form of intervention is required to accelerate the rate of natural development. Smart growth

is one of the forms of intervention that has become fashionable in many developing countries around the world, and it is regarded as a magical door to development. In fact, even advanced countries have recognized the need for some form of economic planning or government intervention. There appears to be a growing consensus that any planning is preferable to no planning at all, and that decentralized planning is preferable to centralized planning[10].

However, we must recognize that planning can only make a positive contribution if it enables the achievement of development agenda more quickly and efficiently than natural forces. It is becoming increasingly clear that the design of the application cannot be left solely to the government. It must be shared by private, cooperative, corporate, and other non-governmental (NGOs) and agencies, as well as, most importantly, by the people themselves. Government planning should complement and supplement the efforts of individuals and non-governmental organizations. The primary role of planning should be to create a favourable economic and political environment that allows individuals to achieve their desired goals, as well as to establish and strictly enforce the rules of the game.The term 'rural development' is a part of the broader term 'development'. It implies an overall improvement in rural people's quality of life. Individuals, families, communities, and nations all over the world share a common desire for development.

Development of Rural Areas

Sustainable development has recently become a buzzword. The World Commission on Environment and Development (WCED) defines sustainable development as "development that meets the needs of the present without jeopardising future generations' ability to meet their own needs." This definition emphasises the importance of intergenerational equity in terms of human need fulfilment. The stability of natural capital stock, including natural resources and the environment, is a prerequisite for sustainable development.Rural development can be thought of as a process, a phenomenon, a strategy, or a discipline. As a process, it entails the involvement of individuals and communities in exercises that lead to the achievement of long-term goals.

It is a phenomenon that occurs as a result of interactions between various physical, technological, economic, socio-cultural, and institutional factors. It is a strategy aimed at improving the economic and social well-being of a specific group of people, namely the rural poor. It is a multidisciplinary discipline that represents an intersection of agricultural, social, behavioural, engineering, and management sciences.While economic growth is an important component of development, it is not the only one, because development is more than just a financial phenomenon. In the end, it must encompass more than the material and financial aspects of people's lives; therefore, development should be viewed as a multidimensional process involving the reorganisation and reorientation of both economic and social systems.

With over 740 million people living in rural areas and the rural sector accounting for roughly 18% of India's GDP, no socioeconomic development strategy for the country that ignores rural people and agriculture can be successful. Rural development is, in fact, a requirement for overall development.In India, as in other developing countries, the common man expects a higher standard of living for himself, his family, his community, and his nation. With the current low level of development and high level of inequality, these expectations cannot be met. This creates frustration, disillusionment, and a variety of antisocial behaviours such as theft, murder, violence, and drug trafficking.

Change is both a cause and a result of development. They have a two-way relationship in which development influences and is influenced by change. A physical, technological, economic, social, cultural, attitudinal, organisational, or political change is implied by the change. While all manifestations of development can be traced back to a change somewhere, not all changes result in development. A change can be for the better (development) or for the worse (retrogression). Man is both the cause and the result of evolution. The human factor is the pivot of the development process. However, most countries around the world ignore this fundamental truth. For example, despite the greatest advances in technology and economic growth achieved under capitalism, decisions about what goods to produce and how to produce them are made by a small group of people who control land and capital.

CONCLUSION

Rural communities face enormous obstacles. Illiteracy, unemployment, starvation, a lack of infrastructure, transportation, medical facilities, basic requirements (electricity, potable water, sanitation, communication), and physical inaccessibility are some of the typical issues.Rural development often refers to a strategy for improving peoples' quality of life and financial security, particularly those who reside in inhabited and distant locations. Historically, the overuse of land-intensive natural resources like forestry and agriculture was at the heart of rural development.

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CHAPTER 10

EXPLORATIVE STUDY ON THE RURAL ECONOMY OF INDIA

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Abstract:

The study of rural economies is known as rural economics. Rural economies encompass both agricultural и non-agricultural enterprises, therefore rural economics is more comprehensive in scope than agricultural economics, which is primarily focused on food systems. Rural development with finance work to address wider issues in rural economy.

Keywords:

Agriculture, Animal Population,Economy, Indian Economy,Rural Economy.

INTRODUCTION

India is one of the world's oldest surviving civilizations and has the largest democracies. It has a diverse cultural heritage and two of the world's 18 biodiversity hotspots. It ranks second in population after China, first in cattle and buffalo citizenry, and sixth in geographical area. It now has one of the world's seven nuclear weapons states and the world's third largest reservoir of essentially trained manpower. Its mainland covers 3.29 million square kilometres (329 million hectares (mha) and measures approximately 3,214 kilometres north to south between the extreme latitudes and approximately 2,933 kilometres east to west between the extreme longitudes. Since its independence 60 years ago, India has made remarkable progress in the fields of science and technology, and it is now self-sufficient in food grain and milk production. On the negative side, India has yet to fully develop and harness its human and natural resources for the benefit of its people, and it has yet to address issues such as illiteracy, poverty, unemployment, and vulnerability to natural disasters[1].

The Indian economy is primarily rural in nature. This is evident from the fact that nearly 72% of its population lived in its nearly 6.38 lakh villages in 2001, and approximately 52% of its workforce was committed in agriculture and allied activities in rural areas. Agriculture and related activities employ over one billion people and contributed approximately 18% of India's GDP at factor cost at current prices in 2006-07.Rural development is a sine qua non of overall development in a predominantly agrarian country like India, and agricultural development is a prerequisite for rural development. As a result, agricultural development should be the foundation of national development in such a country.Agriculture's role in economic development has been recognised and debated since the time of the Physiocrats. Only the agricultural sector, according to the Phy siocrats, produced an economic surplus over the cost of production and thus played the most strategic role in economic development. They saw commerce and manufacturing as non-productive in the sense that the value of raw materials

handled by these sectors was only increased enough to cover the labour and capital used in the production process[2].

Agriculture was also recognised as important in economic development by classical writers. It is now thought that Adam Smith's basic growth model was built around the agricultural sector. He believed that producing an agricultural surplus to support nonfarm production was critical to economic development.We provide an overview of India's rural economy, with a focus on its agricultural production base and indeed the role of agriculture in overall development. We begin with a description of the size and structure of India's rural economy, as well as its key features[3].

Size and Structure of the Rural Economy

An economy can be defined as a set of economic, social, institutional, legal, and technological arrangements that enable individuals in society to improve their material and spiritual well-being. Consumption and production are the two fundamental functions of an economy. Consumption is regarded as the primary engine of an economy. The classical dictum that "the consumer is sovereign" is based on the consumer power embodied in his demand, which is one of the most important requirements for the existence of almost any business enterprise or, for that matter, any business growth, including production.

The Indian economy can be divided into two major sectors: the rural sector and the non-rural sector. The rural sector, in turn, is divided into two major subsectors: the agricultural subsector and the quasi subsector. Agriculture and allied economic activities such as animal husbandry and allied activities, fisheries, poultry, and forestry are included in the agricultural subsector. Non-agricultural subsector economic activities include small-scale village industries, rural craft, business, and services. Cottage and village industries, khadi, cordage, handicrafts, and so on are all examples of industry. Business refers to micro-enterprises, general goods trading, small shops, petty traders, and etc., whereas services refer to transportation, communication systems, banking, input supply, farm and non-farm produce marketing, and so on. Farmers, farmland and nonagricultural laborers, artisans, traders, moneylenders, and those involved in providing services such as transportation, communications, processing, banking, and education and extension are among the major stakeholders in the rural sector. The size of the rural sector can be measured in terms of rural population, livestock population, land resource extent, water resource extent, forest resource and fisheries, quantity of production inputs used, and output produced[4], [5].

Population of Humans

According to the 2001 census, India's rural population was 1028.7 million people, accounting for 72.25 percent of the total population. 127.3 million Cultivators and 106.8 million agricultural workers made up the total rural population. The annual exponential growth rate of the population was 1.95 percent on average. Human resource quality is generally poor in terms of reading skills, life expectancy, technical knowledge and skills. As a result, according to the Global Human Development Report (GHDR) 2007, India ranks 128th out of 177 countries in terms of medium human development. This is a significant impediment to India's development.

Animal Population

India has a high genetic diversity of livestock resources and ranks first in the world in terms of cattle and buffalo population. The country had 185 million cattle, 98 million buffaloes, 61.5

million sheep, 124 million goats, 14 million pigs, and 489 million poultry birds, according to the 2002-03 livestock censusHowever, livestock, like land, has a relatively low productivity in terms of average milk, meat, and wool yield per head. Furthermore, livestock density is relatively high in comparison to the carrying capacity of the country's grazing lands but also fodder resources. The livestock population places a significant strain on the country's limited land and water resources, resulting in their depletion.

Resources for Land

Land is one of the natural resources that influences the overall level and pace of development, as well as agricultural development in particular. India has a total geographical area of approximately 329 mha, of which approximately 188 mha is degraded, accounting for 57% of the country's total geographical area. Water erosion affected approximately 149 mha of the 188 mha of degraded land, wind erosion 13.5 mha, chemical deterioration 14 mha, and waterlogging 11.6 mha (Sehgal and Abrol 1994).

In 2003-04, India had a total gross irrigated area of approximately 75 mha and a net irrigated area of approximately 55 mha, ranking first in the world in terms of irrigated area. The net irrigated area accounted for approximately 39% of the net area sown in the country and contributed approximately 55% of total agricultural output. Cropping intensity was set at 150%. When compared to some of the world's developed countries, India's average land productivity in terms of crop yields is low. For example, in 2004-05, India's average paddy yield was 2,900 kg per ha, compared to 9,800 kg in Egypt and 7,800 kg in the United States (USA), and India's average wheat yield was 2,700 kg per ha, compared to 7,700 kg in the United Kingdom (UK) and 4,250 kg in China.

Resources for Water

Water is a finite but renewable natural resource that, like all natural resources, is an essential component of the environment. It is necessary for the survival of all living beings on this planet, as well as the socioeconomic development of households, communities, and nations worldwide. It is also necessary to preserve and improve biodiversity and environmental quality. India is relatively well endowed with fresh water resources. Every year, it expects to receive nearly 3,800 billion cubic metres (bcm) of fresh water from rainfall and snowfall. During the months of June through September, the majority of the rainfall is concentrated in 100 to 120 days. Furthermore, annual rainfall varies greatly from region to region, ranging from 100 mm in parts of western Rajasthan to 11,000 mm in Cherrapunji in eastern Meghalaya. As a result, the transmission and availability of water are not uniform across space. Similarly, rainfall in the country varies greatly from year to year[6].

It is estimated that 700 bcm of the total amount of rainwater received each year seeps into the ground, while 500 bcm is lost due to evaporation and transpiration. Nearly 432 bcm of the total quantum of seepage is replenish able groundwater through recharging of groundwater water, of which 396 bcm can be economically extracted annually. The surface run-off to the ocean is estimated to be 1,900 bcm, or roughly half of the total annual rainfall. This leaves nearly 690 bcm of fresh usable surface water, which when combined with the extractable groundwater of nearly 396 bcm yields a total of 1,086 bcm of usable water resources. So far, nearly 600 bcm of the country's total usable water resources have been used (GoI 1999: 14–15). India is thought to account for about 4% of the world's fresh water resources. When compared to India's share of land area of 2.50 percent.The world appears to be more than adequate. When we consider that

India accounts for approximately 16% of the world's human population and 15% of the world's animal population, a picture shifts from optimistic to pessimistic. When we consider the declining trend in per capita fresh water availability, the picture is bleak.

The country's renewable fresh water availability per capita is currently estimated to be only 1,086 cubic metres (cm) per year. It has been declining for some time and will continue to do so in the future. While this is the overall picture, there are significant regional and temporal varieties in water availability caused by spatial and year-to-year fluctuations in India's annual rainfall. This leads to regional and seasonal scarcity and surpluses. There are areas where the average per capita fresh water availability is much lower than 500 cm per year. Water becomes a constraint to life below this level of availability. Droughts and floods have been common occurrences in many parts of the country for centuries. They exacerbate the regional and seasonal water scarcity. Droughts and floods cause enormous economic losses for the country as well as suffering for millions of people.

Resources from the Forest

Forests are natural renewable resources that have always been an important part of India's economy and culture. People hold them in high regard.The ancient religious, political, and literary writings attest to the fact that humans were regarded as an integral part of nature rather than as superior to it. Forests play an important role in the Indian economy, contributing to GDP, employment, and the livelihoods of the poor. Forests contributed Rs 27,013 crore to India's GDP in 2002-03, accounting for 1.2 percent of total GDP. Over the nine-year period from 1993-94 to 2002-03, the contribution of forests to India's GDP ranged from one to 1.5 percent (Central Statistical Organisation [CSO] 2004).

According to legal documents, India's total forest area in 2001 was 7,68,463 square kilometres, of which 4,23,311 square kilometres were reserved forests, 2,17,245 square kilometres were protected forests, and 1,27,881 square kilometres were unclassified. In 2001, the forest area accounted for 23.38 percent of the country's total geographical area (Forest Survey of India [FSI] 2001). It is estimated that only 64 mha of the 76 mha of forest area recorded as forest sustains the actual forest cover, and of this, only 35 mha has adequate cover, accounting for only about 11% of the total geographical area of the country at the moment. According to the National Forest Plan (NFP) (GoI 1988), the country as a whole should aim to keep about one-third of its geographical area under forest cover. Because forests are being degraded by increasing biotic pressure, they must be rehabilitated through afforestation not only for environmental reasons, but also to meet local demand for firewood, small timber, fodder, and for defense and industry.

Forests in India meet nearly 40% of the country's energy needs, with more than 80% used in rural areas, and they also meet approximately 30% of the cattle population's fodder needs. As many Non-Wood Tropical Forests (NWFP) provide, forest products play an important role in rural and tribal economies.The rural poor are fed. Forest-related activities are frequently the primary source of income for landless families and marginal farmers. Aside from the direct tangible economic benefits mentioned above, trees confer a number of benefits that are not directly visible to the human eye but have a significant impact on the quality of life. Some of these advantages include climate improvement, soil and moisture conservation, and flood control.

Resources for Fisheries

India is now the world's third largest producer of fish and the world's second largest producer of inland fi sh. India has a 12,700-kilometer-long marine coastline, a maritime area of 4.52 million square kilometres, and a 200-million-square-kilometer Exclusive Economic Zone (EEZ) (Singh 1994: 10). The fisheries sector plays an important role in India's socioeconomic development. In 2004-05, it contributed nearly 1% of India's total GDP and 5.3 percent of agricultural GDP. It provides cheap and nutritious food and is a significant foreign exchange earner. The value of fish and fish products exported from India in 2006-07 was Rs 7,019 crore (GoI 2008). 2

Furthermore, it is regarded as a major source of income for 11 million people in the country, who are either fully or partially engaged in sector-related activities. It is estimated that its fisheries sector will create one million jobs over the next five years.Fish production in the country has grown at a rate that is much higher than that of the agricultural sector as a whole over the last two decades or so, ranging from 5.5 percent to 5.8 percent per year. In 1950-51, India's total fish production was only 7.52 lakh tonnes, but it increased to around 69 lakh tonnes in 2006-07.Fish production can be significantly increased if the country's marine and inland fishery resources are developed, conserved, and harvested wisely through the use of appropriate scientific technologies and conservational measures[7].

Utilization of Inputs and Outputs

Seeds, organic manure, chemical fertilizers, plant protection chemicals, irrigation water, human labour, animal and mechanical power, including electricity and livestock feed, and credit are the major inputs used in agriculture. Agriculture grew from 10.63 million in 1991 to 15.25 million in 2001. In 1997-98, the country's flow of organisational credit to agriculture was Rs 34,274 crore, which increased to Rs 2,03,296 crore in 2006-07. By the end of March 2008, it was expected to have risen to Rs 2, 40,000 crore. Furthermore, farmers now have access to credit through 582.50 lakh Kisan Credit Cards (KCC) issued by the country's vast rural banking network.India is now self-sufficient in terms of food grains or milk production. Milk availability per capita in the country has increased from 176 gms/day in 1990-1991 to 245 gms/day in 2006-07. Agriculture and livestock output increased from Rs 5,26,568 crore in 1999-2000 to Rs 5,71,615 crore in 2004-05. The amount of energy consumed is a major determinant of rural development. Energy is scarce in the rural sector. For example, in 2001-02, electricity consumption was

In India, agricultural electricity consumption was 81,673 million kilowatt hours (mkwh), accounting for only 25.33 percent of total electricity consumption. This was insufficient to meet even half of the agricultural sector's potential demand. Meeting the rising demand for energy from households, industry, transportation, agriculture, and business will be a difficult task. The pattern of energy demand is also changing over time. An examination of total commercial energy consumption reveals an upward trend in the consumption of hydrocarbons, natural gas, and electricity[8].Changes in technology and processes will be required to initiate measures to reduce energy intensity in various sectors. It will be necessary to optimise interfuel and intrafuel substitution. The primary focus will have to be on increasing the use of renewable energy sources at a low cost to low-income groups in rural and urban areas. To reduce the energy elasticity of output, emphasis should be placed on efficiency, conservation, and demand management.

The Characteristics of the Rural Sector

Agricultural production is more dependent on weather and other climatic factors than non-agricultural production because it is biological in nature. In India, for example, approximately 60% of the net area sown in 2004-04 was rainfed, where crop production is entirely dependent on the quantity and distribution of precipitation over the growing season. Given the wide variations in rainfall in India from year to year and region to region, crop production and thus farm incomevaries greatly. To summarise, Indian agriculture is vulnerable to natural disasters such as droughts, floods, hailstorms, and cyclones. For example, nearly 60% of the Indian landmass is vulnerable to earthquakes, approximately 68% is vulnerable to droughts, over 40 mha of land is vulnerable to flooding, and approximately 8% is vulnerable to cyclones. This implies that the degree of nature-induced ambiguity in agriculture is greater than in the non-agricultural sector, as is the need for insurance against such risks. Unfortunately, crop insurance coverage is very limited, forcing most farmers to bear the burden of risk and uncertainty themselves and go bankrupt in the process.

Small uneconomic land and livestock holdings predominate.

In 1995-96, India had 11.56 crore operational landholdings, which had increased to more than 12 crore by 2000-01. In 2000-01, nearly 63% of total land holdings were operated by marginal farmers with less than 1 ha of land and 19% by small farmers with 1 to 2 ha of land. Similarly, it is estimated that the majority of the seven crore households in India that own milch animals are small households with one or two animals. In 2000-01, the average size of operational landholdings in India was 1.32 ha, and it has been decreasing over time. It fell from 2.69 ha in 1960-1961 to 1.82 ha in 1980-1981, 1.57 ha in 1990-1991, and 1.41 ha in 1995-1996. Land and livestock holdings aren't just small in size, but also dispersed throughout the countryside.Landholdings are also fragmented, particularly in states where landholding consolidation has not yet occurred. Under the current land inheritance laws, the process of subdivision and fragmentation of landholdings continues today generation after generation. Small and fragmented landholdings are a significant impediment to the efficient use of farm labour and machinery. Land subdivision and fragmentation must be stopped thru all the appropriate legislative measures. Almost all marginal and small-scale farmers are impoverished and produce very little marketable surplus. Farmers with less than 4 ha of land are estimated to be financially unviable if they rely solely on land income. As a result, more than 90% of farmers.

The capital-labor ratio is low

The rural sector in India is both capital-strapped and overburdened with human labour. As a result, the amount of capital usable per worker, or the capital-labor ratio, is low, which is one of the primary causes of low productivity in the sector. To improve this ratio, it is necessary to increase both private and public investment in the sector, as well as to facilitate the absorption of surplus workers in the non-agricultural sector through appropriate policies. Following a period of decline, both public and private investments in agriculture have increased at both 1999-2000 and current prices. For example, infrastructure spending in agriculture and allied activities increased from Rs 8,733 crore in 2002-03 at 1999-2000 prices to Rs 14,144 crore in 2005-06, while private investment increased from Rs 46,935 crore to Rs 49,987 crore during the same period (GoI 2007a). This buoyancy must be maintained in order to meet the agricultural sector's target growth rate of 4% per year in the Eleventh Five Year Plan.

Factor Productivity Is Low

Low crop yields have long been its bane of India's rural sector. As previously stated, low factor productivity is primarily caused by insufficient capital in the form of productive resources, raw materials, and improved machinery and equipment available per worker/unit of enterprise. For example, India's low average crop yields in comparison to developed countries such as the United States, Egypt, and China are due to low fertiliser and plant protection chemical inputs. Similarly, in India, the low average output of milk per milch animal is primarily due to a lack of concentrated feed and poor quality fodder fed to the animals. Closing the technological gap and reducing the redundant labour force are required to improve resource productivity in India's rural sector[9].

Long gestation and low turnover rate

Investment in agricultural enterprises takes a longer time to yield benefits than in many non-agricultural enterprises. Most crops, for example, mature in three to four months, it takes four to six years to raise a young buffalo calf to the point where she begins producing milk, and it takes five to ten years for fruit saplings to bear fruit. Furthermore, the annual flow of net returns from investment in the majority of agricultural enterprises is low. This results in a low turnover rate or, alternatively, it takes longer to recover the initial investment.

Poverty is prevalent.

Poverty is more prevalent in the rural sector than in the urban sector. In 2004-05, for example, approximately 28% of the rural population was poor, compared to approximately 26% in urban areas. In absolute terms, 22.1 crore (73%) of the total population of 30.2 crore living below the poverty line in the country in 2004-05 were in rural areas. Data from National Sample Surveys (NSS) show that the ratio of urban to rural per capita consumption increased from 1.62 in 1993-94 to 1.76 in 1999-2000 and then to 1.91 in 2004-05, implying that the urban-rural divide is widening, especially since the NSS does not likely fully capture consumption by the wealthy, particularly in urban areas. When the comparison is extended to gaps in the availability of other critical services, the chasm becomes much wider. However, the rural employment situation has recently improved. According to the NSS's sixty-first round, unemployment rates were lower in rural areas than in urban areas for both males and females in 2004-05. Male unemployment rates in rural areas were higher than female unemployment rates. In urban areas, however, the opposite was true. It is not surprising, then, that the average annual per worker income in rural areas is significantly lower than in urban areas. For example, it was Rs 11,496 at 1993-94 prices from 1998-99 to 2003-04, compared to Rs 59,961 in the non-agricultural sector (Radhakrishna 2008: 45). According to the NSS's sixty-first round (2004-05), the average per capita consumption expenditure (a proxy for per capita income) in rural areas was around Rs 559, while it was Rs 1,052 in urban area

Predominance of illiterate and unskilled labor

Although the average literacy rate in the country is low, it is even lower in rural areas. In 2001, it was around 60%, compared to around 80% for the urban population (Table 2.5). The majority of rural people's socioeconomic development is hampered by their higher level of illiteracy and lack of skills.

DISCUSSION

Inadequate Basic Infrastructure

Indian villages are severely lacking in basic infrastructure such as schools, health care centres (excluding hospitals), and all-weather roads, modes of transportation, and communication.Drinking water, and electricity for domestic and agricultural use. Empirical studies have shown that basic infrastructure is an important determinant of development. In fact, the 'growth centre' theory of development is founded on this premise. Despite recent progress in many states under the Minimum Needs Programme (MNP), Bharat Nirman Programme (BNP), Sarva Shiksha Abhiyan (SSA), National Health Protection Mission (NRHM), and other programmes to provide the bare minimum infrastructure, crores of people continue to live in remote tribal and hilly areas where little has been done.

The Agricultural Subsector's Role

The rural sector is the fundamental pillar of India's economy. No national development programme can ever succeed unless it is built on this foundation. More specifically, the rural sector in general, and its agricultural subsector in particular, contribute to India's economic growth and development in the following ways.

The Non-Agricultural Subsector's Role

Rural labour force growth has been rapid in most developing countries, including India, but job opportunities have been limited. As agricultural land becomes increasingly scarce, opportunities for nonfarm employment must expand if rural poverty is not to worsen. Given the expected growth and composition of large-scale urban industries, they are unlikely to be able to absorb the rising tide of workers migrating from rural to urban areas. Looking ahead to the twenty-first century, we must slow the process of urbanization, which has high social and environmental costs such as congestion, pollution, skyrocketing land costs, rising violence, and an increase in the incidence of sexually-transmitted illnesses (STDs) such as AIDS. The expansion of the rural non-agricultural sector, with its emphasis on labor-intensive and small-scale enterprises, broadens income opportunities for the poor, including small farmers, landless people, and women, allowing them to smooth out extreme fluctuations in their income[10].

The relative importance of the rural non-agricultural subsector, as well as the composition of the various economic activities included in the sector, varies greatly across India. This subsector, broadly defined, includes economic activities other than agriculture that are carried out in villages and range in size from households to small factories. Cottage, tiny, village, and small-scale manufacturing and processing industries, as well as trade, transportation, construction, and various services, are examples of these activities. Household industries have declined over time, while non-household industries have grown. Cottage industries, which rely on part-time family labour, are less efficient than small-scale, full-time, and specialized rural industries. As the cost of labour rises, businesses that lack the ability to divide labour continue to lose their cost advantage. Rural towns that serve as trading and distribution hubs for both urban and agricultural goods attract manufacturing activities as a result.

The rural non-agricultural and agricultural subsectors must be linked for rural development. The increase in farm income creates a larger market for non-agricultural subsector consumption goods and agricultural inputs, while agricultural raw materials are digested in the rural non-agricultural subsector.The relative strength of the consumption and production linkages is

determined by the rate and pattern of rising agricultural income, as well as the agricultural production technology used. The greater the increase in per capita income, the greater the share of non-food consumption in rural expenditure, and thus the greater the stimulus to the growth of the rural non-agricultural subsector. The proportion of locally produced consumption goods in consumption expenditure (as opposed to imports from urban areas or abroad) is determined by income distribution in agriculture. It is higher among medium or small farmers than among wealthy farmers.The Khadi and Village Industries Board (KVIC) has identified 95 village industries that will receive government assistance. These industries are classified into seven categories:

1. Industries based on minerals.
2. Industries based on trees.
3. Agriculture-based industries.
4. Industries based on polymers and chemicals.
5. Engineering and alternative energy industries.
6. Textile industry besides khadi.
7. The service sector.

For centuries, the landless and other poor people in villages in India have relied on cottage and village industries for a living. It is a significant source of income and job opportunities for them. Agriculture and rural industries, in fact, are complementary to one another. After agriculture, this sector employs the second highest number of people. It affects the lives of the less fortunate and disorganized segments of society, with more than half of those employed being women, minorities, and the marginalized. Fifty-seven percent of micro and small enterprise (MSE) units are run by a single person. They employ 32% of the workforce and generate 29% of the value added in non-agricultural private unincorporated enterprises.

The sector accounts for more than 40% of the manufacturing sector's gross turnover, approximately 45 percent of manufacturing exports, and approximately 35% of total exports. To further boost this sector, the Government of India has implemented several policy initiatives, including an integrated infrastructure development scheme, a concessional rate of excise duty for non-registered units, a quality certification scheme to obtain ISO 9000, increasing project outlay from Rs 30 lakh to Rs 50 lakh in the single window scheme, and adequate and timely credit supply in accordance with the Nayak Committee (1992) recommendations. Furthermore, the investment limit for small-scale industry (SSI) units has been raised from Rs 60 lakh to Rs 3 crore, the investment limit for the tiny sector has been raised from Rs 5 lakh to Rs 25 lakh, and the composite loan limit for SSI units has been raised from Rs 50,000 to Rs 2 lakh.The Nayak Committee, which was formed to investigate the adequacy of institutional credit to the SSI sector and related issues, concluded that it would be safe to assume that the majority of the financial needs of the SSI sector's rural segment were met by private sources, including moneylenders. In terms of the overall SSI sector, it was discovered that: 1. there has been a dispersal of SSI units away from metropolitan areas and large cities; 2. despite increased credit flow, the share of the tiny sector and village industries has been dismally low; and 3. the establishment forward and and backward linkages to ensure enterprise success has not kept pace with the increase in credit flow.

Credit is only one of the necessary inputs for industrialization; entrepreneurs will be able to prepare viable proposals and obtain institutional financing only if other supporting facilities, such as adequate and timely availability of raw materials, skilled labour, and marketing support,

are guaranteed. The Kayak Committee proposed, among other things, the establishment of a separate fund for modernization, research, and marketing, venture capital assistance for promoting viable projects by technocrat entrepreneurs, and detailed data collection for village and small-scale industries. Infusing latest tools, design skills, modern marketing capacity building, and easier credit access can help this segment grow into a self-sustaining base.

Employment and income creation are also encouraged, as is a creative and competitive industrial culture. Agrofood processing, sericulture, and other village industries that employ people in villages may help to reduce rural-urban migration. This will also relieve agricultural burden. The MSE sector may provide opportunity in areas where major enterprises cannot be established owing to infrastructural gaps and environmental issues, such as the northeast. Income created by numerous activities in this subsector is more equally dispersed than revenue earned by large-scale manufacturing. Moreover, because of the low capital required per worker, the subsector may produce more employment with the same amount of capital as the related large-scale industrial industry.

Absence of suitable infrastructure is a key hindrance to the development of rural enterprises. Electricity, transportation, communication, and the availability of ancillary and allied services, such as suppliers of raw materials and other inputs, semi-skilled and skilled labourers to attend to machinery problems, marketing and credit support agencies, and so on, are critical for industry growth. In their absence, micro unit manufacturing tends to cluster at the outskirts of metropolitan centres. The Sivaraman Committee has proposed that the duty for providing infrastructure and extension assistance to rural industry development (including raw material supply) be transferred to state governments. Banks find it difficult to promote the growth of rural industry in the absence of responsive and dedicated organisations to provide these necessary services.Numerous ministries, agencies, and institutes engage with operations in the MSE sector and have a range of programmes to assist MSEs. Nevertheless, the benefits are only available to a limited percentage of MSEs, since only 13% are registered. We need to adopt a dual policy in the Eleventh Five Year Plan to guarantee that unregistered MSEs and units outside the cooperative fold are encouraged to register and may benefit from government initiatives awaiting registration. In reality, the new Micro, Small and Medium Businesses Development Act, 2006, which provides for the voluntary filing of enterprise memoranda by MSEs, is a step in that direction that should be vigorously implemented.

There is a need to shift the focus from loosely targeted subsidies to establishing an enabling environment. A cluster strategy may assist boost viability by providing these units with higher-quality infrastructure, information, credit, and support services at cheaper prices, while also strengthening their capability for effective collective administration. Furthermore, in order to improve the competitiveness of these micro, small, and medium-sized enterprises (MSME), public-private partnership (PPP) schemes for the establishment of mini tool rooms, design clinics, marketing support, sensitization to intellectual property rights (IPR) requirements and tools, adoption of lean manufacturing practises, wider use of information technology (IT) tools, and so on should be developed. Brand development may be a successful method for promoting their goods in both domestic and international markets. According to the Government Budget 2008-09, a Rs 5,000 crore fund would be established in the National Bank for Agricultural and Rural Development (NABARD) in 2008-09 to strengthen its lending capability to the MSME sector. Similarly, the Small Industries Development Bank of India (SIDBI) would establish two funds, each worth Rs 2,000 crore.

Capital financing, and the other to improve its refinance capabilities for the MSME sector. All of these initiatives would be more successful if they were directed at specific clusters. It is also vital to acknowledge the ongoing need to promote the progression of these businesses to higher levels, notably from small to medium. With well-calibrated fiscal and non-fiscal measures, incentives for the graduation of MSEs to medium and larger units are required.

CONCLUSION

Rural economies encompass both agricultural and non-agricultural enterprises, therefore rural economics is more comprehensive in scope than agricultural economics, which is primarily focused on food systems. Rural development and banking work to address wider issues in rural economy.Rural development often refers to a strategy for improving peoples' quality of life and financial security, particularly those who reside in inhabited and distant locations. Historically, the overuse of land-intensive natural resources like forestry and agriculture was at the heart of rural development.

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CHAPTER 11

DIFFICULTIES AND OPPORTUNITIES IN RURAL DEVELOPMENT

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Abstract:

Generally speaking, rural development refers to a strategy for raising peoples' quality of life and financial security, particularly those in densely populated and distant locations. The overuse of land-intensive natural resources, like forestry and agriculture, has historically been the focus of rural development. There are three key problems in rural development, bringing about economic growth, providing facilities to fulfil social requirements, and lastly bringing about a shift in mindset in areas pertaining to society, culture, and ways of thinking.

Keywords:

Agricultural, Culture, Food Grain, Rural Development,

INTRODUCTION

Before the 1960s, the overarching objective of Indian agricultural policy was to achieve food security. In the late 1960s and early 1970s, the development and fast distribution of High Dividend Variety (HYV) seeds resulted in a continuous increase in food grain production. Governmental investment in infrastructure, research and extension, and crop production practises have all contributed significantly to increased food grain output and inventories. Food grain production has climbed from 8.2 million tonnes in 1960-61 to more than 21 million tonnes in 2006-07. India currently produces enough food for its own use as well as export. It might be the world's prospective granary: the nation to which the world should seek for guidance in feeding its growing population. Yet, agricultural yields in India are now quite poor when compared to those in wealthy nations. In 2004-05, for example, the average rice output in India was 2,900 kg per ha, compared to 6,420 kg in Japan and 6,730 kg in South Korea. Only greater public and private investment in agriculture, broad adoption of environmentally friendly acceptable new technology, producer-oriented pricing policies, and professionally managed programmes might close the yield gap. If the average cereal output in India can be raised to the level of the global average, India would be the world's leading producer of food grains. As a result, the most difficult issue for India is to improve agricultural yields to global average levels on a sustained basis, despite natural disasters like as droughts and floods, to which India remains severely susceptible even now [1], [2].

Farmers have recently committed suicide in the four states of Andhra Pradesh, Maharashtra, Karnataka, and Kerala as a result of significant losses in agriculture year after year, and the resulting mounting debts.In light of this, the Government of India has authorized an Rs 16,978.7 crore rehabilitation plan for suicide-prone regions in these four states. The package will be executed over a three-year period, from 2007-08 to 2009-10. It comprises both short-term and long-term metrics. The rehabilitation package aims to establish a sustainable and viable farming

and livelihood support system through debt relief for farmers, increased supply of institutional credit, crop-centric approach to agriculture, assured irrigation facilities, watershed management, better extension and farming support services, and subsidiary income opportunities in horticulture, livestock, dairying, and fi sheries, among other things. Banks have already forgiven Rs 3,728.4 crore in interest on late loans, and Rs 10,086.6 crore has been transferred to Andhra Pradesh, Maharashtra, Karnataka, and Kerala as part of the package[3].

Landholdings in India are not just tiny, but also widely dispersed over the countryside. Landholdings are also fragmented in states where landholding consolidation has not yet occurred. Under the current property inheritance rules, the practise of subdivision and fragmentation of landholdings continues unabated year after generation. Small and scattered landholdings are a significant impediment to the efficient utilisation of agricultural labour and equipment. Land subdivision and fragmentation must be halted by suitable legal measures, such as prohibiting further subdivision of landholdings below an economically feasible level. Policymakers have a significant obstacle in implementing such a transformation in landholding system.Moreover, there is an urgent need for tenancy changes that safeguard tenants' rights while not inhibiting the business of land leasing [4].

Liberalisation has created new chances for Indian farmers to benefit from better global pricing for their product and cheaper input costs. Export orientation has resulted in the necessity for high-tech initiatives as well as the exploration of worldwide markets for exportable goods. Credit demand evaluation, appraisal, and financing instruments for high-tech projects are all difficult problems.Addressing the credit demands of this burgeoning export-oriented hightech industry necessitates commensurate institutional developments, which have begun with the formation of agricultural development finance corporations. NABARD must play a critical role in tackling this challenge, and it is currently doing so.

Moreover, with global market uncertainties and rising international costs for food, fuel, and edible oils, local price safety and food security are crucially dependent on development in this industry. This entails determining the forward and backward links that improve productivity via balanced resource allocation and improved use at all stages of implementation, as well as measuring output per unit of resource consumed. Since agriculture continues to sustain more than half of the world's population, the problem of efficiency and resource consumption becomes more important.In 2007-08, two major projects were launched to revitalise the agricultural sector: the National Food Security Mission (NFSM) with a budget of Rs 4,822 crore and the Rashtriya Krishi Vikas Yojana (RKVY) with a budget of Rs 25,000 crore. These policy actions will greatly benefit the industry. Human resource development for those involved in agriculture is required not just to increase the penetration of improved technology, but also to allow underemployed labour in this area to be absorbed in other rapidly rising industries[5], [6].

Recently, there has been a dramatic increase in public awareness of the negative environmental consequences of economic expansion and development. This has resulted from increased air and water pollution, soil erosion, ground water aquifer depletion, forest denudation and degradation, and increased waterlogging and soil salinity in canal command regions. A new paradigm of sustainable development is developing as a result of this. This worldview opposes the heedless pursuit of economic expansion at the expense of environmental deterioration. Today's agricultural development planners have a severe challenge: how to accelerate growth while preserving natural resources and environmental quality.

Similarly, to give income and job possibilities to the excess rural population, the rural non-agricultural segment will need to develop at a considerably higher pace. This is also conceivable if a well-thought-out long-term national strategy for rural non-farm sector growth is developed and efficiently executed.

Last but not least, bridging the growing gap between rural and urban areas in terms of basic infrastructure and civic amenities, and thus reversing the current trend of rural-urban migration, is and will continue to be a major challenge for development policymakers, planners, and managers in the near future. Schemes such as the MNP, BNP, SSA, and NRHM, if properly implemented, might help to bridge the rural-urban gap:

1. The Indian economy is divided into two sectors: rural and non-rural.

The rural sector employs over 72% of India's entire population. It is divided into two major subsectors, the agricultural subsector and the nonagricultural subsector.

2. The agricultural subsector is the most dominant in the rural sector. This is clear from the fact that agriculture and related industries provide a living for almost half of the country's inhabitants. Agriculture and associated sectors generated about 18% of India's GDP at factor cost in 2006-07 at current prices and employed 52 percent of the country's total labour force. It is also a significant source of foreign currency and raw materials for India's main agro-industries, as well as a significant market for industrial goods. No development initiative in India can ever be successful if the rural sector is ignored.

3. The non-agricultural subsector includes a variety of economic activities, including cottage and village industries, khadi, handloom, handicrafts, general goods trading, small shops, petty traders, and services such as transportation, communication, banking, input supply, and marketing of farm and non-farm produce. The non-agricultural subsector has been developing faster than the agriculture sector, creating many new job possibilities.

4. Despite India's great advances in science and technology since independence, the rural sector and rural people remain woefully undeveloped, with around 221 million (about 28 percent of India's rural population) living below the poverty line in 2004-05 and 41 percent illiterate.

5. The rural sector is distinguished by, among other things, the predominance of small and dispersed rural enterprises, a lack of basic infrastructure, low productivity, a high incidence of poverty and unemployment, and an excessive reliance on weather and climatic factors, with the resulting high level of risk and uncertainty. As a result, proper crop insurance plans are needed to mitigate weather-induced risk in agriculture Rural Economy of India 35. It is also vital to consolidate the dispersed and fragmented landholdings and prevent future subdivision and fragmentation by proper legal measures, in order to make agricultural labour and equipment more cost efficient.

6. In recent years, there has been an increase in the number of farmer suicides in the four states of Andhra Pradesh, Maharashtra, Karnataka, and Kerala, owing to significant losses in agriculture and increased debts. In light of this, the Government of India has authorised a Rs 16,978.7 crore rehabilitation plan for suicide-prone regions in these four states. The package will be executed over a three-year period, from 2007-08 to 2009-10.

7. The non-agricultural subsector of India's rural sector is also a major source of income and job prospects, notably for the landless. After agriculture, this industry employs the second highest number of people. It affects the lives of the less fortunate and disorganised segments of society,

with more than half of those working being women, minorities, and the disadvantaged. Micro and small businesses (MSEs) employ 32% of the workforce and generate 29% of the value produced in non-agricultural private unincorporated firms. In recent years, the rural non-farm sector has grown faster than the agricultural subsector, but it must expand quicker to accommodate the increase to the rural labour force.

8. The revenue produced by diverse non-agricultural businesses is more equally distributed than the income provided by large-scale industry. Moreover, because of the low capital required per worker, this subsector may produce more employment with the same amount of capital as the related large-scale industrial industry.

9. The rural non-agricultural and agricultural subsectors must be linked for rural development. The expansion of the agricultural subsector creates a larger market for non-agricultural subsector consumer items and agricultural inputs, while agricultural raw materials are processed in the rural non-agricultural subsector.

10. Since its economy has been more liberalized and globalized, India currently confronts a number of obstacles as well as several possibilities. Some of the challenges include ensuring food security and environmental integrity, increasing resource productivity in agriculture and allied activities to at least match the corresponding world averages, closing the infrastructure and civic amenities gap between rural and urban areas, and ensuring the agricultural sector's financial viability by increasing farm incomes and reducing weather-induced risk and uncertainty.

11. The key opportunities created by globalisation include expanded access to global markets and, as a result, the possibility of achieving better prices for agricultural products as well as cheaper costs for certain of the inputs needed by rural farmers. The export orientation has resulted in the necessity for high-tech initiatives as well as the exploration of worldwide markets for exportable goods.Addressing the financial demands of this burgeoning export-oriented hightech industry necessitates 36 Rural Development concurrent institutional improvements, with the formation of agricultural development finance corporations serving as a starting point. The National Bank for Agricultural and Rural Development (NABARD) is an important player in solving this problem.

12. In 2007-08, the National Food Security Mission (NFSM) with an expenditure of Rs 4,822 crore and the Rashtriya Krishi Vikas Yojana (RKVY) with an outlay of Rs 25,000 crore were launched to revitalise the agricultural sector. These actions will greatly benefit the industry.

DISCUSSION

Measures of Development

Statistics on the degree and rate of rural development are essential for a variety of reasons. Quantitative indicators of rural development are required to:

1. Reflect the level of rural people's economic and social well-being.

2. Serve as a baseline for future planning.

3. Function as tools for monitoring, assessment, and control of existing programmes.

4. Permit regional and temporal comparisons of development.

5. Act as loan eligibility criteria.

It goes without saying that if the metrics are to be useful, they must be congruent with the goals of rural development.

The main goals of rural development in all societies, regardless of their economic, political, or socio-cultural systems, are to:

1. Increase the availability and distribution of life-sustaining goods and services such as food, clothing, shelter, health, and security.

2. Increase per capita purchasing power and improve its distribution by providing better education, productive and remunerative jobs, and cultural amenities.

3. Broaden the range of available goods and services.As a result, a measure of rural development should at the very least provide an indication of commonly accepted development objectives, such as per capita availability of life-sustaining goods or per capita real income in rural areas, as well as some idea of the distribution of income, assets, and other means of socioeconomic welfare.

Currently, no one indicator of rural development effectively represents its diverse character. Economists have employed a range of measures to reflect the diversity of aims that characterise rural development. For the convenience of organisation, we divide the indicators into two categories: measures of rural development and measures of income distribution. The sections that follow provide a criticism of some of these indicators.

Measures of Rural Development Level

The following indicators are often used (or may be used) to assess the amount of rural development at a certain moment and location, as well as throughout time and across space.

Per person Gross National Product in Real Terms (GNP): The GNP is the market value of all final products and services generated in a year and traceable to factors of production provided by the country's typical citizens. Real GDP is GDP adjusted for price fluctuations and is calculated by dividing GDP by the General Price Index (GPI). The most generally used measure of people's economic well-being is per capita real GDP. It might be used as a measure of the economic component of rural development if calculated separately for rural people. Measurements of Progress 39 a rise in average real GNP per capita suggests that we are economically better off. Yet, as a measure of economic well-being, GNP has the following shortcomings:

1. It excludes the benefits of physical and mental fulfilment that individuals obtain from leisure.

2. It excludes the value of non-paid housewives' services and household labour, such as gardening, painting, and pet and domestic animal care. The GNP is diminished when a bachelor marries his maid because he no longer pays for her services.

3. It does not attach any negative values to the side consequences of ecological activities that lower the overall pleasure from their product. Air pollution, water pollution, noise, and other unfavorable impacts of industrialization are examples of such negative effects.

4. It places little value on the 'disamenities' of living in unclean, loud, and congested cities and slums as compared to more clean, open, and pleasant environs.

It also gives no weight to environmental benefits such as clean air and water and a pollution-free environment.

5. Determining the per capita income of rural people, the majority of whom are self-employed and, being illiterate, do not maintain any written records of their income and spending, is not only difficult but also time-consuming and costly. It needs a skilled and well-trained rural researcher/investigator to determine the genuine per capita income of rural residents.

Obviously, the GNP does not contain everything that contributes to human pleasure, and it also does not exclude everything that detracts from it. Notwithstanding its shortcomings, per capita real GDP is the sole quantitative measure of the economic component of rural development available for intra-national and international comparisons over time and location.

Consumption Spending Per Capita

Given the limitations of per capita income as a measure of rural development, per capita consumption expenditure of rural people is regarded as a better measure of rural development for a variety of reasons, including the relative ease with which the respondent recalls the expenditure incurred and the general tendency of rural people not to conceal any expenditure when compared to income. Per capita consumer spending is a decent proxy for per capita income. The National Sample Survey Organization (NSSO) conducts sample surveys at regular intervals throughout India to estimate consumer spending for both urban and rural residents. The most recent round (the sixty-first) was held in 2004-05. The NSSO estimations are thought to be relatively trustworthy.Further estimates of consumer spending are also available from research papers of organizations and researchers for certain locations. To be meaningful for comparison, nominal consumer expenditure, like nominal income, should be adjusted for changes in the GPI over time and across place [7], [8].

The degree of rural development in a nation is determined by the per capita amount of different products and services consumed by its rural population during a certain time period. It makes no difference whether the products and services consumed are bought with a person's own money or received without any specific investment on his part. Some government services, infrastructure, and civic amenities, such as schools, hospitals, roads, parks, police protection, and street lights, are given for free or at a small cost to its citizens. The availability of these facilities and services represents ‘real revenue' and hence contributes to the standard of life. Per capita public spending on such services and facilities is a good indicator of socioeconomic well-being. This statistic should be adjusted for changes/differences in the GPI when comparing across time and space. When combined with per capita income or spending, this statistic provides a pretty good measure of rural development.But, no organization/agency in India makes estimates of this variable/measure. To estimate and apply this metric, one must obtain the necessary information from the official records of village panchayats and other village/block level organ stations.

Index of Physical Well-Being (PQLI)

Morris and McAlpin (1982: 1-30) devised this metric to assess the effect of development programmers on their target populations. The PQLI is the name given to this metric.It supplements the most generally used indicator of economic growth, per capita real GDP. It consists of three components: neonatal mortality, life expectancy at one year, and basic literacy. These three component Indi cators lend themselves to international and international comparisons, are easy to compute and understand, are fairly sensitive to changes in the distribution of development benefits, do not reflect the values of any specific culture, and reflect results rather than inputs.

Many commodities and services may be merged in the calculation of GNP by using a common element: market price. Yet, there is no single factor that values all three PQLI component indications. Instead, they are combined into a single index, PQLI, using a basic indexing scheme. Each state/country performance is rated on a scale of 0 to 100 for each indication, with zero being the absolute 'worst' performance and 100 representing the 'highest' performance. After scaling the performance of each indicator to this common metric, a composite index is created by averaging the three indications and assigning equal weight to each of them. As a consequence, the resultant PQLI is similarly scaled from 0 to 100.Morris and Maclin calculated the PQLI for 150 different nations. The range for each component index was determined by reviewing the nations' historical experience. The literacy score varied from 0 to 100% for the population aged 15 and above, the infant mortality rate ranged from 229 to 7 per thousand Measures of Development 41 births, and life expectancy at one year ranged from 38 to 77 years. They calculated a PQLI for each of Nigeria, India, and the United States using these ranges and real data.

Rural Development Index Composite

Recognizing the complex character of rural development, Mathur created a composite indicator of rural development. Twenty-five indicators representing all significant elements of rural development were identified and organised into nine main components.The 25 measures of state-level rural development were translated into an index, with all-India values equal to 100. A two-step technique was used to derive an overall composite index of state level agricultural development based on the 25 factors. The first stage was to generate nine distinct group level composite indexes of rural development. For this reason, the group level indices were calculated as a simple average of the rural development indices pertaining to each of the groups involved for all six groups with more than one indicator. The nine composite indices so calculated depict several aspects of state-level rural development in India. The composite index of state level rural development was created by aggregating all nine group level composite indicators into one.Two different techniques were used for this goal. In the first option, a basic approach similar to that used to compute group-wise composite indices was applied. The resulting Composite Regional Development Index (CRDI) was dubbed the Simple Index. Each of the nine group indices was given an equal weight in this option. With the second option, a weighted average was calculated to combine the nine indices. The weights were calculated using a variation of the First Principal Component [9].

Human Development Index (HDI)

Recognizing that people must be at the centre of all progress, the United Nations Development Programme (UNDP) decided to publish a report on the human aspects of development every year starting in 1990. The Evolution of Man

Composite Rural Development Index

Mathur created a composite indicator of rural development in recognition of the complex character of rural development (2005: 159–90). The 25 measures of state-level rural development were translated into an index with all-India values equal to 100. A two-step technique was used to calculate an overall composite index of state level rural development based on the 25 factors. In the first phase, nine distinct group level composite indicators of rural development were generated. For this purpose, the group level indices were calculated as a simple average of the indices of rural development pertaining to each of the groups involved for

all six groups with more than one indication. The nine composite indices so calculated depict several aspects of state-level rural development in India. In the second phase, the composite index of state level rural development was created by combining all nine group level composite indices into one.

Two distinct techniques were used for this goal. In the first option, a basic approach similar to that used to compute group-wise composite indices was applied. The resulting Composite Rural Support Index (CRDI) was known as the Simple Index. Under this option, each of the nine group indices was given an equal weight. With the second option, a weighted average was produced to combine the nine indices. The weights were calculated using a variation of the First Principal Component.

Groups of people. Moreover, the HDI has been augmented with a Human Freedom Index and indices of human security for selected nations where data is available. The HDI for 1994 was computed differently than it had been in prior years.For the four basic variables, maximum and minimum values were fixed: life expectancy (85 years and 25 years), adult literacy (100 percent and 0%), mean years of schooling (15 years and 0 years), and income adjusted for differences in purchasing power and expressed in terms of Purchasing Power Parity (PPP) ($40,000 and $200).

The threshold value for income was set at the world average real GDP per capita of PPP $5,120. Multiples of income beyond the limit were discounted at increasing rates (UNDP 1994: 92).The minimum and maximum values of y variable were fixed without regard for specific nations, resulting in norms. The minima were those witnessed historically, dating back around 30 years, while the maxima were the boundaries of what may be imagined in the future 30 years. This allowed for more relevant comparisons across nations and over time [10].

$$\text{Component index} = \frac{\text{Actual value} - \text{Minimum value}}{\text{Maximum value} - \text{Minimum value}}$$

CONCLUSION

The Rural Integration Program was established to provide disadvantaged people with work options. This system not only provides the required subsidies to persons living below the poverty line, but it also assists them in improving their living conditions.You can work for a variety of governmental and non-profit institutions that support rural residents. Managers in rural regions are capable of working in all functional areas, including finance, marketing, human resources, project execution, etc.

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CHAPTER 12

AN OVERVIEW ON INCOME DISTRIBUTION MEASURES

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Abstract:

Social scientists employ income distribution metrics or income inequality metrics to assess the degree of economic inequality among those who participate in a given economy, such as that of a single nation or the global economy as a whole. The income distribution is computed by dividing Gross Domestic Product (GDP) by the population of the country, with the GDP representing the market value of all products and services produced.

Keywords:

Capital, Income, Inequality, Income Distribution, Poverty.

INTRODUCTION

From the standpoint of aggregate economic wellbeing, the amount of per capita real GNP and its distribution are both equally essential. Higher per capita real GNP and its more fair distribution often imply a greater degree of economic well-being. A nation with a high per capita terms GNP but a less equal income distribution would score worse in terms of aggregate economic wellbeing than one with the same per capita real GNP but a more equitable income distribution.Economists employ a broad range of methods to assess income distribution. These include, for example, the Pareto index, the proportions of the poorest and top 20% of households in aggregate income, the standard deviation of logarithms of income, the Lorenz Curve, and the Gini Concentration Ratio (GCR). A decent measure of wealth inequality should have two features. Secondly, it should be unaffected by equal proportionate increases in all incomes, such that if the income distribution for year X is merely a scaled-up version of that for year Y, we should treat both as having the same degree of inequality [1].

Be sensitive to disproportionate changes at all income levels, so that if the incomes of lower-income family's increase proportionately more than the incomes of higher income households from year X to year Y, this should result in a strictly positive reduction in the index of inequality rather than simply leaving it unchanged. The technique for calculating some of the most often used metrics of income inequality is described briefly below.

Lorenz's Curve

This is a graphical representation of wealth inequality and inequality. A frequency table displaying the distribution of income by decile groupings of households is necessary to create a Lorenz Curve. In other words, the table should represent the proportion of aggregate revenue for each decile group, as the cumulative percentage of income getting households is shown on the horizontal axis, the cumulative % of aggregate income is represented on the vertical axis, and the curve shows the locus of all combinations of the two cumulative percentages[2].

The Gini Concentration Ratio (GCR)

Corrado Gini created this ratio in 1913, it is now the most often used metric of income disparity. The Lorenz Curve or the mean difference may be used to estimate the ratio.It shows the proportion of the area lying between it diagonal and the Lorenz Curve to the entire area under the diagonal when estimated from the Lorenz Curve.The ratio would be A/A + B if we denoted the region within the Lorenz Curve as A and the area outside the Lorenz Curve as B. As a result, the range of this ratio ranges from zero to one, with zero representing complete equality and one representing perfect inequality. The GCR may be defined as follows when calculated from the mean difference:

$$GCR = \sum_{i=1}^{n}\sum_{j=1}^{n}\frac{f_i f_i / x_i - x_j}{2\bar{x}N}$$

where n is the number of income classes, f I and f j are the frequencies in the ith and jth classes, xi and xj are the means of the ith and jth classes, N is the total number of income receivers, and x is the overall mean income. As a result, the ratio is one the weighted average of all absolute disparities between any two salaries.

The Standard Deviation of Logarithms of Incomes

This is another popular metric of income disparity. It is defined as follows:

$$S.D. = \left[\frac{1}{N}\sum_{i=1}^{n}(\log x_i - \log x)^2\right]^{1/2}$$

Where N is the total number of people/households, xi is the income of the 1st person/household, and x is the mean income of all people/households. This metric is especially helpful when income is roughly log-normally distributed. When a variable's logarithm is normally distributed, it is log-normally distributed. This measure, like the GCR, has both of the features of an ideal measure of economic inequality, but it gives greater weight to income transfers at the bottom of the distribution.

Simplified Development Measures

Recognizing that reducing or eliminating rural poverty, inequality, and unemployment is an essential indicator of rural development, we may identify a few basic indicators by asking the six questions below:

1. Has the number of rural people living in absolute poverty decreased over time?

2. Has there been a decrease in rural income disparity over time?

3. Has rural unemployment been decreasing over time?

4. has the type and quality of rural public educational, health, and other social and cultural services improved over time?

5. Has economic success increased rural people's individual and collective respect, both internally and internationally in relation to other countries and regions?

6. Lastly, has economic prosperity broadened rural people's options and liberated them from external dependency and internal enslavement to other individuals and institutions?

If the answer for each of these questions is 'yes', then plainly these occurrences represent actual rural development, and a country in which they are exhibited may unquestionably \sbe termed 'developed'.

Concepts and Measures of Rural Poverty

The terms 'rural poverty' and 'rural development' are diametrically opposed. It indicates a lack of development, or economic decline, and so knowledge of its measures is as vital for a student of rural development as knowledge of rural development measures. In this part, we will look at some of the most often used metrics of rural poverty.Rural poverty is a global issue that affects both developing and industrialized nations. Around one billion people are believed to be living in poverty across the globe. Poverty incidence varies greatly among the world's regions, nations within those areas, and locales within those countries.South Asia, which accounts for around 30% of the world's population, is home to over half of the world's poor. Poverty alleviation has long been a goal of development policy and laws across the globe, including in India.

Connotations and Definitions of Poverty

While there is no commonly accepted definition of poverty, there are various meanings and definitions in use. Poverty is a way of life marked by deprivation of one kind or another and seen as unpleasant by the person(s) affected or others. It is a multifaceted notion and reality. Scholars generally agree on whether poverty should be thought of and defined as absolute or relative. Absolute poverty denotes a person's inability to get objectively determined substantially acceptable amounts of commodities and services to meet his material and nonmaterial fundamental requirements. Relative poverty, which is the other hand, indicates that a person's access to basic necessities is less than that of some reference group of individuals. When comparing two houses or two people, one may be deemed impoverished while the other may not be, even if both may be able to meet their basic material requirements [3]–[5].

DISCUSSION

Criteria for Measuring Poverty

Poverty measurement is fraught with philosophical, methodological, and empirical issues. Poverty is difficult to define in practical terms that are generally accepted. Methodologically, there is no agreement among researchers regarding the appropriate indicator or measure poverty, and empirically, given the choice of a specific measure of poverty, it is very difficult to gather the trustworthy data required to compute the value of the indicator/measure selected. Notwithstanding these challenges, policymakers, planners, and researchers have sought to quantify poverty and have used poverty metrics to track changes in the level/incidence of poverty and for other reasons [6], [7].

Measurements of Progress

The amount of poverty at any particular moment is determined by the criteria or standards used to define poverty and establish the poverty line. To define the poverty line, two criteria or standards are often used:

1. A nutritionally balanced diet is considered the norm.

2. A standard of life based on the notion of a bare minimum.

Some academics have tried to estimate the cost of providing a nutritionally appropriate meal. For example, Dandekar and Rath (1971: 8–9) calculated the poverty line to be Rs 15 per capita per month for rural families and Rs 22.50 for urban households at 1960–61 prices, based on an average calorie consumption of 2,250 per capita per day.

In terms of the second norm, which is based on the notion of a minimal standard of living, a distinguished Working Group-2 convened by the Planning Commission, Government of India, in July 1962, discussed on what should be considered the nationally desirable minimum level of consumer expenditure. The research group advised that a per capita monthly consumer spending of Rs 20 in rural regions and Rs 25 in urban areas be considered the national minimum at 1960-61 prices.

This excludes spending on health and education, which are supposed to be covered by the government; the'minimum' for urban regions assumes a subsidy in urban housing.The Planning Commission established a 'Task Force on Projection of Minimum Needs and Effective Consumption Demand' in 1979, which defined the poverty line as the per capita expenditure level at which the average per capita per day calorie intake was 2,400 kcal for rural population and 2,100 kcal for urban population. In 1973-74 prices, the proposed poverty level was Rs 49.09 per capita per month for rural populations and Rs 56.64 per capita per month for urban populations. The Task Force also advised boosting the NSSO's projected consumption expenditure levels by a 'factor' to make them commensurate with the greater overall level of private consumption expenditure recorded in the National Accounts Statistics (NAS). This 'factor' was minor at first, but it became more and greater with time.

The Planning Commission's Expert Group (EG) advised in 1989 that the Task Force poverty line (Rs 49.09 for rural areas and Rs 56.64 for urban areas at 1973-74 prices) be maintained as the threshold distinguishing the poor from the non-poor. The EG proposed specifically designed state-by-state indexes for adjusting the poverty level in response to price fluctuations. It also advised against adjusting NSSO-based consumption spending with NAS consumption expenditure since the causes for the disparities were various and the NSSO survey acquired direct information on consumption, making it more credible. Following the EG proposal, the Planning Commission changed the poverty series beginning in 1973-74. Since then, official poverty figures have been based on the EG's suggested approach. The EG's proposed technique is summarized here (Radhakrishna and Ray 2005).

The poverty lines are tied to a fixed commodity basket that corresponds to the Task Force's proposed poverty limit (Rs 49.09 per person per month at 1973-74 prices for rural regions and Rs 56.64 for urban areas, as specified in the preceding paragraph). In 1973-74, the EG's rural commodities basket comprised 2,400 kcal per capita per day in rural regions and 2,100 kcal per capita per day in urban areas.The calorie norm was used as an estimate to what may be deemed an acceptable ‘minimum requirements'. All states use the same consumption basket. To account for shifting preferences and palates, the EG suggested that the consumption basket be changed every five years. This was to meet ‘minimum requirements,' as determined by the nutrition qualities selected and disclosed by customer behavior patterns.

The consumption baskets so identified for rural and urban regions are then assessed at state-specific prices that arrive at state-specific poverty limits in the base year, 1973-74. The poverty limits calculated for the base year 1973-74 are modified for following year prices. Poverty levels are assessed for each state for each year using the state level consumers’ spending distribution.

The all-India poverty ratio is determined by adding the poverty ratios from each state. The poverty line is computed using the consumer spending distribution for that year, given the all-India poverty ratio.

Some Common Measures and Indicators of Poverty

Whereas Head Count (HC) is the most often used indicator, three additional measures, namely Poverty Gap (PG), Squared Poverty Gap (SPG), and Sens' Index, are equally significant for their features. The first three measures fall within the category of additive measures.

There are excellent surveys for measuring poverty.We briefly discuss the major challenges affecting policy analysis. Let y represent per capita consumer spending and z represent the poverty line. Let f(y) and f(y) be the density and cumulative distribution functions, respectively (CDF). A measure of poverty is a function f(y, z) that is non-increasing in y and OU pas in z. Homogeneity is a desired quality for the function. In other words, the scale is irrelevant. In the literature, many methods of aggregating the p(y, zhave)'s been presented. Nevertheless, additive measures meet sub-group consistency, which implies that if poverty rises in any sub-group of the population (say, agricultural labourers) without falling elsewhere, aggregate poverty should rise as well. A sub-group inconsistent measure could mislead policy analysis since it may not demonstrate a reduction in national poverty even if it does in a specific region. The category of additive income deprivation is denoted by

$$P(z) = \int p(y, z) f(y)\, dy$$

The Head Count Index (HC)

This metric is often used nowadays. It simply refers to the fraction of the population whose consumption (y) falls below the poverty line (z). This is just the value of P(z) in equation, the metric is simple to comprehend and express, but it has two significant flaws that impact policy analysis. First, it contradicts the monotone axiom of welfare, which stipulates that an increase in some people's income, given the earnings of others, should alleviate poverty. The HC ratio is unaffected by changes in income as long as they do not transfer a person of one side of the poverty line to the other. The proposal also breaches the welfare transfer principle, which holds that transfers from one person to another should eliminate poverty. This breach has the critical consequence that a given increase in income via policy interventions will have a substantial effect if people near the poverty line are chosen.

The Poverty Gap (PG) Index

Setting = 1 in equation yields this result. It assesses the level of poverty by taking into account the distance from the poverty line as well as the number of impoverished people. I = 1 - P /z = PG/H is a commonly used income gap ratio, where P is the mean value of the asset for the poor. It calculates the average proportional deficit below the poverty level. This is a misleading statistic because if a poor individual with a standard of living above P leaves poverty, the income gap ratio increases even if no one would be worse off and one of the poor is really better off. As a result, PG is a more accurate estimate than the income gap ratio. Although it meets the monotone axiom, it is indifferent to transfers from one poor individual to another, since the disparity stays like as long as both remain poor. Although it indicates the depth of poverty, does not represent the severity of poverty since the distance from the poverty line is not weighted.

The Squared Poverty Gap (SPG) Index

Foster et al. (1984) suggested this measure to represent the intensity of poverty, which is produced by taking = 2. This is a strictly function of x., which is desired in a welfare function.

Sen's Index

Sen (1976) suggested a poverty index that takes into account the number of poor, the level of poverty, and the distribution of poor within the group. Ps = 2/(q + 1) n (1 - yi/z) (q + I + 1) (3.3), where q is the numbers of poor and q + I + 1 is the weight assigned to the ith poor person below the poverty line. The formula may be stated as the average of the HC (P0) and PG (P61) measurements weighted either by Gini coefficient of poverty inequality (Gp).

Gibbons (1997) presented this index as a low-cost approach for identifying the impoverished. He claims that this index has indeed been found to be valid and useful in a number of countries, including China, Vietnam, the Philippines, Indonesia, India, and Bangladesh, and that it can help identify about 80% of the poor very quickly; an experienced field assistant can use the index properly in about five minutes.

The Housing Index is composed of three components: (a) the size of the home; (b) the physical condition of the building as reflected in the materials used in its construction; and (c) the sort of materials utilised to create the house's roof. The three elements of the index may be examined and evaluated by walking up and down the lanes/streets of a hamlet. There is no need to use questionnaires or timetables to conduct interviews.The material of the roof, according to Gibbons, is a simple yet significant predictor of poverty in most Asian nations. The impoverished in those nations live in dwellings with thatched roofs, roofs made of woven reed or twigs, or plastic sheets with holes, which leak and cause health concerns. Nobody wants to live in such dwellings unless it is absolutely necessary. As a result, the individuals who live in such dwellings are really impoverished.

When we combine this with the modest size of the buildings and the extremely basic construction materials, such as mud, jute sticks, and other items, we are very near to recognising the vast majority of the very poor. Gibbons recognises that this index has two drawbacks. To begin with, some impoverished individuals live in larger and nicer homes because they inherited them, but they no longer get any income. Second, in many nations (including India), the government offers affordable housing to the needy. As a result, this score cannot identify the impoverished in certain places. There is an appeal mechanism for these and other comparable limits. Poor individuals living in nice residences might make an appeal to the field assistant and persuade him or her that they are not wealthy.

Afterwards, a senior official might interview such individuals and make a final judgement on the situation. The Participatory Rural Appraisal (PRA) technique of wealth ranking has been demonstrated to be beneficial in such instances. The PRA approach gathers all the villagers to determine who is extremely poor, poor, not so poor, and not poor at all. In terms of cost effectiveness and time required, the two techniques, Housing Index and PRA, were determined to be comparable. These might be used by both government and non-governmental organization. (NGOs) working in rural development to identify the impoverished and focus their efforts. The Housing Index has a significant restriction in that it cannot be used to make worldwide or even intra-national comparisons when the types of dwellings vary much from country to country or state to state within a country.

Yet, the major goal of this index is to identify the impoverished in a certain region in order to provide them with benefits or services. The index seems to be enough for this purpose. Another constraint is that the three components cannot be put together into one index. As a result, the moniker Housing Index is deceptive.

The Human Poverty Index

The Human Development Report 1997 (UNDP 1997) includes an HPI and uses it to rank 78 impoverished nations. According to the paper, poverty is multifaceted, and poverty metrics focused on income do not represent deprivation of many forms.The HPI is based on three distinct categories of deprivation:

1. Survival deprivation, as defined by the proportion of persons (in a particular nation) who are not anticipated to live to the age of 40 (P1).

2. Education and knowledge deprivation, as indicated by the adult literacy rate (P2).

3. Economic provisioning deprivation (P3), calculated as the mean of three variables: population without access to clean water (P31), population without access to health services (P32), and underweight kids below the age of five (P33), all of which are reported in percentages.

The HPI is then calculated as the cube root of the average of the cubes of the three deprivation components. This is a third-order power mean. The simple mean, or average of the variables, is the power mean of order one.Trinidad and Island had the lowest HPI among the 78 developing nations, at 4.1, while Niger had the highest, at 66.0. India's HPI was 36.7, and it was ranked 47th.

According to the paper, the HPI may be utilised in at least three ways: as an advocacy tool, as a planning instrument to locate concentrated poverty regions within a nation, and as a research tool. For example, the HPI may assist summarise the amount of poverty across several dimensions, as well as the amount to go and progress accomplished.This indicator has several shortcomings and is hence not yet accepted by academics and policymakers. Some essential characteristics of human poverty, such as low income, lack of political freedom, incapacity to participate in decision-making, lack of personal security, and challenges to sustainability and intergenerational equality, are not included in the HPI. Moreover, in many circumstances, the quality and trustworthiness of the data utilised to compute the HPI are problematic.

1. Measuring the level and pace of rural development is useful for a variety of purposes, including determining the extent of rural people's economic and social well-being, serving as a benchmark for future planning, facilitating the monitoring, evaluation, and control of ongoing programmes, and facilitating spatial and temporal comparisons of development.

2. For measurements of rural development to be useful, they must be congruent with the aims of rural development. A measure should, at the at least, offer an indication of universally recognised development goals such as per capita availability of life-sustaining items or per capita income in rural regions, as well as some concept of the distribution of income, assets, and other means of socioeconomic wellbeing.

3. There is no commonly accepted metric of rural development that reflects its complexities. The choice of measure is determined by the aim of measurement as well as the availability of required data/information. Measures of rural development may be divided into two categories: measurements of rural development level and measures of rural development distribution.

4. Per capita real gross national income (GNP), per capita consumption expenditure, per capita public expenditure on crowd facilities and services, the Physical Quality of Life Index (PQLI), a composite index of rural development, and the Human Development Index are some measures of rural development level (HDI).

5. When calculated separately for rural population, the composite index of rural development and the HDI may be the most suitable indices of rural development.

6. The Lorenz Curve and the Gini Concentration Ratio (GCR) are two common income distribution indicators. They might also be used to track how benefits from rural development programmers are distributed.

7. Some of the often used measures of rural poverty or lack of rural development include the Head Count (HC) ratio or index, the Poverty Gap (PG) index, the Squared Poverty Gap (SPG) index, Sen's index, and the Human Poverty Index (HPI). Several conceptual, methodological, and empirical issues plague poverty estimation, including a lack of agreement on the definition of poverty, the mechanism for determining the poverty line, and the difficulty in getting trustworthy data on rural family income [8]–[10].

CONCLUSION

The smoothness or impartiality with which revenue is distributed among members of a community is referred to as income distribution. The income distribution is fully equal if everyone earns the same amount of money.The ease or equality with which revenue is distributed among the people in a community is known as income distribution. The income distribution is fully equal if everyone makes the exact same amount of money.

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CHAPTER 13

PARADIGMS OF RURAL DEVELOPMENT

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Abstract:

Its primary concept is that agricultural labour productivity must rise significantly in order to create surplus with in form of food to be utilized for non-farm sector growth and to free up excess labour from agriculture to satisfy the expanding demands of the non-farm sector.Generally speaking, rural development refers to a strategy for raising peoples' quality of life and financial security, particularly those in densely populated and distant locations. The overuse of land-intensive natural resources, like forestry and agriculture, has historically been the focus of rural development.

Keywords:

Economy, Growth, New Paradigms, Paradigms Rule, Rural Development.

INTRODUCTION

There are several development paradigms or models in use today, as well as numerous views or opinions. A theory is intended to accomplish two key purposes for a phenomenon: explanation and prediction. There is no commonly accepted model or theory of poverty alleviation that can explain the current situation and forecast its future direction. What we have is a collection of hypotheses and propositions that represent higher level generalizations in the field of development. The development paradigms apply to rural development to the degree that it is a subset of development. Several of these ideas emphasize both economic and non-economic development drivers, making them highly broad. Another feature of several of the ideas advanced by development theorists is that they are not completely operational, in the sense that testing them is very difficult, i.e. they are refractory. This chapter provides a critical examination of certain modern development theories and their relevance to rural development in the Indian setting [1]–[3].

We begin by looking at what the great minds of the past, notably the Classical economists, had to say on the issue. We may then decide if they were correct or incorrect in light of later experience. In this way, we may liberate ourselves (at least somewhat) from the constraints of our own era and better equip ourselves for an impartial appraisal of the complicated process of growth.The late eighteenth and early Victorian period economists were mainly concerned with the prerequisites for economic expansion. In Europe, this was the time of the Industrial Revolution. Classical economists such as Adam Smith, David Ricardo, Thomas Robert Malthus, John Stuart Mill, and Karl Marx saw the transition from rapid expansion to steady growth. As a result, the views of these economists on the nature and causes of economic development are of great

importance. We will now discuss some fundamental principles from the Classical school of thinking that may still be applicable today.

The idea of circularity, which highlighted the interplay between technology, investment, and profit, was an intriguing feature of the Classical economists' arguments. The circularity was implicit in their statement that the level of technology is determined by the level of investment, investment is determined by profits, and profits are determined in part by the level of technology. This was not an oversight or an accident. That was exactly what the Classicists sought to emphasise: nothing succeeds like prosperity and nothing fails like failure in economic progress. The circular argument already hints to the disparity in performance between industrialised and developing nations.

Classical economics did not priorities development or rural development in general. They may have believed that economic progress would inevitably lead to development. Towards the conclusion of World War II, around 1945, development became an important field of study, attracting a number of experts. The majority of the early publications on the topic focused on describing the meaning of development, identifying variables influencing development, and studying the interrelationships between the components.In the 1950s, two unique schools of thought emerged: the Capitalist University and the Marxist School, as well as two distinct theories relating to them: the Capitalist School's 'Modernisation Theory' and the Marxist School's 'Dependency Theory'.

The Modernization Theory

The primary ideas of the Capitalist School are expressed in the Modernisation Theory or the 'Free World' growth paradigm. In the context of the Cold War, the Modernisation Thesis provided justification for American hegemony. Economists, sociologists, historians, and anthropologists were among the scholars who contributed to the creation and development of this theory, and the drivers of development identified by them encompassed both economic and non-economic elements. The crux of the idea was the transfer of Technology and reason as a method of progress without affecting class structure, as well as the eradication of all social and ideological barriers to such a process.

The Modernisation Hypothesis was founded on a number of assumptions, some of which are summarised here:

1. Western science and technology must be used to improve output in order to achieve development.

2. The process of development may be divided into phases, and all civilizations pass through them.

3. Throughout the development process, old social and political institutions are being replaced by contemporary ones.

4. Democratic modes of governance will replace traditional feudal forms of political control.

In a nutshell, the Modernization Hypothesis argued that the "American way of life" was the pinnacle of modernity. It believes that progress can only be realised by industrialization and urbanization, as well as agricultural technology transformation an understanding reinforced by the experience of newly industrialized East Asian and Southeast Asian nations.In the context of

rural development, the Modernization Theory provides several useful insights, such as the inevitability of using modern technology to increase agricultural production and the need for replacing traditional feudal institutions with new democratic ones in order to shift towards a more scientific temper and secular values and norms. However, the theory has lost much of its appeal as a result of its failure to predict and explain many economic factors, such as the stalling of the post-World War II boom in the 1960s, the global depression in the 1970s, and the shift in the terms of international trade in favor of developed countries. The theory also failed to anticipate the negative environmental consequences of the free market development paradigm, as well as its unsustainable nature. Despite these flaws and objections, the hypothesis has survived [4], [5].

International Keynesianism, with its emphasis on the construction of a New International Economic Order, the Guarantee of Basic Needs, and Structural Adjustment Programmes, has taken a few new avenues. Nevertheless, these new efforts do not directly address rural development issues and are hence irrelevant.The East Asian nations' financial (currency and stock market) upheaval has shown that the free market economy model, or capitalism road, cannot ensure steady and durable economic progress characterised by rapidly growing living standards.

From Japan and South Korea to Malaysia to Indonesia, increased bankruptcies, unemployment, and inflation have resulted in not only a loss of economic confidence, but also a danger to the region's political and military security.Another explanation for the Modernization Theory's inability to be relevant in emerging nations like India is the absence or inadequate application of regulations and restrictions designed to keep private enterprises or organizations from dominating their local markets. Such laws and regulations are successfully enforced in free market oriented Western democracies, and as a result, they tend to equal out the wealth and income disparities. In the absence of strong management and regulation of private company operations in developing nations such as India, not all of the expected benefits of free markets flow to society.

DISCUSSION

The Dependency Theory of the Marxist School

When the Modernization Theory failed to explain rising inequities, poverty, violence, and military coups in newly independent African and Asian states, development researchers were driven to pose new questions and seek new solutions using an alternative paradigm. The new paradigm's conceptual underpinning was based on the concepts of Karl Marx, Friedrich Engels, and other Marxist philosophers. Marx (1818-83) and Engels were contemporaries of the Modernization Theory's proponents, especially Emile Durkheim (1858-1917) and Max Weber (1864–1924). Marx and Engels argued that social transformation was neither progressive nor evolutionary, as the Modernization Theory stated. Instead, it was characterized by a clash of interests between social classes, or class conflict. Marxists considered class conflict as the driving force behind societal change and growth [6]–[8].

The Marxists maintained that, rather from being a benign political offshoot of European civilization, imperialism was an exploitative system of economic, social, and political connections. The system transformed colonized countries into suppliers of inexpensive inputs to capitalist nations' manufacturing, as well as marketplaces for their goods. This system was

always advantageous to the imperial authority. Such a perspective of the forces at work in the capitalist system implied a complete reversal of modernization's rationale, from the promise of progress to poverty. This was the central thesis of the Marxist School of thought, later known as the Dependency Theory.

Latin America provided the early backing for the Dependency Theory, notably via the work of Raul Prebisch and his colleagues at the Economic Commission for Latin America (ECLA). Nevertheless, Andre Gunder Frank, the theory's principal advocate, criticised the Modernisation Theory as ineffective from a policy standpoint. According to Frank, the relationship between affluent and poor countries was not only detrimental to the latter, but also constructively harmful, impeding and distorting their progress.Development and underdevelopment, in his opinion, were both the product of interactions between civilizations. To back up his claims, he created thorough historical case studies of Chile and Brazil. The basic arguments of a Dependency Theory are as follows:

1. The industrialised nations (the First World) could not have reached their current level of growth without systematic exploitation of poor countries.

2. It is a delusion that the development process proceeds in phases.As long as the exploitative international order remains, developing nations cannot achieve progress by following the road taken by wealthy countries.

3. Poor countries were not always poor; rather, they were driven into the stage of underdevelopment by a worldwide system of capitalist exploitation.

4. Developing nations can only develop if their ties with developed ones are severed.

The Dependency Theory was popular in the 1970s because it offered a convincing explanation for the persistence of poverty and stagnation in developing nations, despite considerable attempts to address them. Development academics recognised the need of closely examining existing ties between wealthy and poor countries to see if they were benign and beneficial to impoverished countries or detrimental.

But, in the 1980s, the thesis lost much of its original appeal, and was challenged as being 'too deterministic' and 'too simple'. The experience of the East Asian tigers invalidated the theory's primary thesis that 'underdevelopment' in emerging nations (the periphery) is the outcome of 'development' in industrialised countries (the core/centre). These tigers were originally reliant on developed nations (i.e., on the perimeter), but over time they grew highly developed and competitive, moving from the periphery to the core. Moreover, the theory did not take into account the importance of various inter nal variables in explaining the presence of 'underdevelopment,' such as unsustainable population growth, undeveloped human resources, scarcity of natural resources, and class conflict.

In the context of rural development, we could say that the theory provides a useful caveat that, while identifying the determinants of rural development, we should critically examine various inter-sectoral linkages (both backward and forward) and interactions to see if they are beneficial to rural people or not. If not, policy measures should be implemented to make the links and interactions beneficial to the rural population. A comparable analysis must be carried out at the national level to determine whether international economic and political linkages are beneficial to economic growth in general, and rural development in particular.

Rosenstein-rodman's theory of the 'big push'

According to this notion, a development programme needs have a certain amount of resources allocated to it in order to be successful. Launching a nation into self-sustaining development is like to taking flight in an aircraft. Before the craft may take to the skies, it must reach a necessary ground speed.The core of this idea is that going 'bit by bit' will not result in effects that add up to the sum total of the single bits. A minimal amount of investment is required, but not sufficient, for success.

Rosenstein-Rodan (1970) identifies three types of indivisibilities that might be regarded the principal impediments to poor nations' growth. They are the indivisibility of supply of social overhead capital (lumpiness of capital), demand indivisibility (complementarity of demand), and supply indivisibility (kink). He contends that a large push in the form of a large amount of investment is necessary to overcome the economic barriers to development caused by these three types of indivisibilities, as well as the external economics to which they give birth. This means that the development is a series of discontinuous 'jumps', and each jump requires a 'strong push'. Moreover, there may finally be an indivisibility phenomena in the energy and desire necessary for effective development policy. Solitary and little efforts may not have a significant influence on progress. Only once a crucial minimum amount of capital is met can a development environment emerge.

Rosenstein-Rodan does not provide any specific and realistic solutions to mitigate the negative consequences of indivisibilities, but he does indicate that international commerce may lessen the amount of the minimum push necessary to eliminate the effect of demand indivisibility (complementarity). Mobilization of sufficient resources to offer the requisite "great push" remains the most difficult challenge that developing nations cannot solve on their own. Rosenstein-Rodan suggests establishing a trust with outside resources to plan and finance investment for the whole region at the same time. A significant critique of this notion is that the resources necessary to provide the "great push" are so expensive that a developing nation like India cannot afford them. In truth, a nation capable of mobilizing the necessary resources would not be considered impoverished. Yet, this paradigm remains theoretically intriguing to planners and researchers.

The core notion of Harvey Leibenstein's (1957) theory is that in order to achieve continuous secular growth, the first stimulant to development must be of a necessary minimum magnitude. Economic backwardness, according to Leibenstein, is defined by a group of interconnected parameters that have a certain degree of stability at their tiny equilibrium values. Since the economy is constantly exposed to stimulants or shocks, real values diverge from equilibrium values. Stimulants have a propensity to enhance per capita earnings over the level of equilibrium. Long-term economic development, however, does not occur in backward countries since the volume of stimulants is insufficient. In other words, attempts to overcome economic backwardness, whether spontaneous or coerced, fall short of the crucial minimum required for continuous progress.

In the long term, the produced income-depressing forces are more significant than the induced income-raising forces for low stimulant values, while the opposite is true for high stimulant values. Population growth may be used to illustrate this phenomena. A minor gain in capital through income increases will stimulate more than an equal rise in population and a comparable decrease in per capita income. Of fact, there is a physiologically determined maximum rate of

population increase that ranges between 3% and 4%. As a result, sustained capital accumulation over a certain threshold would ultimately allow development. The need for a minimal effort develops to overcome internal and external scale disadvantages, to overcome income-depressing hurdles caused by growth stimulants, and to generate sufficient momentum in the system so that growth stimulants may continue to play their role.

Rosenstein-'huge Rodan's push' notion is more feasible than Leibenstein's

Providing a strong push to the industrialization programme all at once is not feasible in developing nations, but the essential minimum effort may be appropriately scheduled and split up into a succession of smaller efforts to set the economy on the road of sustainable development. This notion is also compatible with India's and other developing nations' commitment to decentralised democratic planning. As a result, this paradigm gives useful information on the amount of expenditure required to get a programme off the ground [9]–[11].

CONCLUSION

Enhancing the rural population's quality of life. Rural infrastructure needs to be improved. To minimise unemployment by creating job possibilities. To provide potable water, education, energy, and effective communication.Its fundamental tenet is that labour productivity in agriculture must significantly rise in order to produce surplus in the form of food that can be utilised to build the non-farm sector and to release the excess labour from agriculture to fulfil the non-farm sector's expanding labour demands.

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CHAPTER 14

LEWIS' MODEL OF ECONOMIC DEVELOPMENT

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Abstract:

The dual-sector model is also known as the Lewis model in development economics. It depicts how a worker moves between two sectors capitalist and subsistence as an emerging economy develops.Lewis' model demonstrated that low wages and poverty would endure in a labour surplus economy as long as the potential cost of labour to the capitalist sector stays constant.

Keywords:

Economic Development, Lewis' model, Labour, Poverty.

INTRODUCTION

W. Arthur Lewis' concept is based on the reality that there are vast pools of labour in many developing nations with marginal productivity that is low, zero, or even negative. This labour is accessible in endless numbers at a wage equivalent to subsistence living standards plus a sufficient margin to overcome the friction of transitioning from the'subsistence sector' to the 'capitalist sector,' which may be referred to as a'subsistenceplus' wage. Since the supply of labour is infinite, new industries may be established and old ones can be developed indefinitely at the current pay rate. The capitalist sector need skilled people as well. Yet, Lewis believes that skilled labour is simply a temporary barrier that may be alleviated by offering training opportunities to unskilled employees [1]–[3].

Since labor's marginal productivity in the capitalist sector is greater than the dominant pay rate, there is a capitalist surplus. This excess is utilised for capital development, allowing more individuals to be employed in the subsistence sector. Capitalists' increased investment boosts the marginal productivity of the staff, causing capitalist employers to grow their labour force until the marginal productivity of labour falls to a level similar to the governing wage rate.The capital-labor ratio grows to the point where labour supply becomes inelastic. Several opponents have pointed out that Lewis' optimism about progress via the absorption of disguised agricultural unemployment is misplaced, since it is not feasible to do so. Transferring a significant number of people permanently and full-time from agriculture to industry without reducing agricultural production; that is, the marginal productivity of agricultural labour is not zero[4].

As long as there is surplus labour, technological advancement in the capitalist sector may raise the percentage of profits in national income. The proportion of professionals rises, both because the proportion of professionals inside a particular capitalist sector rises due to innovation and because the capitalist sector expands. According to Lewis, this is the primary mechanism behind the increase in capital creation from 4% to 5% to about 12% to 15% of national income.

Capital is developed not just via profits but also through bank loans. Credit creation will grow production and employment in the same manner that profits do in a developing economy with jobless resources and a lack of capital. Yet, credit-financed capital development causes a temporary spike in prices. When voluntary savings from rising profits are significant enough to finance new investment without resorting to bank loans, the inflationary process comes to a stop.

According to Lewis, the process of development cannot continue indefinitely and must terminate due to a variety of circumstances. When this occurs, the process of capital production may be maintained by promoting immigration or encouraging capital export to nations with plentiful labour at subsistence pay rates. Since the former is heavily opposed by labour unions, the latter seems more feasible.Lewis' model seems to give an adequate framework for comprehending the process of economic growth in labor-surplus emerging nations such as India. Its primary concept is that agricultural labour productivity must rise significantly in order to create surplus in the form of food to be utilised for non-farm sector growth and to free up excess labour from agriculture to satisfy the expanding demands of the non-farm sector. Unfortunately, the model's applicability is limited by a number of issues. First, labour unions may raise pay rates as labour productivity rises, causing the rate of profit and rate of capital creation to remain lower than planned. Second, capitalist employers may spend the surplus for speculative or non-productive reasons rather than reinvesting it in growth. This is exactly what has been occurring in India and other emerging nations recently. Finally, in order to fulfil their increased expectations, rural people may spend more and save less than indicated by the model, slowing growth [5], [6].

The Agency theory does not provide a proper understanding of the agricultural sector because it fails to account for the potential of a shift in agricultural production.Based on the Lewis model, Ranis and Fei (1970) proposed an economic growth theory by first analyzing the function of the 'neglected' agricultural sector in a static sense, and then generalizing the ‘static' analysis by including the prospect of a rise in agricultural production Cochrane examines the Lewis and Ranis and Fei models closely and finds that the formation of investment capital is required to utilize the surplus.The critical missing component in these models is labourers liberated from agriculture. He then recommends that the money needed to support the costly process of agricultural modernization may be gained in one of three ways:

1. By reducing agricultural excess.

2. by delaying investment in the non-farm economy and in basic infrastructure.

3. via the acquisition of foreign loans and grants.

Foreign loans and grants, he claims, are the most favorable or least costly of these three sources. He goes on to say that in the early phases of development, agricultural output must rise at a rapid enough pace to fulfil the country's rising food needs. He contends that the pressure placed on agriculture by increased market prices will not be sufficient; agriculture must be pushed, and pushed hard, by a strategy emphasizing the use of contemporary technologies as well as supporting infrastructure and services.Cochrane's model, in my view, is an excellent exposition of the agricultural development process, as well as the potential and limits of agricultural growth as a catalyst for total national development. I would want to supplement Cochrane's model with two more components: (a) population control methods and (b) the worldwide economic and political environment. No agricultural or national development plan would ever succeed in the absence of adequate population control measures and a favourable political and economic global

environment. While a developing country can always do something to manage its expanding population, the establishment of a proper international organisation is more difficult.

DISCUSSION

Gunnar Myrdal's Thesis of 'Spread and Backwash' Effects

Gunnar Myrdal (1957) emphasises low income levels in most non-Soviet nations, as well as worldwide differences in income, wealth, and investment. Myrdal believes that the theoretical method (automatic self-stabilization) is insufficient for dealing with inequality concerns. In his perspective, in most cases, a change does not elicit countervailing changes, but rather supportive changes that propel the system in the same direction as the initial change, but much faster—the concept of circular and cumulative causation. A social process tends to proceed quicker as a consequence of such circular causation. By adding fresh external alterations into the system, a social process may be halted. He illustrates this with a case study of the African-American situation in the United States of America (USA). Two elements, particularly white preconceptions generating discrimination against African-Americans and their "poor standard of life," are interconnected. Their poor level of existence is maintained by white prejudice. On the other side, the poverty, ignorance, superstition, slum housing, and health of African-Americans [7]–[9].

Deficiencies and their allegedly dirty look, unpleasant odour, chaotic behavior, unstable family ties, and crime inspire and fuel whites' hostility towards them. Both of these elements 'cause' each other.He also emphasizes the relevance of non-economic variables in development, as well as the backwash consequences of growth caused by free market forces. The concentration of labour, money, products, and services in specific locales and regions places the other areas, generally rural, in the backwaters and exacerbates regional inequality. Concentration of firms, money, and talented persons in certain locations (growth points) at the cost of neighboring areas (backwash) reduces the degree of economic progress below what would have occurred if these growth points had never developed.

Yet, there are some centrifugal'spread effects' of expansionary momentum from the centres of economic expansion to other areas that counteract the backwash effects.Back wash effects are only neutralized by spread effects at a high degree of development, according to empirical findings. This is among the reasons why, once a nation has attained a high degree of development, fast continuous advancement becomes nearly natural. At low levels of development, the spread effects are either extremely weak or just powerful enough to counteract the backwash effects, resulting in poverty and stagnation in both circumstances.Similarly, at the international level, trade, capital mobility, and migration have significant negative consequences for poor nations. There are several examples of emerging nations whose cultures have suffered as a consequence of the introduction of trade links with the outside world. Yet, the notions of 'backwash effects' and'spread effects' are important in general and should be addressed when planning for rural development.

The Human Capital Model of Development

This model emphasizes the significance of human capital investment in the economic and social development process. Human capital refers to mental and physical abilities gained via education, training, health care, and the practice of spiritual approaches such as yoga or meditation. Human

capital is mostly acquired via the expenditure of time and money. A schooling model, which links economic growth to education, is the simplest and most significant sort of model.

The quality of human resources was not explicitly included in the theoretical frameworks of classical and neoclassical economics; labour was assumed to comprise both physical and mental effort. Theodore Schultz developed the idea of human capital and clearly recognised human capital investment as an essential predictor of economic progress. After that, many other researchers were interested in the economies of human capital, particularly the economics of education, and several studies were undertaken on the issue. The approach addresses all aspects of human ability and emphasizes the need of maximizing it.

It honors people's culture and religion, as well as their social ideals and systems. It is more suitable to developing nations such as India than any other approach. The human capital approach to rural development is founded on three assumptions that have been overlooked by traditional development theory:

1. Human physical and mental capacities are inherited and developed in different ways, and they differ from person to person; so, the traditional premise of a homogenous labour force does not hold.

2. Human capital immediately helps to development by increasing productivity and decreasing resistance to the dissemination of new technologies in the economy, particularly in the rural sector.

3. Human resources are limitless and plentiful in all emerging nations across the globe, including India. Human resources, when properly developed and used, may make a significant contribution to progress.

As a result, as a foundation for general development, this model transfers the focus from physical capital generation to human capital formation, and from industrial growth to rural development. This paradigm seems to be best ideal for labor-surplus emerging nations like India, where there are many undeveloped human resources with tremendous development potential. Moreover, human resources are renewable and hence limitless.

As a result, in the development process, human capital may be replaced for exhaustible non-renewable physical capital, greatly relaxing the limit on progress imposed by physical capital deficiency. Moreover, measures for the growth of the tertiary (service) sector, which is presently India's fastest expanding sector, need trained, experienced, and creative human resources. And this is the road that India should take in order to achieve total sustainable development. Human resource development via nutrition, health care, suitable education, training, and empowerment should be given top priority in terms of resource allocation.

The Gandhian Rural Development Model

Mohandas Karamchand Gandhi, well known as Mahatma Gandhi, played a pivotal role in gaining India's political independence from the British Raj by organising and mobilising Indians from all walks of life in a peaceful and nonviolent way. He is, therefore, properly named the 'The Father of the Country'. Gandhiji's approach to rural development in India was comprehensive and people-centered. It was founded on his belief in the truth, nonviolence, and the decency of human beings.As a result of his exposure to Tolstoy, Ruskin, and the teachings of The Gita, he

prioritised moral and spiritual qualities above economic motivations as a way of general growth. The following sections highlight some of the key aspects of the Gandhian model.

Development Theories from Other Social Sciences

Development is a multifaceted process influenced by both economic and non-economic variables. The Classical school recognised the significance of non-economic variables in growth. Non-economic factors such as beliefs, habits of thought, customs, and institutions, according to John Stuart Mill, play an important role in economic development, and he attributed underdeveloped countries' backwardness to the despotic and anti-progressive nature of their customs, institutions, and beliefs.

Boeke (1953) sought to explain underdevelopment in terms of sociological dualism, which he defined as "the collision of an imported social system with an indigenous social system of a different character." Based on his research, which is mostly based on Indonesian experience, he concludes that the Western world should leave emerging nations alone; any attempt to develop those following Western lines would only expedite their retrogression and deterioration. Acceptance of dualism leads to two policy conclusions: (a) one policy for the whole nation is generally not practicable; and (b) what is beneficial to one sector of society may be destructive to another. An examination of Boeke's thesis reveals that, although there is no doubt that dualism exists, its explanation resides not in the structure of society as Boeke understands it, but in economic and technical terms. This is shown by the fact that the West's attempts to foster growth in developing nations via technical and financial support have not been in vain.

For example, in India, a large part of the credit for bringing about the Green Revolution goes to the United States Agency for International Development (USAID), which assisted India in the 1960s in setting up modern land-grant type state agricultural universities and training its agricultural scientists in American land-grant agricultural universities. Similarly, the OF programme, which is credited for modernising India's dairy sector, benefited greatly from food assistance in the form of skimmed milk powder and butter oil, first from the Food and Agricultural Organization's (FAO) World Food Programme and later from the European Economic Community (EEC).

One might reject Boeke's thesis of sociological dualism while yet believing that sociological, cultural, and psychological aspects are important in economic growth.Moreover, all economists who specialise in economic development recognise the significance of the interaction of these variables with economic forces. 'The psychological and social conditions for growth are as significant as the economic ones,' write Meier and Baldwin. They are entitled to complete attention in their own right.' Yet, few economists have had the audacity to propose a comprehensive theory of development that incorporates strategic sociological, cultural, and psychological aspects. David McClelland and Everett Hagen stand out among these fewMcClelland's idea of 'Need-for-Achievement Motivation' (N-Ach) attempts to draw a link between N-Ach and economic development. His hypothesis is based on two propositions: (a) that group differences in the average level of some motivations, such as N-Ach, predict differences in the pace of economic development; and (b) that certain motives predict variations in the rate of economic growth.

Individuals are predisposed to operate like successful business founders who have played major roles in all prior economic progress as a result of these combinations. Based on his research and

analysis, he thinks that in order to encourage economic development, we must first transform the values and motivations of people. This, he believes, may be accomplished by (a) persuasion or education; (b) establishing changes in the social structure; and (c) early character training. The third of the three is, by far, the most likely to succeed. Because morals may be instilled in this manner from the start. A corps of professionally qualified nursery and grammar school teachers properly recruited for the purpose may provide early character development.Hence, McClelland's approach leads to the conclusion that launching into economic growth needs a significant number of persons with the entrepreneurial motive complex, especially those with high N-Ach, and that establishing psychological preconditions takes time.

1. There is no widely accepted theory of rural development that can explain the current situation and forecast its future direction.In the field of development, we have a collection of hypotheses and assertions that represent higher level generalisations. To the degree that rural development is a subset of development, development assumptions also apply to rural development.

2. Classical economists did not concentrate on development or rural development in general; they may have expected that economic progress would inevitably lead to development. The idea of circularity, which highlighted the interplay between technology, investment, and profit, was an intriguing feature of the Classical economists' arguments. The circularity was implicit in their statement that the level of technology is determined by the level of investment, investment is determined by profits, and profits are determined in part by the level of technology.

3. The heart of the Modernisation Theory was the transfer of Western technology and reason to less developed nations as a method of progress without affecting their class structure, as well as the eradication of all social and ideological barriers to such a process.

4. To summarise, the Modernizations Theory portrayed the 'American way of life' as the pinnacle of modernity. It was envisioned that progress could only be realized by industrialization and urbanization, as well as agricultural technology reform. It provides some valuable ideas, such as the necessity of using modern technology to increase agricultural productivity, as well as the need to replace ancient feudal institutions with new democratic ones, as well as a trend towards stronger scientific temper and secular ideals and norms.

5. The conceptual basis of the Marxist School's Dependency Theory was built in the views of Karl Marx and Friedrich Engels, who argued that the process of social development was neither progressive nor evolutionary, as suggested by the Modernizations Theory. Instead, it was defined by a clash of interests between different social classes, or class struggle. Marxists considered class conflict as the driving force behind societal change and growth.

6. The Dependency Theory was popular in the 1970s because it gave a convincing explanation for the persistence of poverty and stagnation in developing nations despite strenuous attempts to address them. While identifying the determinants of rural development, the theory provides a useful caveat that we should critically examine which international economic and political relationships are beneficial and which are harmful to economic development in general, and rural development in particular, and initiate policy measures to mitigate the negative ones.

7. According to Rosenstein-Theory Rodan's of the 'Great Push,' there is a minimum amount of resources that must be given to a development programme in order for it to be successful. Launching a nation into self-sustaining development is like to taking flight in an aircraft. Before

the ship may take to the air, it must reach a crucial ground speed. A significant critique of this notion is that the resources needed to offer the "Great Push" are so expensive that a developing nation like India cannot afford them.

8. According to Harvey Leibenstein's 'Critical Minimum Effort Thesis,' in order to achieve continuous secular growth, the initial stimulant to development must be of a particular critical minimum magnitude. In the sense that the essential minimum effort may be correctly scheduled and divided up into a succession of smaller efforts to set the economy on the road of sustainable development, Leibenstein's thesis is more practical than Rosenstein-Big Rodan's Push idea. This notion is also congruent with India's practise of decentralised democratic planning.

9. W. Arthur Lewis' model of economic growth with infinite labour supply is based on the reality that in many developing nations, enormous pools of labour exist with marginal productivity that is small, zero, or even negative. Since the marginal productivity of labour in the capitalist sector is greater than the governing pay rate, there is a capitalist surplus that can be utilised for capital creation, allowing more people to be employed from the subsistence sector and initiating the development process. The model offers an excellent foundation for comprehending the process of economic growth in labor-surplus emerging nations such as India.

10. Gunnar Myrdal states in his theory 'Spread and Backwash Effects' that the concentration of labour, capital, products, and services in select locations and regions leaves the other areas, primarily rural, in backwaters and exacerbates regional inequality. Concentration of firms, money, and skilled persons in certain locations (growth points) at the cost of adjacent regions (backwash) reduces economic development below what it would have been if growth points had never formed. In addition to the backwash effects, there are some centrifugal'spread effects' of expansionary momentum from the centers of economic expansion to other locations. Backwash effects are only neutralized by spread effects at a high degree of development, according to empirical research.

11. The Human Capital Model of Development emphasizes the relevance of human capital investment in the economic and social development processes. Human capital encompasses mental and physical abilities gained via education, training, health care, and the practice of spiritual approaches such as yoga or meditation. Human capital is mostly acquired via the expenditure of time and money. The most basic and crucial form of model is a schooling model, which links economic growth to education. This concept is applicable to India and other emerging nations.

The Gandhian Model is comprehensive and people-centered. It is founded on Gandhi's belief in the truth, nonviolence, and decency of human beings. It prioritizes moral and spiritual qualities above economic objectives as a way of total growth. Proponents of the Gandhian model claim that, given India's current socio-cultural and economic realities, the model is still relevant and the only viable option for achieving fair and sustainable rural development. Critics contend that Gandhiji's principles of swadeshi, voluntary limitation of one's demands, trusteeship, self-sufficient communities, and the preference of manual labour over machinery are now antiquated.

Some social scientists have proposed a few alternative theories of development. These include Boeke's explanation of underdevelopment in terms of sociological dualism, which he defines as "the clashing of an imported social system with an indigenous social structure of a different type," as well as McCIelland's "Need-for-Achievement Motivation" (N-Ach) theory.

McClelland's study leads to the conclusion that launching into economic growth needs a significant number of people with the entrepreneurial motivational complex, especially those with a high N-Ach, and that establishing psychological preconditions takes time. These models by Boeke and McClelland are helpful in understanding the impact of non-economic elements in development [10].

CONCLUSION

Lewis proposed the two-sector concept in his 1954 book, "Economic Growth with Unlimited Labor Supply." Lewis' model aims to give a framework for analyzing how economically impoverished nations might progress.Lewis' model demonstrated that, as long as the opportunity cost of labour to the capitalist sector is low, low wages and poverty will continue to exist in a labour surplus economy.

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CHAPTER 15

AN OVERVIEW ON THE DETERMINANTS OF RURAL DEVELOPMENT

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Abstract:

Natural resources, human resources (labour), money, technology, and institutions and organizations all have an impact on rural development. Rural development often refers to a strategy for improving peoples' quality of life and financial security, particularly those who reside in inhabited and distant locations. Traditionally, the overuse of land-intensive natural resources like forestry and agriculture was at the heart of rural development.

Keywords:

Capital, Economy, Growth, Rural, Labour.

INTRODUCTION

The factors influencing rural development favourably or negatively are so diverse, and have intermingled in so many various ways throughout time, that it is very difficult to identify a small number of critical variables or deter minants. The degree and rate of rural development are influenced by a variety of physical, technical, economic, socio-cultural, institutional, organisational, and political variables. These elements are present at all levels: home, village, district, state, country, and the whole planet. These elements may have both positive and negative impacts on growth, depending on how they are controlled. For example, if a country's people resources are not adequately developed via good nutrition, health care, education, and training, and are not effectively used, these resources become liabilities and barriers to progress. But, if they are properly developed and used, they may become valuable assets and key contributors to progress. Rural development managers must understand the nature and size of the influence of numerous variables on rural development in order to employ these factors effectively and efficiently. This chapter identifies the primary factors of rural development and investigates their function in fostering rural development[1].

Many aims characterise rural development, and as indicated in Chapter 3, no single statistic or indicator can fully reflect the diverse nature of rural development. At the same time, we are unsure much about the quantitative effect of the elements that influence rural development unless we can quantify it.In the lack of a single gauge of rural development, we will utilise change in output as a proxy measure and analyse the impact of numerous elements that seem to us as major drivers of this measure on an a priori basis. Assume that changes in natural resources, labour, capital, technology, and institutions and organizations cause changes in production[2].

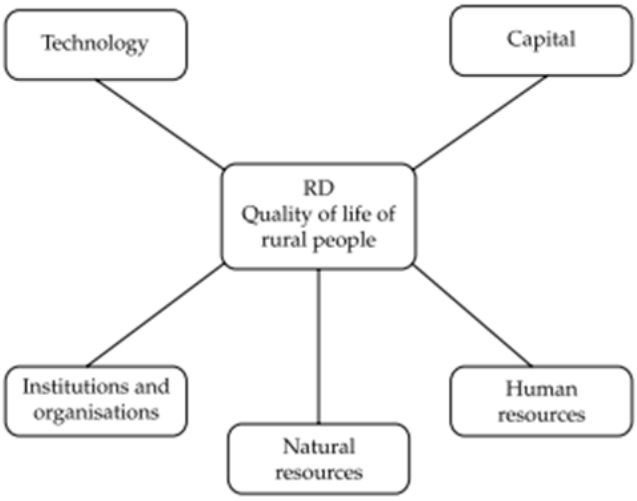

Figure 1: Represent the determinants of rural development

Improvements in Output

Assessing variations in production over time is far more complicated than is often assumed. We need an accounting that provides signs of production change for this. Several indicators may be employed, but each has its own set of restrictions. Before delving into specific indicators of production change, a few remarks concerning productivity expansion as a way of boosting general development will be presented.Growing economies are one of the aims of economic policy in all nations, wealthy and poor. Yet, in recent years, especially in industrialized nations, this obsession with expansion has been challenged. It is now recognised that growth should not be seen as an aim in itself, but rather as a tool to promote development.Moreover, it is now commonly accepted that economic expansion has both beneficial and unfavourable repercussions. It has been argued that our fixation with building larger, better and quicker goods to fulfil our insatiable cravings and whims is a kind \sof 'growthmania'. The implication is that we have been so focused on gains in some indices of income or product that we have overlooked some of the side effects of growth that are causing people's quality of life to deteriorate[3].

Before growth to be regarded the final goal of social policy, it must be shown that economic activity will improve the well-being of at least some people.The total revenue accounts were created to offer indications of aggregate output or, alternately, aggregate revenue to owners of the elements of production on the opposite side of the accounts. Examples of these measures are gross national product (GNP), net national product (NNP), national income, personal income, and personal disposable income (Figure 1).

Determinants of Rural Development:

If we must have a single indicator that demonstrates growth, it must be capable of meaningfully aggregating physically disparate items and services such as wheat, milk, homes, clothing, steel, aeroplanes, banking, and insurance.The national income indicators do this by multiplying the physical units of production by market prices. As a result, the monetary values of production are equivalent and cumulative.This valuation technique is subject to one fundamental issue. Do market prices employed as weights correctly reflect the respective units of output's contributions to aggregate income? The answer seems to be that they do if product and factor markets are totally competitive and there are no externalities in either consumption or production of the

commodities being valued. If demand for a product is less than fully elastic, however, income increases due to increased production will be reflected by marginal revenue rather than price, since as output grows, the price of all units sold will fall. Additionally, if externalities exist in the product's consumption, the market demand price will not reflect the'social' worth of the commodity as it is consumed. Similarly, if externalities are present in the product's manufacture, the product supply price will not reflect the total'social' productivity of the means of production. Externalities may be positive or negative, and when they are shown to exist and adequately quantifi ed, value changes can be made to reflect their significance[4], [5].

An even more significant issue is the lack of statistical coverage of conventional national income indicators. Of course, an indicator that catches all changes in output level is required. In general, income accounts give fair coverage of products and services that transit through the market but exclude those that do not. This implies that when the economy grows more complicated and the market extends into more and more sectors of the economy, the statistics coverage becomes more extensive. If this is the case, the income accounts are likely to understate the actual production of a developing nation more than the real output of an advanced one.

Economists and others have recognised that a gross measure of production, such as real GDP, is not the greatest predictor of the aggregate size of the economy's growth-generating mechanism. The reason for this is because a portion of gross production is required to maintain the stock of capital, which is part of the economy's productive base. Part of the 'gross investment' category represents net increase to the capital stock and should therefore be included in any estimate of net productive capacity. Yet, a significant portion of gross investment is merely replacement capital, which is referred to as 'capital depreciation allowance' in the income statement. Net product equals gross product minus capital depreciation allowance. We believe that the change in real total product is the most accurate indication of economic growth[6].

The Composite Regional Development Index (CRDI) and the Human Development Index (HDI) are more complete indices of rural development than the actual NNP. But, unlike true NNP, their annual calculation is not yet institutionalised in India. While they cannot be measured in the income statements, it is critical to note that other elements of production have exact analogues to the asset depreciation allowance. A certain level of human capital necessitates investment in training, education, health, and nutrition. Natural resources are exhausted and, to that degree, should be netted so out gross production figures in the same way that capital is netted out. The point is relevant in terms of both the quality and quantity of the elements. If the quality of the human capital that exists and natural resources deteriorates over time, the economy's latent productivity deteriorates, and these negative changes should be deducted from the system's net output. If, on the other hand, the quality of the factor stock improves as a result of technological breakthroughs and gains in knowledge, this latent capacity to create should be added to the net output actually produced in a particular time period[7].

The way we deal with negative fi nal products is maybe the most damaging constraint of our productivity accounting. These are the final outputs of manufacturing that cause human disutility and, in most cases, deterioration in the natural surroundings as a result of waste leftovers and environmental degradation. External diseconomies, such as crowding, congestion, and criminality, are additional examples. Before a fair assessment of the consequences of growth on personal well-being can be made, the negative effects of growth must be subtracted from the positive ones.

DISCUSSIONS

Natural Resources

A natural resource is any commodity, substance, or condition discovered by man in his natural surroundings that he may use for his own benefit. In this sense, natural resources include air, climate, soil, moisture, plants, animals, mineral ores, mineral oil, coal, natural gas, solar radiation, and some tourist facilities. The world's resource pattern varies with time, not because nature's fundamental supply changes, instead due to changes in what defines a resource[8].Natural resources are divided into two categories: non-renewable or stock resources such as metal ores, mineral oil, and coal reserves, and renewable or flow resources such as solar radiation, species of plants and animals, and winds. This difference is critical in terms of resource development, conservation, and use strategies.

Natural resources are very significant in the rural development process.Mother Nature supplies us with free natural resources and serves two vital purposes in the process of economic growth: giving inputs to manufacturing processes and digesting wastes created during the production process. Since Planet Earth is finite, closed, and non-growing, there is a natural limit to each of these vital functions, namely, our planet's input and waste absorbing capabilities. This indicates that one cannot continue to increase the production of goods and services utilizing natural resources indefinitely; there are ecological/natural constraints to economic development, and so it cannot be perpetuated indefinitely. Sustainable development necessitates that we keep our resources and the environment intact throughout the economic growth process, and that we use/harvest only what is naturally regenerated.

That is, we survive on the 'flows' while preserving the'stock' of natural resources and the ecosystem. Nonetheless, we would want to point out that it is now feasible to boost the natural flow/harvest of natural goods via suitable technology and managerial interventions. Fish catches, for example, can be increased sustainably through artificial feeding and breeding; crop yields can be increased through the use of balanced organic and inorganic fertilizers, bio pesticides, and scientific soil and water management; and forests can be rejuvenated faster and their natural productivity increased through the use of fertilizers and water. Consequently, the carrying capacity of our biosphere in terms of living being population may be increased to some degree by technical and administrative interventions. As a result, contrary to what growth maniacs and technocrats think, there are limitations to economic growth. Moreover, contrary to what ecologists believe, the constraints are not absolute, and may be loosened. Sustainability advocates recognize this fact and urge for a medium road between the two extremes represented by technocrats and ecologists.

There are three basic ideas attempting to explain the relationship between natural resources and development: The three hypotheses are (a) the Neo-Malthusian hypothesis, (b) the Cornucopian hypothesis, and (c) the Environmental Kuznets Curve (EKC) hypothesis. The proponents of the Neo-Malthusian theory, principally biologists and ecologists, think that our planet's carrying capacity is restricted since it is finite, closed, and non-growing.In other words, both the vital functions of the environment, that is, the input provisioning and waste absorbing capabilities of our planet Earth, have a natural limit.

On the other hand, supporters of the Cornucopian theory are more hopeful. Most of them are technicians, agricultural scientists, and economists. They claim that there is no indication or cause to dread the catastrophic breakdown of society predicted by Neo-Malthusian thinkers.

Entrepreneurs are venturing out because of the incentives afforded by competitive marketplaces and creating new energy and mineral sources, and reserves of many commodities have expanded as a result of new discoveries and/or waste recycling. Moreover, agricultural science research has made it possible to boost natural flows/harvest of natural products via proper technology and managerial interventions.

Singh and Shishodia According to the EKC hypothesis, there is an inverted U-shaped relationship between environmental quality as evaluated by various measures of environmental deterioration and per capita income, which is an essential indication of development This suggests that environmental deterioration is low while per capita income is low, rises as per capita income grows, and finally reduces as per capita income increases more. The EKC is named after Simon Kuznets (1955), who offered a theory that the link between a measure of inequality in income distribution and income level is represented by an inverted U-shaped curve. Many researchers take the EKC hypothesis to mean that economic development will ultimately rectify the negative environmental consequences of the early phases of economic expansion, and that sustained growth will lead to additional improvements in environmental quality. Several academics have criticised the idea on theoretical and empirical grounds. Nonetheless, the common view is that it true for certain environmental indicators but not all, and that economic expansion alone cannot fix all environmental issues. The best fit is for air pollution and a few water pollution indicators Barbieri.

We believe in the middle road between the two extremes represented by biologists and ecologists, and technocrats and economists, as taught by India's great thinkers, academics, and gurus. This indicates that, contrary to what growth zealots and technocrats think, there are limitations to economic development. Moreover, contrary to what ecologists believe, the constraints are not absolute; they may be loosened. We end with the positive perspective that, as advocated by Simon and Kahn (1984), the twenty-first century will usher in an age of improved living standards and lower human environmental consequences as a result of technical advancement and policy innovation. This viewpoint is congruent with the core ideas of sustainable development.Common Pool Resources (CPRs), or resources shared by people, play an essential role in India as supplies of food, fuel wood, fodder, and many other fundamental requirements of rural people, especially the impoverished. India has almost 100 million hectares (mha) of common pool land, around 30 million hectares (mha) of common pool forests, and the majority of its water resources and fi sheries are also CPRs. The poor's lack of access to privately held natural resources and natural CPRs is one of the key reasons of rural poverty in India[9], [10].

With the increasing economic exploitation of natural CPRs, rural poor people are finding it difficult to satisfy their fundamental needs. The depletion of CPRs of land, forests, and water has worsened the pain and drudgery of the rural poor, especially women, who now have to spend a significant amount of their energy and time collecting water, fuel wood, and feed from far locations. The restoration and prudent management of natural CPRs is critical for enhancing the well-being of the rural poor as well as the quality of the environment.Use of locally accessible natural resources is the backbone of an economy at any stage of economic growth. The number and quality of accessible natural resources, as well as the intensity and efficiency with which they are used, affect the degree and speed of a nation's economic growth to a large extent. Natural resource poverty, on the other hand, does not preclude high levels of economic growth, as shown by Denmark, Switzerland, Israel, Hong Kong, and Japan. These nations have made up

for a lack of natural resources by developing adequate technology, institutions, and organisations, as well as highly developed human resources. India is reasonably endowed with natural resources, but has not been able to properly develop and use them for the benefit of its people. As a result, India has a poor degree of agricultural and rural development.

The poorer a nation is, the bigger the share of its revenue that goes to natural resource owners, and hence the greater the significance of natural resources to economic growth. In the case of food production, this is simply proved. Food and drinks account for around 42% of total private consumer spending (a proxy for income) in India. Around 30% of the entire cost of production is paid out in the form of rent to landowners. Consequently, land services account for around 13% of the community's overall revenue. This suggests that land accounts for a large portion of India's capital value. Who owns this property makes a huge impact, since land ownership is also related with economic, political, and social benefits. In contrast, in a developed nation such as the United States, roughly 10% of total income is spent on food, while about 20% of the cost of producing food is spent on land rent. As a result, landowners get little more than 2% of overall community revenue. So, land ownership has substantially less political and economic significance in the United States than it does in India. The same reasoning applies to the manufacture of other items that rely heavily on natural resources. When capital is limited and labour is unskilled, land and other natural resources become highly essential in production, and their ownership becomes a major societal problem.

The Human Resources

The amount and quality of human resources are essential factors in the development process. The degree of employment should be examined both in the long term and in the near run. In the long term, employment is essentially connected to population increase. The relationship between employment and population growth is notably tight in civilizations where people join the labour force at an early age, where most of the labour is used in agricultural activities, and where people are likely to be working even if they are underemployed. The greater the pace of population expansion, the greater the proportion of labour needed in relation to other elements of production.

The crucial aspect to remember in this context is that it takes time and money to develop a fully functional human being. When time is cut short due to the need for children to work, the ultimate effect is less productive labour in the long term. On the other hand, if work is delayed and children attend school, the burden on public institutions, such as educational institutions, increases, and the net consumption embodied in per capita incomes decreases, as resources are diverted into institutions for training and maintenance rather than consumption. Hence, per capita earnings are temporarily decreased until individuals enter the labour market, at which point they rise if the labour is productive enough to compensate for the time spent on education and training. In the near term, however, employment may be expanded through expanding job options. This may be accomplished by delivering competitive pay, which entice formerly unemployed persons into the labour market, and by creating a healthy economic climate with more employment opportunities.

According to research conducted in both developed and developing nations throughout the globe, the quality of labour is more essential than the quantity in increasing productivity. When one considers the experiences of other nations, a clear picture emerges. No nation with an educated, technically trained labour force is poor, and no country with an illiterate, uneducated labour force

is affluent. In general, the quantity of natural resources is much less important in economic growth than the quality of the labour force. Japan is a nation with essentially little mineral or energy resources but great economic output due to a highly educated, skilled, and efficient workforce.

It has also been shown that investment in learning and instruction generates very high internal rates of return in economic production. The returns to basic literacy are very high. In many developed nations, the rate of return on investment in education is about 50% each year, while in emerging countries like India, the rate of return on investment in basic education is considerably greater. Each impoverished nation seeking development should focus its meagre resources on education, technical education, training, and management.Another thing to remember about people and their relevance in the development process is that their beliefs and attitudes must be development-friendly. If growth is to take place, a rise in income and wealth, whether held personally or publicly, must be one of the most important aims in life. That is, individuals must have a rising drive to acquire, collect, or consume. Otherwise, development is almost impossible. There is no doubting that Western technology, money and financial intermediaries, private property, and an economic framework based on free contract and trade were all the result of this ambition. Others might claim that the primacy of monetary concerns in the hierarchy for privately held objectives resulted in political liberty, which promoted social mobility and so contributed to progress.

India has an excess of labour. According to the 2001 population census, India's rural labour force was 234.1 million, consisting of 127.3 million cultivators and 106.8 million agricultural labourers, accounting for about 64% of the overall labour force. The rural labour force is of inferior quality in terms of skills, education, training, values, and attitudes. In 2001, the rural population in India had a literacy rate of 59%, compared to an urban population literacy rate of 80%. There is a positive relationship between the female literacy and real per capita GDP (GDP). The simple correlation between both of these variables was 0.48 for a sample of 43 developing nations. The low productivity and hence low per capita incomes in India's rural sector are explained to a significant degree by the poor quality of the rural labour population combined with extremely low per capita availability of capital.

Capital

Most development economists in industrialized Western nations see capital as the most important tool for economic growth. The Harrod-Domar model is an example of this school of thinking. Capital accumulation is important in the process of economic development in this model because the rate of economic growth is represented as the product of the savings rate and the output-capital ratio. Capital formation is therefore a necessary condition for economic progress. Much modern technology is incorporated in capital, such as high-yielding crops, chemical fertilizers and insecticides, tractors, combine harvesters, and food processing factories. Improvements in capital stock contribute to increases in labor's marginal productivity, which in turn raises pay rates.

Capital may be classified in a number of ways. Long-term capital is represented by improvements to land, machinery, equipment, fundamental infrastructure, and other long-lived kinds of capital, while operational capital is represented by seeds, fertilisers, fuel, and other raw materials that are used yearly in the manufacturing process.Moreover, capital may be classified based on whether it is held publicly or privately. Private money is controlled by the individual

entrepreneur, and examples include those described above in long-term and operational capital examples. Public capital, on the other hand, refers to societal investments in infrastructure such as roads, schools, hospitals, national defence, and different government enterprises. Of course, private capital exists.Individuals, of course, gain it by their own choices to spend less than they earn.Public capital, on the other hand, is created by collective action through political processes, although it may also be created when society earns more than it consumes. Private and governmental capital investments are required to promote rural development.At the moment, both sorts of investments in the nation fall short of the mark, thus impacting the level and rate of rural development.

Looking at capital production from the standpoint of the economy, capital resources may be obtained in one of two ways: domestic saving or foreign help. Domestic savings may be obtained from three sources in most nations. The first comes from individual persons who consume less than their earnings and invest the difference back into the economy. People in affluent nations save as a matter of course in order to offer protection against a variety of calamities, and this saving takes the shape of healthcare costs, retirement pensions, bank accounts, and so on. Since these decisions are made willingly, individuals believe that saving improves their well-being, and hence no deprivation occurs. Saving in impoverished nations, on the other hand, is frequently difficult since people live on the verge of famine and sickness and need all of their money for consumption alone.

As a consequence, savings are often limited. Nonetheless, domestic saving in India has recently increased across all industries. For example, in 2004-05, the average rate of gross savings across all sectors was 29.1%, up from 24.9% in 1999-2000. Similarly, the average gross saving rate in the household (private) sector rose from 21.3 percent in 1999-2000 to 22.0 percent in 2004-05. If the society requires more savings than are accessible via private savings choices, then saving must be compelled through inflation.Second, savings may be obtained from companies, which, in order to grow, often take a portion of their revenues and reinvest them in the firm for greater capital development. This kind of saving and capital accumulation is very significant in affluent nations because firms are many, big, and strong. In India, the average rate of gross savings in both the private and governmental sectors has been improving but remains relatively low; in 2004-05, it was 4.8 percent and 2.2 percent, respectively.

Finally, governments may obtain resources for capital formation through taxes and inflation. Income tax, stamp duty, excise tax, VAT, and so on all have perks and downsides. But, due to limited space, an assessment is not possible.Inflation is a kind of taxation as well. The government produces inflation by expanding the money supply, which leads to an increase in demand for goods and services. This causes price increases, and the average increase in a price index is referred to as inflation. The government purchases goods and services using money generated by operating printing presses or selling securities. This might be in the form of investment capital. Inflation is a tax on cash holdings because it erodes the buying power of people and organizations in the economy who keep cash balances. Hence, wealth is transferred from individuals who have money in the form of cash balances to those who get resources by creating money. Of course, it is feasible to analyses and assess the efficiency and equitable consequences of inflation.

In comparison to other kinds of taxing used to produce revenue for government purposes. Of fact, saving is just one component of the capital development process. Savings created in the economy must be made accessible to investors, i.e. those who really produce capital production.

If private savings are prioritised, an organizational foundation must be in place to facilitate the flow of cash to investors. Commercial banks, savings and loan associations, insurance companies, and credit cooperatives are the most common types of organizations in most nations. Similarly, if government funds are available for investment, whether via foreign assistance, taxes, or money creation, an institutional foundation must exist to distribute the resources to investors.Several nations (including India) have central banks as well as industrial and agricultural banks.

Foreign assistance has been widely employed as a means of transferring international money from one government to another since World War II. It should be noted, however, that many of today's advanced nations obtained a large portion of their development capital from outside sources. Foreign capital supplies, mainly from the United Kingdom, assisted the United States and Canada greatly in the early stages of their growth. But, there is one significant difference between that era and the present. The majority of the development finance that fueled the boom in the United States and Canada came from private international sources. Profit possibilities were particularly plentiful, attracting money that was looking for these professions. It goes without saying that since the capital transfer was voluntary, it benefited both borrowers and lenders.

Nowadays, a lot of private cash is going overseas. Several nations, including India, have large multinational enterprises and international firms with branches. Nonetheless, considerable amounts of financial resources are collected for development objectives from international organizations such as the World Bank, the Asian Development Bank (ADB), the Inter-American Development Bank (IADB), and via government-to-government assistance. Again, as long as the transfers are mutually beneficial and consensual, both the grantor and the recipient stand to benefit greatly. When a substantial quantity of foreign money is accessible via grants or low-interest loans, beneficiaries are less concerned about the economic feasibility of initiatives that use these monies. This is a waste of precious resources. Foreign grants and low-cost loans should be managed in the same way as high-cost loans are. The true cost to the economy of utilizing these monies, independent of source or conditions, is the opportunity cost of not employing the resources in their most productive way. These capital funds should be directed to purposes that provide the most productivity. In terms of establishing how foreign assistance resources should be used in the economy, planning should be equally as tight and thorough as it would be if the resources were earned via local savings.

Capital is scarce in India's rural sector, which is one of the most important barriers to rural development. The rural sector's rate of capital creation has been low in comparison to the rate necessary to achieve a greater degree of rural development. Additionally, for a number of reasons, including a lack of institutional structures for mopping up small deposits and giving incentives to small savers, most of the excess created in the sector is syphoned off to the urban sector.

Technology

In all probability, technical progress is the most essential element influencing economic growth. It is, in many senses, the sine qua non of development, that is, development. According to studies conducted in advanced nations, growth in natural resources, employment, and capital have accounted for less than half of the improvements in output throughout time. The majority of expansion must thus be accounted for by qualitative rather than quantitative increases in production components. In essence, technical progress is an improvement in manufacturing

processes that results in increased output per unit of input. It is a gain in knowledge and know-how, enhanced abilities, and the use of better technology and equipment, all of which combine to raise production.

Numerous development scholars, including Hayami and Ruttan, Schultz, and Rostow, have developed theories of development that place technical progress at the forefront of their concerns. According to Schultz, the move from traditional to modern agriculture is mainly one of using contemporary inputs, which are defined as technologically sophisticated. As the static stage of traditional life is disrupted, society progresses through the following stages: (a) formation of the preconditions for growth; (b) take-off; (c) drive to maturity; and (d) mass consumption. During the phase of establishing the preconditions for expansion, contemporary scientific findings begin to be converted into new industrial functions. This is merely another way of emphasizing that technical progress is taking place.

Schumpeter (1949) separates two types of influences on an economy's dynamic evolution: (a) the impacts of changes in factor availability, which he refers to as the 'growth' component; and (b) the effects of technical and social changes, which he refers to as 'development' or 'evolution'. Development, in his opinion, encompasses five combinations, which are as follows:

1. The release of a new product.

2. The use of a new manufacturing process.

3. The establishment of a new market.

4. Conquest of a new source of raw resources or semi-manufactured items.

5. Industry reorganization, such as the establishment of a monopoly position or the dissolution of a monopolistic situation.

The entrepreneur is the primary figure in Schumpeter's economic growth paradigm. He changes the production pattern by using innovations, utilising untested technology potential for generating new commodities, producing existing commodities in novel ways, and so on. Capitalist logic and bourgeois institutions are necessary for entrepreneurial activity to flourish. Credit, according to Schumpeter, also plays a vital role in helping entrepreneurs to secure productive resources and carry out innovation. He emphasises the significance of innovation in the creation of business cycles. According to Schumpeter, there is no limit to the rise in production per head.The important challenge, of course, is how to foster rapid technological progress. First and foremost, the overall economic environment must be favourable to innovation and knowledge creation. Individuals will generally innovate if there are incentives for them [11].

A nation with a sizable and educated middle income may depend on the profit incentive to motivate inventors, scientists, and entrepreneurs to pursue technological advancement. But, in conservative traditional cultures, governmental institutions must also play a significant role. At all levels, educational institutions are critical. Experiment stations and extension services are also available. Empirical research from both wealthy and poor nations show that public investment in these knowledge-building organisations and activities yields extremely high rates of return. In the long term, no nation can afford to ignore these institutions that operate as change agents in developing and implementing technological development.

Prior to 1965, India's agricultural prospects were bleak. Nonetheless, the post-1965 period was defined by a significant increase in the use of modern inputs such as high yielding seeds,

chemical fertilisers, plant protection agents, and enhanced agricultural tractors, tools, and equipment. Dantwala addressed several economic, technological, institutional, and organisational aspects that had been attributed to the so-called "technical breakthrough" or Green Revolution in Indian agriculture in his 1970 presidential speech to the Indian Economic Association (IEA). As compared to new technology, he determined that land tenure, credit, marketing, extension services, education, relative pricing, taxes, and subsidies were all insignificant. He arrived at his conclusion by a process of elimination: technology was the sole important causative element that changed between the pre-1965 stagnation and the post-1965 Green Revolution. What he didn't realise was that the efforts of many institutions and organisations, such as agricultural colleges, and the provision of extension education services, credit, marketing, and subsidies, aided both the introduction and dissemination of new technology. Nonetheless, it is clear that new and appropriate technology is a prerequisite for economic progress. Yet, without the backing of proper institutions and organisations, modern technology cannot alter traditional agriculture. Despite having access to the most recent crop production technologies, India's average rice output in 2004-05 was about 2,900 kg/ha, compared to 6,730 kg/ha in Korea and 6,420 kg/ha in Japan. What variables might explain this large yield differential? Natural resources and knowledge of new technologies, without a doubt, cannot.

The amount and intensity of usage of accessible new technology explains these disparities, and it is a function of supporting institutions and organisations, such as government policies and programmes in the fields of input and output pricing, credit, marketing, subsidies, and land reforms. The insufficient usage of fertilisers is one of the key reasons for poor crop yields in Indian agriculture. In 2004-05, for example, the average usage of nitrogen, phosphorous, and potassium (NPK) fertilisers in India was about 105 kg/ha, compared to 350 kg/ha in Japan and 448 kg/ha in South Korea. India's agricultural research infrastructure is excellent, with 45 research institutions, 10 project directorates, 30 national research centres, four national bureaux, and more.

The Indian Council of Agricultural Research developed 86 all-India coordinated research initiatives (ICAR). There are also 31 state agricultural universities (SAUs), 120 zonal research stations affiliated with the SAUs, one central agricultural university, eight regional agribusiness research centres, and numerous other public and private organisations engaged in agricultural and rural development research and solution-finding. Both ICAR institutions and SAUs have made significant contributions to the country's Green Revolution. What is required today is a shift in researchers' attitudes towards demand-driven, problem-solving, and action-oriented research. In addition, there is an urgent need to increase governmental and private investment in agricultural research. The National Agricultural Technology Project (NATP) launched by ICAR is a positive step in that direction.

In investigating the role of new technology in rural development, I would want to warn that the adoption of inappropriate technologies may do considerable harm to the biosphere, although unintentionally. The overall economic and political circumstances that exist in emerging nations favour and promote ecologically harmful technology. For example, excessive use of chemical fertilisers, as well as effl uent released by firms manufacturing chemicals such as napthol, disulphonic acid, and its derivatives, contaminate rivers, streams, land, and air, posing threats to human health and reducing lifespan. Individuals in India, especially the poor, are more vulnerable to such threats since there are no property rights or responsibility restrictions to

protect them. As a result, before new technologies are suggested for widespread usage, their environmental implications must be thoroughly assessed.

CONCLUSION

The Integrated Rural Development Program was established to provide disadvantaged people with work options. This system not only provides the required subsidies to persons living below the poverty line, but it also assists them in improving their living conditions.The degree and rate of rural development are influenced by several physical, technical, economic, sociocultural, institutional, organizational, and political variables. All levels, including the home, village, district, state, country, and the entire planet, are affected by these elements.

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CHAPTER 16

AN OVERVIEW ON ORGANIZATIONAL AND INSTITUTIONAL FRAMEWORK

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Abstract:

A collection of formal organizational structures, regulations, and informal norms for service providing is referred to as an "institutional framework." As a prerequisite for the effective application of various sanitation and water control intervention methods, such a framework must be carefully evaluated.An "institutional framework" is a collection of official organisational guidelines, laws, and unwritten standards for providing services. A framework of this kind is necessary for the deployment of other sanitation and water management intervention techniques, thus it must be given special consideration.

Keywords:

Agriculture, Economic, Rural, Institutional Framework, Organization.

INTRODUCTION

Natural resources, human resources (labour), money, technology, and institutions and organizations all have an impact on rural development. While classical and neoclassical economists emphasized the importance of natural resources, labour, technology, and investment in economic growth, they did not place a high value on institutions and organizations in the development process. They took the economy's institutional architecture as a given (exogenous) and so went beyond scientific study. In reality, they pushed for reducing the role of the government in the development process and promoting a laissez faire approach. Institutional economists and Karl Marx were the first to recognise the critical role that institutions and organizations have in the process of economic growth. The words "organization" and "institution" are often interchanged. Organizations are seen as a subset of the larger collection of institutional structures or arrangements [1], [2].

An organisation denotes the coordinated actions or endeavors of two or more people. It is designed to put into action a certain institutional configuration. The primary goal of an economic structure is to provide signals that direct self-interested economic agents/entities to behave in the best interests of the wider community. The primary job of every nation-state is to establish institutional structures that deliver the necessary signals to individual economic entities. Markets efficiently supply such signals as long as transaction costs are modest. Such signals may also be sent by non-market processes such as government agencies and non-governmental organizations (NGOs), including cooperatives.Institutes are crucial development tools. They may have an impact on agricultural and rural development in a variety of ways, such as the provision of production inputs and services, the reduction of transaction costs, the enhancement of rural producers' bargaining power vis-à-vis those to whom they sell their produce and from whom

they purchase production inputs and services, influencing investments and savings and bringing the two together, and so on. Each community's economic activity takes place in such a milieu of organizations and institutions. They significantly influence the community's economic structure and provide the rules by which the financial game is played. Changes in these organizations and institutions will almost certainly have a significant impact on economic production and development over time. Because of the interaction between changes in organizations and institutions, as well as other instrument factors of agricultural growth, these impacts are sometimes difficult to identify and quantify[3].

There are several organizations, including public (government), single proprietorship, partnership, corporation, cooperative, and charity trust, that may and do serve the needs of farmers in India. An appropriate organization for supporting agricultural growth should thoroughly identify with farmers' interests and be totally dedicated to serving their requirements, both organizationally and operationally.The government of India has been a major organization in the field of agricultural and rural development. Development is seen as the government's specific responsibility. This has far-reaching ramifications for the function of the bureaucracy, the arm of the state in charge of carrying out the desires of political leaders. Attempts to enhance the quality of life for rural people rely primarily on government administration and bureaucracy.

Some nations, such as Japan, are highly liberal in allowing private firms and people to operate freely, but others impose many regulations that limit private profits in the guise of preserving the wider public interest. Additional problems include the kind of agreements that private persons may enter into; what types of claims and contracts may be enforced and to what degree; and so on.Are government-regulated activities permitted? How are taxes, tariffs, subsidies, and other costs used to penalise certain activities while encouraging others? How are taxes and inheritance laws used to limit income distribution at the price of economic growth? All of these variables and circumstances influence economic production incentives and must not be overlooked in the quest for a favourable organizational and institutional environment for economic growth.

A cooperative is the only group that theoretically meets all of the requirements for a successful rural organisation. The cooperative organisational structure is simply intended to promote the mutual interests of its client patrons on the basis of equality and equity.It is democratically governed by them. It also resolves conflicts of interest between the lender and the borrower, or between a seller and the buyer, since the lender and the borrower, or the seller and the buyer, are the same person in it. The goal is not to conduct business just for profit, but to address the requirements of the members. It is a local organisation that encourages local engagement. It is sensitive to local demands since its policy is democratically established by local members/users. It acts as a business and democratic training platform for rural residents.

The Anand pattern dairy cooperatives in India have shown what proper institutions and organisations can accomplish to launch and encourage agricultural and rural development. Similarly, sugar cooperatives have made significant contributions to rural development.Apart from cooperatives, there are several other types of institutional and informal organizations that might help to promote agricultural and rural development.Sadguru Water and Health Foundation, a Dahod (Gujarat)-based NGO; SEWA, an Ahmedabad (Gujarat)-based NGO; and PRADAN, a Delhi-based NGO, for example, encourage grassroots people's organizations to undertake agricultural and rural development projects.

The goal of non-governmental organisations (NGOs) is to organise individuals and provide them with technical knowledge, training, and, to a lesser degree, finances. Moreover, they support grassroots organisations in obtaining financial aid from different governmental and non-governmental organizations.

In most situations, the success of programmes undertaken under the aegis of NGOs has outperformed that of government programmes. Unfortunately, this statement cannot be generalised since many NGOs lack the technical and management ability, as well as the financial discipline, to launch and implement agricultural and rural development programmes. Indian enterprises and businesses have the potential to play a critical role in promoting agricultural growth. Indeed, many blue chip companies such as the Tatas, Mafatlals, Larsen and Toubro, and Hindustan Unilever, as well as industrialist associations such as the Confederation of Indian Industry (CII) and the Federation of Indian Chambers of Commerce and Industry (FICCI), have already received awards for their exemplary work in the field of agricultural and rural development, not only from Indian NGOs and government organisations, but also from international donors and development organisations. Corporates may bring the advantages of contemporary science and technology, management, and global markets to the agriculture sector, promoting agricultural growth, especially in this period of liberalisation, deregulation, privatisation, and globalization [4]–[6].

DISCUSSION

Relation between Rural Development and Its Determinants

The link between rural development and the numerous characteristics outlined in the previous section is difficult to define. For starters, no time series data on any acceptable measure of land reform, much alone numerous drivers, some of which cannot be quantified at all. Second, all of these factors change at the same time, and it is impossible to isolate and assess the contribution of any one variable without using advanced econometric tools.There have been a few efforts in the past to quantify the influence of some of these drivers on rural development. Hayami and Ruttan, for example, attempted to explain differences in agricultural output per worker (a proxy for agricultural development) between a representative group of developed and developing countries, and discovered that (a) resource endowment (land and livestock); (b) technology (fertilisers and machinery); and (c) human capital (general and technical education) accounted for 95% of the differences.

The implications of their study for developing nations' agricultural development strategies are obvious. An endeavour must be made to bridge the gap between industrialised and developing nations in terms of contemporary industrial inputs, education, and research. The agricultural surplus created by narrowing the gap, in excess of what is required to sustain agricultural productivity growth, must be utilised to finance industrial expansion. A variety of studies, usually at the farm level, have been undertaken in India to assess the influence of land, water (irrigation), fertilisers, labour, and electricity on agricultural productivity and revenue. These studies provide useful information regarding the type and extent of the influence of numerous drivers on agricultural income. Therefore, macro-level research are required to determine the link between an accepted measure of rural development and numerous variables influencing it [7], [8].

Rural Development Policies

Webster's dictionary defines policy as a defined course of action chosen (as by the government, an organization, a group, or a person) from among options and in the context of specific circumstances to guide and, in most cases, deter my current and future actions. The most typical social and 100 The word "policy" in Rural Development refers to a plan of action or expected course of action that is consciously selected after a consideration of feasible alternatives and pursued or oriented to be followed. The policy process includes the creation, dissemination, and implementation of these plans of action. In this section, we will focus on public rural development policy, which refers to activities made by the government to achieve certain rural development goals. Rural development, as is customary, involves agricultural development.

It is critical to differentiate between (a) policy, (b) programmer, and (c) project from the start. Policy is a broad phrase that, as previously said, refers to a collection of desired activities. It encompasses programmers that are smaller in scope than policies but more specific in terms of what is to be done, how, by whom, and where. Before a policy can be implemented, it must be translated into a number of programmers. A project is highly specified and precise in terms of its goals, location, duration, funding, and executing agency, and it lends itself to group planning, financing, and execution. A programme may include numerous projects. A rural new development may be defined as an investment activity in which resources are used to establish a producing asset from which we can anticipate long-term benefits.

Few fundamental aspects of public policy, such as a conceptual framework and public policy justification. This is presented in form of India's significant public policies affecting the rural sector. Lastly, we explore briefly the significant consequences of globalisation for rural development. The major goal of this chapter is to familiarise the student with the fundamental aspects of public theory as well as the key characteristics of India's rural development policies that are implemented from time to time.

Control, Freedom, and Public Policy

Government policy is a kind of social control. A farmer who accepts a production loan from a nationalised bank and a government subsidy is limited in how he may spend the borrowed money and subsidy, but his freedom to increase productivity, improve his income and quality of life, and develop his particular abilities is increased.The farmer is caught between the concepts of independence and control. As an individual, he values his individuality and freedom; as a social entity, he recognises the need of discipline and control. Yet, like so many other quandaries, this is a ruse predicated on two seemingly comprehensive and mutually incompatible choices.

Control and freedom are not mutually incompatible alternatives: they are two ideals that may coexist. In reality, the primary goal of restricting some acts via social regulations is to preserve the ability to engage in other activities.The contrast between 'permission' and 'freedom' is relevant in this context. If licence is defined as self-gratification that is damaging to others and freedom as self-expression that is not harmful to others, then social restrictions may enhance freedom by regulating licence. From this vantage point, there is no need for a conflict between freedom and control. In reality, societal regulation may help to increase individual liberty. Avoid social control; rather, consider how we might make social controls selective enough to curb licence while promoting freedom in the wider benefit of society.

A rural development policy is required.

The more we move away from basic, small-scale handcraft manufacturing and self-contained and subsistence agriculture, the greater the necessity for economic policy. The individual, both as a producer and as a consumer, is becoming increasingly dependent on the general market conditions, employment, output, and production efficiency of the nation as a whole, and the manner in which income is distributed as among people; in short, on the country's economic welfare. The following are some specific reasons why the government should intervene in the rural economy.

India's Promise to Create a "Socialist Pattern Society"

India has opted to develop a 'socialist type of society'. This means that the primary criterion for determining development lines must be social gain rather than private profit, and that the pattern of development and the structure of socioeconomic relations must be planned in such a way that they result in not only appreciable increases in national income and employment, but also in greater income and wealth equality Yet, past experience in India has shown that the benefits of development are not distributed fairly. This has exacerbated the problem of poverty, which has shown itself in a variety of ways, including increased unemployment, hunger, slum expansion, real wage declines, and impoverishment of marginal and small farmers. Even after 60 years of independence, India's poverty and employment difficulties contradict the primary goal of planned development, which is to raise the quality of life for the population. It has been recognised that rapid growth is not a replacement for intentional policies aimed at ensuring equal distribution of economic advantages. As a result, a public policy to assure development with social fairness or social justice is required.

Violent Fluctuations in Agricultural Production, Prices and Incomes

Farm output is more subject to the vagaries of nature than non-farm production and, as a result, fluctuates more violently than industrial production in reaction to unpredictable rain fall or other natural occurrences. Fluctuations in agricultural production cause even greater fluctuations in rice prices and, as a result, agricultural revenue. This is due to inelastic demand for most agricultural items (less than 1.00) or to the greater price flexibility most agricultural commodities 102. Rural Development in relation to changes in supply. This indicates that a 1% rise in the price of a farm product, such as wheat or rice, is connected with a less than 1% decrease in demand, or that a 1% decrease in the pricing of a farm product is related with a less than 1% increase in demand. Most farmers, since they are small-scale and impoverished, cannot tolerate the impacts of fluctuations in agricultural output prices and revenue. They need certain safeguards against the negative impacts of the market system and human nature. Only the government can give such protection in the form of government subsidies, insurance, and credit programmers.

High Incidence of Rural Poverty

Poverty is more prevalent in rural parts of India than in metropolitan ones. Similarly, rural per capita income is not only lower than in metropolitan regions, but it is also more unequally applied. Throughout the period 1998-99 to 2003-04, the average annual per worker income in the agriculture industry was Rs 11,496 at 1993-94 prices, compared to Rs 59,961 in the non-agricultural sector According to the Uniform Recall Period (URP) consumption distribution data from the sixty-first round of the National Sample Survey (NSS) that was carried out by the

National Sample Survey Organisation (NSSO) in 2004-05, India's rural poverty ratio was 28.3 percent, compared to 25.7 percent in urban areas and 27.5 percent overall. The tangible benefits of growth in India have been more abundant for urban people than for rural people. This is also true for other nations. The unfairness of rural people's predicament justifies government involvement to sustain rural income and improve its distribution via anti-poverty programmes.

Small, Scattered and Unorganized Rural Enterprises

The majority of rural businesses are tiny, dispersed, and unorganized. Because of these features, their owners have little or no negotiating power with those to whom they sell their products and from whom they purchase their supplies. This leads to exploitation on both fronts selling and purchasing. This highlights the need of government programmers that try to equalize opportunities, increase the negotiating leverage of people and organizations in rural regions, and prevent the strong from abusing the weak.

Inadequate and Poor Basic Infrastructure in Rural Areas

Rural regions are at a significant disadvantage in comparison to metropolitan areas in terms of the supply of essential infrastructure and services like as roads, drinking water, power, schools, hospitals, police and fire protection, transportation, and communications. These public services and amenities in rural regions are not only insufficient, but also poorly organized and unreliable. As a consequence, impoverished peasants are doomed to inadequate education, bad health, unemployment, and poverty generation after generation. Improving their situation requires extensive government action. In reality, the government has stepped in by introducing programmers such as the Basic Needs Plan.

Predominant Place of Agriculture in India’s Economy

Agriculture is India's most important economic industry. In 2005-06, it contributed around 18% of India's GDP at current prices and 19% at 1999-2000 values. 2 It is also the primary source of income for around two-thirds of India's population. In reality, agricultural and rural growth is the sine qua non of national development. As a result, agricultural and rural development must be a fundamental element of any effective national development strategy.

Goals of Rural Development Policy

Rural development policies aim to enhance the working and living situations of rural residents. The objectives of policies are determined by what people want, and the measures of policies are determined by what people believe the government can and should do to effect the intended change. This is public policy theory. Change is only wanted when people are unhappy with the way things are going. Pressure for public action emerges when individuals believe that they, alone, cannot effect the desired changes.They have some standard or concept of an ideal state in mind for which they strive. These standards become policy goals towards which specific programmes' aims are focused.

From the 'Directive Principles of State Policy' contained in India's Constitution, two major aims of economic policy may be deduced: first, raising national income; and second, improving the distribution of national wealth among members of society. These objectives are reflected in India's economic policies, which are outlined in the country's five-year plans. The aims that strive to achieve 'development with equality' must be seen in the framework of the four major elements of state policy outlined below. These are the following:

1. The residents' standard of living.

2. The creation of productive jobs.

3. Regional equilibrium.

4. Self-sufficiency.

All of these goals seem to be valuable and, as such, need serious consideration by policymakers. Yet, in order to be useful to society, these goals must be translated into specific programmes and initiatives that are doable given the current circumstances. Many rural development strategies are complicated amalgamations of many aims, diverse sets of tools or instruments, and various constraints. To comprehend such policies, must divide them into different programmes or initiatives.A clearly defined target may be set for each programme, which a certain government agency will pursue. The programmer measures may then be identified and evaluated to see whether they are suitable and efficient in fulfilling the goal, as well as modified to situations beyond the scope of that specific programmer. These variables are often critical in assessing whether or not a particular programmer is 'administratively' viable.

Hierarchy of Policy Goals

Considering the variety of policy objectives, it is vital to investigate the relationships between them and ensure that they converge towards, or do not militate against, the public interest. This is possible if numerous actual policies and programme objectives are placed in the shape of a pyramid,

1. Descending the levels of the policy objective pyramid from the high peak of generality to the practical bottom of actual concerns reveals the following hierarchy:

1. The overarching purpose of economic policies is to foster general welfare, which includes economic, cultural, social, and political wellbeing. This master objective is met by two superior goals: maximum national income and opportunity equality. The highest level of the hierarchy is made up of the master goal and the superior objectives.

2. A succession of objectives are defined at a lower plane of generality as one descends from the top level of the hierarchy. These aims address specific maladjustments in different areas of the economy and may be referred to as the core goals of significant national initiatives. Each of these primary aims remains broad in scope and complicated in form. For practical implementation, these aims must be further subdivided into more specific programme objectives aimed at a wide range of scenarios and involving numerous groups of people, places, and commodities.

3. At the next level, we see the goals of certain government programmes aimed at correcting misalignments or removing the cause of unhappiness felt by particular groups of people. For example, the central goal of agricultural policy is divided into various programme objectives assigned to irrigation, soil conservation and agricultural credit, marketing, research, education, and extension. 4. We then descend to the lowest, most specific level of programme units, the objectives of which are relatively simple and clear-cut. They include subsidizing certain agricultural commodities at specific prices, giving loans to farmers for specific objectives, incentivizing farmers to perform specific soil conservation techniques, and creating dams and irrigation systems (Figure 1).

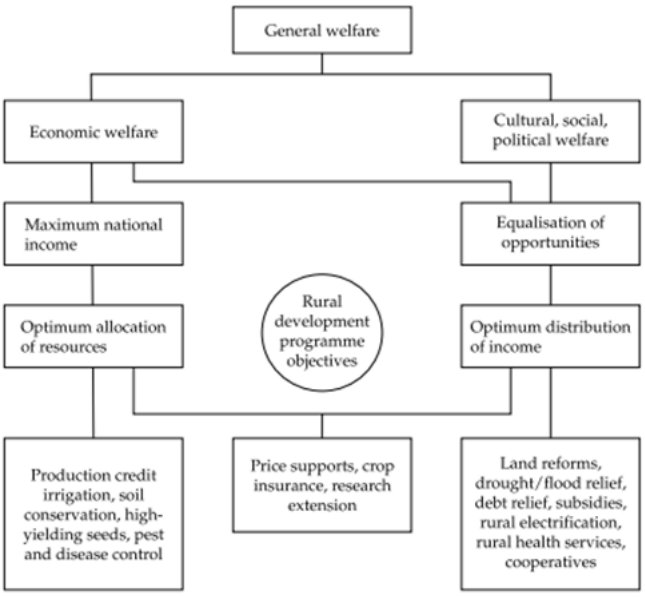

Figure 1 Represent the rural policy goals

The approach of developing programmes in which the goal and methods are clearly defined is essential for policy analysis. Nevertheless, the approach is not easy to implement. Depending on how one looks at it, aims become means and means become objectives. Consider the elimination of rural unemployment. According to the Union Minister for Rural Development, it is an objective, and the tools to achieve it include budgetary distribution of money, grants to NGOs, institutional loans and subsidies for the pursuit of income-generating assets, and technical support to beneficiaries. According to the Planning Commission, eradicating rural poverty is a means of improving income distribution and equalizing opportunities; these objectives, in turn, are means of improving social, cultural, and economic welfare, all of which are means of achieving the overarching goal of general welfare. Consequently, in the context of a more specific programme, an aim emerges as a means in a more broad action system. We take the aim for granted when assessing the appropriateness of means; to evaluate the appropriateness of an objective, we must put it in the position of a means serving a greater purpose.

Rural Development Policies in India

Tinbergen differentiates between qualitative and quantitative policies.

A qualitative policy tries to alter the economic model through establishing new institutions, modifying existing institutions, and nationalizing private firms. A quantitative policy aims to alter the size of specific factors, such as the tax rate. The implementation of a free education system, when before tuition fees were levied, is an example of both qualitative and quantitative policy. It is qualitative in that it indicates a shift in the economic system, and quantitative in that it represents a change in the charge, from something to nothing.Divides agricultural policies into two categories: development policies and compensation policies. A development policy aims to enhance commodity and resource availability while also improving product and input quality. A compensation policy seeks to compensate its target group in many ways, such as via subsidies, price support, and so on. India's government has a lengthy history of intervening in the rural sector of its economy.

Prior to independence, the British government intervened to promote the export of food and raw resources to the United Kingdom. There was no official strategy for the development of India's resources for the benefit of its people. The British government took significant steps, including the establishment of a land tenure system, the expansion of road and rail connectivity, and the encouragement of export commerce in particular agricultural commodities. The founding of the Forest Department in 1864 and the USDA in 1871, the appointment of the Royal Commission on Agriculture (RCA) in 1926, and the formation of the Imperial (now Indian) Council of Agricultural Research in 1929 were other highlights of that period. The RCA report was recognised as the foundation for future agricultural growth at a meeting conducted by the Government of India in Shimla in October 1928. The study emphasised the necessity of establishing a minimal quality of living in villages, as well as the modernization of agriculture via research, extension, and increased cooperation of different agricultural departments, as well as the establishment of cooperative organisations. Nevertheless, many of the RCA's suggestions could not be followed owing to a lack of financial resources and the Great Economic Depression (1929-30).

The Government of India produced a 'Statement of Agricultural and Food Policy in India' in January 1946, outlining the goals to be reached, the means to be implemented, and the relative duties of the centre or the provinces. The all-India policy, according to the statement, was to promote the welfare of the people and to ensure a gradual increase in their level of life [9], [10].

CONCLUSION

The institutional framework for sustainable development should balance the three dimensions of sustainable development and improve implementation by, among other things, increasing coherence, and coordination, avoiding duplication of efforts, and reviewing progress in implementing sustainable development.

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CHAPTER 17

EXPLORATIVE STUDY ON THE NATIONAL FOREST POLICY

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Abstract:

The National Forest Policy, 1988 is a law passed by the Indian Parliament to update the National Forest Policy, which was first adopted in 1952. The notion of empowering and incorporating local populations in the conservation and development of forests was extensively advocated by the 1988 National Forest Policy. The study main focus is on forest conservation, preservation, and management, as well as protecting the interests of tribal and forest-dependent people.

Keywords:

Agriculture, Forest Policy, Land, National Forest Policy, Rural.

INTRODUCTION

Since 1894, India has had a forest policy, making it one of the few nations in the world. After independence, a new forest strategy was enunciated in May 1952 in recognition of the significance of forests in the economy Rural Development Policies 107 and to guarantee the best possible use of land. The new policy stipulated, among other things, that forest areas should account for at least one-third of total geographical area, and that forest lands should not be converted to agricultural production indiscriminately. The National Commission on Agriculture (NCA) (1976) suggested revising the 1952 forest policy further. In 1988, the forest policy was amended. The new forest policy of 1988's core tenet is protection and conservation [1]–[3]**.**

The following are the key characteristics of the updated policy:

1. A minimum of one-third of the country's total land area must be covered by forest or tree cover.
2. Complete protection for tropical rain forests and wet forests.
3. The scope of forest usage for grazing and extraction will be limited by the forest's carrying capacity.
4. Encourage tribals and forest inhabitants to participate in forest conservation, regeneration, and development.
5. Forest-based companies would have to grow their own plantations to satisfy their needs, and the practise of giving forest output to industries at reduced prices would come to an end.

These principles are required to guarantee that the forest area may grow from 75 million hectares (mha) to 110 mha (33 per cent of the total land area).The updated forest strategy has ramifications for multiple sectors of the economy, including energy, manufacturing, and agriculture. Development initiatives are now being scrutinized to ensure that the natural balance is not disrupted. This is accomplished by assessing their influence on the

environment.Unfortunately, India's forest policy has not always been conducive to supporting the sustainable use and management of forest resources. The existing policy must also be revised if the relationship between scarcity and pricing of forest resources is to be restored. Since forest resources are becoming scarcer, forest product prices should rise to reduce deforestation and stimulate reforestation[4].

At the moment, many forest goods and services are not valued at all, and even lumber, an internationally traded commodity, is priced below its real scarcity value owing to implicit and explicit subsidies, as well as institutional failings. Often, forest concessions are insufficient to offer incentives for conservation and regeneration.Non-timber products and services are undervalued, resulting in excessive deforestation, conflicts with local populations, loss of economic value, and environmental harm. Local timber processing typically results in inefficient plywood factories, over capacity, waste of precious tropical timber, and loss of government income. Subsidies for replanting often end up subsidising the conversion of a valuable natural forest to inferior monospecies plantations, resulting in a loss of the value of both tropical hardwoods and biological diversity.

A improved system of sustainable forest accounting is also required (FRA). The current FRA system has significant flaws. There is no accounting, for example, of the free harvest of fuel wood, grass, and other non-wood forest products, benefits from free grazing of woodland creatures and a slew of intangible benefits such as soil and water conservation, preservation of neighbouring areas' productivity, biodiversity conservation, microclimate moderation, carbon sequestration, oxygen release, recreation, and so on. As a result, the forestry sector's contribution to India's GDP is grossly underestimated. As a result, the new FRA system must be implemented. Moreover, given the expanding demand for forest-based goods, there is an urgent need to focus significantly more effort on enhancing forest productivity and modernising forest management. The NFP should be founded on two pillars: supplying the need for raw materials for forest-based enterprises; small timber, fuel wood, and feed for the rural population; and addressing current and future requests for forest protective and recreational activities and environmental amenities[5].

Social forestry and wasteland afforestation should be given top emphasis. The Union Ministry of Environment and Forests issued recommendations to all state and union territory forest departments in June 1990, urging them to include local communities and volunteer agencies in the restoration of degraded forest areas on a usufruct sharing basis. The majority of state governments reacted favourably to the Ministry's request, launching what became known as Joint Forest Management (JFM) programmes. The Ministry of Environment and Forests published new operational rules for the development of a new programme known as the National Afforestation Programme (NAP) for the Tenth Five Year Plan (2002–07). These recommendations aim to promote a process approach to forest development for GoI-sponsored afforestation programmes. Afforestation schemes that were operational during the Ninth Five Year Plan have been merged into the new NAP to avoid duplication of schemes with similar objectives and to ensure consistency in the funding pattern and implementation mechanism (for more information,: 'Joint Forest Management [JFM] and National Afforestation Programme [NAP]'). The Tenth Year Plan called for the JFM to be implemented across the nation [6]–[8].

DISCUSSION

Land Reforms Policy

To build the groundwork for a progressive rural society, the agricultural organisation must be reorganised. A competent land reform strategy may significantly contribute to agricultural and rural development and hence merits high emphasis. Land policy should ensure scientific and intensive use of land, create productive employment, reduce disparities in land distribution, provide incentives to increase land productivity, and induce changes in property relations and social structure to enable greater participation of property owners and tenants in the process of rural development. The agricultural structure should be built on peasant ownership, complemented and enhanced by cooperative and joint farming systems, and supported by the essential supplies and services for optimal land use. For the first time after independence, the GoI created a comprehensive national land reforms programmer in the First Five-Year Plans. The policy's principal goals were to eliminate constraints to agricultural modernization that were inherent in the system.

Inherited agricultural structure, and the decrease of enormous inequities in the agrarian economy and rural society. It gave great attention to programmes that boosted agricultural productivity, encouraged diversification, minimised disparities in income and wealth distribution, eradicated exploitation, and offered security to tenants and employees. This approach has been followed in all succeeding five-year plans, with minor adjustments to the interests of its constituents. State governments have previously passed and implemented necessary land reform laws. The policies and programmes have been examined and analysed on a regular basis. One of the recurrent findings of the assessments is that programme implementation has been slack. Several conspicuous gaps have emerged between policy goals and legislation passed to accomplish them, as well as between laws and their enforcement. As a result, the programmes must be executed more strictly than in the past. Land reform, consolidation of fragmented landholdings, land development, drainage and irrigation, and purchase of excess land and distribution should be effectively integrated and performed for best outcomes. Particular emphasis must be placed on the repair of degraded common property land resources and their effective use for the benefit of the rural people as a whole. With the formation of the National Wastelands Development Board (NWDB), it is envisaged that about 100 million hectares of India's wastelands would be appropriately developed and used [9], [10].

The following strategy to land reform was outlined in the National Agricultural Policy 2000:

1. Consolidation of holdings across the nation along the lines of the northwestern states. 2. Redistribution of ceiling excess and waste lands among landless farmers and jobless youth with initial starting money.

3. Tenancy changes to recognised tenants' and sharecroppers' rights.

4. Creation of lease markets to expand holdings by providing legal arrangements for leasing private lands for agriculture and agro-business.

5. Land record updating and enhancement, computerization, and distribution of land passbooks to farmers.

6. Recognition of women's land rights.

National Water Policy

Water is the most important natural resource influencing agricultural and rural development levels and rates. As a result, optimal growth and efficient use of water resources becomes very important. Irrigated land accounts for over 36% of the gross cultivated area in the nation, while it accounts for more than 55% of total agricultural production. The Union Department of Water is in charge of developing and regulating the country's water resources via policies and programmes. The GoI declared India's first NWP in September 1987. It emphasised that 'water is a primary natural resource, a fundamental human necessity, and a valuable national asset. Water resource planning and development must be guided by national viewpoints'. It advocated for an integrated and interdisciplinary approach to project planning, development, and execution in order to fulfil the needs for water from diverse sectors and, to the greatest extent feasible, liberate the nation from the scourge of repeating floods and droughts.

The following points are highlighted in the NWP 1987:

1. The need for efficient water usage.
2. The need for a well-designed information system.
3. The need to preserve environmental quality and ecological balance.
4. Periodic scientific appraisal of groundwater potential, taking into consideration the quality of accessible water and the economic feasibility of its usage.
5. Integrated and coordinated development of surface and groundwater, as well as their joint usage.
6. Considerations for equity and social justice in water distribution.
7. Farmers' participation in different facets of water management, including water distribution and water fee collection via water users' groups.

The GoI introduced a new NWP in April 2002. It also emphasises the same problems as the first NWP. The Policy emphasised, among other things, the need of efficient water usage and the maintenance of environmental quality and ecological balance. This policy succeeds the 1987 Policy, however it shares some of the same issues.The NWP 1987 and NWP 2002 do not explicitly explain their aims, nor do they provide any operational recommendations for how the Policy Papers' many components will be implemented. Given this, we may conclude that the Frame work is ineffectual. Its fundamental objective, in our view, should be to achieve water security for everyone and for all time by restoring, developing, conserving, using, and managing the country's groundwater and surface water resources in a socially optimal, environmentally sound, and sustainable manner. Moreover, the policy should be supported by legal authority and operational directions in order to realise its goals. Moreover, the government must recognise water as a fundamental human right, incorporate it in the list of development objectives, and utilise it as a starting point for development efforts. To achieve personal consumption, hygiene, and sanitation requirements, a minimum of 40 litres of water per head per day is necessary Water Supply and Sanitation Collaboration Council.

Agricultural Price Policy

There was no such thing as an APP in India before to independence. After independence, the government implemented a pricing strategy aimed primarily at protecting the interests of consumers by making food accessible at affordable costs; in other words, the policy was consumer centred. For the first time, a comprehensive framework for pricing policy was specified in the Terms of Reference of the Agricultural Prices Commission (later renamed the

Commission for Agricultural Costs and Prices [CACP]), which was established in 1965 to develop a balanced and integrated price structure. While developing a pricing policy, the Commission was expected to consider the interests of both the producer and the consumer.

The policy framework was reviewed and modified in 1980 and again in 1986. The most recent assessment was conducted in 1991, when India became a signatory to the new global trade arrangement, which covered agriculture for the first time. The new agricultural pricing strategy intends to establish correct prices and eliminate input subsidies, to limit the public delivery system (PDS) to the poor, to abolish the food management system, and to liberalise agricultural commodity trading.

The main goals of the government's agricultural price policy are: to ensure a remunerative and relatively stable price environment for farmers, inducing them to increase production and thus increasing the availability of food grains; to improve people's physical and economic access to food; and 3. to evolve a production pattern that is in line with the overall needs of the economy.

Each year, minimum support prices (MSPs) for important agricultural goods are released, which are fixed after taking into consideration the CACP's recommendations. The CACP considers all important factors when recommending prices, including:

1. Cost of production
2. Changes in input prices
3. Input/output price parity
4. Market price trends
5. Inter-crop price parity
6. Demand and supply situation
7. Effect on industrial cost structure
8. Effect on general price level
9. Effect on cost of living
10. International market price situation
11. Parity between prices paid and prices receivable (terms of trade).

The most concrete aspect is the cost of manufacturing, which takes into account all operational and fixed expenses. The government organizes commodity Price Support Schemes (PSSs) through various public and cooperative agencies such as the Food Corporation of India (FCI), Cotton Corporation of India (CCI), Jute Corporation of India (JCI), National Cooperative Agricultural Marketing Federation of India (NAFED), and Tobacco Board, for which MSPs are fixed. The government also organizes for market intervention on certain commodities that are not covered under PSS.

Request from nations for a certain amount at a mutually agreed-upon price. Any losses are split 50:50 between the centre and the state. The pricing strategy has paid off handsomely. In recent years, the government has significantly increased MSPs. Food and input subsidies have been employed as supplemental tools in the APP. Contrary to popular belief, the price support programme, as well as input and food subsidies, have benefited all sections of society and not just a few crops and farmers in a few regions. It is now well established that these instruments have played an important role in achieving the goals of food security and accelerated economic growth, and have benefited all sections of society.The MSP programme now covers 25 agricultural commodities.In addition, various additional commodities, such as onions, potatoes, and ginger, are covered under the Market Intervention Plan (MIS). The FCI, which has been the

nodal agency for administering the price support programme for rice and wheat, has also been tasked with implementing the price support policy for coarse cereals. In terms of addressing the poorest portions, a redesigned PDS was inaugurated in 1992 with the goal of expanding the distribution of particularly subsidised food grains to the people living in mountainous and dry regions as well.

It is critical for rural development that the overall connection between agricultural input and output prices, as well as the terms of trade between agriculture and other sectors of the economy, be such that rural growth is promoted. The primary goal of an APP should be to remedy market imbalances that are usually damaging to society.

As part of the same policy, the interests of producers should be protected through price support (above market price) operations when market prices fall sharply, and the interests of consumers, particularly vulnerable sections of the population, should be protected through distribution of food grains and other basic necessities at a fair price (below market price) when market prices rise sharply. Since the MSP is anticipated to take into account changes in input prices, extensive use of input subsidies as an incentive to boost output should be avoided, save for small and marginal farmers in difficult locations. A transportation subsidy will be more suitable in the latter instance.

According to the National Agricultural Policy 2000, the federal government will continue to perform its responsibilities to provide remunerative pricing for agricultural production by announcing MSP policies for main agricultural commodities.The country's food, nutrition, and other internal and export needs will be considered when calculating commodity support prices. The pricing structure and trading mechanism are constantly evaluated in order to provide a favourable economic environment for the agriculture industry and an equal balance between rural and urban earnings. The CACP's approach for estimating production costs is revised on a regular basis. The pricing structure of both inputs and products is being evaluated in order to provide greater returns to farmers and cost efficiency across the economy. Farmers' distress sales are strictly watched in the domestic market. The government plans to broaden the scope of futures markets in order to reduce the huge fluctuations in commodity prices and to hedge their risks. Over time, the goal will be to include all significant agricultural goods in futures trading.

Rural Credit Policy

Government participation in the rural lending sector has a long history in India. Seeing the need to safeguard growers from the abuse of private moneylenders and merchants, the GoI began issuing loans to cultivators under: (a) the Improvements Loans Act of 1883; and (b) the Agriculturists' Loans Act of 1884. Such loans are known as taccavi loans. The 1883 statute authorises the granting of long-term loans for the purpose of making permanent improvements to land. Short- and medium-term loans are issued under the 1884 statute to satisfy present agricultural requirements, such as the purchase of seeds, fertilisers, and minor tools and equipment. The track record of taccavi loans has been dismal. Some of the disadvantages include insufficient funds, excessive delays in loan approval, a lack of oversight, poor recovery, and a lack of cooperation.The Reserve Bank of India (RBI) and the Commercial Bank for Agriculture and Rural Development (NABARD) have both played critical roles in creating India's rural credit policies and in developing its rural economy via institutional lending.

A number of committees have evaluated the rural credit policy on a regular basis.

The following are the significant turning points in the development of India's rural lending policy:

1. The Act of Cooperative Credit Societies of 1904.

2. All-India Rural Credit Survey Committee (1954): Establishment of a three-tier cooperative credit framework and state engagement in cooperative equity.

3. All-India Credit Review Committee (1969): A multi-agency approach to commercial banks entering the rural loan market.

4. In 1969, 14 commercial banks were nationalized.

5 Nariman Committee on Priority Sector Lending and the Lead Bank Program, 1971.

6. Implementation of the Differential Rate of Interest (DRI) System in 1972.

Regional Rural Banks (RRBs) were established by the Narasimham Committee in 1975.

NABARD was established in 1982 by the Committee to Review Arrangements for Institutional Financing for Agricultural and Rural Development (CRAFICARD).A new credit policy was developed by the Agricultural Credit Review Committee in 1989.Agricultural and Rural Debt Reduction Program of 1990.The Narasimham Committee implemented financial sector reforms in 1991.Cooperative credit societies were the first of all sorts of cooperatives to be created in India, with the goal of freeing impoverished farmers from the clutches of moneylenders by providing ample credit on reasonable terms. Credit cooperatives have played an important role in providing loans to farmers and play an important part in India's rural credit system. In 2005-06, they provided for around 24% of total institutional credit supply in the rural sector, a decrease from approximately 40% in 1999-2000 to approximately 24% in 2005-06. Nevertheless, even after more than a century of existence in India, their core goal remains mostly unfulfilled. They are hampered by several financial, organizational, managerial, and legal limitations. Their poor capacity to mobilise resources, as well as their low levels of recuperation.

High transaction costs, numerous suspensions of recovery, low administered interest rates, government regulations, and political interference in their business and management issues have all had a significant impact on their profitability and sustainability. It is necessary to free them from these restraints and to restructure the cooperative credit structure in order to make it profitable, dynamic, and strong enough to tackle the difficulties given by the new economic strategy of liberalization and privatization. Otherwise, most credit cooperatives would have to close their doors sooner or later.

The current credit strategy must be reoriented such that a bundle of all important financial services is supplied to needy rural people, allowing them to embrace modern technologies and so improve their income and socioeconomic status. More flexibility in loan repayment schedules is also required. In a word, rural lending institutions should emulate the behaviours of private moneylenders that have made them so popular even after 60 years of independence.According to the National Agricultural Policy 2000, gradual institutionalisation of rural and farm finance shall be maintained in order to provide farmers with timely and enough loans. Rural financial institutions will be designed to encourage saving, investing, and risk management. Special emphasis will be placed on removing distortions in commercial banks' priority sector lending to agricultural and rural sectors. Specific steps will be made to restructure cooperatives in order to

eliminate institutional and financial shortcomings, as well as to provide a simplified method for the approval and distribution of agricultural financing. The goal will be to achieve distribution equality in loan disbursement. Microcredit will be promoted as an effective instrument for poverty alleviation. Self-help organisations and a bank linkage system tailored to the Indian rural sector will be established as a supplement mechanism for integrating the rural poor into the formal banking system, hence enhancing banks' outreach and credit flows to the poor in an effective and long-term way.

National Agriculture Policy

In July 2000, the Indian government unveiled a National Agricultural Policy. This might be seen as a formal declaration of the GoI's most recent national agriculture strategy. The strategy attempts to encourage technically competent, economically successful, ecologically non-degrading, and socially acceptable uses of the country's natural resources land, water, and genetic endowment in order to achieve agricultural sustainability. Steps are recommended to limit indiscriminate diversion of agricultural lands for non-agricultural activities and to contain biotic pressures on land.The unused wastelands will be used for agriculture and afforestation. For the next two decades, the Policy intends to achieve:

1. Annual agricultural growth rates in excess of 4%;

2. Growth based on efficient resource use and conservation of our land, water, and biodiversity;

3. Growth with equity, that is, growth that is distributed across regions and farms.

National Policy on Cooperatives

The cooperative movement in India has its roots in agriculture and adjacent areas, and it was initially developed as a vehicle for pooling people's little resources in order to provide them with the benefits of economies of scale. The Cooperative Credit Societies Act of 1904 was the first effort to institutionalize cooperatives, and its scope was later expanded by the more comprehensive cooperative society's act of 1912. The issue of cooperation was passed to the then-provinces through the Government of India Act, 1919, which authorized them to adopt their own cooperative laws. Cooperatives remained a provincial matter under the Government of India Act of 1935. Currently, the item 'Cooperative Societies' is a state subject under entry 32 of the Indian Constitution's State List. State governments have passed Cooperative Societies Acts, which are currently in effect.

To govern the operations of cooperative societies with membership from more than one province, the Government of India enacted the Multi-Unit Cooperative Societies Act, 1942, which was later replaced either by Multi-State Cooperative Societies Act, 1984, under entry 44 of the Union List of the Indian Constitution.Prior to independence, the government had no active part in the promotion and growth of cooperatives. The introduction of planned economic growth after independence ushered in a new era for cooperatives. Collaboration became recognized as a favoured tool of planned economic growth and evolved as a separate sector of the national economy. The First Five Year Plan text specifically specified that the effectiveness of the plan should be assessed, among other things, by the degree to which it was implemented via cooperative organizations. Throughout the 1960s, a strong emphasis was placed on increasing agricultural productivity as well as rural development.

Between (1966-1971), a significant breakthrough on the agricultural front was the introduction of a new agricultural policy, the Green Revolution, aimed at attaining food self-sufficiency. The

introduction of high-yielding and hybrid seed types, as well as considerable outlays for irrigation systems and proper use of agricultural inputs, resulted in a significant expansion in the importance of cooperatives. Consequently, the Green Revolution boosted cooperative society activities, improved agricultural output and productivity, mandated greater concentration on value-addition in agricultural products, marketing and storing, and the growth of associated industries. As a consequence, specialised cooperative societies were established in the fields of milk, oil seeds, sugarcane, cotton, interaction occurs, and so on. Numerous major cooperatives arose in the fields of fertiliser manufacturing and agricultural product marketing. Cooperatives' roles have therefore evolved beyond their core operations and into new economic initiatives, as in the case of other similar companies in the public or private sectors.

With the shifting landscape of globalisation and economic liberalisation, the function of cooperatives has taken on a new dimension. Internal and structural deficiencies in these institutions, along with a lack of appropriate governmental backing, have mitigated their good influence. There are significant regional inequalities in the country's cooperative development. Notwithstanding their successes and extraordinary development, cooperatives face a number of financial, organisational, and administrative limits and issues. Given this, there is an urgent need for them to be restructured.

They are also looking for a fresh direction and a new strategy for survival and development in an ever-changing national and international economic climate.This has required the necessity for a defined national cooperative strategy to support the continuous establishment and expansion of healthy and self-sufficient cooperatives for achieving people's sectoral/regional ambitions in accordance with cooperative principles. In this regard, it is equally critical to address the concerns that must be addressed by developing appropriate legal and policy support for these organisations.

Given the above-mentioned situation of cooperatives, the Government of India issued a National Strategy on Cooperatives in April 2002. The Policy is an essential aspect of the Government of India's concentrated efforts to establish a conducive environment for cooperatives via suitable policy measures and legislative assistance in order to revitalise them. This section briefly describes some of the Policy's most important characteristics. This bodes well for the country's millions of rural impoverished growers and consumers. But, in order for them to be credible, the GoI's obligations must be institutionalised by the ratification of an appropriate (model) central cooperative legislation. It is hoped that the administration would faithfully execute the new Policy and honour its promise to action.

Only then will the government's good intentions bear fruit.

The primary goal of the National Policy is to assist the overall growth of cooperatives throughout the nation. Cooperatives would be given the necessary support, encouragement, and assistance under this Policy to ensure that they function as autonomous, self-sufficient, and democratically managed institutions accountable to their members, and that they make a significant contribution to the national economy, particularly in areas that require people's participation and community efforts. This is especially significant given that a sizable portion of the country's population remains impoverished, and cooperatives serve as the sole viable method for providing assistance to this group of people.The Policy intends to accomplish its goals primarily via the following measures:

1. Ensuring cooperatives run in accordance with the essential cooperative ideals and principles articulated in the International Cooperative Alliance Congress Declaration of 1995.

2. Cooperative revitalization, notably in the agricultural credit subsector.

3. Elimination of regional imbalances via central/state government assistance measures, notably in poorer states/regions where cooperatives are weak.

4. Improvements to cooperative education and training.

5. Professionalization of cooperative management via human resource development.

6. Increased member engagement in cooperative administration and promotion of the idea of user members.

7. Amendment/removal of sections in cooperative statutes that aim to needlessly limit and control cooperatives' operation as autonomous organisations.

The GoI advises developing a time-bound plan of action for policy implementation, backed up by suitable financial support, in collaboration with state governments and other involved authorities, including federal/national level cooperative organizations.The GoI's policy promises to do some things and not do others are also commendable. Yet, as the expression goes, the flavour of pudding is in the eating. Hence the Policy's execution and its effect on cooperatives and their stakeholders will define how excellent or terrible the Policy is. We propose the following actions to increase the Policy's chances of being effective and successful in accomplishing its goals: Initially, a deadline should be established for developing a "timebound plan of action for execution." Second, a few reputable national-level organisations must be identified and recognised as "Policy Implementation Agencies" (PIA). The National Dairy Development Board (NDDB), for example, may be designated as the PIA for dairy cooperatives, the National Bank for Agricultural Development (NABARD) for credit cooperatives, and the National Cooperative Development Corporation (NCDC) for marketing and processing cooperatives [11], [12].

CONCLUSION

The strategy encouraged the use of underutilized communal land for social forestry. The government planned to offer technical and early financial help in order to develop such programmes, and the advantages produced through social forestry were to be passed to the community via panchayats.

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CHAPTER 18

AN OVERVIEW ON FISHERIES DEVELOPMENT POLICIES

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Abstract:

The National Fisheries Policy, 2020's scope includes the development, management, and regulation of inland and marine fishery resources, including aquaculture in marine, freshwater, brackish water, and saline/alkaline areas, as well as their post-harvest management, due to the industry's extreme diversity and dynamic nature."Fisheries is a fast-growing industry in India, providing nutrition and food security to a huge population as well as a livelihood to more than 28 million people." This chapter discusses the different fisheries development policies.

Keywords:

Economic, Fishing, Fisheries Development Policies, Natural.

INTRODUCTION

There was no national fisheries policy in India till the first national policy for managing (marine) fisheries was issued in 2004. Nonetheless, the GoI has attempted to boost fish output in the nation via a number of research and development programmes.More specifically, the GoI created many fisheries research institutions under the auspices of the Indian Council of Agricultural Research (ICAR) to conduct study and encourage the implementation of composite fish culture and induced breeding technologies. In addition, it established the Fish Farmer Development Agency (FFDA) in 1976 with initial funding from the World Bank to encourage aquaculture in the country. The FFDA provides technical, financial, and extension assistance to fish farmers interested in establishing culture fishery in common pool village ponds and tanks[1].

The Union Ministry of Agriculture has also devoted close attention to the growth of deep-sea fisheries in the nation during the last decade. The establishment of an Exclusive Economic Zone (EEZ) surrounding India in 1976 permitted the exploration, exploitation, and use of marine life resources in a 200-nautical-mile radius.Offering the country great possibilities and difficulties to harvest the resources and keep them on a strong scientific foundation. Throughout the last three decades, the country's marine fisheries industry has seen fast developments from both the government and business sector. When it became clear that most deep-sea fishing resources beyond the conventional fihing limit and fishing capability of indigenous craft could only be profitably exploited if upgraded and sophisticated vessels of adequate size and capabilities were inducted into the fishery, the GoI facilitated the mobilization of equity and expertise indigenously to address this issue in the 1981 Charter Policy[2].

Following five years of operation, the government amended the Policy to correct deficiencies discovered during its operation and to make it more beneficial to the nation. As a result, a revised 1986 Charter Policy was issued. Its Charter Policy called for Indian enterprises to acquire vessels

either via import/construction in India or through joint ventures. Because of the Charter Policy, 97 businesses were granted permission to operate 311 foreign fishing boats. In addition to increasing marine fish output in the nation, the Policy enabled higher inflow of foreign cash via export of fish captured by these boats. All of these ships were entirely based on Export Oriented Units (EOU). The circumstances for the purchase of boats of suitable kind and quantity by Indian businesses that hired vessels aided the rapid rise of the Indian deep-sea fishing fleet [3], [4].

After laying the groundwork for the Indian deep-sea fishing sector, the government expanded the efforts with the Deep Sea Fisheries Policy (DSFP) 1991. This policy aimed to encourage joint ventures, test fishing, and leasing, while also enabling boats chartered under the 1986 policy to operate until the validity of their licenses expired. The DSFP has been criticized by numerous fishermen organisations, Members of Parliament (MPs) and Members of Legislative Assemblies (MLAs), mechanised fishing vessel owners, fish processors, and other stakeholders since its inception in 1994. The fishermen organisations have also gone on strike, claiming that their operations area is being encroached upon by bigger boats operating under charter, joint venture, and leasing agreements.

In response to these objections and protests, the Government of India formed a committee to evaluate the deep-sea fishing policy. In 1996, the committee issued its report. The government approved all 21 of the committee's recommendations with minor changes.As a result, the government reversed all previous deep-sea fishing regulations. It was also resolved that the government's fishing policy should be reviewed on a regular basis. After that, the GoI formed a few more committees to collect information on the availability of fishing vessels, the state of marine fi shing resources, problems pertaining to different stakeholder, and so on, and issued its fi rst Marine Fishing Policy (MFP) in 2004.The 2004 Policy aims to meet the concerns of traditional and coastal fishermen, as well as those of other players in the deep-sea sector, in order to ensure synchronized development of ocean fishery in the country's territorial and extra-territorial seas[5].

Resource Administration

Because of the overexploitation of natural resource within a 50-meter-deep zone, the Policy requires the implementation of a strict fishery management system. It specifically calls for the following measures:

1. The Marine Fishing Supervision Acts (MFRAs) of coastal states and Union Territories of India would be reviewed to ensure that they have adequate provisions for resource management and fishing operations; if necessary, a new model bill on coastal fisheries development and management would be proposed.

2. All current boat-building yards must be registered, and any new fishing units may be built only once a licence is obtained. A new piece of law would fix and enforce standards for fishing vessel design and registration, as well as training, certification, and keeping an eye on fishing vessel crew.

3. A 'closed season' requirement will be imposed on both coasts, with the length determined by a recognised authority. Such closed seasons must be consistent throughout neighboring states, unless geographic or climatic considerations dictate otherwise. This would be accompanied by a severe prohibition on all damaging fishing practices and restriction of mesh sizes in various elements of the fishing gear. The designated authority would have the ability to declare any

approach as damaging if it was satisfied of this based on facts and statistics.Penalties for breaches of mesh requirements would be fixed. If required, the authorized authority would set the quota for various kinds of fishing boats in any area[6].

5. Capturing juveniles and non-targeted species, as well as discarding less desirable species once collected, would be severely forbidden by regulation.

6. The deployment of observers on commercial fishing boats and the implementation of a monitoring, control, and surveillance (MCS) system will be assured.

7. A resource augmentation initiative will be prioritized. This would include establishing multispecies hatcheries to provide seed for marine ranching. Some places would be designated as marine sanctuaries, and the collection of brood stock from all of these areas would be strictly regulated. Also, open sea cage culture would be encouraged in order to grow or fatten economically important species of fishes.

Worries about the Environment

Since they are the final destination for the majority of wastes—solid, liquid, radioactive, or otherwise the oceans are becoming more contaminated over time. This has a negative impact on the health and production of living resources. The negative environmental repercussions of human activities on the seas must be minimised. Moreover, health risks associated with the intake of fish produced from polluted water are becoming a major issue in many regions of the globe. The authorities in charge of environmental pollution regulations will be asked to enforce it more strictly in order to reduce the effect of pollutants on fisheries.

The fishermen, as the primary stakeholders in the maritime environment, must be made aware of the escalating land-based pollution. They must also be trained on eco-friendly fishing tactics that produce the least disruption to the maritime ecology, especially mangroves. Consumers must also be safeguarded from the negative consequences of ingesting fish polluted with heavy metals and other dangerous chemicals emitted by industrial enterprises. As a result, the 2004 Policy emphasises the following aspects:

1. To reduce the effect of industrial effluents on coastal waterways, the federal and state pollution control boards must collaborate and consider establishing appropriate regulations for all industrial sites that discharge effluents into the sea. Such laws should make the Hazard Analysis and Critical Control Points (HACCP) system obligatory in effluent discharge systems.

2. Coastal area conservation via mangrove planting with the goal of establishing nurseries for shrimp and fish would be launched as a participatory programme with the active participation of coastal residents, notably the fishing community.

3. The Coastal Regulation Zone (CRZ) notification will assess the current zonation of regions while taking into account the topography of each region and guarantee that any human activity in the high tide limit (HTL) that might degrade the coastal environment is not authorized.

4. The Policy, among other things, allows for India's involvement in Regional Fisheries Management Bodies (RFMB) to guarantee increased collaboration among the region's neighboring nations.

Infrastructure Improvement

Infrastructure development for maritime vessels is critical and requires an integrated strategy. The Policy calls for the construction of jetties, the landing of 124 Rural Development Centers, the supply of fuel, water, and ice, and the maintenance of boats and equipment. A master plan for infrastructure development over the next ten years would be created for this aim. Furthermore, alternatives to the current system of financing infrastructure projects by the center and the state with cost sharing through 'Build-Operate-Own' and 'Build-Operate-Transfer' systems would be investigated, as would areas such as information technology, database strengthening in marine fisheries, human resource development, and Eco labeling of marine products [7].

Nevertheless, the 2004 Policy has a few flaws. For example, there is no clear long-term vision for the fisheries industry. Similarly, it does not describe any specific organisational structure or management system for executing and monitoring the Policy, nor does it provide a cohesive vision of true decentralized government and grassroots empowerment. Moreover, no specific mechanisms for attaining the policy's goals have been identified. Finally, there is no mention of gender in the whole policy paper. Despite the fact that fisherwomen play an active and vital part in the local grading, processing, and selling of fish.Notwithstanding these disadvantages, we may claim that MFP 2004 is a solid start towards curbing overfishing and marine fishery resource management. Nonetheless, the policy must be honestly implemented through suitable mechanisms and with the participation of all main stakeholders, including fishermen and fisherwomen via their representatives and organizations.

Globalisation and Rural Development

With the implementation of the New Economic Policy (NEP) in India in August 1991, a process of privatisation, deregulation, and globalization was initiated. The statist paradigm of rural development, defined by the state's dominating role in starting, promoting, and guiding rural development, is likely to be abandoned in favor of a market-driven and guided approach. It has recently been trendy to assume that a greater dependence on market forces and the integration of national economies into a global economy—that is, globalization would alleviate poverty and unemployment by increasing the rate and degree of economic development. Additionally, this renewed reliance in market forces has resulted in a reorientation of international development strategies towards open trade rather than assistance as a development tool. Despite this, the majority of development experts and practitioners are skeptical about the new model's applicability for developing nations like India, where a huge portion of the population lives below the poverty line and therefore beyond the influence zone of market forces.

Indian agriculture has been shielded from the impact of international market forces, primarily via a system of quantitative limits on the import of about 800 agricultural goods. Now that India is a member of the World Trade Organization (WTO) and a party to the Uruguay Round of the General Agreement on Tariffs and Trade (GATT), we are obligated to replace non-tariff measures (quantitative restrictions/quotas) with fair tariff levels. As a result, all quantitative limits on merchandise imports have been eliminated, and import taxes on non-agricultural items have been decreased from 300 percent in 1991-92 to 125 percent in 2006-07. There are fears that agricultural import liberalisation may harm our farmers and harm the agriculture sector's economic prospects. According to Chand, liberalization of international commerce in agricultural commodities may have the following significant effects on farmers and consumers:

1. It is expected that the removal of quantitative limits on international commerce would increase both imports and exports of agricultural commodities and production inputs. This would hasten the rate of commercialization and specialization in the agriculture industry due to increasing comparative advantage. Export orientation of agricultural production may necessitate the use of increased quantities of chemical fertilizers, pesticides, and irrigation water, which would have a negative impact on environmental quality unless appropriate safeguards, such as the use of biofertilisers and bio pesticides, provision of recharging of groundwater aquifers in water scarce areas, and drainage in water-surplus waterlogged areas, are implemented.

2. Liberalization of international commerce in agricultural commodities would allow private enterprises and corporations to enter the import market, which is now monopolized by government organizations, who are the only canalizing agents for numerous commodities. Agricultural producers and consumers would be influenced by price changes producers from higher prices, and consumers from lower and/or better quality as a result of more competition and, as a result, enhanced efficiency.

3. If the agriculture sector is not free of internal constraints, importers will have an advantage over local producers. To promote increased engagement of the private sector in processing, marketing, and distribution, government regulations and interference in the industry should be lowered further.Globalization, like any other economic phenomena, is founded on a set of ideals such as competitiveness, efficiency, wealth growth, and the free play of market forces.Globalization of business and commerce without a global understanding of society as a global family would result in social conflicts and economic turmoil, as is already occurring in many developing nations that have implemented structural adjustment programmes[8].

Sympathy, kindness, compassion, world-brotherhood, cooperation, and other qualities have no place in the globalisation paradigm. Capitalists/portfolio investors would benefit the most from globalisation due to the comparatively simple flow of money worldwide in comparison to labour. This would exacerbate the issue of income and wealth discrepancies between the affluent and the poor. Moreover, globalisation would breed corruption, dark money, and other societal ills, as portfolio investors would bribe officials and politicians to keep them on their side. Moreover, strong and affluent nations define and redefine globalisation laws to suit their own country's interests or the vested interests of their capitalist investors.

DISCUSSIONS

Strategies for Sustainable Development

According to Wikipedia, the free encyclopaedia, a strategy is a long-term plan of action aimed to attain a certain 'objective', most typically 'winning'. Strategy differs from 'tactics,' or quick actions using resources at hand, in that it is meticulously planned and often practised.The term strate-gos is derived from the Greek terms stratos (army) and ago (old Greek meaning 'leading'). During the Athenian democracy, a'military commander' was referred to by Strate-gos. This chapter discusses solutions for long-term growth.Now, sustainable development has moved to the top of the world economic and political agenda. The World Commission on Environment and Development's (WCED) 1987 report, 'Our Common Future,' was the first major international initiative that raised policymakers' awareness of sustainable development and the complexities of the relationship between environmental problems, economic growth, and the needs of people, rich and poor. One of the United Nations' follow-up measures to execute the WCED proposals culminated in the United Nations Conference on Environment and Development (UNCED) in

Rio de Janeiro in June 1992. The UNCED has heightened worldwide awareness about the deterioration of the environment, as well as interest in the quest for workable measures for sustainable development [9].

This chapter first introduces the fundamental ideas and meanings of sustainability and sustainable development, followed by a few signs of non-sustainable development. This is next followed by an in-depth analysis of India's rural development policies and, finally, the presentation of the main parts of a new sustainable development strategy.

The Concepts of Sustainability and Sustainable Development

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Now, sustainable development has moved to the top of the world economic and political agenda. The World Commission on Environment and Development's (WCED) 1987 report, 'Our Common Future,' was the first major international initiative that raised policymakers' awareness of sustainable development and the complexities of the relationship between environmental problems, economic growth, and the needs of people, rich and poor. One of the United Nations' follow-up measures to execute the WCED proposals culminated in the United Nations Conference on Environment and Development (UNCED) in Rio de Janeiro in June 1992. The UNCED has heightened worldwide awareness about the deterioration of the environment, as well as interest in the quest for workable measures for sustainable development[10].

This chapter first introduces the fundamental ideas and meanings of sustainability and sustainable development, followed by a few signs of non-sustainable development. This is followed by a critical analysis of India's rural development policies and, finally, the presentation of the main parts of a new sustainable development strategy. The amount of people that a natural system/area/watershed can support indefinitely or for a certain time period at a given level of life. Certainly, carrying capacity is important. Except at the global level, which is a utopia, all of these parameters/factors make the idea inapplicable. Defined sustainable development as "development that satisfies the requirements of the present without jeopardizing future generations' capacity to satisfy their own needs." This definition emphasizes the necessity for the current generation to guarantee intergenerational justice by protecting the interests of future generations by preserving the planet's natural resource capital. In these ways, it is quite similar to the notion of sustainable livelihood, which refers to long-term access for both current and future generations to basic essentials of existence such as food, clothing, housing, security, freedom, basic literacy, and health care. This idea of sustainable livelihood is almost equivalent with human survival with freedom and dignity, or human growth, which should, in our view, be mankind's ultimate objective. Few would argue that the objective of sustainable living (survival) is more environmentally benign and internationally acceptable than the goal of economic expansion.

Sustainable development demands that, throughout the economic growth process, we leave our natural resources and environment intact and use/harvest only the amount that is naturally regenerated, that is, we live on the 'flows' and keep the ‘stock' of natural resources and

environment intact. Nonetheless, we would want to point out that it is now feasible to boost natural flow/harvest of natural goods by suitable technical and managerial interventions.

Two questions are critical in the context of sustainability:

1. Given present consumption trends, how long will our natural resources last?

2. How should we manage our natural resources and environment so that future generations may have the same standard of living as we do?

The first concern of resource lifetime is one of prediction and accounting: how can technology, taste, population, and natural regeneration affect the stock of environmental goods accessible from one year to the next? Consequently, the ethical motivations for sustainability stem from a concern for the future and a worry that present production and consumption tendencies are endangering the well-being of future generations.

Concerns about how long resources will survive have long preoccupied planners and economists concerned that the globe is running out of agricultural land, fi sh, and other vital environmental products. A number of indexes have been devised to assess the degree to which resources are utilized in a sustainable manner. These indexes, in their most basic form, simply divide inventories by consumption rates. More sophisticated indexes include how changes in taste or technology may lower future demand while natural regeneration, particularly for biological resources, may boost supply.

To keep up with rising demand. Most projections concerning resource sustainability are often inaccurate. Obviously, a greater knowledge of demand and technological trends is required before we can predict how environmental quality and commodities will fare in a consumption-oriented future.

The second issue of sustainability, 'how should we manage our resources,' necessitates some kind of management aim for how resources are dispersed between generations. Because we do not know the likes, preferences, or technology of future generations, the idea of Pareto optimality, which is helpful in analyzing welfare within a generation, is inapplicable. Customers, especially the impoverished, tend to priorities purchasing now above consumption tomorrow. Should we disregard this propensity when considering sustainability, or should we consider the society's temporal preference by discounting the value of future consumption when deciding how to manage for sustainability? What about anticipated technological advancements? Might conserving too many of our natural and environmental resources benefit future generations at the price of current generations.

The word 'we' in the second sustainability question, 'how should we manage...,' suggests a common understanding of the aims of sustainability. There is, however, no general agreement on a single metric of sustainability. Nevertheless, the most often cited measure of the long-term viability of any planned resource usage is the maximization of net present value, as recommended by neoclassical economists.Yet, whether sustainability and sustainability should relate to maintaining the status quo, economic growth, income redistribution, capital stock protection, or natural capital preservation is still contested.The response would differ depending on the society and its degree of economic growth. The concepts of 'weak sustainability' and ‘strong sustainability' are related to this subject. The former is defined as the preservation of the aggregate stock of capital's value. It suggests that in production and consumption, we may replace human-made capital for natural capital, so that economic progress can be linked to

improvements in environmental quality. 'Weak sustainability' may be defined more precisely as follows:

$$K + H + SC + N \geq X^*$$

Where K is man-made capital, H is human capital, SC is social capital, N is natural capital, and X* is a predefined monetary threshold level of all types of capital. This suggests that, under a weak sustainable development strategy, loss of natural capital stock might be compensated for by investment in man-made capital. Yet, it is vital to emphasize that the replacement of one type of capital for another is only achievable to a limited degree. This indicates that a specific amount of each kind of capital is required for development.'Strong sustainability,' on the other hand, holds that natural and human-made capital are complementary and cannot be replaced by one another in either production or consumption. As a result, economic expansion that depletes natural resources and produces waste must exacerbate environmental deterioration. The following is a thorough definition of ‘strong sustainability':

This definition demands that each sort of capital stock be kept above some minimal level in its own right. Daly (1990) identified three elements for achieving and sustaining robust sustainable development:

1. Renewable resources must be collected at or below the rate of increase for a specific stock of the resource.

2. When nonrenewable resources degrade, renewable equivalents must be produced to keep the flow of commodities and services flowing throughout time.

3. Pollutant emissions should be confined to the environment's assimilation capability.

The scale of sustainability is another major aspect influencing the effectiveness of a sustainability policy. Since the scale extends from local to global, we may conceive of local sustainability and global sustainability. The scale defines whether issues may be handled locally, nationally, or worldwide. For example, the issue of global warming or ozone layer depletion can only be adequately handled at the global level, not at the local level. The contrast between local and global sustainability is analogous to the dichotomy between 'weak' and'strong' sustainability. Most discussions of sustainability see 'weak sustainability' and'strong sustainability' as conflicting concepts. Yet, it is more important to acknowledge that both of these measurements may be valid in distinct circumstances at the same time. Maintaining stocks of a key resource, like biodiversity, above a'safe minimum standard' level for sustainable development, a requirement for strong sustainability, is critical for global sustainability. Yet, although the local economy is reliant on strong global sustainability, it may pursue poor local sustainability by depleting its renewable resources, such as forests or fisheries, in order to preserve its material well-being without jeopardising global sustainability [11].

Land Degradation

During the last 50 years, 1.2 billion hectares (bha) of land an area greater than China and India combined has been degraded and its productivity has decreased. It is also estimated that 500 billion tonnes of topsoil have been lost since 1972, and that 5 million hectares (mha) of land are lost each year owing to desertification. If human-caused losses continue, feeding the world's population, which is expected to roughly quadruple by the middle of the twenty-first century,

will be a difficult undertaking. It is estimated that around 188 mha of land in India was degraded in 1994, accounting for 57% of the country's overall geographical area of approximately 329 mha. Water erosion damaged about 149 mha of the 188 mha of degraded land, wind erosion 13.5 mha, chemical degradation 14 mha, and waterlogging 11.6 mha.According to a recent assessment conducted by the National Bureau of Soil Survey and Land Use Planning, 66% of India's entire geographical area (about 192 mha) was in various stages of degradation.

Land degradation may be caused by both natural and man-made factors, such as location, environment, and chemical and physical qualities of the soil. Land degradation, whatever its underlying causes, has a significant negative influence on agricultural yield and the environment. Joshi and Jha (1991) discovered that salinisation and waterlogging produced by the irrigation system caused a 50% drop in agricultural production over an eight-year period in a study of four villages in Uttar Pradesh.The prevalence of common pool lands, that is, lands utilised in common by identifiable groups of people, is a distinguishing aspect of land resources in India. These areas, regardless of legal ownership, are freely accessible to locals and are exploited without regard for norms and regulations. In this sense, they may be referred to as open access resources (OAR). All OAR suffer from "the tragedy of the commons," as Hardin (1968) incorrectly termed it. The majority of OAR are degraded, eroded, devoid of vegetation, encroached upon, and contaminated. Hence, with more than half of its land damaged, India's chances for maintaining even the current (poor) pace of food production in the next decades are grim.

Degradation and Depletion of Water Resources

Water is necessary for all types of life on Earth to survive. Sufficient and timely irrigation water supply is a critical element influencing agricultural productivity and, by extension, food security. The worldwide renewable water resources are estimated to be 41,022 cubic kilometres (ckm), and the per capita availability of water in 1998 was 6,918 cubic metres (cm), with considerable differences from country to country, ranging from 11 cm in Kuwait to 6,06,498 cm in Iceland (WRI 1998: 305). Pressure on water resources has increased tremendously as a result of increasing irrigation area, growing industrialism and urbanisation, and increasing human and animal populations, and as a result, both surface water and groundwater resources are depleting and degrading at a rapid rate in most countries around the world. Others fear that in the twenty-first century, there will be more water wars—both worldwide and intra-national—than any other kind of conflict. This tendency endangers not just sustainable growth but also human existence. In comparison to the average amount accessible in many other nations throughout the globe, India as a whole is rather well endowed with water, with an average per capita availability of 1,896 cm of freshwater resources yearly. Yet, owing to the very unequal distribution of rainfall, there are large fluctuations in water availability over area and time.

Both surface water and groundwater supplies in India are severely degraded and polluted. The level of water resource deterioration has reached a point where rapid action by governmental and non-governmental entities via proper measures is absolutely necessary. Surface water is not fit for human consumption. The river Ganga, revered by Hindus as 'Mother Ganga,' is no exception. Certain areas are heavily contaminated. Similarly, groundwater has been depleted and damaged in many arid and semi-arid regions owing to over-extraction and leaching of fertiliser and pesticide residues from planted fields. As a result, the prevalence of waterborne infections has risen significantly in recent years.

Furthermore, mismanagement of both surface water and groundwater resources, combined with rising demand for water for agricultural, industrial, and domestic purposes, has resulted in a slew of issues, including depletion and degradation of groundwater aquifers, pollution of surface water bodies, and acute shortages of freshwater in the country's arid, semiarid, and hard rock regions. Groundwater levels have plummeted in numerous parts of the nation, including Mehsana district in north Gujarat and Coimbatore district in west Tamil Nadu. It is believed that the water table in Mehsana district is lowering at a pace of five to eight metres per year, and that around 2,000 wells dry up each year Excessive extraction has depleted groundwater aquifers in Gujarat's coastal districts, and the resulting vacuum has been filled by saltwater intrusion, a process known as salinity ingress. Salinity infiltration is predicted to be growing at an alarming pace of half a kilometre to one kilometre each year along 60% of Gujarat's 1,100 km long Saurashtra coast (The Times of India 1998). Salinity infiltration has made groundwater in those places unfit for both home and agricultural usage, and crop yields have suffered as a result. The majority of difficulties in the use and management of water resources may be traced back to a lack of well-defined property rights and the absence of effective institutions for regulating water usage. Restoring the sustainability of sustainable water supplies requires government intervention.

CONCLUSION

The aquaculture industry must work to develop methods and means of efficiently managing and utilizing local feedstuff resources, such as improving processing methods, increasing digestibility and nutritional value, extending shelf life and sweetness, and developing formulations specific to each species, culture system, and so on.

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CHAPTER 19

DEGRADATION AND DEPLETION OF FOREST RESOURCES

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Abstract:

Forest ecosystems degrade when they are unable to continue providing crucial products and services to both humans and the natural world. More than one hectare of tropical forests being lost or severely degraded every second, and since the 1960s, more than half of the world's tropical forests have been destroyed. This Study focus on the degradation and depletion of forest resources.

Keywords:

Biodiversity, Forest, Resources, Rural, Ozone.

INTRODUCTION

Forests are a significant renewable resource that provides a crucial life support system and are critical for long-term development. The demand for forest resources has steadily risen as the world's population has grown. As a result, forest resources are being drained at a faster pace than natural regrowth. The global average yearly rate of degradation in tropical nations is estimated to be 16.9 mha.This is 50% greater than the rate projected in the preceding Tropical Forest Resources Assessment in 1980. While there is no agreement on the global amount of tropical forest deforestation, environmentalists are concerned about crumbling slopes, desolate dry regions littered with stumps of once-thriving trees, and burnt out tropical forests. Asia has the greatest deforestation rate among the three tropical areas, namely Asia, Africa, and Latin America, with 1.2 percent each year from 1981 to 1990[1].

Millions of rural people in India rely on woods for a living. Given this, the sustainability of the flow of forest products is critical to their lives. Yet, during the past three decades, reserves have been subjected to significant biotic and abiotic stresses. They have been over-exploited, degraded, and encroached upon. It is projected that around 36 million hectares of total forestland are deforested and degraded (Society for Promotion of Wastelands Development [SPWD] 1984). Moreover, large areas of forest land are being converted to nonforestry usage. As a result, forest acreage, productivity, and output have decreased, and the forests' sustainability is jeopardised. The poor productivity of Indian forests in terms of growing stock volume is obvious from the fact that the volume of growing stock in India in 2000 was 43 cm per hectare, compared to 119 cm in Malasiya and 100 cm in Nepal. All of this threatens the existence of millions of impoverished people, particularly tribals, who rely heavily on forests for a living [2]–[4].

Depletion of Conventional Sources of Energy

The world's commercial energy demand from conventional sources is rapidly expanding, depleting the world's supply of fossil fuels. According to International Energy Agency

predictions, worldwide energy consumption is predicted to increase by nearly 50% from 1993 levels by 2010. (WRI 1998: 170). It is also projected that we currently have just 90 years of proven recoverable mineral reserves, 243 years of proven reserves in situ, and 800 years of total reserves remaining (United Nations 1992). Moreover, energy usage varies greatly across areas and nations. It is estimated that in 1989, the average per capita energy consumption in developed nations was ten times that of developing countries.As compared to wealthy nations, India's per capita usage of commercial energy is quite low. For example, in 1989, it was just nine gigajoules per year, compared to 295 gigajoules in the United States. In 1994-1995, agricultural uses accounted for around 31% of overall energy consumption in the nation. In 2001-02, per capita power consumption in India was 313 kilowatt hours (kWh), with agriculture accounting for 25.33 percent of overall electricity use in the nation. Yet, given its vast population, even this level of energy consumption is not viable until nonconventional energy sources are properly explored and exploited [5], [6].

DISCUSSION

Loss of Biodiversity

The variety of species is required for ecosystems and the biosphere to operate normally. Wild species genetic material supplies billions of dollars to the global economy in the form of enhanced agricultural species, innovative medications and cures, and raw materials for industry. Besides from utilitarian, there are moral, ethical, cultural, artistic, and strictly scientific motivations to conserve wild species.There are no accurate estimates of the global biodiversity available.Estimates range from 2 million to 100 million species, with the best estimate being about 10 million, only 1.4 million of which have been identified thus far.

The biological legacy of the planet is under threat. According to Bartelmus (1997), one-quarter of all species are threatened with extinction, and 5,000 to 1,50,000 species are lost each year owing to the degradation of biomass and habitat caused by destructive agriculture, deforestation, pollution, and harmful fishing and grazing activities. Most of the world's biodiversity is situated in poor nations, and it is predicted that it is vanishing at a pace that is 50 to 100 times faster than natural regeneration rates.India has a very diverse biodiversity. It is considered one of the world's 12 mega diverse nations, accounting for 60% to 70% of global biodiversity. India possesses 6% of the world's flowering plant species, 14% of the world's birds, one-third of the world's identified plant species (over 45,000), and over 81,000 animal species (World Bank 1996: 1). Natural resources and biodiversity in India are commercially significant on a national and global scale.

India, being one of the world's oldest and greatest agricultural nations, has a diverse range of crop species and cultivars. The subcontinent is home to at least 166 agricultural plant species and 320 wild relatives of cultivated crops. Almost 90% of all medications in India are derived from plant species, many of which are gathered in the wild[7], [8].

Medicinal plants and other non-timber forest products are especially essential to the indigenous inhabitants as a source of revenue and subsistence. Natural ecosystems have a tremendous influence on the development and administration of natural resources, which is vital not just for agriculture but also for industrial and municipal growth.Deforestation has resulted in a massive loss of biodiversity in India. Several plant and animal species are facing extinction. While the extinction of 23 species has been confirmed, many more are believed to have perished silently.

Although habitat loss, over-harvesting, and pollution are the most obvious causes of biodiversity loss, the underlying causes of these actions include a variety of socioeconomic due to population pressure, poverty, unemployment, ignorance, and a lack of incentives to use natural resources and biodiversity in the best interests of society. There was no environmental degradation or loss of biodiversity owing to human activity as long as the human and animal population stayed within the carrying capacity of locally accessible natural resources and the local environment. But, as the population grew and local economies became more intertwined with global economies via trade, the process of natural resource degradation and biodiversity loss began. Nevertheless, many communities rely only on natural resources for a living. They are very impoverished and illiterate, with no other options for job 140 Rural Development. This leads them to over-exploit and damage the natural resources available to them, posing a serious danger not just to their own existence but also to environmental security and integrity. It is past time for India to implement a responsible national policy of natural resource conservation and biodiversity conservation that is consistent with its economic development plans [9], [10].

Changes in the Climate

Climate change has been seen all across the globe, especially in the past two decades or so. Acid rain, global warming, ozone layer loss, and increasing frequency of droughts, floods, cyclones, and hailstorms are among the key changes.According to the Intergovernmental Panel (IPCC) (1995), greenhouse gas emissions in the atmosphere have resulted in global warming ranging from 1° C. to 3.5° C. (Bartelmus 1997: 325). This is supported further by the IPCC's Fourth Assessment Report (2007). Carbon dioxide (CO2) emissions from the burning of fossil fuels, which today provide about 95% of the world's commercial energy, are of special concern. CO2, methane, nitrous oxide, and other greenhouse gases have already reached levels well beyond those of the pre-industrial period.

If global emissions continue at their current rate, CO_2 concentrations in the atmosphere are expected to quadruple compared to pre-industrial levels by the middle of the next century. The buildup of greenhouse gases presents significant hazards to the global climate and human well-being. Possible consequences include rising sea levels, increasing frequency of floods and droughts, shifts in agricultural productivity, dangers to human health from expanding disease range and incidence, changes in freshwater supply, and harm to ecosystems and biodiversity. Another troubling feature of this issue is the abnormally large fraction of total global emissions attributed to developed and oil-producing nations. To stabilise CO_2 concentrations in the atmosphere, emissions must be reduced by 60% from current levels. The Kyoto Protocol, agreed in December 1997 by the United States and 159 other nations, establishes enforceable limitations on industrial countries' greenhouse gas emissions. The pact also allows industrialised countries to exchange rights to release greenhouse gases with one another.

The Depletion of the Ozone Layer

Rising industrialization and deforestation are altering the chemical makeup of the planet in ways that endanger agriculture, ecological balance, and human health. The changes in the atmosphere offer two primary threats: the first is ozone depletion caused by the manufacturing and use of chlorofluorocarbons (CFCs) and other similar chemicals, and the second is the greenhouse effect caused by the accumulation of CO_2 and other greenhouse gases. Ozone is a potent oxidant that absorbs a large portion of the sun's harmful UV radiation 141 rays. Increased UV light may cause skin cancer and cataracts, as well as disturb the marine food chain and harm crops.

According to recent studies, peak ozone degradation has reached 60% over Antarctica, and there is evidence of an Arctic ozone hole above the North Pole. Thus yet, only equatorial areas have seen significant ozone losses (WRI 1992: 9). The ozone layer reached an all-time low of 90 Dobson units in 1993, with the ozone hole becoming 15% bigger than in prior years. The 2005 ozone hole was one of the largest ever recorded, covering 24 million square kilometres, about the size of North America. Although the ozone hole above Antarctica remains large, the ozone layer across the rest of the earth seems to be improving.

The usage of CFCs and halons in refrigeration, insulation, and packaging contributes to this. There is no accurate information available regarding the degree of ozone loss in countries such as India.All of these indications of sustainability loss need dramatic adjustments in traditional economic planning and policymaking. In general, two new paradigms are developing in response to such challenges to sustainability: 'economics' and'sustainable development'. The former emphasizes the internalization of environmental costs into traditional micro- and macroeconomics, whereas the latter encourages conformity with social and environmental standards in economic development processes and activities.

Economics may be considered as an effort to integrate externalities in traditional economic analysis while also including inter-generational equality requirements such as long-term per capita consumption maintenance. This suggests a change away from GDP maximization and towards more sustainable growth, which may be defined as Environmentally Adjusted Net Domestic Product (EANDP). Numerous recent United Nations conferences have approved a variety of objectives for the twenty-first century. One of the objectives is to "adopt national sustainable development plans by 2005 to guarantee that the present loss of natural resources is reversed worldwide and domestically by 2015.

Holistic and Equity-oriented Strategy

Agriculture and rural development have been prioritized in India's five-year plans. The Community Development 142 Rural Development Programme (CDP) dominated the First Five Year Plan, reflecting India's overarching concern for nation building and equality. The CDP's main strategy was established holistically to meet the aims of development, welfare, equality, and community engagement all at the same time. This paradigm provides a broad yet integrated perspective of the fundamental issues of poverty, unemployment, and inequality, attempting to address its physical, economic, technical, social, motivational, organizational, and political roots.

The many aims of this strategy are to be reached through increasing the community's ability to participate in development in collaboration with the government. This method is based on the essential premise that the government can reform social power relationships and that centralized bureaucracies can learn to share power with community organizations. Complex decentralized matrix structures with persistent mechanisms for vertical and lateral integration, a mix of expert and generalist abilities, institutional leadership, social intervention capacity, and systems management are required for successful execution of this method This model was intended to be followed by other programmes created after the CDP, such as the Integrated Rural Development Programme (IRDP), National Rural Employment Programme (NREP), and Training of Rural Youth for Self-Employment (TRYSE). Nevertheless, given India's current organizational structure and governance system, which lacks many of the conditions stated before for the effective execution of this approach, this method did not provide the intended outcomes.

Growth-oriented Strategy

By the middle of the Second Five Year Plan, it was clear that, notwithstanding the success of the CDP, a new strategy would be necessary if agricultural output was to keep pace with India's growing population. India suffered its first post-independence food crisis in 1957-58. In response to the crisis, and based on the recommendations of the Ford Cornerstone Team of American Agricultural Production Specialists, a new programme known as the Intensive Agriculture District Programme (IADP), or Package Programme, was developed and launched in seven selected districts across the country in 1960-61, and was later expanded to eight more.The IADP deviated significantly from the CDP in that it deployed resources using the concentration principle rather than the CDP's equity requirement. Its major goal was to generate quick gains in agricultural productivity at the farm level by using complementary inputs and activities (package approach). The cornerstone of IADP was farm planning. By 1966, the basic concept of conservation, as well as the effective use and management of resources, had gained national acceptance, and a number of new agricultural development programmers, such as the Intensive Agricultural Area Programme (IAAP), the High Yielding Varieties Programme (HYVP), and the Intensive Cattle Development Programme (ICDP), were modelled after the IADP. All of these programmes were focused on expansion and did not address equitable concerns. They proved the success of the concentration principle in producing quick gains in food production on the one hand, and the inadequacy of the growth-oriented approach to alleviate the fundamental issues of rural poverty and income disparity on the other. The most essential lesson learnt from these programmes was that growing economic growth rates were no guarantee against deteriorating poverty, and that a straight frontal assault on the fundamental causes of poverty and unemployment was required.

Welfare-oriented Strategy

This aims to improve the well-being of the rural population in general, and the rural poor in particular, by implementing large-scale social programmes such as the Minimum Needs Programme (MNP), the Applied Nutrition Programme (ANP), the Mid-day Meals Programme (MMP), the National Old Age Pension Programme (NOAPP), and so on. This strategy's principal methods of implementation are the free provision/distribution of commodities, services, and civic amenities in rural regions. The essential assumptions of this approach are that individuals are not capable of identifying and resolving their issues, and that government specialists can recognise their requirements and address them using the government's fi nancial and administrative resources. Villagers play the role of passive receivers of services. This method is paternalistic in nature. The number of commodities, services, and civic amenities given is used to assess programme success. The welfare-oriented programmes provide a mixed picture; the rural poor have benefited significantly in some places but not in others. This technique has three key criticisms:

1. It has led to dependency.

2. It necessitates resources that go beyond the capabilities of governments.

3. It has paved the way for widespread corruption among those in charge of administering social benefits.

Facilitating and Participatory Strategy

This is intended to assist rural people in self-help via their own organisations, active involvement, and other support networks. Its concern is to react to the perceived needs of rural people as defined by them. The government's role is to support the villagers' self-help efforts by providing technology and resources that are not locally accessible. The essential premise of this technique is that if the rural poor are given limited assistance and otherwise left to their own devices and efforts, they would discover and handle their issues.

The major performance measure of this technique is community engagement in and control over project activities. Operation Flood (OF) in India, which began in 1970 in 18 milksheds across ten states, is an excellent illustration of this 144 Rural Development technique. Using a three-tier structure of Anand pattern dairy cooperatives, OF aims to modernise and improve India's dairy sector. Numerous non-profit organisations are likewise adopting this growth approach. To summarise, what is required now is an integrated or holistic approach that includes all of the beneficial aspects of the previous four strategies and is faithfully executed via the development of an adequate organizational and institutional structure [11]

CONCLUSION

Human activities, extreme weather events, fire, pests, diseases, and other environmental disturbances may all degrade forests, reducing the availability of forest products and services, ecosystem values, productivity, and health.

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CHAPTER 20

SUSTAINABLE AGRICULTURE, FOOD SECURITY AND ECOLOGICAL SECURITY

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Abstract:

Organic agriculture and agro-ecology, for example, increase food security, erase hunger, and are economically feasible, all while protecting land, water, plant and animal biodiversity conservation, biodiversity, and ecosystems, and increasing resilience to climate change and natural catastrophes.

Keywords:

Food Security, Ecological Security,Rural, Sustainable Agriculture.

INTRODUCTION

Food security, which is dependent on sustainable agriculture, is a requirement for sustainable livelihoods, which are an essential component of sustainable development. Food security at the national level is defined as the long-term secure access of all persons and families in a country to an appropriate amount of food for an active and healthy life. Food security is now used to refer to livelihood security, which includes secure physical and economic access to a balanced diet, clean drinking water, environmental sanitation, primary education, and basic health care. The three components of food security, namely physical availability, economic access, and sustainability, are critical for preserving national and international peace and social harmony. As a result, it is rational to state that food security is a precondition for peaceful, sustained development.

To achieve food security, the promotion of sustainable agricultural production methods must be prioritized. Growing agricultural output at the expense of deteriorated soil and depleted and contaminated water bodies is the polar opposite of sustainable agriculture.Agriculture land usage should be based on a scientific evaluation of land capabilities.Additionally, yearly loss of top soil, fish supply, or forest source must not exceed natural regeneration rate. Future productivity increases in both rich and developing nations should be based on more regulated use of water and agrochemicals, as well as more widespread use of manures and non-chemical pest control methods [1].

Judicious Management of Natural Resources and Natural Disasters

Land, water, plants, animals, forests, fisheries, and the environment are the essential support systems for life on Earth. The judicious utilisation of such natural resources is critical to long-term development. Most natural resources in India, particularly those owned and/or exploited in common, namely common pool resources (CPRs) and OAR, are substantially degraded and have poor productivity. Hardin (1968) refers to the tragedy of the commons as afflicting the majority

of CPRs and all OAR. It is estimated that almost 100 million hectares of land in India are common pool land, as are around 30 million hectares of forest, and the majority of water and forest resources. The restoration and prudent management of CPRs and OAR are critical to the well-being and livelihoods of millions of rural poor.

It will be impossible to achieve the aim of sustainable development unless the process of deterioration of natural resources, particularly the environment, is reversed. Thankfully, since they are biological systems, the CPRs of land, water, forests, and fisheries are dynamic and amenable to management interventions that may give long-term benefits such as food, fodder, fuel wood, fibre, lumber, and other environmental amenities[2], [3].

A careful orchestration of policies and management techniques is required to manage CPRs on a sustained yield basis. Agricultural economists, particularly those specializing in natural resource economics, have a distinct edge over other technical and social experts when it comes to designing socially optimal methods for utilizing and managing CPRs. Natural resources are handled via a variety of various property regimes or management systems. Private, cooperative/collective, corporate, and public property regimes are among them. Establishing and enforcing adequate property rights in OAR might be a tool for avoiding their "tragedy" and increasing production Cooperative management has been proven to be a potential option for maintaining CPRs in several circumstances. The experience of India with numerous watershed development initiatives demonstrates that the watershed method might secure the long-term usage of renewable CPRs (Singh 1995). We need to figure out which resources are likely to be exploited and managed wisely under what property system and under what circumstances, and how the watershed model may be more generally implemented in India, particularly in rained regions.

Natural catastrophes have long been a scourge on the Indian economy. Natural calamities such as extended droughts, flash floods, hail storms, landslides, cyclones, and forest fires are mentioned in ancient Indian literature. Around 60% of India's landmass is subject to earthquakes, over 40% is sensitive to floods, 8% is vulnerable to cyclones, and 68% is vulnerable to droughts. A 8,000-kilometer-long coastline is vulnerable to severe cyclonic forms. Seismic zones III and V cover around 55% of the entire area, making it sensitive to earthquakes. Landslides are a risk in the Sub-Himalayan and Western Ghats areas.Economic progress is unsustainable if it makes people more vulnerable to natural and man-made disasters. A drought may compel farmers to sell their livestock or other productive assets required to continue output in future years. A plague may completely destroy a crop, rendering crop farmers insolvent. Similarly, a reduction in farm product prices may lower farm revenues, causing farmers to over-exploit natural resources. According to Pursell and Gulati (1993), the liberalization of internal and foreign trade in agricultural commodities may exacerbate India's poor's food insecurity by raising grain prices. To mitigate the negative consequences, the public distribution system (PDS) must be properly targeted and made more effective as a welfare state for the poor. To summarize, a development path that includes growth and decreased vulnerability is more sustainable than one that does not [4].

DISCUSSION

Optimal Development and Utilizations of Human Resources

Human growth is both a means to a goal and an end in itself for total society development. People and their well-being should be at the centre of development policies and programmers. Individuals should be given the flexibility and chances to develop their skills, as well as be educated, empowered, and driven to contribute to the achievement of sustainable and equitable development. Human resource development is critical not just for increasing technical knowledge and capacities, but also for developing new values to assist people and countries in dealing with constantly changing social, environmental, and developmental realities. Global knowledge sharing would result in improved mutual understanding and a stronger readiness to share global resources equally. Delivering more and quality teaching, health care, and other associated social services is a critical component of any sustainable development plan. Existing priorities must be adjusted in order to devote more public funding to providing basic infrastructure and services to all people, especially the poor. According to recent research, developing nations might shift a significant portion of their present spending—more than 2% of their GDP towards human development. Measures to cut military spending, curb capital flight, battle corruption, and privatize loss-making state firms might free up significant funds to assist human development[5], [6].

The dynamics of population increase are also inextricably tied to the sustainability of development. Many distinct scenarios have been used to project India's population to the year 2150. The medium fertility scenario seems to be the most likely of all. Fertility is anticipated to stabilize at slightly more than two children per woman in this scenario. According to this scenario, India's population would increase from 929 million in 1995 to 1,533 million in 2050, 1,617 million in 2100, and 1,669 million in 2150. Immediate action is required to curb India's current (high) pace of population increase. Decisions taken today will influence the level at which the population stabilizes, which is estimated to be approximately 1.25 billion people. But, this is not merely a demographic problem; providing individuals with information, incentives, and facilities that enable them to select the size of their families is a manner of ensuring the fundamental human right of self-determination, particularly for women.

Sustainable Development Strategies

Instilling attitudes and behaviors that are conducive to sustainable development in individuals from infancy is a critical necessity for maintaining livelihoods in perpetuity. The Vedic system of livelihood in India was sustainable in the sense that it emphasized frugality and harmony with—and protection ofnatural resources and the environment. The Rig Veda has hymns praising Prithavi devata, Indra devata (the rain deity), Surya devata (the sun: the source of infinite solar energy), Vayu devata (the air), and others. Gandhiji also praised their qualities and way of life. There are also Vedic prayers that ask the devatas for benefits in the form of food, animals, health, and money. This signifies that people in the Vedic age respected nature and accepted everything it gave them with appreciation. Unfortunately, most people nowadays misuse nature for self-aggrandizement, decreasing its productivity. Most Indians, especially the urban affluent, increasingly mimic Western attitudes and lifestyles and engage in extravagant consumerism, which is unsustainable.

Alleviation of Poverty and Inequality through Higher Economic Growth

Even after more than 55 years of development planning, India's poverty rate remains high. In 2004-05, it was 27.5%. Sustainable development must address the challenges of a substantial number of people who live in utter poverty, unable to meet even the most basic necessities. People all across the world have fundamental requirements such as food, clothing, and shelter. The essential purpose of all economic systems is to provide these basic necessities. The rate and pattern of economic growth must produce long-term job opportunities at a level of productivity that allows the poor to fulfil their basic needs. Increasing food production ought not to be dependent on environmentally unsound production practices that jeopardize long-term food security prospects.Poverty decreases people's ability to utilize resources sustainably, putting additional strain on the environment. A reasonably quick growth in per capita incomes is a necessary but insufficient condition for the abolition of absolute poverty. With the present growth rate of the population, this would need total national income growth of roughly 10% each year in India; in 2005-06, the national income growth rate was 8.6% at 1999-2000 prices[7].

Income distribution is a critical component of long-term growth. In India, there is a large disparity in the mean per capita economic of the wealthiest 20% of the population and the lowest 20%, and this disparity has not shrunk over time; in fact, it may have expanded. Slower growth paired with redistribution in favour of the poor may be worse than faster growth combined with redistribution in favour of the poor. If India focuses its efforts on alleviating poverty and meeting basic human needs, local demand for agricultural products as well as manufactured goods and services would rise. As a result, the logic of sustainable development necessitates an internal boost to economic growth.

Reorienting Technology and Reducing Risk

Promoting sustainable development would need a concerted effort to develop and disseminate new technologies, such as those for agricultural production, renewable energy systems, and pollution management. Most of this endeavor will be centered on international technology interchange, such as trade in upgraded equipment, technology transfer partnerships, expert assistance, research cooperation, and so on. As a result, the procedures and laws that govern these exchanges must encourage innovation while also ensuring fast and broad access to ecologically sound solutions.

All of these activities will need a reorientation of technology, which serves as the primary connection between humans and nature. Secondly, our nation's ability for technical innovation must be considerably expanded so that we can react more effectively to the difficulties of sustainable development. Second, the focus of technological development must shift to pay more attention to environmental issues.Industrial technologies are not always well adapted or readily adaptable to the socioeconomic and environmental situations of emerging nations. To make matters worse, the majority of global research and development is focused on a handful of the most critical concerns confronting these nations, such as dry land agriculture or the management of tropical pests and illnesses. There hasn't been enough done to adapt recent advances in material technology, energy conservation, information technology, and biotechnology to the demands of India and other developing nations. These deficiencies must be filled by increasing public investment in capacities for research, design, development, and extension.

Environmental resource issues should guide the processes of developing new technologies, improving existing ones, and choosing and adapting imported technology. The majority of commercial technical research is focused to marketable product and process breakthroughs.

Technology that produce 'social benefits,' such as enhanced air quality or longer product life, or that address issues that are generally beyond the cost calculus of individual firms, such as external costs of pollution or waste disposal, are required[8].

Optimal Use and Management of Energy Resources

Energy is critical to fostering and maintaining agricultural growth.Energy usage per hectare is strongly connected with agricultural yields per hectare, according to research done in India and other nations. The similar conclusion may be drawn in the case of cattle production. The current amount of energy utilisation in agriculture in India is quite low, which partly explains the poor total factor productivity in Indian agriculture.We have yet to discover a safe and sustainable energy route for sustainable agricultural growth. To raise the current level of energy consumption in Indian agriculture to that of industrialized nations by 2025, current energy use will have to be multiplied several times. The global environment cannot withstand this, particularly if the increasing consumption is dependent on non-renewable fossil fuels. Threats and Strategies for Long-Term Development Based on current main source mix, global warming and acidification of the environment most likely rule even a doubling of energy usage.

Patterns and changes in energy consumption are already determining patterns over the next decade. We tackle this subject via the lens of sustainability. The key elements of sustainability that must be reconciled are:

1. Sufficient growth of energy supplies to satisfy the increasing requirement of Indian agriculture; 2. Energy efficiency and conservation measures to reduce waste of primary resources; and

3. Biosphere protection and prevention of more localized forms of pollution. Energy experts and agricultural economics will need to examine and overcome these and other comparable concerns.

Removing Market Imperfections and Getting the Prices Right

The price of an item or service in a well-functioning market reflects both its marginal value to the customer and its marginal cost to the provider. The market system is likely to result in the most efficient allocation of economic resources as long as there is no divergence between private and societal values and costs of these commodities and services. Nonetheless, it is true that pricing may be skewed in many scenarios and that a modern economy might fail to distribute resources efficiently. Externalities, incomplete or asymmetric information, public or community products, and imperfect competition are all potential reasons of market failure. When markets fail, suitable government interventions are required to improve market performance and boost general economic well-being. Economists can provide light on the situations in which the government might act to enhance market performance, how it can do so in a cost-effective way, and how the costs and benefits of such interventions are likely to be allocated.

Considering the large year-to-year and place-to-place fluctuations in agricultural productivity, as well as the inelastic demand for basic food grains, free market forces cannot be relied on to protect farmers' interests and achieve and preserve food security in India. As a result, government involvement in agricultural markets and marketing has been widely supported across the globe.

To reap the full benefits of the new liberalized international trade system, certain limitations and deficiencies in current local markets and marketing techniques must be removed. The policy tools devised and utilized to govern markets and promotion in a period of food scarcity must be

thoroughly assessed and ultimately abolished if they are no longer essential or create needless barriers to efficient marketing. Administered pricing, levy procurement of grains and sugar from millers/processors, buffer stock management, limits on inter-state trade/movement of grain crops, purchase/sales taxes, rural development chess, government monopoly procurement, and so on are examples of such mechanisms.

Farmers' organizations, particularly Agricultural pattern producers' cooperatives, might play a significant role in shielding farmers from the negative consequences of the new global trade system and allowing them to reap full benefits from it. With proper farmers' (cooperative) organization at the secondary level for processing and selling of agricultural products, particularly high value export-oriented commodities, India's majority of small land holdings would not be a disadvantage .The roles of the State Agricultural Marketing Boards, Commodity Boards, Food Corporation of India (FCI), and State and National Agricultural Cooperative Marketing Federations must also be reconsidered in light of the current privatization, deregulation, and globalization policies. Most natural resources and their products are greatly undervalued in developing nations such as India, leading to over-exploitation and environmental deterioration.

Mainstreaming Gender in Development Strategy

Notwithstanding the reality that improvement cannot be maintained unless it is a shared duty of men and women, there has been a conspicuous absence of gender perspective in development policies in both rich and developing nations throughout the globe, including India. A gender viewpoint emphasizes men's and women's interactions, as well as men's and women's ties with their social and natural environments. It recognizes that the amount to which both men and women engage in design stage, planning, execution, and monitoring is critical to the success of programmers promoting sustainable development. There are several approaches of instituting a gender sensitive sustainable development approach. The first and most important prerequisite is a policy that promotes equitable development for men and women in development initiatives. After that, rather than merely attending project meetings, women should be granted specific roles, duties, and rights in making different choices.

Moreover, if gender awareness is to be fostered, the development company team as a whole must be sensitized to gender concerns. The staff must also be taught and held accountable for implementing the gender sensitive strategy. Ultimately, it is critical to clearly define the goals to be accomplished, the measures to be used to achieve each of the objectives, and to build quality and process-oriented indicators to track the progress of the initiatives towards the intended objectives.

Creating a Congenial International Economic and Political Environment

Nations' economic, political, and environmental ties have expanded fast. This has exacerbated poor nations' susceptibility to the negative implications of expanding international inequities in economic development. Asymmetry in international economic connections exacerbates inequality since poor countries are often influenced by yet unable to influence international circumstances.Foreign economic interactions represent a particular challenge for emerging nations like India attempting to manage their ecosystems, since natural resource export remains a significant component of their economy. The processing of some raw resources, such as pulp and paper, oil, and alumina, may have significant environmental consequences. In general, industrial nations have been more effective than developing countries in ensuring that export input costs

reflect the cost of environmental harm and in managing that damage. Hence, in the case of industrial-country exports, these costs are borne by consumers in importing countries, including those in developing countries. But, in the case of developing-country exports, such costs continue to be paid exclusively locally, mostly in the form of damage costs to health and environment, property, and ecosystems.

Most of these nations' incompetence and bad pricing trends make it hard for them to manage their oil and gas bases for long-term production. The increasing weight of debt service and the fall in fresh capital flows amplify the pressures that lead to environmental degradation and resource depletion, all at the price of long-term growth. Foreign commerce in fish, for example, is a key contributor to India's depletion of marine fisheries. Several individuals and private enterprises are encouraged by foreign currency benefits from exports to deploy big mechanized trawlers to collect fish at a pace quicker than fish can be replenished. Overfishing not only hastens the extinction of species of genetic resources, but it also destroys the lives of impoverished people who rely only on fishing and pollutes the sea.

Protectionism is increasing in industrial nations, stifling export development and preventing diversification away from conventional exports. According to a recent International Monetary Fund (IMF) and World Bank research, protectionism in developed nations costs emerging economies twice as much in lost export revenues as they get in development aid. According to Ekins, global commerce, assistance, and debt are all harmful to the poor in developing nations.

All three of the North's power instruments benefit exclusively the wealthy in both developed and emerging nations.External capital flows are also required for growth in many emerging nations. The likelihood of any increase in living conditions is gloomy in the absence of sufficient flows. However, as goods and capital flow freely within an integrated global economic system in search of the highest short-term profits, national governments lose their ability to regulate and manage their own economies in the public interest, and instead become puppets in the hands of the World Bank, IMF, and other financiers, subserving their interests. They provide inexpensive labour, lax environmental health and safety requirements, low taxes, well-developed infrastructure, and least limited access to natural resources in order to attract investment dollars. All of this contributes to a quicker depletion of its natural resources and destruction of their environment.

A bigger part of overall development aid should go towards expenditures required to improve the environment and resource sector productivity. Reforestation and fuel wood development, watershed preservation, soil conservation, agroforestry, irrigation project rehabilitation, small-scale agriculture, low-cost sanitation initiatives, and the conversion of specific crops into fuel are examples of such activities. Small initiatives with maximal grassroots engagement have shown to be the most successful efforts of this sort.

As a result, programmes most closely tied to the goal of sustainable development may have higher local costs, a higher recurrent-to-capital cost ratio, and a stronger utilisation of local technology and experience. In the near term, the new era of economic development for most emerging nations, including India, is dependent on competent and coordinated economic management among major industrial countries aimed to stimulate expansion, cut real interest rates, and arrest the slide towards protectionism. Longer-term adjustments are also necessary to maintain production and consumption patterns in the face of rising global growth.

Policy Instruments of Rural Development

An instrument is defined as anything that a management or actor may adjust or control to get the intended result. It might be an economic quantity, like as the interest rate, or it can be a component of the institutional framework, such as the nationalization of banks. As a result, an instrument is the method by which a purpose is pursued. A measure is the employment of a certain instrument at a specific moment to promote one or more goals. An instrument is, for example, the choice to increase the bank rate on a certain day or to lower income tax in a specific fiscal year.A measure is also the removal of either a measure, such as the removal of price control. For rural development policymakers and managers to be effective and successful, they must understand what tools may be employed to meet the goals of different rural development programmed. This chapter discusses certain tools that rural development policymakers, administrators, and managers may employ to attain their goals.

Function of Social Welfare

W is referred to as the social welfare function by economists. It reflects the amount of happiness attained by a community. As such, it symbolizes the sum of the satisfactions attained by the people who comprise the society. 'Utility' is ultimately 'consumed' by people, and no societal or community welfare function exists apart from the well-being obtained by individuals. W is totally psychological and subjective since no way for measuring utility or well-being has been discovered. It is, nevertheless, a valuable term since it implies that the ultimate goal of all policy and planning is the well-being of people. It is important to emphasize that W is made up of much more than only economic considerations. In truth, the amount and distribution of earnings that exist in society are only means to a higher human aim. W is made up of final goals including freedom, equality, justice, opportunity, and security. Consequently, social, political, and cultural aspects, in addition to economic ones, must be included in any conception of wellbeing and assessed in any policy study. In a democratic society, W is best considered as provided to policymakers; that is, W is the societal welfare function, not the policymaker's.He must go beyond himself for the ultimate ideals of society: to legislation established by the people's representatives, to the constitution under which the people are governed, to court judgments, and so on. Of fact, determining exactly what the society's values are is often a difficult subject in which the policymaker may contribute or provide articulation. He should not, however, accept responsibility for determining what societal ideals should be.

Policy Objectives

The Yi are policy objectives that have been expressed. They are derived from W values. This will be shown using an example. One aspect of W may be an increase in the spectrum of options available to individuals of society the aim goal could be a 5% annual increase in per capita income, a 70% literacy rate, or the total eradication of poliomyelitis. It should be evident that W and Yi are linked, and the nature of their connection should be as explicit as possible.The Yi may be decided by the policymaker. In a democratic system, voters will review the rationality of the Yi selected by the policymaker, as well as whether or not the objectives are met. The selection of acceptable target variables requires much thinking and effort.It is particularly critical that the Yi be phrased in such a manner that they can be assessed. Vaguely worded aims are often unattainable. Compare and contrast the following objectives: (a) incomes should be raised; and (b) average yearly per capita real earnings should be increased by 5%. The first statement is

broad and ambiguous, making it difficult to evaluate. The second is more specific and quantifiable, and it can be easily assessed.

Instruments of Policy

The Zj are the policy tools accessible to attain the desired results. For example, multiple strategies (Zj) may be used to decrease unemployment to 5% of the workforce (a desired aim). The government may raise the amount of money in the economy, thinking that increased demand for products would eventually decrease unemployment; alternatively a tax break may be offered to enterprises who invest in new capital equipment, on the idea that capital expansion will generate more jobs. A large variety of policies may be claimed to contribute to the achievement of the goal.

Policy analysis is primarily concerned with identifying and analyzing various approaches to achieving the desired outcomes. The vast majority of science, as well as the majority of economics, is concerned with these responsibilities.Policy analysis, like any other scientific research, should use scientific methodologies.Hypotheses should be developed that explain how a particular policy is predicted to hypothetically influence a certain aim. Experimentation is the process of establishing whether or not a policy really works as predicted. A model is a collection of theoretical hypotheses that scientists use to bridge the analytical gap between policy instruments and target variables. Models must, however, be verified for logical coherence as well as empirical validity. A set of statistical correlations must be developed to indicate the procedures of going from the Zj to the Yj, as well as their efficiency.It should be recalled that, just as the Yi are mandated by society's ultimate ideals, so are the Zj; that is, the Zj must be judged in terms of political and moral acceptability, as well as efficiency in achieving the goal. Several policies that are acceptable and even supported in one stratum of society are repugnant to another.Most democratic or non-totalitarian cultures would never allow measures that substantially jeopardise individual rights.

Non-controllable Factors and Irrelevant Variables (Uk and Xs) Certain factors impact the goals but cannot be manipulated or influenced by policy. These are the United Kingdom in the preceding framework. As an example, consider the weather. Any agricultural output aim would be influenced by rainfall or frost, but man has been generally ineffectual in regulating these elements until recently. In any policy analysis, they must simply be viewed as 'uncontrollable,' but they must always be recognised and accounted for.Lastly, certain policy consequences do not apply to the goals or immediately enter the community's welfare function, but they should be watched since they are potentially significant. They are the Xs in the preceding framework, and they are known as policy's side consequences. A strategy that shifts energy output from steam engines to internal combustion engines will have little side effects in most cases. Internal combustion engines emit a number of invisible pollutants into the atmosphere that are not a concern until they reach harmful levels. These sorts of side effects must be monitored, but they may not have an impact on policy assessment until they reach issue proportions, at which point they may be categorised as Yi.

That's it for the policy framework. It is essentially a taxonomic device and should be useful in explaining what is sought, the accessible ways of obtaining what is desired, and the expense of doing so. It aids policymakers in keeping things clear. This basic structure is not made operational or is not sufficiently developed in the majority of policy texts.The model may alternatively be stated as an economic or mathematical programming model.

A System of Action

An action system in the context of development management may be thought of as having four components: the manager/actor, the objectives, the circumstances (physical, technical, economic, social, and political), and the methods or instruments. A simple diagram depicting these connections.The manager or actor might work for a public, private, cooperative, corporate, or other institution. In each given system, the manager decides what measures should be used to achieve a certain goal or set of goals. The goals are what the management hopes to achieve. In operational words, they must be well defined.The conditions of an action system are all technical and institutional variables outside the manager's control, at least in relation to the specific programme under discussion. The instruments must be fitted to – or compatible with – the operating circumstances of the programme.The instruments are the up or programme provisions that are used to attain the goals. There are often several tools that might be used to achieve a certain goal. Understanding of economics is extremely beneficial in making intelligent instrument selection decisions.

Government Finance

This group of instruments covers the majority of national, state, and municipal government revenue and spending. The majority of government spending is directed at meeting common needs.The yearly budget is the primary occasion for the deployment of public finance tools.As a result, many (but not all) of these instruments can only be used on a yearly basis. The statistical documentation is correct since these instruments include quantities of money sent into or out of government accounts. Not all government expenditures and revenues may be considered economic policy tools. There are a few flows which enter the public finances, but which the govern ment may, or does not, strive to modify in order to attain economic goals. This is true, for example, of public debt interest, imputed rent on federal buildings, sales of government products and services, revenue from property, and depreciation allowance. Public business financial transactions are omitted from public finance since, in general, public firms operate similarly to private enterprises.

Equity-oriented and Growth-oriented Programmed

India has a long history of trying with different rural development initiatives. Even before independence, nationalist theorists, social reformers, and Equity-oriented and Growth-oriented Programmes 179 missionaries launched a variety of rural rehabilitation programmes. Among them were F. L. Brayne's Gurgaon Experiment (1920), Spencer Hatch's Marthandam Experiment (1921), poet Rabindra Nath Tagore's Sriniketan Experiment (1920s), Mahatma Gandhi's Sewagram Experiment (1933), the Firka Development Scheme (1946), and Albert Mayer's Etawah Pilot Project (1946). Apart from these rural development trials, different government agencies such as Agriculture, Cooperation, Irrigation, Health, and Education have also attempted to solve rural issues within their own domains.With the start of the First Five Year Plan in 1951-52, the government has periodically launched a number of agricultural and rural development programmes. For ease of presentation, we have divided these programmes into three general categories:

1. Programs focused on equity and growth.

2. Programs to Reduce Poverty and Unemployment.

3. Plans for the development of natural resources and infrastructure.

Considering the limited space available, it is not feasible to offer a full description of each of India's rural development programmes implemented so far, nor is it of significant importance and interest to the modern rural development student to get mired down in the intricacies of those programmes. In our view, it is sufficient to discuss briefly some of the key programmes' significant aspects and the lessons learned from their experience. As a result, we've decided to dedicate a chapter to each of the three programme areas. In this chapter, we offer an abbreviated summary of a few key rural development programmes aimed at increasing equality in the distribution of development benefits, as well as growth in the form of greater output employing new technology. The chapter's major goal is to familiarise the learner with the nature, approach, aims, and contents of such programmers, as well as their courses [9].

CONCLUSION

Sustainable agriculture is the only means to preserve future balance between rising food demand and food supply. Food demand of the future population fluctuates as population grows, income demographics shift, and dietary preferences vary.

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CHAPTER 21

THE INTEGRATED RURAL DEVELOPMENT PROGRAMMED

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Abstract:

The Indian government established the Comprehensive Rural Development Program (IRDP) in 1978 and began implementing it in 1980. The program's purpose is to provide underprivileged persons with job opportunities as well as opportunities to improve their skill sets in order to improve their living conditions.

Keywords:

Employment, Integrated Rural Development, Rural, Rural Development.

INTRODUCTION

The most significant programme in the area of self-employment programmes is the IRDP. It is the single greatest anti-poverty initiative now ongoing in all of the country's community development blocks. It was first implemented in 2,300 chosen blocks around the nation in 1978-79, and it was expanded to all blocks on October 2, 1980. It strives to provide the rural poor with income-generating assets and self-employment possibilities, allowing them to climb beyond the poverty line once and for all. In consequence, the IRDP tries to allocate assets and job opportunities in favour of the rural poor, reducing income inequality. It is a centrally sponsored system that is supported 50:50 by the federal government and the states. Beneficiaries of the IRDP are aided via feasible bankable projects that are funded in part by subsidies and in part by bank loans. The subsidies are provided at different rates ranging from 25% to 50% of the scheme's capital cost, subject to a maximum of Rs 5,000 in drought-prone area programmes (DPAP) areas and Rs 4,000 in non-DPAP areas; the limit for a Scheduled Caste/Scheduled Tribe (SC/ST) or disabled beneficiary is Rs 6,000 [1]–[3].

The District Rural Development Agency is in charge of implementing the IRDP (DRDA). The Ministry of Rural Development is responsible for the release of the central share of funding, policy formation, general guidance, direction, coordination, monitoring, and evaluation of the IRDP at the national level.As a help to successful programme administration, the Ministry of Rural Development has allowed for concurrent assessment and impact studies of the IRDP. State governments have been recommended to conduct assessment studies on a regular basis to assess the program's effect and to determine the degree to which beneficiaries have directly benefitted extra income and employment from programme investments. State governments may utilise their own assessment apparatus to conduct concurrent evaluation and evaluation, or they may delegate this work to designated academic/research organizations of status and renown in this field.

Numerous all-India assessment studies of the IRDP have been conducted by the National Bank for Agricultural and Rural Development (NABARD), the Reserve Bank of India (RBI), the Planning Commission's Programme Evaluation Office (PEO), and academic institutions. In its

report, the Indian Parliament's Public Accounts Committee (PAC) offered certain proposals for restructuring the IRDP. The PAC study identified the following key deficiencies in the IRDP:

1. The per capita investment (loans + subsidies) is insufficient to create enough income to lift the beneficiary family out of poverty.

2. Insufficient infrastructure support for a variety of revenue-generating activities.

3. Insufficient representation of interested agencies on the DRDA's governing council.

4. The lack of involvement in the programme.

Development of Rural Areas

The subsidies given by the IRDP have piqued the attention of politicians looking to transfer funds to present or future supporters. This has contributed to the poor loan payback rates, since defaulters (and bank employees) are aware of the political backing enjoyed by this type of beneficiaries. It has also resulted in a large number of beneficiaries not falling below the poverty line.Lower-level officials' misconduct has been widespread. According to surveys in certain locations, bank officials deducted 10% as informal 'charges'. In some areas, more than 20% of the subsidy component was charged as'speed money' in different methods. Another type of corruption that was prevalent in some areas was collusion between officials and local middlemen, who provided the asset specified by the beneficiaries and received money from the beneficiaries for allowing the over-invoicing of the asset's cost and shared the booty with the local officials. This technique violated rules, which require that the specified asset be given by authorised providers rather than intermediaries.

Training of Rural Youth for Self-Employment

TRYSEM, and unique initiative, was launched in 1979 with the primary goal of eradicating rural youth unemployment. The TRYSEM is a vital aspect of the IRDP and is focused with providing rural youth between the ages of 18 and 35 with the required skills to be self-employed. Any rural adolescent living below the poverty line is eligible for selection, although Scheduled Caste (SC), Scheduled Tribe (ST), and women applicants are given precedence. TRYSEM training is heavily focused on trades with high prospective demand that may lead to long-term IRDP projects.

A TRYSEM assessment study including 6,686 beneficiaries yielded the following results: Almost 54% of the total beneficiaries covered were women, which is more than the mandated requirement of 40% of TRYSEM beneficiaries being women. According to the program's guidelines, 32% of all beneficiaries were SC, while 21% were ST (that 50 per cent beneficiaries should be SC or ST). After completing the TRYSEM training programme, beneficiaries' employment levels increased by 20%. Almost 15% of them have launched their own businesses. Just 26% of them got any kind of subsidy/rebate/concession. More than 80% of TRYSEM beneficiaries were satisfied with the level of training provided and the stipend provided during training.

Development of Women and Children in Rural Areas

The DWRCA programme was established as part of the IRDP in 1982. Their goal was to organise rural women living below the poverty line to build sustainable income-generating activities via self-employment. It was the first of its type, focusing on enhancing the quality of life of rural women. Unlike the other IRDP components, the DWCRA focused on access to health, education, clean drinking water, sanitation, nutrition, and other services in addition to

income development. As a result, it not only promoted economic growth but also supported social development. Another distinguishing characteristic of the curriculum was its focus on group activities. Women's empowerment, it was assumed, would be dependent on the establishment of a movement that fosters awareness and self-reliance in the long term [4]–[6].

According to a DWCRA assessment study, the DWCRA had a direct and significant influence on employment and community projects. As many as 93% of beneficiaries said that the DWCRA inspired a desire for self-employment, while around 89% of beneficiaries believed that the DWCRA increased their income. The DWCRA had a noticeable influence on savings, economic circumstances, and social prestige, but it had a less noticeable impact on health, sanitation, drinking water, and children's education, which are primarily communal services.

Yojana Swarnjayanti Gram Swarozgar (SGSY)

By reforming and integrating the IRDP with related programmes into a single self-employment programme, the SGSY became active in April 1999. The SGSY's primary goal is to lift helped impoverished families out of poverty by providing them with income-generating assets via bank lending and government subsidies. The formation of grassroots poor organisations via a process of social mobilisation for poverty reduction is key to the approach. The SGSY model is built on women's self-help groups (SHGs), which must operate as a financial intermediary as well as a vehicle for women's empowerment. Non-governmental organisations (NGOs) are expected to aid in the creation of such organisations. In contrast to IRDP, the programmes place a premium on community participation.

The programme was designed as a comprehensive self-government programme, addressing all areas of rural poor self-employment, such as organising the poor in SHGs, strengthening their capacity, selecting important activities, designing activity clusters, infrastructure development, and technological and market assistance. The program's goal is to build a significant number of micro-enterprises in rural regions depending on the poor's abilities and the possibilities of each place. The SGSY provides assistance in the form of government subsidies and bank financing. Credit is a vital component of the SGSY, while subsidy is a back-end, enabling component. In contrast to IRDP, SGSY envisions higher engagement of banks in project planning and report creation, identification of activity clusters, selection of SHG activities, selection of individual beneficiaries, and post-credit monitoring, including loan recovery. The linkage between DRDAs, state government line departments, banks, NGOs, and PRIs is required for the proper execution of this programme. The programme includes protections for the program's weakest components. As a result, the SGSY's major tenets are (a) key activities, (b) cluster strategy, and (c) group technique. The first minimises the amount of activities; the second reduces the geographical spread to fewer contiguous or chosen 212 Rural Development communities; and the third decreases the number of customers from many people to a few groups. All of this is supposed to lessen the burden of follow-up, as well as the instruction and instruction required to provide backward and forward links.

The programme is being implemented on a 75:25 cost-sharing basis between the centre and the states. The number of SHGs has been quickly increasing; as of December 2007, around 27.37 lakh groups had been created since April 1999, and 93.21 lakh swarozgaris had received assistance totaling Rs 19,340.32 crore.For 2006-07, the total investment (credit + subsidy) is estimated to be about Rs 3850 crore. The average investment per supported household is around Rs 25,000. According to evaluation studies, only around one-fourth of supported families are

able to escape poverty.During 2006-07, the national and state governments committed Rs 1,466 crore for the SGSY (66 percent for subsidies, 12 percent for revolving funds, 12 percent for infrastructure, and so on).

SHGs had a significant influence in Andhra Pradesh, Kerala, and Tamil Nadu, but have yet to have an impact in impoverished states like as Bihar, Orissa, and Uttar Pradesh. The majority of the reasons for their poor performance are related to the delivery methods. Ad hocism in planning and execution procedures, insufficient reach of delivery systems, a negative attitude of bankers regarding loan disbursement to the poor, and a lack of knowledge and respect of the complexity of livelihood concerns are among them. In several states, the cluster strategy has also been rejected. The DRDAs and state government line agencies have failed to provide non-credit inputs to beneficiaries. Above all, the curriculum has been noticeably lacking in developing a gender perspective.

DISCUSSION

Wage-employment Generating Schemes

Wage-employment programmes have become key tools for reducing poverty and smoothing consumption during crucial seasons such as drought and flood. They are seen as both protective (through income transfer) and promotional (by infrastructure development) types of safety nets. The Rural Works Plan (RWP) was the first significant government initiative to provide work to the jobless, especially during the lean season. It first appeared in 1971. Yet, owing to its restricted scope and many organizational and administrative deficiencies, it made no significant contribution to the unemployment crisis [7]–[9].

The RWP was followed by a number of specific employment programmes. The following were the series' key programmes:

1. The Crash System of Rural Employment (CSRE), which was implemented in April 1971.
2. The Food-for-Work (FFW) Program, which began as a non-plan scheme in April 1977.
3. The Jawahar Rozgar Yojana (JRY), which was introduced in April 1989.
4. The Sampoorna Grameen Rozgar Yojana (SGRY), which was established in 2001.
5. The Employment Assurance System (EAS), which went into effect on October 2, 1993.
6. The National Food-for-Work (NFFW) Program, which was established in 2005-06.
7. The National Rural Employment Guarantee (NREG) Program, which was implemented in 2006.

National Rural Employment Guarantee (NREG) Scheme

After the passage of the Rural Employment Guarantee Act on September 7, 2005, the National Rural Employment Guarantee (NREG) plan was begun on February 2, 2006, in 200 backward districts, with the intention of expanding it to all districts within five years. In the districts serviced by the NREG system, the plan incorporates both SGRY and FFW. It seeks to improve rural people's livelihood stability by providing 100 days of pay employment in a fiscal year to a rural family whose adult members agree to conduct unskilled manual labour. It recognises the right to work as a basic legal right for the first time in India.It intends to enhance rural infrastructure by generating wage employment programmes that address the causes of drought, deforestation, and soil erosion, in addition to offering 100 days of guaranteed work to every disadvantaged rural home in a fiscal year.

In addition to the 200 most disadvantaged districts that were notified under the NREG Act (NREGA) on February 2, 2006, 130 more districts were notified during the fiscal year 2006-07. The remaining 266 districts were notified on September 28, 2007, and the programme went into operation on April 1, 2008. Sufficient money have been made available for this purpose. The districts that will be notified will begin planning for NREGA transportation.The Act's early universalization validates the beneficial effect it has had on the rural poor and reflects the government's unwavering commitment to improve the rural poor's plight.

During 2006-07, the Act's implementation provided employment for 2.10 crore rural families in the first phase districts, resulting in 90.50 crore person days of labour. More over 60% of the total number of beneficiaries belonged to the ST and SC categories, and 40% were women. With an emphasis on establishing long-lasting assets, eight lakh works were completed, 54% of which were related to water conservation and harvesting. During 2007-08, 2.57 rural families received paid work, compared to 2.61 crore rural households who requested employment. During 2007-08, a budget allocation of Rs 12,000 crore (including the NER component) was provided, and Rs 10,501.02 crore had been disbursed as of 30 January 2008.

There is also growing evidence of reduced distress migration and increased land production. An change to the Act's schedule now allows activities related to land development, horticulture, planting, and small irrigation on the landholdings of all BPL households, not only SC/ST families, therefore directly tying wage employment with agricultural production.

Vigilance and monitoring have been given top attention. Independent monitors conduct concurrent monitoring of all NREG scheme districts, and independent monitoring studies have also been conducted. Social audits, which actively include civil society organizations, are being used to make programme procedures more transparent. The Right to Information (RTI) Act has been utilized successfully to improve the efficacy of NREG initiatives. This has produced a favorable atmosphere for public accountability. All vital data has been made available through a web-enabled Management Information System (MIS). For the first time, muster rolls are available for public inspection on the online.

The NREG scheme and SHG may benefit from synergistic relationships. The implementation of the NREG programme in Andhra Pradesh demonstrates how SHGs may be engaged in the development of a list of people ready for employment, the identification of shelf projects, and the execution of NREGA activities. Integrating of current Area Development Programmes (ADP) with the NREG scheme, as well as facilitation of interaction between the NREG scheme and SHG federations, would go a long way towards supporting a people-centered approach to poverty reduction.The space supplied here does not allow for an examination of the pay employment programmes implemented in India under various titles from time to time. It is sufficient to state that none of these programmes made much of a difference in the issue of chronic unemployment in rural regions, notably tribal and other backward communities.

National Social Assistance Programme

Vigilance and monitoring have received top attention. Independent monitors conduct concurrent monitoring of all NREG scheme districts, and independent monitoring studies have been conducted. By social audits, which actively incorporate civil society organisations, programme procedures are tried to be transparent. The Right to Information (RTI) Act has been utilised successfully to improve the effectiveness of NREG initiatives. This has made it easier to ensure public accountability. Via a web-enabled Management Information System (MIS), all vital data

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Natural Resourcesand Infrastructure Development Programmes

Natural resources such as land, water, forests, minerals, air, and solar radiation are critical in the rural development process. Mother Nature supplies us with free natural resources and serves two vital purposes in the process of economic growth: giving inputs to manufacturing processes and digesting wastes created during the production process.Similarly, basic infrastructure1 such as roads, schools, health care centres, markets, electricity, water supply structures, and modes of transportation and communication play an important role in the development process due to the rapid spread of technologies and increased access of rural people to markets and institutional credit. Many studies have shown that the average rate of return on investment in basic infrastructure, especially rural roads and irrigation systems, is relatively high. Better infrastructure also aids in poverty reduction; there is an inverse association between poverty and the Infrastructure Development Index. Infrastructure, together with natural resources, is the foundation of India's economy.

In terms of basic infrastructural supply, India's rural regions lag well behind its metropolitan counterparts. The provision of appropriate, reliable, and high-quality infrastructure in India's rural regions is therefore a necessity for rural development. The Government of India (GoI) seems to have recognised the necessity for basic infrastructure in the country's rural regions and has undertaken many programmes to that end from time to time.In the early 1970s, the inequitable distribution of the benefits of growth-oriented programmes such as the Intensive Agriculture District Programme (IADP) and the High Yielding Variety Programme (HYVP) between wealthy and backward regions was officially recognised. Since India's backward regions are severely lacking in natural resource endowment as well as basic infrastructure, corrective efforts in the shape of many area-specific/natural resource-based and infrastructural development programmes have been implemented in those areas.This chapter first provides an overview of some of the key natural resource-based development programmes, followed by highlights of some of the significant infrastructure development programmes implemented in India on a regular basis. The chapter's major goal is to familiarize the student with the key elements of such programmes, their efficacy, and the lessons that may be drawn from their experience.

Drought-Prone Area Programme

In 1970-71, a Rural Works Programme (RWP) was launched with the goal of executing rural works and creating jobs in order to alleviate the effects of Natural Resources and Infrastructure Development Programmes 223 shortages in drought-prone regions. As a result, it was apparent

that a simple RWP would not be sufficient to achieve these objectives. During the mid-term evaluation of the Fourth Five Year Plan, the programme was renamed the DPAP in order to be reoriented on the basis of an area development strategy. The programme was limited to the regions that were first addressed by the RWP.

Under the Fourth Five Year Plan, the DPAP was a central sector initiative that received full government funding. This programme has been in operation since the Fifth Five Year Plan, with money split 50:50 between the centre and the state. The DPAP was combined with the Integrated Rural Development Programme under the new rural development strategy proposed in the Sixth Five Year Plan (IRDP). Drought-prone districts are classified in 183 districts across 16 states in India. They are all protected by the DPAP. The programme is presently administered by the Department of Land Resources under the Ministry of Rural Development. Under the leadership of C. H. Hanumantha Rao, a technical committee formed by the GoI reviewed, among other things, the implementation and effects of DPAP and provided suggestions to improve its efficiency. These are summarised in the next section.

Desert Development Programme

The DDP was introduced as a central sector initiative in 1977-78 in the hot desert districts of Rajasthan, Gujarat, and Haryana, and cold desert portions of Jammu & Kashmir and Himachal Pradesh. It has been running as a central sector plan since 1979-80, with spending being split 50:50 between the centre and the states.The DDP strives to mitigate the negative impacts of drought on crops, as well as people and animal populations, by preventing further desertification of desert regions and 224 Rural Development increasing the productivity of local resources to boost income and employment levels of local residents. The method employed to meet the program's goals include developing the targeted regions on a watershed basis.

The DDP's efforts include afforestation, water collection, rural electrification, and animal husbandry. Sand dune stabilisation and shelter belt protection were given more weightage in hot sandy desert environments than other efforts. To evaluate the program's flaws and to address the proposals of certain state governments to include additional regions under the programme, the Ministry of Rural Affairs and Employment, GoI, formed a technical committee on DPAP and DDP in 1993, chaired by C. H. Hanumantha Rao. In April 1994, the committee presented its report. Based on the committee's suggestions, more districts/blocks were added to the programme, and revised watershed development rules relevant to DPAP and DDP were released in October 1994 and became effective in 1995-96. The program's performance was deemed inadequate by the committee. The key causes for the poor performance identified by the committee were the inability of the implementing agencies to embrace the watershed method, a lack of people's engagement in programme design and execution, shortage of funding, and a lack of educated employees (GoI 1997a: 42–43). The programme is presently administered by the Department for Land Resources under the Ministry of Rural Development.

Integrated Wasteland Development Programmed

India contains huge areas of wastelands, which are typically defined as degraded fields that may be brought under vegetative cover at a reasonable cost and effort. The size of wastelands in India is estimated to be 75 million hectares (mha) to 200 mha (Balooni and Singh 2003: 1). According to a recent assessment conducted by the National Bureau of Soil Survey and Land Use Planning (NBSSLUP), 66% of India's geographic area (about 192 mha) is in various states of deterioration. To fulfil the rising demands of its quickly expanding population and increasing affl

uence, India must restore its degraded land and make it productive.The IWDP is one of numerous wastelands development initiatives now ongoing in India. From 1989-90, this initiative has been carried out under the auspices of the National Wastelands Development Board (NWDB), which was founded in 1985 under the Ministry of Environment and Forests. Since July 1992, both the NWDB and the programmes it supports have been administered by the Ministry of Rural Development's Directorate of Wastelands. The IWDP has been implemented on a watershed basis since April 1, 1995, in accordance with the standard criteria for watershed development. The initiative also helps to create jobs in rural regions while increasing people's engagement in wastelands development programmes at all phases. This results in a fair distribution of benefits and long-term growth.

National Watershed Development programmed for Rain-fed Areas (NWDPRA)

Watershed development projects have been undertaken as part of various programmes established by the Government of India from time to time. In 1987, the DPAP and the DDP embraced the watershed method. Watershed was also employed as a planning and implementation unit in the IWDP adopted by the NWDB in 1989. The NWDPRA was established as a centrally funded initiative by the then-Union Ministry of Agriculture and Rural Development in July 1986, and it is currently administered by the Ministry of Agriculture. The NWDPRA incorporates elements of the DPAP, DDP, and IWDP, as well as the extra dimension of developing arable lands via improved crop management technology.

The following criteria are used to pick districts: (a) the annual rainfall should be 500-1,125 mm, and (b) the irrigated area should be less than 30% of the agricultural land. The project had been undertaken on a watershed scale. The major goal of the project was to make the most use of the available rainfall while reducing the danger of crop failure. The project was entirely funded by the Government of India. Under the Ninth Five Year Plan, it was a main thrust initiative of the Department of Agriculture and Cooperation.Although the emphasis of each land resource development programme has varied, the core goal of land and water resource management for sustainable agriculture has remained consistent. As previously stated, the Hanumantha Rao Technical Committee investigated the implementation and impact of the DPAP, DDP, and IWDP programmes throughout the country and recommended that a common set of operational guidelines, objectives, strategies, and expenditure norms for watershed development projects be developed, integrating the features of the three Ministry of Rural Development programmes. As a result, the Ministry of Rural Development developed a set of standard principles in October 1994.

Based on the experience with the execution of the previous recommendations released in 1994, the Department of Land Resources, Ministry of Rural Development, amended these rules in 2001.The Department of Agriculture and Cooperation has also provided instructions for the NWDPRA's implementation.A National Rain-fed Area Authority (NRAA) has been established to concentrate on the concerns of rain-fed regions in India. Its mission would include all elements of sustainable and comprehensive development of rain-fed regions, including suitable agricultural and livelihood system techniques. The authority is divided into two parts: (a) a governing body led by the Minister of Agriculture, and (b) an executive committee comprised of a Chief Executive Officer (CEO) and five technical specialists.

Development of Rural Areas

The NWDPRA is in effect in 28 states and two UTs. An area of 2.34 lakh acres was treated and improved at a cost of Rs 94.20 crore during 2006-07 (up to December 2006). Moreover, 38,971 water collecting structures and 38,204 run-off management structures were built in 2006-07. Moreover, by the end of December 2006, 29,995 Self Help Groups (SHGs) and 42,425 Users Groups (UGs) had been founded and operationalized.The Department of Agriculture and Cooperation and the National Bank for Agricultural and Rural Development (NABARD) have established a Watershed Development Fund (WDF) at NABARD, with both contributing equally to a capital of Rs 20,000 crore.

The National Commission on Agriculture (NCA) of 1976 proposed, for the first time in India, the planting of trees on degraded forest and non-forest areas to increase the country's forest cover. After that, throughout the 1970s and 1980s, the GoI implemented large-scale social forestry programmes, including farm forestry, to engage people in afforestation projects on private and communal holdings. The 1988 National Forest Policy (NFP) emphasized the need of public engagement in forest conservation and management. The Ararbari experiment in West Bengal, which involved local people in the protection and management of degraded forests, gave rise to a new concept known as JFM, which refers to forest co-management by local people and the forest department, usually mediated by a local non-governmental organisation (NGO). 5 As a follow-up to the NFP of 1988 and based on the Ararbari experiment, the GoI has issued instructions and directions on the JFM on a regular basis.The first policy directive was a JFM circular published by the Ministry of Environment and Forests, GoI on 1 June 1990 for the participation of local communities and volunteer agencies in the regeneration of degraded forests. After that, state governments enacted their own JFM resolutions.

The Ministry of Environment and Forests has published new operational rules for the development of a new programme known as the National Action Plan for the Tenth Five Year Plan (2002–07). These recommendations aim to promote a participatory approach to forest development for GoI-sponsored afforestation programmes. Afforestation projects that were in existence during the Ninth Five Year Plan have been incorporated into the new NAP in order to "prevent multiplicity of schemes with identical aims" and to maintain "uniformity in financing pattern and execution method."To allow for greater community participation in planning and implementation, these guidelines stipulate that all new centrally sponsored afforestation schemes will be implemented by a two-tier setup consisting of Forest Development Agencies (FDAs) at the forest division level and Joint Forest Management Committees (JFMCs) at the village level. The FDA is a new organization that will be formed at the territorial wildlife Natural Resources and Infrastructure Development Programmes 227 forest division level. It will be a registered society under the Societies Registration Act 1860. In addition to JFM committees, currently existing village institutions with new names will serve as implementation agents at the grassroots level.

By signing a Memorandum of Understanding, the FDAs will collaborate with JFM Committees (MoU). On the one hand, the FDAs will enhance existing JFM committees while also forming new JFM committees. To put it simply, the NAP's goal is to make JFM a "key essential aspect" of all afforestation initiatives in the nation.

In India, there are presently about 64,000 forest protection committees/JFMCs scattered across 27 states, maintaining over 14 million hectares of degraded forests. This indicates that the JFM

manages 22 percent of India's total forest cover of 63.73 million hectares. In addition, a huge number of self-initiated forest protection groups (SIFPGs) maintain forests in India using the participatory forest management philosophy. Thousands of SIFPGs are protecting large areas of forest in the states of Orissa, Bihar, Gujarat, Rajasthan, Karnataka, Madhya Pradesh, and Andhra Pradesh, which were established by village communities with a strong economic dependence on forests and where a tradition of community resource management is often still surviving.

Million Wells Plan (MWS)

During 1988-89, the MWS was introduced as a sub-scheme of the National Rural Employment Programme (NREP) and the Rural Landless Employment Guarantee Plan (RLEGP). The Scheme remained as a sub-scheme of the Jawahar Rozgar Yojana (JRY) after the merging of NREP and RLEGP in April 1989. It is being implemented as an autonomous plan starting of January 1, 1996. The scheme's primary goal is to offer free open irrigation wells to individual impoverished small and marginal farmers from the Scheduled Caste/Scheduled Tribe (SC/ST) group, as well as released bonded labourers. If wells are not viable owing to geological constraints, alternative smaller irrigation works such as irrigation tanks and water collection structures, as well as improvement of land belonging to small and marginal farmers, might be conducted. The target population was broadened to include non-SC/ST poor, small and marginal farmers beginning in 1993-94. Beneficiaries are expected to build their wells using their own labour as well as local labour, for which they are compensated. The use of contractors is prohibited. A wage-to-material ratio of 60:40 must be maintained. Any additional material costs may be covered by other private/public sources. The plan does not include any lifting equipment. Beneficiaries wishing to install a lifting device, on the other hand, are given priority in getting aid under IRDP.The system is supported by the centre and states in an 80:20 split. The central government provides all finances for union territories. Money are provided to states/UTs based on their share of rural poor to total rural poor in the nation.

Watershed Development Project for Moving Agricultural Area in Rural Development (WDPSCA)

Shifting agriculture is a primordial form of cultivation that is considered as the first stage in the shift from food collecting and hunting to food production. When this food production method first appeared, it functioned effectively and there was a balance between fallow periods of 20 to 30 years. With growing population pressure, the jhum cycle has gradually decreased from three to six years. This has resulted in the issue of land and ecological degradation.

According to the 1983 report of the Task Force on Development of Shifting Cultivation Areas, the total area impacted by jhum is 43.57 lakh hectares, spanning over the states of Andhra Pradesh, Arunachal Pradesh, Assam, Bihar, Madhya Pradesh, Manipur, Meghalaya, Mizoram, Nagaland, Orissa, and Tripura.Control of Shifting Cultivation (CSS) was launched as a pilot project under the Fifth Five Year Plan, with full financial support from the central government, and was administered by the Ministry of Agriculture. The plan was introduced in 1976-77, and it included all of the north-eastern states, as well as Andhra Pradesh and Orissa. Following two years of operation, the project was transferred to the state sector on April 1, 1979, by resolution of the National Development Council (NDC). Nonetheless, the plan was extended till 1982-83 in the then-Union Territories of Arunachal Pradesh and Mizoram.

During the Seventh Five Year Plan, the scheme for shifting cultivation control was implemented with 100% central assistance to the state plan programme in nine states covering seven north-

eastern states, Andhra Pradesh, and Orissa, in accordance with the recommendation of the Task Force on Shifting Cultivation (1983). After the NDC's decision, the plan was handed back to the public sector and was phased down beginning in 1991-92. During the Seventh Five Year Plan, the plan was also conducted via the Ministry of Agriculture on the basis of a family development strategy, with 26,512 jhumia households benefiting from the programme at a cost of Rs 60.72 crores. In response to a compelling demand from the north-eastern states, the Planning Commission decided to revive the project for the north-eastern area solely as an extra central aid to state plan schemes beginning in 1994-95. As a result, the initiative is being carried out on a watershed basis in seven north-eastern states, namely Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, and Tripura, with 100% extra aid to the state plan under the name of WDPSCA.

The program's main goals are as follows: to protect the hill slopes of jhum areas through soil and water conservation measures on a watershed basis and to reduce further land degradation; to encourage jhumia family relocation by providing developed productive land and improved cultivation packages; to improve the socio-economic status of jhumia families through household/land based activities; and to mitigate the negative effects of shifting cultivation.

TADP/Tribal Sub Plan (TSP)

For the first time, a strategy of allocating funding for ST development was developed in the Fifth Five Year Plan. Due of the concentration of ST populations in certain locations, the TSP was created to secure the flow of benefits from all sectoral programmes and to enable integrated service delivery in tribal communities.The techniques of measuring funding from identifiable programmes and customising them to the requirements of indigenous people and areas—where necessary were specified in the recommendations provided to state administrations. As a result, distinct sub-plans covering 63% of the indigenous population in 16 states and two Union Territories were developed. For operational reasons, the TSP regions were split into 180 Integrated Tribal Development Projects (ITDP).Protective measures and the abolition of exploitation were given top emphasis. Exploitation occurs in tribal regions via activities such as liquor sales, land expropriation, money lending, and forest food gathering. The states have passed laws/enacted rules prohibiting the transfer of land from tribals to non-tribals. State governments have also evaluated the legislation in recent years and taken necessary actions to close the gaps.

The TSP's broad objectives are: to close the development gap between tribal and other areas; and to improve tribals' quality of life by liberating them from exploitation in the areas of land alienation, indebtedness, bonded labour, and malpractices in exchange for agricultural and forest produce.Excise and forest regulations have been examined, and appropriate steps have been implemented to stop exploitation in tribal regions. Priority was given in development programmes to agricultural and related sectors, irrigation infrastructure, and forest-based and other businesses.

Infrastructure like as roads and rural electrification were tied to economic programmes. Agricultural programmes were designed to boost growers' earnings. Attempts were made to modify conventional farming processes.Training programmes in agro- and forest-based businesses were launched in order to generate chances for meaningful work. Several governments formed tribal development companies to play a vital role in establishing a new interaction between the tribe and the market economy via an integrated credit-cum-marketing

service. The tribal communities' most backward groups, many of whom were in the pre-agricultural stage of the economy, were identified, and specific programmes for their development were implemented. The tribal administrative system was evaluated and reorganised in order to deliver efficient services to the tribal people. The regions covered by 230 Rural Development the Fifth Schedule have been rationalised in order to offer more effective tribal protection and improved plan implementation.

The TSP programmes are funded by sectoral outlays in state plans, central programmes, and institutional financing available for various programmes. Under the Sixth Five Year Plan, a Special Central Assistance (SCA) plan was implemented. The GoI provides financial support in the form of outright grants to state governments executing the TSP under the programme, in addition to the monies provided to the state government under the state TSP. The SCA is a component of the TSP plan for accelerating socioeconomic development in the most backward tribal communities. The strategy is mainly intended to assist family-oriented income-generating activities and infrastructural incidentals (not exceeding 30% of total spending). The plan applies to 23 TSP states and Union Territories, including Assam, Manipur, and Tripura in the northeast.

Scheme National D'assurance Pour L'agriculture (Nais)

Climate variability induced by irregular rainfall patterns, increased severity of droughts, floods, and cyclones, and increasing temperatures have created uncertainty and danger, resulting in massive losses in agricultural productivity and cattle population in India. The crop NAIS has been in place since the 1999-2000 rabi season, with the goal of providing insurance coverage in the case of crop loss due to natural catastrophes, pests, or illnesses. The initiative is open to all farmers (both loanees and non-loanees), regardless of holding size, and works on a 'area approach'. It plans to include all food crops (cereals, millets, and pulses), oilseeds, and other commercial/horticultural crops for which previous yield data is available for a sufficient number of years. Small and marginal farmers are now eligible for a 10% premium subsidy, which will be split equally by the federal and state governments, 23 states and two union territories participate in the system. Over 971 lakh farmers have been covered by the plan from its establishment and up through Rabi 2006-07. The insured area was 156 mha, and the value insured was Rs 92,618 crore. Claims totaling around Rs 9,855 crore have become due against premium revenue totaling approximately Rs 2,943 crore, benefiting roughly 270 lakh farmers.

Farmers (especially non-loanee farmers) are not taking use of crop insurance in large numbers, despite a high claims ratio (1:3.3) and inexpensive premium prices, particularly for food and oilseed crops. A Joint Group was formed to offer modifications to the current crop insurance systems in order to overcome some of the restrictions and make the plan more farmer-friendly. The Group conducted an extensive study and made significant recommendations such as reducing the unit area of insurance to gramme panchayat for major crops, improving the basis of calculating threshold yield, increasing indemnity level coverage of pre-sowing/planting risks and post-harvest losses, personal accident insurance cover, and so on. The present NAIS was to be modified by the GoI 2008-09.6 The WBCIS is based on actuarial premium rates, but in order to make the programme appealing, the premium actually paid from farmers has been limited at "at par" with the NAIS. During the kharif 2007 season, the Agricultural Insurance Corporation of India Ltd. (AIC) executed the pilot WBCIS in Karnataka, covering eight rain-fed crops and insuring crops on roughly 50,000 hectares for a total insured of Rest 50 crore. The WBCIS is being deployed on a greater scale in selected parts of 12 states for the rabbi 2007-08 season in

2007-08. Apart from AIC, other insurers such as ICICI-LOMBARD, General Insurance Company (GIC) [10]–[12].

CONCLUSION

The IRDP's purpose is to help impoverished households improve their level of life. Empower the underprivileged by aiding them in all aspects of their growth. By supplying productive assets or inputs to its target groups.

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