

Resource base and Tribal Development: Agenda for Development Studies

***Anand Pd. Mishra**

Natural resources are 'factor of production'. Resource evolved along with labour and other forms of capital in producing goods and services. In an often cited statement, Erich Zimmerman wrote, "Resources are not pre given natural factors around which society fashions its production process but rather their usefulness is conditioned by cultural, historical, technological and other knowledge, and geographical circumstances. In fact, human effects through their creative minds produce resources. On this account, creativity of human beings and their cumulative knowledge, which stored in society from generation to generation played a major role in the process of resource evolution and development. The level and storage capacity of cumulative knowledge is basically an outcome which generated through interaction of man with nature and its resource potentiality. In this context, tribal society and its people had opportunity for interaction with nature many times since the evolution of our civilization. Consequently, the tribal people have accumulated more and more cumulative knowledge within their command. Moreover, the tribal people have long heritage and experiences in process of their interaction with nature and resource mobilization.

The knowledge of tribal people is primitive but its utility in production of nature should be considered as an important aspect in development studies. This element should be incorporated and updated through modern education in tribal areas. The expansion of resources base in tribal area may open many new dimensions in the discourse of resource identification and its production. The conventional view of natural resources is that they have value only when employed as factors of production. That view has led to calculation of optimal rate of depletion. In addition, it has led to the implicit recognition of resource depletion as a contribution to national wealth; resource consumption contributes to gross domestic

* Reader, Department of Geography, Banaras Hindu University, Varanasi, India.

product in national accounts. While conservation does not (*Steers and Litz 1993*). At local level, resources are viewed in the same way. Job and income are generated when natural resources are exploited as a factor of production. Unemployment and poverty result from their preservation (*Powar 1996*).

Considering above-mentioned aspects, resources may be classified as an evolving concept. It emerges through thumb of rule and depersonalization of knowledge. Moreover, resources are available stock that can be drawn on country's collective wealth, person's inner strength, creativeness, innovative skill etc. In this context, knowledge is truly the engine of all sciences and resources. Selective social control has negative impact on resource development process. On the other hand, scientific revolutions were loosened the social control where it took place. Europe has released tremendous individual energies through social and cultural revolution that initiated the economic and scientific development. Moreover, in any development process the role of resource base is very important. However, resource is a product, which is produced by human creativity with interaction of nature.

The nature has potentiality of infinite resources and it can only be endeavoured by human labour and skilful knowledge. In this process, human labour both physical and mental can play a vital role towards the expansion of resource base in the underdeveloped tribal regions. The proposed paper will make an effort to survey the various aspects of labour in development planning. It will also highlight the role of human creativity in underdeveloped region, as tools in solving the problems of conflicts and scientific development. Human creativity has linkages between Human Development Index (HDI), Human Poverty Index (HPI), resource base and development in a rational way. In contemporary debate on development and its relation to resource mobilisation now become more interesting and attract scholar and planner to think over this aspect in a scientific way. This debate can be categorically explained in following ways.

1. Conceptualizing Resources Base

Resources are the engine of all modern development and inadequacy of this may hampered the people aspiration for further development. The global society are always seeking to explore resources for the maintenance of future growth and it influence the human being and their world to become a 'resource conscious world'. The role of resource in development process is very much important and

this had motivated the geographer and other social scientist to start their study for various aspects of resources. Since the early 1980s a growing number of economic geographers and social scientists have put nature at the centre of their inquiries. Noel *Castraee* (2003), found, a key reason for this shift of focus is the increasingly obvious impact of existing economic systems on the natural world, notably which is arguably the dominant mode of producing goods and services worldwide. On this account, *Simmons* (1996), states that each human civilization was sustained by a particular set a resources and technologies for their exploitation. The industrialization based on fossil fuel energy represents a turning point in the history of human relations. In 19th century, industrialisation was based on the exploitation of coal, then after that 20th century had transformed in resource base on oil and gas. Thus, the changing pattern and its dynamics of resources production is an important factor in shaping the relationship between human societies and natural environments (*Michael Bradshaw; 2005*). Considering the various aspects of resource development process *Rees* (1985) observed, "resources are defined by Society not by nature". According to the World Bank (1998, 1999), in 1996 the so-called 'high-income countries' accounted for 16 percent of the world's population, but produced 80 percent of global Gross National Product (GNP) and accounted for 51.8 percent of global commercial energy consumption. Moreover, resource may consider the relationship between resource production and consumption and the level of economic development. In this context, *Blunden* (1995) observes, "because definition as a resource depends on usefulness to human society, natural materials may be required as a resources by societies in sometimes and places but not in others". In conceptualizing resources, the above-mentioned facts have reflected much scientific idea on resource and its various dimensions. It also highlighted the role of civilization change and level of production and consumption. These formulations about resources can be classified into following way.

1. The concept of resources is purely functional, inseparable from human wants and human capabilities. It is concept, which legitimately belongs to the social scientists. The physicist claims, that quantity of matter and energy in the universe is constant, the social scientist replies that nothing is constant, that everything is influx. (*W.H.Peach and James A. Constantin; 1972*).
2. "Knowledge is truly the mother of all other resources". (*Erich W. Zimmerman, 1944*). Through knowledge man has acquired control level and also expand

their resource base from Neolithic man (with misery and fear) to relatively content and secure modern man. Knowledge had constructed many cultural and scientific change in society. Freedom and Wisdom, the fruits of knowledge, is the fountainhead of resources. Moreover, the concept of resources is purely functional, inseparable from human wants and human capabilities. It is a concept, which belongs to area of social science.

3. Another aspect belongs to resources the impact of technology on resource generation. According to Hamilton, "It is technology which gives value to the stuffs which it processes, and as the useful arts advances the gifts of nature are remade. With technology on the march, the emphasis of value shifts from the natural to the processed good."
4. The individual and group interest for resource is largely explained by the functional vision of labour and its relation to society. In a different contextual social relation, resources can be discussed in a following way.
 - a. Resources that are exploited for individual benefit only; there is no conflict between social and private viewpoint.
 - b. Resources which are used only for social and there is no conflict.
 - c. Resources in the utilization of which both individuals and society at large are interested; Then following condition may arise.
 1. The supply is abundant; therefore, conflict may avoid.
 2. The supply is limited, then the conflict may be arise. (*Peach. W.H. and Constantin J.A. 1972, p. 28*).

Based on above facts, the production of resources is linked with the nature of production and social organisation. The maximum level of participation in resources development had ultimately produced the social equilibrium in society. This harmonious relation between society, development and production create an environment, which promote resource base :

2.a. Resources base

Resource is wide term and dictionary meanings are - that upon which one relies for aid, support or supply; mean to attain given ends, and the capacity to take advantage of opportunities or to extricate oneself from difficulties. The resources is known and often used in plural sense. Moreover, resources may be classified as :

Mean available, stock that can be drawn on, country's collective wealth, person's inner strength etc. In other world resources have relation with creativity, enterprising imaginations, innovativeness, inspired invention of human being and other skill of society in a given a development level. Natural resources exist as a form of interaction between the physical environment and society (Dean, M. Hanick, 2003). Nature has infinite resources potential in its command and the exploitation of those resources for the benefits of human being is determined through level of scientific knowledge and level of technology. Actually human energy and their creativity have played major role in shaping the availability of resources and its utility to humankind.

Table : 1 Energy Flow and Storage in the Physical World From of energy Storage, (Energy / Power in Trillion MK)

1. Energy released in large volcanic eruption	-	100
2. Chemical energy stored in all living organism	-	30,000
3. Energy release in large Earthquake	-	100,00
4. Chemical energy stored in dead organic matter	-	100,00
5. Heat stored in atomosphere	-	1,300,00
6. Kinetic energy of Earth's rotation on its axis	-	250,000,000,000
Form of Energy Flow		Million MW
1. Tide	-	3
2. Head flow from Earth's interior	-	32
3. Conversion of sunlight to chemical energy in photosynthesis	-	100
4. Conversion of sunlight to energy of motion of atmosphere	-	1,000
5. Sunlight striking top atomosphere	-	1,72,000

Source : Paul. R., Ehrlich et M., Eeosciences (1977) Population, Resources and Environment", W.H. Freeman and Company, Santrancisco, P. 14.

Philosophers, scientists, writers and the leaders of society enriched the classical debates of resources. In every period, apparently, a people live under a kind of

social tension that must be relieved. Something must be expressed. Relief comes through on expressive artists, philosopher, military leader, or scientists, depending on the crucial social need of the moment. The leader invariably expresses the mass unconscious aspiration of the race and the responds to a social tension of which he may not even be aware". (*Peach, W.H. and Lama, H. Constantin, 1972*). The evolution of resources, which exist in nature as neutral stuff, as a contribution of modern sciences, but the impact of science on human productiveness is cumulative-one invention leads to another. A new discovery increases the value of an old. The inventor of today stands on the shoulders of his predecessors and they, in turn, repeated the benefits of past performances. Moreover, the evolution of science is occurred on the basis of depersonalization of knowledge.

The above-mentioned aspect revealed that the production of resources have emerged through human creativity and depersonalization of cumulative knowledge. In this context, the creativity of man and their labour (both physical and mental) may be counted as a resources base in a given social environment. Table: 1 show the potentiality of energy resources, which fulfil our requirement for long period. However, the lack of appropriate technology has posed limitation to use these useful resources for our contemporary energy demand.

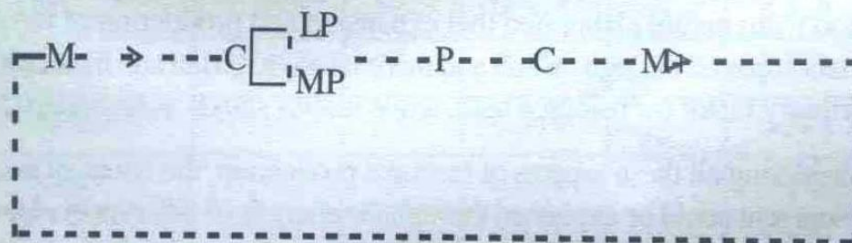
2.b. Resource Mechanism

The above-mentioned conceptual discussion on resources established the thesis that various resources at different times and production level have been produced by human labour and cumulative knowledge of society. Considering this aspect, economic geographers explain that resources are the production of nature by human effort. Since the early 1980s a growing number of economic geographers have put nature at the centre of their inquiries. *Smith (1984)* argued that nature is produced economically. He explained, "The production of nature idea only seems old because the nature-society dualism, under pinning technocentric and ecocentric thinking about the environment has much a powerful ideological grip on our imagination. In dissolving this dualism, the production of nature approach directs our attention not to how modern societies merely "interact with," "interfere, with", upset "nature and environment, since each of these terms implies an asymmetrical relationship between two ostensibly separate domains. Instead, it seeks to show that nature and society are "innerrelated" from the very start. (*Simirh, 1998*), Moreover, *David Harvey (1974)* in his famous writing entitled, "Population

Resources and the Ideology of Sciences, "criticised the concept of resource scarcity hypothesis and writing of neo-Malthusianism of early 1970s. Harvey rejected the argument of over-population. He said, "there are too many people in the world because the, particular ends we have in view (together with the form of social organization which we have) and the materials available in nature, that we have the will and the way to use, are not sufficient to provide use with those things to which we are accustomed (*Harvey, 1974*).

The evolution of resources has come into existence through various productive processes of nature. In primitive mode of production, the interaction of labour with nature was simple and was mostly dependant on manual Pattern of labour. After scientific invention and evolution of organised production system, the promulgation of resource has become quite different and complex. In capitalist society, the role of capital is very significant and at every step for resource development, capital and technology are being considered as essential component. In this context, the following diagram may helpful for the understanding of resource mechanism.

The Production of nature



- Where
- M = Money through which communities can purchase
 - C = Commodities
 - MP = Means of Production
 - LP = Labour Power
 - P = Combined productive forces
 - C = Production of new commodities with value addition.
 - Δ = Profit.

Fig. 1: Based on Smith, Harvey and Marx for the nature of Production.

Fig. 1 : Reveals the process of the production of nature in a capitalist economy

and society, In figure M (money) is put forward to purchase C (commodities). Moreover, MP (means of production inputs, machines) and LP (labour power) - which are combined in the productive process (P) to produce a new commodity (C), which get value additions and earned profit (Δ). This profit further reinvested to make more money for new round of production. The above-mentioned mechanism for resource production explains about the dualism in capitalist production system. This duality depends on the character of the labour done by human labour. New values are created by the concrete human labour and the value of the means of production used in the process of production. *Marx (1984)* explain it as, "the property therefore which labour-power in action, living labour possesses of preserving value, at the same time that it adds it, is a gift of nature which costs the labourer nothing, but which is very advantageous to the capitalist".

The above mentioned facts about production of resources has explained the significance of human labour (physical and mental) and the changing faces of human labour have been played a major role in expanding the resource base of society. In any development studies, the issue of resource base is very much crucial and detatable. Most of the capitalist logic regarding the issues of resource base and development have favoured about the role of money as basic component by ignoring human labour and creativity. However, the histogenesis of resources and its production from nature elaborated that expansion and production of resources have been completed through, MAN and their creativity, Man and their creativity are the primary factor for resource base, while money stands as secondary factor.

Considering all these aspects of resource production, the issues of resource and development could be explained through the analysis of different evolutionary faces of human civilization and its interaction with society and nature.

3. Resource and Development

In contemporary development studies, the issues of resources and its mobilization have created many debatable points both for the academics as well policy makers. Many are in opinion that substantial amount of capital flow may ensure the tempo of development. However, classical meaning of resources is associated with human labour and creativity. Most of the resources have produced by man and capital itself is a secondary product of civilization development. The level of development of geographical regions could be explained through the gradual enhancement of human knowledge and creativity in a particular social and cultural context.

Table 2 : Human Development Index for India - combined

State/Uts	1981 Value	1981 Rank	1991 Value	1991 Rank	2001 Value	2001 Rank
Andhra Pradesh	0.298	9	0.377	0	0.416	10
Asam	0.272	10	0.348	10	0.386	14
Bihar	0.237	15	0.308	15	0.367	15
Gujarat	0.360	4	0.431	6	0.479	6
Haryana	0.360	5	0.443	5	0.509	5
Karnataka	0.346	6	0.412	7	0.478	7
Kerala	0.500	1	0.591	1	0.638	1
Madhya Pradesh	0.245	14	0.328	13	0.394	12
Maharashtra	0.363	3	0.452	4	0.523	4
Orissa	0.267	11	0.345	12	0.404	11
Punjab	0.411	2	0.475	2	0.537	2
Rajasthan	0.256	12	0.347	11	0.424	9
Tamil Nadu	0.343	7	0.466	3	0.531	3
Uttar Pradesh	0.255	13	0.314	14	0.388	13
West Bengal	0.305	8	0.404	8	0.472	8
All India	0.302		0.381		0.472	

Sources : Based on planning commission 2001

Table 2: has shown the level of Human Development Index (HDI) for different state. The table also reveals about the relationship between the HDI and overall modern development. The most deprived state interms of human resource development are Bihar (15th rank), Assam (14th rank), Uttar Pradesh (13th rank), Madhya Pradesh (12nd rank), Orissa (11th rank) etc. These states are also backward in the process of modern development and mostly predominated by tribal population. Their severe condition is reflected by the prevailing nature of Human Poverty level. However, the regions of poverty have maximum resources and its potential in most deprived parts of India. These facts of development have

conceptualized the role of human resource in furthering the process of modernization and development.

Table 3: shows the magnitude of severe poverty in most deprived seven districts of India. The rural population Kalahandi district of Orissa has shown the maximum concentration of severe poverty (34.08 percent) followed by Bahraich of U.P. (23.2 percent) 14' Kishanganj district of Bihar (27.62 percent), Damoh of Madhya Pradesh (21.78 percent) etc. These poverty-stricken regions have been deprived since long period of time in terms of human resource development.

Table 3 : Concentration of Poverty

State	Region	Districts	Rural Population (Poor) in %	Rural % Population (Severdy Poor) in %	Urban % Population (Poor) In %	Urban % Population (Severdy Poor) in %
Orissa	Southern	Kalahandi	81.02	34.08	45.64	33.53
Bihar	Northern	Kishanganj	58.68	27.62	49.37	21.68
Madhya Pradesh	Central	Damoh	50.13	21.78	53.68	32.93
Uttar Pradesh	Eastern	Bahraich	48.6	23.2	38.6	18.48
Uttar Pradesh	Western	Buduan	29.59	10.24	31.03	14.37
Rajsthan	Western	Barmer	25.48	5.84	23.68	7.43

Sources : Based on K.K.Datta and Savita Sharma, Level of Living in India, Planning Commission, 2000.

4. Resource : Expension of Resources in Tribal Areas

Most of the tribal areas are full of natural resources but have characterised by extreme human poverty. The prevalence of human poverty can be summarised on the existing nature of expectancy of life below 40 years, status of knowledge and other modern skill, and status of comfort level of individual as well society. These are the elements which affects the level of human resources and overall the process of development. The areas having maximum concentration of Human Poverty Index (HPI) are mostly dominated by tribal people and experimenting regions of capital investment in contemporary development. The ongoing

development process in tribal revealed, that the issues of resource expansion have been closely associated with the better health and education facilities for people. Recently, most of the development projects have victimised the people and creates the problems for society. Victims of development - the project affected people (PAP) addanother unpleasant dimension to the tribal area. *Bandyopadhyay (2007)* observed that between 1951-2005, 50 to 60 million persons were forcefully evicted from their hearth and home. Among the project affected people (PAP) tribal constituted 40 percent. The absolute figure would be 20-40 million out of the total tribal population of a little over 80 million. It is estimated that 28 percent PAPs people has been property rehabilitated. It is also estimated that only 20 percent tribal people had been property rehabilitated (Bindyopadhyay).

The above-mentioned discussion gives us insight about the resource base of tribal people. They are deprived because they have minimum level of health and education facilities. The prevailing poor status is defined their level of human capital which is not up to the mark. Under the above-mentioned condition and any modern industrial development has created the problem of development-induced displacement. The diversification in economy and employment structure has not absorbed the tribal people in its gambit of development because of primitive skill and knowledge.

Moreover, the quesiton of resource expansion in tribal belt are directly linked with the enhancement of human resource, i.e. expectancy of life, health condition, knowledge, and comport level in a given situaiton of tribal society. To achieve this target, a specific health and education programmes based on local knowledge and tradition should be launched in deprived partys region. This initiative may be proved a right direction towards tribal development.

5. Tribal Development

Previously discussed various dimension of resource and development explains the pattern of Socio-economic growth in different parts of regions. However, the issue of tribal development needs to a fresh attention from policy makers and developmental agencies. Tribal are closely associated with their nature and deprived from modern educaiton and health facilities. Under these conditon, most of the tribal people have loosen their command over native resources and become unfit to participate in modernphase of industrialization. Therefore, most of the industrial development in tribal belt have dent negative impact on innocent unskilled tribal people.

In this context, human capital in the form of education and skills are important factor for unequal distribution of productive asset and its ownership. Before, initiating any attempt for modern development, a sizable investment in the area of human

capital for tribal people should be ensured. In tribal area, the health and education are closely related in economic development. Considering, the various aspects of economic development, the issues of tribal development have now come to conclusion that there should be a proper linkages in between the process of modernisation and ground reality of tribal. Tribal are associated with nature and their knowledge has cumulative strength from one generation to another. Policy makers should consider this unique feature of tribal society as a vital component for resource base. The issues of resource expansion at first stage start from the investment in education, which promote the skill level of tribal people through consideration of their cumulative knowledge.

The following figure may reveal the mechanism of tribal development.

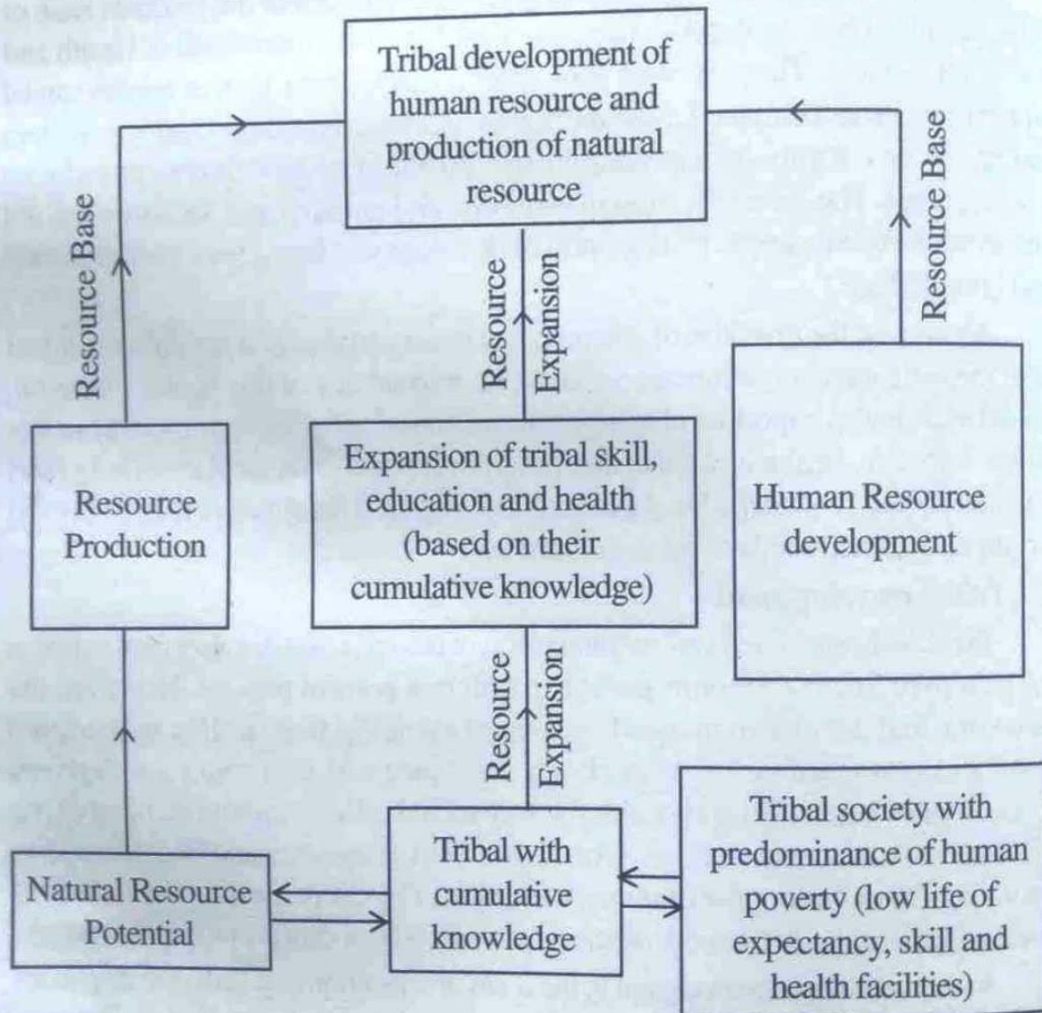


Fig. 2 : Plan for Tribal Development

6. Conclusion

Now, based on above-mentioned facts, the following conclusion, regarding resource base and tribal development, may be drawn -

- i) Resource is a production of nature through human labour and their creativity. Therefore, the issues of expansion of resource base are associated with development of human resource.
- ii) Any initiative for tribal development should consider the prevailing nature of human poverty (low level of life expectancy, knowledge and skill and modern health facilities) rather than modern industrial development.
- iii) The process of human resource development is vital element for modern industrial development.
- iv) The expansion of skill and human resource development among tribal people may open opportunities for tribal to participate in emerging economy of industrialisation. This may also minimise the issues of antagonism in the process of development and ensure the maximum and optimum participation of tribal people.

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