Title : Is There An Alternative to Industrialisation for Sustainable Development of Jharkhand?

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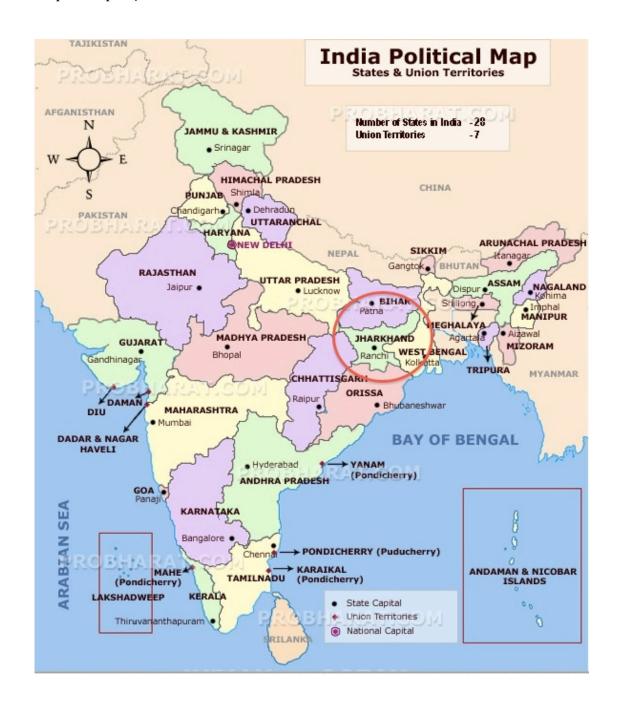## Table of Contents

Annexure 1: Rough checklist of questions

Annexure 2: List of interviewees

Abstract

Industrialization in India has created conflict over large developments and seemed to threaten sustainable development model. With the help of this research, I tried to understand the reasons behind opposing industrialization and also whether the social movements in near future will protest against this industrialization process. Then whether their protest is directed towards sustainable development concept or not? Whether they are searching for alternatives or not? If yes, what are they?

I found that ill experiences of local people with this industrialization have caused conflicts. Moreover, the present social movements will continue to protest against large development projects. In addition, their protest is directed towards the concept of sustainable development. Furthermore, there are a few possible alternatives available such as agriculture, forest and forest produces, herbal medicines, renewable energy, and tourism.

Then, I went on arguing, firstly, development model should focus on development of overall society and preserve the societal values. Secondly, development model should be along the lines of sustainable development and should be able to meet the basic needs of entire population. Thirdly, development needs to be redefined from cultural perspective rather than more production and more consumption. Fourthly, the emphasis should be made more on intra-generational equity rather than inter-generational equity.

Map 1: Map of Jharkhand in India.

Map 2: Jharkhand Mineral map.

1. Introduction

What is the problem?

The root of debate on sustainable development goes back to 1798 when Thomas Malthus came up with his book "Essays on the principle of population". In this book, his central question was "whether the world as a whole is on a trajectory in which living standards can be improved or at least maintained into the indefinite future, or whether the current trajectory is likely to overtax the natural environment and lead to a consequent downturn or 'crash' in living standards" (Brander, 2007: 2). Afterwards, the issue of environmental degradation, overpopulation, and resource depletion was accentuated by Rachel Carson (1962), Paul Erlich (1968), and Meadows, Meadows, and Randers (Brander, 2007). As a result in 1980s, United Nation took the initiative to focus on these environmental issues in addition to economic growth and formed Brundtland Commission that came up with '*Brundtland Report*' or '*Our Common Future*' published by WCED[1] in 1987 (Osorio et al., 2005; United Nations, 1992).

WCED (1987) in this report acknowledged that human activities like industrial extraction, and agriculture related activities are causing environmental degradation. In addition, Roy (2001) goes on to claim that industrial activity among them is more destructive, which causes threat to sustainable development compared to any other activity. Currently, these activities are being more often linked with the debate of climate change, declining quality of air and water, and soil fertility. These debates on making the resources available for the human population led the discussion towards sustainability of the environment, where environmental constraints were brought in to economic growth.

Why this study?

The purpose of the case study will be to understand firstly whether the present social movements will continue to contest installation of large industries with the ideology of 'no more new extractive industry' and look for alternatives other than industrialization. Secondly, this research will also help to understand

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[1] World Commission on Environment and Development

whether the politics of social movement and tribals are directed towards sustainable development context or not.

Research question

Why the social movements are opposing industrialization? Are the local people of Jharkhand looking for alternatives to industrialization? What is the variation in conceptualization of these alternatives to industrial development by Adivasis and Dalits in Jharkhand?

This research question can further be divided into four sub questions. For instance, do most of the landowners, civil society organizations, and tribals are opposing the industrialization? What are the main reasons behind opposing industrialization? Are they proposing any alternatives? What are the alternatives to industrial development interpreted by local people? Why there are differences in prioritizing alternatives? What are the implications of these alternatives in the lives of local people? What is the role of social movements and tribals in promoting environmentalism?

Why Jharkhand as a regional case study?

Jharkhand means 'land of forests', which was recently separated as state on 15th November 2000 and here mainly Adivasis[2]' and Moolwasis[3] have lived in this region from the beginning (Areeparampil, 1996: 1524; Bineet J. Mundu, 2006). In addition, Adivasis practiced self-governance such as Manki-Munda or Majhi Parganait system, for many generations (Sharan et al., 1999). This is a system to govern their community's socio-political, and economic aspects. Moreover, they have a symbiotic relation with the nature and their festivals are based on nature and seasons such as '*Baha Parv*' means festival of flower, which is being celebrated to welcome new flowers into trees. Moreover, they managed their livelihood with agriculture and forest produces till date. They exploited their nature just to meet the need and not for making surplus.

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[2] Literal meaning is original settlers, and they have unique culture, language and administrative systems. Moreover, they are also referred to as Indigenous People and by government as Scheduled Tribe (ST) for administrative purpose.
[3] Those who lived along-with Adivasis' in this region but they are not Adivasis.

Furthermore, Jharkhand is one of the richest states for ores and mineral resources that have got huge reserves of coal, iron, copper, uranium, and fieldspar, and has densed forests like Saranda and Neterhat, which is among the Asia's largest forest for Sal trees (Government of Jharkhand, 2011; Areeparampil, 1996). In addition, Ahmad and Lahiri-Dutt (2006: 321) explains that "the working of Jharia, Bokaro and Karanpura coalfields began in 1856, and in recent decades the region has been one of the favorite destinations of mining, power, irrigation and other large industrial projects". Apart from these, there are already big industries including SAIL[4], UCIL[5], Tata Company, HEC[6], ACC[7] Cement, and CCL[8] in this state and this states is still ranked amongst the poorest states as per Multidimensional Poverty Index (Alkire and Santos, 2010).

Industrialization was rapid here after formation of new state and as a result more than 100 MOUs[9] have been signed within a decade (Dungdung, 2009). Meanwhile, the social movements by Adivasis and Moolvasis grew with this increase in MOUs. These resistance movements basically show an essence of conflict over large development projects and that is the reason, I choose Jharkhand as a regional case study.

Limitations

This research has got three main limitations including this research has to be completed within limited time, limited word, and with limited financial availability. I believe these limitations may sometimes affect the quality and the result of any research so this may apply to the present research also.

Outline of dissertation

I will split this research into six chapters, where first chapter will be introduction that will include explaining problem briefly, research questions, and limitations. Second chapter will review literature on concept of Sustainable Development, industrialization in India and its impact on people and environment, and then the

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[4] Steel Authority of India Limited.
[5] Uranium Corporation of India Limited.
[6] Heavy Engineering Corporation.
[7] Associated Cement Companies.
[8] Central Coalfields Limited.
[9] Memorandum of Understandings.

social movements and tribal politics around environmentalism. Third chapter will be the conceptual framework. Fourth chapter will be the research methodology including research design, data collection methods, and method of analysis with some ethical issues. Fifth chapter will be findings and analysis of data. Finally, the sixth chapter will be the conclusion.

2. Literature Review

The purpose of this literature review is firstly to know, to what extent studies have been done in relation to the present research topic. Secondly, what are the ongoing debates about this research topic, and thirdly, to refute or accept some of the literatures as well as to explore new possibilities for further research. This literature review will further help me to understand whether they coincide with the interpretation of local people as a result of my studies or they have differing opinions. In this way, the literature review will assist to build the conceptual framework for this study.

This section can be broadly discussed under three sub sections namely sustainable development concept, industrialization in India, and social movements around environmentalism and tribal politics. I will begin this section by discussing conceptual issues with the sustainable development concept.

2.1. Sustainable development

Lele (1988 cited in 1991: 609) notes that, "the concept of sustainability originated in the context of renewable resources such as forests or fisheries, and has subsequently been adopted as a broad slogan by the environmental movement". Afterwards, this concept of sustainability was combined with other forms of development like economic development, and societal development, where it lost its essence of sustainability (Jabareen, 2008). Along these lines, WCED (1987: 43) defines sustainable development as

"Development that meets the needs of the present without compromising the ability of future generations to meet their own needs".

This definition mainly incorporates two concepts that include, the integrative management, and the equity concept.

In first case, Lele (1991) explains that the concept of sustainable development encompasses the social and ecological concerns in addition to the traditional

development objective. In addition, Commission on Sustainable Development (2001 cited in Jabareen, 2008: 185) explains "integrating social, economic and environmental concerns in planning and management for sustainable development has received considerable attention in recent years". Thus, sustaining economic growth, society, and environment seems to be at the core of sustainable development concept.

In this context, firstly, Rostow (1959) explains economic development refers to economic growth or modernization and transforming traditional society to a modern one for promoting industrialization, which is an important component of economic growth. In addition, he explains more production and more consumption will contribute to this increase in economic growth, which can be measured in terms of "the increase in production (GDP) per capita or income (GNP) per capita" (Hagen, 1980 cited in Newman and Thomson, 1989: 462). Thus, sustaining economic development would mean to sustain this more production and more consumption process.

Secondly, Meadowcroft (1999 cited in Kenny and Meadowcroft, 1999: 14) explains environmental sustainability refers to "preservation of natural environmental systems and processes, or addressing environmental issues to maintain social institutions and processes". Furthermore, Baker (2006: 5) explains that this "environmental development model is aimed not just at protecting nature, but at creating ecological society that lives in harmony with nature. In this model, the promotion of human well-being does not have to depend upon the destruction of nature".

Thirdly, Meadowcroft (1999: 15) explains that, "the expression *sustainable society* is usually taken to mean a society that has learned to live within the boundaries established by ecological limits. Society as a collective and ongoing entity can be sustained, because social practices which imposed excessive burdens upon the environment have been reformed or abolished". Thus, this concept of integrative management emphasizes in sustaining these economic, social, and environment aspects.

In sustainable development context, Lele (1991) explains that ecological constraints have been brought in the present form of economic development because of visible negative environmental consequences. Furthermore, Brander (Brander, 2007) explains the results of environmental degradation are seen in the form of climate change, global warming, deforestation, soil erosion, depletion in ground water level due to overuse and more carbon emission. In addition, Agyeman, Bullard and Evans (2002 cited in Jabareen, 2008) explains that these consequences have raised questions on their quality of life of society. Furthermore, Jabareen (2008) explains due to these reasons it has been suggested to integrate social, environmental aspects to economic development model within sustainable development concept. Here, it seems that the environmental concerns are incorporated to economic growth so that the development can continue.

In contrast, Ekins (2000) claims that the idea of economic development still dominates the societal, and environmental development in this integrative management approach, where development is still conceived as GNP. In addition, Reboratti (1999: 207-209 cited in Jabareen, 2008: 181) explains "the term sustainability belongs originally to the field of ecology, referring to an ecosystem's potential for subsisting over time, with almost no alteration. When the idea of development was added, the concept would no longer be looked at from the point of view of the environment, but from that of society and the capital economy". Furthermore, Naredo (1997 cited in Osorio et al., 2005: 503) supports the notion by saying "most of the contemporary in definition comes from the effort of matching economic growth (or development) with the idea of sustainability, when, in fact, the two concepts refer to different levels of abstraction and systems of thought". Here, the analysts have underpinned the claim of economics, who argued that environmental aspects are now being properly addressed in economic development. This basically shows the differing opinions about to what extent economic development is taking care of fast environmental degradations.

Apart from this, the concept of equity seems to be incorporated within this concept and comes out when asked for whom to sustain these resources. Firstly, the inter-generational equity refers to the distribution of resources between the present generation and the future generation (Jabareen, 2008; WCED, 1987). Secondly, the intra-generational equity refers to the distribution of resources between the rich and the poor or between the north and the south (Jabareen, 2008; WCED, 1987). At the same time, Jabareen (2008: 184) highlights that "the concept of intra-generational equity has received less attention in the literature on sustainable development, and particularly that on ecological economics". In this case, the authors seem to present the concern over equitable distribution of resources so that the entire population can meet its basic needs.

However, the authors like Pezzey and Toman (2005) have highlighted problems with distributing resources between inter or intra generation and what should be the basis. Furthermore, Pezzey and Toman (2005: 8) explains, "even if one accepts in principle the importance of intergenerational equity, there remains disagreement about how difficult intergenerational equity will be to achieve in practice". These authors seem raise the question on the validity of concerns shown about equitable distribution of resources. However, it can be felt that both the arguments seem to follow right direction of debate on how to secure the livelihoods or meet the basic needs of the entire population. After this, the concept of weak and strong sustainability should be discussed.

The concept sustainability from weak or strong ecology

Firstly, holding weak sustainability view, ICC (1990: 1) explains "economic growth provides the conditions in which protection of the environment can best be achieved, and environmental protection, in balance with other human goals, is necessary to achieve growth that is sustainable". In addition, WCED (1987) explains poverty enhances environmental degradation, that is why economic growth is essential to reduce poverty so that environmental degradation can be prevented. Furthermore, Hagen (1980 cited in Newman and Thomson, 1989: 462) suggests that "economic growth will improve the distribution of material welfare".

These analysts seem to believe that economic growth will have trickledown effect on poverty and environment. It means economic growth will help to reduce poverty, meet basic needs, and regenerate the environment and its resources.

However, proponents of strong sustainability, like Lele (1991) explains that economic growth in 1970s have failed to reduce poverty significantly and has ignored fast environmental degradation of resources. Furthermore, Bartelmus (1986: 18 cited in Lele, 1991) asserts that this in turn worsens the situation of poor people, who are directly dependent on these resources. For example, Brander (2007: 11) explains "deforestation in the Amazon has the direct effect of reducing the forest stock. Its indirect effects include loss of habitat for wildlife populations, reduced rainfall and water retention, changing weather patterns over a broad area, and reduced carbon absorption and oxygen production".

Adding more into this, proponents of stronger sustainability, also view "the Earth as finite and their conceding that no habitable future is possible unless the demand-side of the equation radically alters by rethinking our attitude towards nature as well as our view of economic progress and 'development'" (Williams and Millington, 2004: 102). In addition, IUCN et al. (1991) explain earth has a limited absorption capacity and environmental degradation will have direct impact on the poor people.

Here, the strong sustainability proponents seem to reject the idea that economic development will reduce poverty and environmental degradation. Moreover, they emphasize that need of entire population cannot be met if this fast resource exploitation continues because earth has limited physical stocks and limited absorption capacity to assimilate and recycle wastes.

Secondly, supporters of weak sustainability, like Williams and Millington (2004) explains that technological innovation will help to solve the problems in order to meet the needs of people by increasing productivity and will use fewer resources. Furthermore, Roberts (2004 cited in Williams and Millington, 2004)

argues that it is not only possible to improve the efficiency of economic growth through sustainable waste practices, but also that such environmental practices can themselves become a driver of economic growth. Here, weak sustainability analysts seem to believe that technological advancement is a panacea to solve the problems of resource scarcity and can meet the demands of people.

However, Brander (2007) sharing his opinion in favor of strong sustainability explains that it is difficult to divert resources for research and development to enhance technological advancement, when large population is struggling to meet its basic needs. Furthermore, Brander (2007: 21) explains that "relatively little progress has been made in the energy sector over the past 50 years. Other energy sources, including solar energy, wind energy, alcohol (derived from agricultural crops), and hydrogen fuel cells remain promising but progress has been slow". Thus, there is a need to reduce the demand for resources so that the basic needs society could be met instead of focusing on economic growth (Williams and Millington, 2004).

These authors have underpinned the previous argument made that technology will solve all problems. Moreover, they went on arguing that there is a need to reduce the demand made to the earth for sustainable development.

This section has discussed the main concerns over the debate of sustainable development concept and within this concept highlighted competing interest between economic sustainability with that of social and environmental sustainability. In addition, both the section establishes a relationship between industrialization in India and the concept of sustainability and the environmentalism came up as a major issue for the social sustainability. Thus, we shall review the literature on social movements and tribal politics around environmentalism in next section to understand to what extent these major influential groups are concerned about this serious issue.

2.2. Industrialization in India

India like other developing countries has followed the path of rapid industrialization in order to achieve higher economic growth and to stand in par with the industrialized countries. After independence, Jawaharlal Nehru as a first prime minister strongly supported heavy industrialization apart from many disagreements (Chakrabarty, 1992; Roy, 2001). Nehru influenced by Russia's economic development believed that industrialization would help to reduce poverty and inequality, and attain self-sufficiency to stand in par with the advanced industrial societies. Furthermore, he went on saying industrialization "was the only available means to attain substantial economic development" (Chakrabarty, 1992: 278) and regarded "big dams and heavy industries" as the modern temples of development (Sharma, 2010: 505). As a result of his efforts, many big industries and dams were established.

This rapid industrialization restarted with the formation of new mineral rich states like Jharkhand, and Chhattisgarh (Areeparampil, 1996; Roy, 2001; Sharma, 2010). As a result, 79 MOUs have been signed by government of Orissa by 2009 and in Jharkhand more than 100 MOUs have been signed to establish industries (CPI (ML) New Democracy, 2009; Dungdung, 2009) and in many other states of India there exists same situation. With this process, there started the conflict over large development projects, which was frequently reported in media and the website or monthly bulletins of CSOs[10]. In this relation, most of the media in Jharkhand reported that most of the MOUs[11] signed to establish industries during 2003 are not yet established because of delay in land acquisition. This land acquisition is delayed because the local people are protesting against these large development projects.

Thus, this section will explore the effects of large development projects on

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[10] Civil Society Organizations'.
[11] Memorandum of Understandings.

environment to find out whether it has positive or negative impacts on environment.

2.1.1. Effects of large development projects on environment

In this relation, the authors like Ekka and Asif (2000 cited in Ahmad and Lahiri-Dutt, 2006) and Areeparampil (1996) claim that the establishment of big companies like Tata Company, CCL[12], SAIL[13], and UCIL[14] in Jharkhand have resulted in different kinds of environmental problems including land degradation, deforestation, soil erosion, water, air and noise pollution. In addition, firstly, Uday Kumar et al. (1999) explains that industrialization and mining in Chotanagpur region has caused deforestation, thereby resulting in land degradation at the rate of 25 sq. km per year. Moreover, Priyadarshi (undated: 6) highlights the report of state of forests saying "between 1997 and 1999, about 3,200 ha of forest was lost in the Singhbhum region. Between 2001 and 2003 some 7,900 ha of dense forests were lost in the East and West Singhbhum districts". Furthermore, Areeparampil (1996: 1525) explains that due to coal mining in Jharkhand by CMPDI "more than 75 sq km of land being destroyed every year " and "70 mine fires covering an area of 17.32 sq km in Jharia coalfield" is under fire covering many parts of Raniganj, East Bokaro and Karanpura coalfield.

Apart from these instances, JOHAR and Mines Minerals and People (2003) draws our attention towards the case of land degradation and water pollution. They elaborate that Roro asbestos mine has stopped operating a couple of decades ago when all the asbestos was mined but the wastes of asbestos can still be found that was dumped openly, and through rain water, it goes into agricultural land and river.

Secondly, Priyadarshi (undated) and Sarkar (1999) claims that mining industries are polluting the river waters as well as the ground water severely. Furthermore, Areeparampil (1996) supports this notion saying the extraction of minerals has

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[12] Central Coalfields Limited.
[13] Steel Authority of India Limited.
[14] Uranium Corporation of India Limited.

resulted in reducing the ground water table significantly and this ground water is also receiving acid mine drainage and liquid effluents from these industries. For instance, referring to Damodar river, Uday Kumar et al. (1999) explains that more than 130 million ltr. of industrial wastes left after washing coal are disposed off each day in this river. In addition, those areas have more than ten similar washeries using the river water and have placed Damodar River as one of the most polluted river of the India.

These authors have presented that industrialization has mainly caused trouble for the environment in many forms, such as deforestation, land degradation by mine fire or mining, water pollution by disposing off hazardous waste materials. In addition, these consequences are mainly faced in the areas, where industries are operating or in its surroundings. **We know, it very well that these resources land water, and forest are the bases for human survival**. Thus, it seems the environment adjacent to industrial areas suffer more than the far places from it.

In contrast, Gupta et al. (2004: 14) explains that "safety standards followed at all the operating units of UCIL are the best amongst the comparable industries. Environmental control measures adopted at all the units are very stringent following the guidelines of national and international regulatory bodies". Similarly, Jha (undated) claims that Coal India takes appropriate measures to reduce environmental degradation in relation to air, and water, noise pollution, in addition to stand in par with the standard of laws. Furthermore, he exemplifies that CCL has increased its plantation from 5.06 sq. km to 5.64 sq. km in two years since 2006 in Ashoka and Piparwar of North Karanpura region.

Here, the authors have claimed that best efforts are made to reduce environmental degradations by following safety standards. In addition, they claim to reduce all kinds of pollutions, and furthermore, they explain that plantations are being done to compensate the forest loss.

This section has discussed the impact of industrialization on environment, where

some of the authors have claimed that industrialization has mainly negative consequences on environment. Whereas, others have claimed to reduce these consequences in order to improve the environmental quality and compensate environmental loss. Even though, this impact of industrialization seems to be negative on environment but we can expect it to have impacts that are more positive on society. This is because; these resources are being exploited to increase the human welfare. Thus, next section shall discuss impact of large development projects on society.

2.1.2. Effects of large development projects on society and people

Authors in relation to its impact on people argue that, displacement is the first and foremost impact of large development projects on society (Dungdung, 2009). Furthermore, Mundu (2011b) asserts that this displacement of people from their ancestral or pastoral lands have many negative impacts on the lives of local people.

Firstly, Areeparampil (1996) explains that dispossession of Adivasis' from their land threatens their identity, political autonomy, their language, and culture. Moreover, Centre for Science and Environment (2003) explains that displacement of Adivasis' vanishes their self-governance system such as Manki-Munda system or Majhi-Haram system. For instance, Mundu (2003) asserts the case of Parej mine displaced Dhaniram Majhi, a tribal chief under *Manjhi-Haram system*[15], lost his status of heading his Santal community in his village after being displaced to Pindra and he has no other option than following the social structure of the host community.

Secondly, Meher (2009) claims that the land alienation of tribal and marginalized people threatens their livelihood sources. This livelihood may mean their means of survival like agriculture, as agricultural labor, forest produces, and similar occupations. Furthermore, Cernea (2000: 3663) explains that "expropriation of land removes the main foundation upon which people's productive systems, commercial activities, and livelihoods are constructed". For instance, Singh

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[15] It is the self-governance system of Santali tribes.

(1985: 223 cited in Areeparampil, 1996: 1527) "the Damodar Valley project (DVC) alone has displaced 93,874 persons from 84,140 acres of land in 305 villages. Of these 37,320 acres were cultivated land".

Further adding on livelihood insecurity, Dungdung (2009) explains that local Adivasis were not given proper compensation, jobs, and rehabilitation and instead these jobs were mostly offered to outsiders. In addition, Sharma (2010: 507) explains that "in the case of mining and super thermal power projects (under the NTPC) in Singrauli region, out of the 13,865 land oustees, 4523 got the permanent jobs, with a majority of these jobs (74 per cent) provided by the coal mines. In contrast, the NTPC provided only 769 jobs to over 10,000 land oustees under the thermal plants". These authors have explained that the industrialization causes land alienation of local people resulting in their displacement. This displacement in turn threatens their traditional cultural and other systems as well as impoverishes them.

In contrast, Dash and Samal (2008) explains that these projects helps to ensure the livelihood of local people because they get a large sum of money as compensation, then job, hospital and education facilities. Furthermore, Jha (undated) explains that they get the other basic facilities as a benefit of being in a periphery of industries include road and rail transport, electricity, and water supplies.

These instances have shown, where some authors have argued that industrialization has not benefited the local people, who gave their land for setting up industries, rather it had negative consequences on society in the form of displacement. This displacement further vanishes their traditional self-governance system, culture, and intimidates their livelihood. Whereas, other authors share opposing view that these people get compensation amount, and jobs that secure their livelihood. In addition, they explain that these people get other benefit of in terms of road, and rail transport and power supplies. These two competing opinions also reflect the conflict over the issue, whether industrialization has positive or negative impacts on society. Due to this illusion

of industrialization development model towards the benefit it offers to environment and society, we shall explore the concept of sustainable development, to check whether it can provide us a solution as an alternative to industrialization or not.

2.3. Social movements around environmentalism and tribal politics

Touraine (2002) explains that the idea of social movement emerged in contrary to the conventional theory of class conflict. Here, Touraine (2002: 90) defines social movement "as organized conflicts or as conflicts between organized actors over the social use of common cultural values". Moreover, he explains that the focus of these movements changed over time, such as during nineteenth century labor movement took over central stage from class conflict. Klandermans (1984: 583), moreover, lists out "personality traits; marginality and alienation; and grievances and ideology " as the main reasons for people's involvement in these social movements. Based on these issues, two main theories developed having opposing views named Resource Mobilization Theory and New Social Movements Theory (Karmani, 2008).

Firstly, McCarthy and Zald (1977) argues referring to the strand of Resource Mobilization Theory that the success and failure of social movement depends upon the mobilization of resources including money, media, and labor and the relative deprivation ideology is ambiguous. In addition, Klandermans (1984) explains that people participate in these movements after comparing the cost and benefits in getting involved with it, they do not participate because of marginalization or personality traits. Furthermore, Edelman (2001: 289) explains that ""social movement organizations," regarded collective action mainly as interest group politics played out by socially connected groups rather than by the most disaffected. Movement "entrepreneurs" had the task of mobilizing resources and channeling discontent into organizational forms". Klandermans (1984: 583), for instance, asserts that "marginality and alienation, for example, were not the typical background of participants in such divergent movements as fascism in Germany (Oberschall, 1973), the student movement (Kenniston, 1968), the civil rights movement (Morris, 1981), and the union

movement (Moore, 1975)". Here, the proponents of resource mobilization theory seem to emphasize more on availability of resources rather than the cause behind the driving force of any social movement.

In contrast, Klandermans (1984: 584) states resource mobilization theory underestimates the importance of deprivation and marginalization related grievances in the social movements for social change. Furthermore, Edelman (2001) explains that it has disregarded the success of movements by poor people, who demonstrated their interest because they were marginalized and repressed, and they didn't have any resources. Moreover, Jenkins (1983) explains that the mobilization of resources depends on the interest of groups that may change during the process of pooling these resources. For instance, Walsh (1981 cited in Jenkins, 1983) explains that the protest against the Nuclear Power Plant in Three Mile Island has been successful to prevent it from opening, when protested by elite class and well supported by middle and upper middle class people and not because of availability of resources.

The resource mobilization theory seems to work as driving force in many cases and may lead to success of any movements, whereas in other times, it may not have the same affect.

Secondly, Calhoun (1993) explains the claims of New Social Movements, as this form of movement is very different from the traditional ones in terms of their ideology and goals, participation, structures, and tactics by citing feminism, youth movement, and ecological movement. Explaining more about it, Touraine (2002) argues this movement is a defensive movement to protect itself from the overarching spread of industrial phase of capitalism, where state is superseding its power to control the lives of society beyond an acceptable limit. Hence, furthermore, he explains, these movements are resisting mainly with the state to get back this control of their individual and collective identity.

In context of ideology and goals of New Social Movements, D'Anieri et al. (1990: 446) explains that "prior social movements fought to secure political and

economic rights from the state and other institutional actors, new social movements target their activities away from the state". Moreover, Pichardo (1997) explains that their tactics is to remain outside the control of state and with the help of demonstrations, and rallies, they pressurize the state as well as gain the political leverage. Furthermore, he explains that their participation is "an ideological, rather than ethnic, religious, or class-based community" and mainly includes people, who are directly affected or marginalized with the state or corporate actions (Pichardo, 1997: 417). For instance, D'Anieri et al. (1990: 447) explains that "earlier labor movements sought wage increases or social security benefits, new social movements focus on the establishment of cooperatives or alternative economic institutions where the quality of life at the workplace would increase job satisfaction and worker control ".

These authors seem to emphasize that marginalization and grievance are the main reasons behind people's involvement in social movements. Moreover, they explain that these movements are defensive rather than aggressive in order to protect their identity.

However, Karmani (2008) explains that the authors like Zimmerman (1987) and Scott have criticized that new social movement theory does not give due importance to the organizational operation and it is separate from the politics.
The analysts here seem to believe that grievance ideology is the main driving force behind the social movements and the resources are just the medium of facilitating this smoothly. Furthermore, they explain that resources may or may not lead to raise the issues but the grievances will certainly force people to react.

Social movements around environmentalism and tribal politics
Pichardo (1997: 417) explains that the "new middle class" and "geographically bound communities", who are directly impacted by the industrial activities are involved in the protest against different kinds of pollution including dumping hazardous industrial wastes in water, and land. Similarly in context of India, Gadgil and Guha (1994) explains that the conflict over natural resources is not new in India in contrast to industrialization. Furthermore, they explain that the

social movements and tribal politics grew around environmentalism, particularly in tribal populated states like Jharkhand (part of Bihar), Andhra Pradesh, Maharashtra, Madhya Pradesh, and Orissa due to rapid increase in large development projects in 1970s. Moreover, they explain that Chipko Movement[16] in Himalayas, Narmada Bachao Andolan[17] in Narmada River, and Bedthi Dam Project in Karnataka are good examples of environmental social movement in India. For example, recently CNBCTV18 (2007) explains that environmentalists protested against Posco steel company's new establishment in Orissa. Moreover, CPI (ML) New Democracy (2009) explains that environmental organizations' and tribals have strongly opposed the establishment of bauxite mines in the Niyamgiri hills, which would destroy the greenery and the water streams and have filed petition in the court challenging the environmental clearance by Ministry of Environment and Forest. Based on this petition, the bauxite-mining project is kept on halt on the ground of likely environmental consequences.

These instances of environmentalism shows that people in many parts of India are already in action to protect environment and also have formed social movements as well as in other parts it is dominated on ethnic grounds like the tribals.

Tribal politics, as same as other social movements around environmentalism, gained momentum in few cases and in other cases not. In this relation, Gadgil and Guha (1994) explain that most of the large development projects were established in tribal populated areas though not all and that's why the conflict over natural resources is more than in any other parts. In addition Stuligross (2008) explains that Jharkhand is the struggles in Jharkhand are prominent to define environment and these are mainly led by the tribals. Moreover, Centre for Science and Environment (2003) explains that in 1978 Devendra Majhi and Shailendra Mahto emerged as political leaders, who protested against cutting down of trees and plantation of teak in Saranda forest.

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[16] Hug the trees movement.
[17] Save Narmada river movement.

At the same time Centre for Science and Environment (2003) explains that government brutally suppressed these agitations resulting in police firing, looting, burning the houses of tribals, and killing them and then by 1984 this movement slowed down. Furthermore, Stuligross (2008) explains that these movements have shown their concern by raising the issues in Jharkhand region about environmentalism by focusing on protecting the land, water, and forest by associating it with the issue of displacement. Similarly, Civil Society Online (2009) explains that tribals' associated with the organizations' like Jharkhand Jangal Bachao Andolan has been protesting to protect the forests in Jharkhand for many years.

This section has so far discussed three main concepts. Firstly, the concept of integrative management and equity along with strong and weak sustainability has been discussed under the concept of sustainable development. Secondly, the debate about conflict over large development projects in India and its impact on environment and people was discussed. Thirdly, the two theories include resource mobilization theory and new social movement theory was discussed. In addition, the social movements around environmentalism and tribal politics have been discussed. Then, next section shall discuss the conceptual framework for this research explaining about the concepts to be used for analysis.

3. Conceptual Framework for Analysis

From literature review section, I have chosen the concept of sustainable development, and the social movements around environmentalism and tribal politics to use as a conceptual framework for the analysis. In first case, I will use the strong sustainability concept as well as integrative management concept within concept of sustainable development. Here, strong sustainability concept emphasizes on reducing the demands made to the earth for resources in order to meet the basic needs of entire population. For that, the environmental degradation needs to be prevented so that the stocks of resources are used wisely. Moreover, the concept of integrative management focuses on combining economic, social, and environmental aspects rather than just following economic development pattern because resources needs to be distributed between inter and intra generation.

In the latter case, I will use the concept of New Social Movements from the social movement concept. This is because, as Touraine (2002: 95) emphasizes the importance of social movement stating that there is a need to reawaken social movements and transform "anti-globalization movement" to a social movement to prevent totalitarian world and ensure democracy, justice and freedom in near future. It basically means the social movements need to check the state actions and strengthen democracy. Moreover, it will depend on the social movements, how strongly they articulate with the state on the issue of environmentalism.

The literature review shows that, people engage with the new social movements because they seem to believe on grievance ideology. In addition, they are believed to protect their rights from state and they demand the issues to be resolved away from the state not within the state. Moreover, they use demonstrations, rallies, and campaigns as their tactics to protest for their rights. Having discussed the conceptual framework, we shall further discuss the research methodology for this study.

4. Research Methodology

This chapter will discuss the methodology including research design, data collection method, data analysis method, and the ethical issues associated with this research. These can further be explained under the following heads one by one:

4.1. Research design

There are three main research methods that include quantitative method, qualitative method, and mixed method (Creswell, 2003). However, I will only explain the qualitative research method, which will be used in this research.

Schwandt (2001 cited in Rowlands, 2005) explains that qualitative research uses description, decoding, and interpreting in order to understand problem rather than quantifying the social phenomena. In addition, Creswell (2003: 227) explains that the focus is more on "participants' perceptions and experiences" to analyse multiple dimensions of any problem rather than just one dimension. Here, the authors have explained that by this qualitative method we can understand and explain different dimensions to any problem. It is a tool to investigate the issues in detail with the help respondents knowledge and experience. Thus, this increases the accuracy by reducing chances of missing out any important information. In addition, this method can help to explore, and explain existing concepts or produce new concepts and theories.

However, there are three main problems attached with it; firstly, it is time consuming, as it requires in-depth discussion with the respondent. Secondly, the quality of outcome to a great extent will depend on the skills of researcher. Thirdly, the generalization of responses is difficult because this method is an open-ended discussion rather than asking close-ended questions.

I chose this method to use in my research considering these benefits and limitations. This research needs detailed discussion with the respondents.

Moreover, it is appropriate because this research is seeking to explain why people are opposing industrialization and why they should look for alternatives to industrialization, and then to construct new idea by producing alternatives as per the experience of respondents.

<u>Approaches to qualitative research</u>

The literature shows ethnography, grounded theory, case study, phenomenon, and narratives as the main approaches to qualitative research (Creswell, 2003). Again, I will discuss only the case study approach that will be used in this research.

Kumar (2005: 113) explains case study approach "rests on the assumption that the case being studied is typical of cases of a certain type so that, through intensive analysis, generalizations may be made that will be applicable to other cases of the same type". Here, the author has explained that the case study approach is used to understand the problems of one case and find solutions that can be applied in other cases as well. In addition, this method can help us to understand one case in detail that increases the possibility of accuracy of research findings. Furthermore, it can save cost and time because instead of conducting study in many places, we research one single case.

However, sometimes it is difficult to generalize the findings of one case with the other, and then it may have misleading results. In addition, this could be because if there are dissimilarities in the situation or dynamics with each cases.

Based on above discussions, I believe that case study approach is suitable in this paper's context, where the situation of industrialization in Jharkhand can successfully be representative to other resource rich states of India like Orissa, and Chhattisgarh, as most of these states have similar problems and situations.

4.2. Data collection method

Data for the case study approach can be collected from primary and secondary source (Ranjit Kumar, 2005). Here, primary source may include observation,

interviewing, questionnaire, and FGD[18], these are being collected by the researchers as first time as raw materials (Mayoux, 2006; McQueen and Knussen, 2002). I will use interview method to collect primary data.

In secondary source of data, the printed and electronic books, journal articles, newspapers, web-pages, and reports published can be used (Creswell, 2003). These are basically the data collected and already used by other researchers. I will use most of them that will help me in reviewing the literature in order to know appropriate theories and assumptions, and what has been explored so far in this particular issue in order to avoid the repetition of same research what has already been done.

In the first case, Kumar (2005) explains interview as the interaction of researcher with the individuals with respect to any problem. These interviews can be structured interviews and semi-structured, where structured interview is planned well in advance, questions or contents are fixed. Whereas, in case of semi structured interviews, Kumar (2005), and McQueen and Knussen (2002) explain that this method is partly fixed and partly flexible, moreover, this gives an opportunity to researcher to deviate from the set guidelines as per the importance or relevance. It implies, the researcher identifies broad themes and the checklist of questions in order to maintain the focus on main issue rather than fixed set of questions to be asked to the participants.

These semi-structured interviews have the potential to explore the issues comprehensively due to its flexible nature. In addition, it can help to get the most closed answers to the research question. However, this flexibility can sometimes lead the researcher to deviate and loose the focus from topic. In addition, the quality of research will depend on researcher's capability, and there are also chances of enforcing biasness by the researcher by asking leading questions. Moreover, there could be problem in generalizing the responses, and this method is time consuming and expensive.

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[18] Focused Group Discussion.

I will use semi-structured interview because of its flexibility and comprehensive discussion feature, as this research needs more interaction with the respondents to know the issues and possible solutions in detail.

Whom to interview?

I will interview members of NGOs, GROs, politicians, Adivasi intellectuals, and traditional chiefs, as they can offer contrasting opinions. The benefits and challenges of interviewing these people can be discussed as follows:

NGO leaders

The NGO members including FBOs[19] can present the ground realities. In addition, these NGO members sometimes may include actually or potentially affected people from industries and this is the reason of association with these movements. Moreover, NGOs have three important characteristics, firstly, they are formal registered institutions and that's why they are more educated and organized that in turn helps them to critically think on the issues. Secondly, they have got a regular funding, which is an important resource to support and carry out the planned activities regularly. Thirdly, they have got good networks and contacts beginning from village to international level. All these features make them influential in the present society.

However, these NGOs sometimes may be motivated with their own self-interest and they use people's cause to get benefit out of it. In addition, they might be driven by their donor's agenda and the FBOs by their religious institutions agenda. In these cases, I might not get the real reflection of people's issues or interests.

GRO members

These GRO members might or might not be formally registered and they have got good networks or contacts from village to the national level but sometimes at international level. They are sometimes less educated and organized, and have no regular funding compared with the NGOs. However, most of the GROs are formed of actually or potential affected from industrial projects and they are not

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[19] Faith Based Organisation.

obliged to anyone other than their community that's why accurate responses can be expected from them.

However, I understand the fact that they may not be able to express themselves clearly and sometimes they may not get my questions correctly.

Traditional chiefs

Few traditional chiefs like Manki-Mundas, and Doklo-Sohor will be interviewed because they have governed these tribal villages for many generations. Their community is more likely to get affected directly, if their area falls under acquired land, indirectly, if their area falls adjacent to the land acquired by this by this industrialization process. Actual responses can be expected from them as landowners, or traditional chiefs though they may lack formal education and networks in other areas beyond their district or state. Therefore, they might not be as influential as NGOs or GROs.

Party members

Few party members belonging to national party and regional party will be interviewed, of which they are either recently engaged or for long time on people's cause. Firstly, they may share the perspective from a politician point view; it may help me to understand how the people in power or in government may think about Adivasis. Secondly, it will help us to understand how an Adivasi politician is concerned about the Adivasi issues. Thirdly, one leader has been in power for many a times that's why he may be expected to explain ground realities on the side of government.

However, there is a likeliness that they will not share the actual thought of the people and they may speak on the people's issues though they are not concerned about those or they have different opinions.

Adivasi Intellectuals

Few Adivasi intellectuals will be interviewed, who are either engaged with local people's issues for a long time or they have recently engaged. Some of them may be associated with NGOs or GROs, whereas others may not. This association can or cannot have influence on intellectual's opinion. This may help me to get

appropriate and logical responses, as they are likely to respond free from any biases because they do not work for any NGOs and they are free thinkers.

Interviewing these people should help me to get the answers of current research question. In addition, these interviewees will be selected from different districts of Jharkhand include West Singhbhum, East Singhbhum, Bokaro, and Ranchi, here except Ranchi all other districts are heavily industrialized. Furthermore, the expected sample size will be 20 due to the time and cost constraints and it is likely to be completed within 30 days time.

4.3. Data Analysis and Interpretation

As I have mentioned in the previous section that I will collect data from field in Jharkhand. This collected data will be presently as per the broad classification of theme in a qualitative manner. In addition, these data will not be quantified, it means I will generalize the view of interviewees rather than converting their view in percentage or quantity. Furthermore, I will analyze the data with the help of conceptual framework and the findings from the field for the purpose to understand whether the literature available depicts the true picture of the problem or not. Here, I will also try to find out the reasons behind the responses of interviewees towards the issue.

4.4. Ethical issues

I am aware that there are many ethical issues associated with the qualitative research throughout beginning from data collection to data analysis and interpretation.

1. Disclosure of full information about the study to the participants
2. Keep participation anonymous
3. Keep participant's details and views confidential
4. Take the consent of participants before publishing their opinions
5. Neutrality to be maintained in explaining the information about the study to the participants
6. Interviewees should be allowed to terminate the conversation at any point of time if they express their desire to do so

7. The information collected from the participants will be used for this research only and the information will not be passed on to other individual or institutions.

This section has discussed that the case study approach will be used under the qualitative research method. Moreover, twenty people will be interviewed using semi-structured interview from different parts of Jharkhand and secondary data will be collected from books, journal, and other publications. Furthermore, it has discussed the method of data analysis and some ethical issues associated with this research.

5. Findings and Analysis

This chapter will present the findings and analysis of the data collected from the fieldwork done in Jharkhand state of India. Both the findings and analysis will go together under the broad themes. I have split this chapter to six broad themes that will help to answer the research question and this can be discussed under the head as follows:

5.1. Reasons behind protest against industrialization

Most of the evidences show that the landowners, NGOs, and tribals are protesting against the large development projects in Jharkhand (Kujur, 2011, Lourduswamy, 2011) and the main reasons can be presented under three heads of social, economic, and environmental impact.

Social impact

Majhi (2011) and Deogam (2011) hold an strong opinion like others that industrialization have mainly negative impact on the social life of local people, who are alienated from their ancestral lands. Furthermore, Mundu (2011a) explains these negative impacts are in the form of displacement that endangers the self-governance system, their language, and cultural values. Moreover, Barla (2011) supports this notion exemplifying Noamundi and Gua, where industrialization has adversely affected the Manki-Munda system, their *Ote Ili Parv*, and *Marang Buru*. He further elaborates, firstly, the people today hardly respect or abide by the governance of Duccasai Munda even if he has got judicial power and he can solve the small disputes except rape and murder then also the people go to police station to settle the disputes rather than settling it with the help of Munda. Secondly, he raises a question, how Adivasis will celebrate their *Ote Ili Parv,* festival of land, without their land when their land will be taken away for industrial purposes. Thirdly, he raises question on how they will worship *Marang Buru,* the god of forests, when the forests will be cut down for establishing industries. Fourthly, he explains that Adivasis are loosing their values of cooperative, consensus, and participation. Furthermore, Kachhap (2011), and George (2011) explains that local people in past had an egalitarian society and they were very cooperative with each other in their community but

industrialization has weakened these values, and they lost their homogeneity. Moreover, Mardi (2011) shows his concern over threat to Adivasi identity by raising a question "where are the Santals and Hos, who used to live in the place where now Tata Company is situated?"

In contrast, George (2011) explains that industrialization had a mixed impact on the culture, it means the local people also learned some good things. Apart from her, none of the respondents mentioned about the good impact on local people. Rather, Philip Kujur (2011), and Toppo (2011) have said that, industrialization mainly benefited the Non-Adivasis in the sense that their culture, language and system grew.

Economic impact

In context of economic impact, Kachhap (2011), Mardi (2011), and Toppo (2011) explains that these Adivasis were mainly dependent on agriculture, forest produces, and some other small occupations like steel making for producing agriculture related equipments. Moreover, they explain that these sources of livelihood were enough to secure food and meet the basic needs of people, however, industrialization has destroyed these means by acquiring land and forest and by using the river water for industrial purposes. Similarly, Toppo (2011), and Minz (2011) also maintains that most of the people got either contract jobs or of labor grade jobs, whose lives mainly ruined because of insufficient wages, and mostly these people did not get the full compensation against their land. Furthermore, they explained that industrialization has mainly benefited the outside population, and company owners, businessman, and the privileged ones. Furthermore, Barla (2011) asserts that the government is destroying the livelihood of Adivasis by forced industrialization without developing any alternatives for them. He further elaborates that they are being affected in many ways, firstly, by acquiring their land, secondly by disposing off the *Lal Pani and Lal Mitti*[20] in the water streams and agricultural fields in the areas like Dubil (near Chiriya mines) thereby, reducing their fertility, which were previously multiple crop areas. Thirdly, their forest is being cut down that has

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[20] Red water and red soil with contents of iron ore.

resulted in loss of their livelihood because they used to use forest produces, and firewood in their daily life.

In contrast, Minz (2011), Kachhap (2011), and Philip Kujur (2011) acknowledges that industrialization has offered few jobs to the local people, compensation, and byproducts of industrialization. Furthermore, Toppo (2011) explains that a few local people got job at first and second class level, whose standard of living improved to some extent. Whereas, to others it offered benefits of bus and train transportation which they used to go to nearby towns to earn their livelihood whose production capacity was not enough to feed their family.

Environmental impact

Majhi (2011), and Toppo (2011) explains that cutting down of trees and disposing off industrial wastes in river water by Chiriya, Kiriburu, Megahatuburu, and Gua mines have visible negative impact in surrounding areas degrading land, reducing safe water, and dense forest. In addition, Kujur (2011) highlights that Sponge Iron Factory in Birmitrapur has been operating day and night causing river water, ground water, noise, and air pollution by dumping dangerous chemicals and heavy metals and similar situation can be seen in Piparwar, and Urimari. Furthermore, Kumar Ch. Mardi (2011) explains that the rivers like Subernrekha and Damodar is today referred to among the most polluted rivers in India. Similarly, Barla (2011) claims that huge Saranda forest is disappearing due to intense mining, which was previously stood as one of Asia's largest forest and now its density has come down below the minimum required level of 33 percent. In addition, cutting down of trees for industries have resulted in migration of animals like elephant, tiger, and birds from this Saranda forest.

Moreover, Barla (2011), and Philip Kujur (2011) explained that the mining companies have not made much of effort to reduce land degradation, water pollution and deforestation, however, they (mining companies) claim that they would take measures for reducing air and water pollution by installing cleaning machines but actually they never did it. In addition, Kachhap (2011), and Gayali (2011) explains that some plantation has been done to compensate the loss of forest though its insufficient. Apart from this evidence on few plantations, I did

not come across other efforts or the good impact of industrialization on environment. Besides these, Mullick (2011) terms all these large mining activities in Jharkhand as "a crime against ecology".

These evidences affirm to the claims made by authors that industrialization has mainly negatives impacts on society and the environment in the literature review section. These negatives impacts on society are in the form of threatening Adivasis self-governance system, cultural values, and livelihood. In addition, the negative impacts on the environment were in the form of deforestation, land, and water pollution, and reducing the fertility of soil. At the same time, it does offer benefits to the local people for acquiring land in the form compensation amount, jobs, and some cultural values. In addition, some plantation has also been done to compensate deforestation.

However, this is also evident that the compensations are not paid in full to majority of people, a small percentage of people got jobs out of which majority were contract laborers. In addition, the plantations done to compensate deforestation or to reduce environmental degradations are negligible in comparison to the extent of which they are polluting and exploiting the environment. Thus, I believe this industrialization in Jharkhand has mainly caused trouble many times greater than the benefit it has offered to the people and the environment. *If the industrialization is not benefiting the local people, then why should they accept this industrialization development model*? This question very clearly states the reason behind opposing industrialization.

Apart from these ill experiences, I believe there are two main reasons behind opposing industrialization in Jharkhand, which can be outlined in this paper. Firstly, this industrialization process has ignored the symbiotic relation of Adivasis with the nature. This relation is the main foundation of their life because their customs and traditions including self-governance system, worshipping land, water, and forest, and livelihood opportunities like agriculture and forest produces are all based on their land. That's why the land alienation

from them would mean destroying all their life. This is the main reason behind opposing the large development projects.

Secondly, these landowners have been excluded in this industrialization process, where the local people were just seen as a burden or hurdle to development. That's why rather than distributing the significant benefit of industrialization, these people have been given jobs as contract labor, and some compensation amount. This process has mainly benefited the outside people, industry owners, and other privileged ones but it hardly benefited the local people who sacrificed their lands for the sake of national development. Thus, this industrialization process has been so far proved to be a development model that focuses on developing a small segment of society rather than the development of overall society.

Based on these evidences, I would argue that development model should consider the development of overall society keeping the local people at the centre of focus otherwise the development model will continue to create conflicts over large development projects. In addition, this model should consider preserving the cultural values of any society, if it wants to develop a society without destroying the society itself.

5.2. Social movements and tribal politics around environmentalism

In relation to the environmentalism by social movements and tribals, Philip Kujur, (2011) explains that "environment is at the soul of these social movements" because destruction of environment will cause destruction of local people and their livelihood. In addition, Kumar Ch. Mardi (2011) supports this notion saying environmentalism is the main agenda of social movements and tribals while protesting against these large development projects in the states like Jharkhand, Orissa, Chhattisgarh, Andhra Pradesh, part of Maharashtra. Furthermore, he explains, postponement of construction of big dams in Icha-Kharkai and Koel-Karo is the success of social movements on the issue of environmentalism. Furthermore, Minz (2011) asserts that people have been protesting against Koel-Karo dam in Khunti and Field firing range in Neterhat

since 1980s and 1990s to protect dense forest from destroying and in addition, to protect the existence of primitive tribes like Asur, Nagesia, Korba, and Birhor that is threatened from these projects.

In contrast, In the first case, Barla (2011) explains that the tribal politicians including regional or national parties who are in government or outside government are not at all concerned about the negative environmental consequences of industrialization. Furthermore, he elaborates that this was the disinterest, particularly regional parties that were mainly dominated by tribals who could have taken this issue and the problem with national parties is that their agenda is set at national level. In addition, there was a lack of coordination between politicians with the NGOs or GROs due to which the serious issues like displacement and environmental degradation did not become a political issue. Moreover, he exemplifies that in the last election the candidates who did not speak about these issues won from Chaibasa and Manoharpur, and a few others who strongly voiced against these issues did not win. After explaining these, he further raises a question on the tribal leadership that our tribal leaders need to assess it for the right direction of community as a whole.

In addition to Barla, Dungdung (2011) explains that self governance system did not focus on other issues other than the social awareness. Furthermore, he explains it is the activist organizations', social movements, and project affected people who are raising questions on present form of development. Again, he says the tribal as a large society is not ready to accept that industrialization model of development is not good for their community. Similarly, George (2011) explains environmental pollution are serious problems in Noamundi region but it was not taken over by majority of organizations even if by traditional system.

These evidences show how people have differing opinions about environmentalism of social movements, where some acknowledge the significant contribution of social movements around environmentalism, whereas others do not. This variation is because few respondents associated with NGOs emphasize that issue of environment is properly addressed in social movements, whereas

others not associated with these NGOs point out the lack of coordination among different groups. This does not show a good sign for the issue of environmentalism because they need a strong force to articulate this issue. It is also evident that resource mobilization theory has helped in raising the issue in some cases, whereas, new social movement theory in other cases. However, the common issue among them is to respond to the states action towards taking over the control of natural resources from Adivasis. Below is the slogan of Adivasis shows their claim over water, forest, and land:

"Jal Jangal Jameen Hamara Hai".

I believe this can be achieved provided they raise these issues and succeed to make these a political issue.

5.3. Issue of sustainability and future of industrialization

Most of the respondents like Dungdung (2011), Kujur (2011), Biruly (2011), and Toppo (2011) explain that the present concept of industrial development model has threatened Adivasis' sustainable development model. In addition, they have explained that the present form of industrialization is resulting in fast exploitation of natural resources. Moreover, Kachhap (2011) strongly asserts that "I am against this over exploitation of natural resources for the industrial benefits only". In addition, he elaborates this over exploitation is basically the problem because of differences in ideology between *jarurat*[21] versus *lalach*[22]. Here, *jarurat* will fulfill the basic needs of entire population, whereas *lalach* is the greed for having more for something like profit or consumption of goods. Mullick (2011) further supports this notion exemplifying Gandhi's quote, who said "we have enough resources to satisfy the need of entire population in the world but all these resources will be insufficient to satisfy someone's greed".

Apart from these stances, I did not come across any view from the respondents, who did not agree on the issue that industrialization threatens sustainability. I believe this reason behind one opinion is that most of the respondents have seen and experienced the severe negative consequences of industrialization on environment and people. This impact on people is in the form of displacement,

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[21] Jarurat is a hindi word that means need.
[22] Lalach is a hindi word that means greed.

loss of livelihood, fast decline in natural resource base, and on environment in the form of deforestation, soil erosion, water pollution, and declining fertility of land.

Based on these evidences, I will argue that industrialization development model is a threat to the concept of sustainable development. Both of these concepts of development have their competing interest, where the base of industrial development model is profit maximization contributing to higher economic growth, which in turn depends on more production by fast exploitation of natural resources. Whereas, the concept of sustainable development emphasizes sustainable use of resources to last long. Thus, I believe, if we want to promote sustainable development then we need to slow down the existing form of industrial development. In this relation, we shall further discuss the future of industrialization in the next section.

5.4. Future of industrialization

On the future of industrialization in Jharkhand, Kujur (2011) explains that "I think we already have required number of industries in Jharkhand such as H.E.C[23]., S.A.I.L.[24], P.T.P.C.[25], and abandoned mines near Karanpura and many parts of Jharkhand". Moreover, he explains that better management is required to use abandoned mines and extract the minerals from there. He gives an example that only 1 unit is functioning out of 10 units established in P.T.P.C. and that's why he clearly states the new proposed industries are all not required. However, Toppo (2011) states that "I believe there should be no industrialization unless and until our people are mentally prepared or professionally strengthened to get the benefit out of it". Apart from that, most of the respondents like Minz (2011), Kachhap (2011), and Dungdung (2011) believe that industries have a significant contribution in human's life so industrialization could be done but it should be based on the need of the people and the local people should decide about it. At the same time, they also maintain

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[23] Heavy Engineering Corporation.
[24] Steel Authority of India Limited.
[25] Patratu Thermal Power Corporation.

that these industries should not be promoted at the cost of Adivasis or the environment.

These evidences show that a few respondents strongly said that there should be no further new industrialization at all, however, the majority took a bit liberal view saying there can be need-based industry. This pre-condition of need-based industry is a clue for slowing down the pace of industrialization.

Based on these evidences, I would argue that this form of need based industrial development would certainly contribute to promote sustainable development concept provided industrialization is done to meet the basic needs rather than maximizing the surplus. This will further reduce the fast exploitation of resources, and reduce pollution levels thereby reducing its negative consequences on society and environment. Here, I acknowledge that promoting this form of development would limit the current production process. I will suggest looking for alternatives to industrialization to maintain the current production level in order to avoid unemployment and food insecurity, which should be discussed in the next section, expected to contribute overall development of society.

5.5. Alternatives to industrial development

This section will outline some of the alternatives to industrialization for the overall development of society as per the response of field data.

Agriculture

Firstly, most of the respondents agreed that agriculture should be the first priority for development as it has been the traditional occupation of local people, which ensures food security, and helps to generate cash income (Biruly, 2011, Deogam, 2011, Melookunnel, 2011). In addition, Majhi (2011) explains that "it can give sufficient food to the local people for the whole year, we could sale between 15-20 quintal a year, and we can afford our children's education. Moreover, it is also sufficient for many generations". Furthermore, Mullick (2011) explains that it is evident in many parts of the world that agro-forestry can give more income than the mining and previously Jharkhand has good

agricultural productivity. Adding more to it, Minz (2011), and Philip Kujur (2011) explains that agriculture covers a broad area that may include fishery, flower, horticulture, and animal husbandry. Furthermore, like Minz (2011), and Barla (2011) have explained that, it will contribute to the economy at individual, community, and national level, and it does not cause environmental degradation. Moreover, George (2011) explains that development of local resources will lessen their destruction in terms of displacement and will help to preserve the culture.

Kachhap (2011) explains that Jharkhand is situated in good location, where monsoon arrives from two ways. Furthermore, Philip Kujur (2011), and Kumar Ch. Mardi (2011) explains that water can be supplied to the agricultural fields from already established big dams like Chandil Dam and other areas. Furthermore, Barla (2011), and Minz (2011) advocates for the better irrigation facilities and construction of small check dams. Apart from these challenges to be met, Barla (2011) points out the need to provide support like subsidies and loans for agriculture purposes, and facilitate the crop insurance schemes in a better manner, whereas Dungdung (2011) asserts the need for investment to promote agriculture.

In contrast, George (2011) has shown her concern over the rainfed agriculture, the egalitarian water supplies to the farmers, and the right price of agricultural produce to the farmers.

Here the respondents have strongly supported the notion that agriculture to be the first and foremost alternative to the industrialization. Moreover, they have explained the benefit at level as well the reduced negative impact of development on people. Furthermore, they have explained the opportunities as well as the challenges to be addressed.

Forest and forest produces
Secondly, most of the respondents agreed on forest produces as the second best alternatives (Mardi, 2011, Minz, 2011). In addition, Mullick (2011) has already

explained in the previous section that agro-forestry is evident to give more income to the local people. Moreover, Minz (2011), and Philip Kujur (2011) explained that forest and forest produces may include fruits, wood, craft making, and plantation that can ensure food security and can help to generate income. Furthermore, Dungdung (2011) explained the need for more government investment on forest and forest produces, and facilitate the marketing of these products. Apart from these, Dungdung (2011), Barla (2011), and Mullick (2011) explained that Gram Sabha should be strengthened and should be given the responsibility to monitor forest and produces. In addition, Barla (2011), and Dungdung (2011) also emphasize on mini plants to process and produce forest related products like juice, jams, and lac. This alternative seems to be most appropriate as per ecologist point of view because it will preserve the environment in on one hand, and on the other, it will ensure the livelihood of local people.

Herbal medicines

Thirdly, George (2011), and Philip Kujur (2011) explain that producing herbal medicines could be another alternative those are available in forests of Jharkhand. Furthermore, they explain that many of the herbal plants are only available in Jharkhand, and if it is promoted properly then it could reduce the cost of treatment particularly for the local people. However, they acknowledge that presently, the market of herbal medicine is limited and it is difficult to get the right price. At the same time, they also maintain that herbal medicine can be promoted on the ground that it does not have side effects, and it cures the diseases properly in comparison to allopathic medicines.

Renewable energy

Fourthly, Kachhap (2011), and Minz (2011) explains that energy in jharkhand can be generated out of many sources such as wind, water, solar, and bio diesel. In addition, they explain there is no need of establishing large power plants and exploit coal resources heavily. Moreover, Minz (2011), and Dungdung (2011) gives an example of Hazaribagh mini power plant, where small check dam was used to generate electricity and it has been successfully functioning and supplying electricity to the entire village.

Tourism

Fifthly, Dungdung (2011) emphasizes to encourage tourism and he further elaborates that Jharkhand has got plenty of natural beauties in the form of water falls, and forests. That's why this state has got plenty of opportunities in the field of tourism and this responsibility of managing the environment and take care of the tourist place should be given to the community.

5.6. Redefine sustainable development

Based on above discussions and the emphasis made by Mullick, Kujur, and Dungdung, I believe there is a need to redefine this concept of sustainable development. Here are a few:

Mullick (2011) "*It is a challenge to us to evolve a different life style which will be ...which should be more for enjoying the life rather than struggling for existence*".

Kujur (2011) "*Presently development is merely seen as industrialization, however, we have seen the consequences of industrialization and that's why development needs to be redefined*".

Dungdung (2011) "*Sustainable development should be conceptualized as need based (jarurat ke anusar) rather than a race*".

Based on evidences, I would argue that an approach of need based production and consumption should be adopted as development model and discard the more production and more consumption model. Moreover, it should be defined from cultural perspective. In addition, social and environmental sustainability should be the two pillars of sustainable development excluding the economic sustainability. This is because I believe as long we keep economic sustainability within the concept of sustainable development, there will be conflict of interest between economic sustainability with the social and environmental sustainability. Moreover, economic sustainability should be seen as a medium of achieving or a supporting element to social sustainability rather than making economic sustainability as main agenda. Similarly, industrialization should help to meet the needs of society without transforming the traditional society, and the focus should be made to preserve the culture and values. In addition, I would argue that more emphasis should be given on the concept of intra-generational

equity rather than stressing more on inter-generation equity. This is because there is a huge gap between the distribution of resources within countries or between North and South, where a large population is unable to meet its basic needs and in these circumstances, I would argue, it will be unfair if we talk about future generation without meeting the needs of present generation.

5.7. Reflections on Research Methodology

In this section, I would like acknowledge the shortcomings of research methodology. Firstly, the traditional chiefs and one women leader could not be interviewed because of their busy schedule and un-contactability. Moreover, I am using the respondents personally interviewed directly quoting their names in findings and analysis section, as they have given their consent to so. Thus, I have used the names of almost all respondents except one this is because even though he has given his consent to publish his name, I felt that it could be sensitive for using his name.

6. Conclusion

In this paper, I was trying to understand the reasons behind opposing industrialization and explore the alternatives to industrialization in context of Jharkhand. For this, I reviewed the literature on the concept of sustainable development, industrialization in India, and the social movements around environmentalism and tribal politics. In addition, I used the case study approach under qualitative research method, in which people associated with the issue of industrialization and development were interviewed using semi-structured interview.

In this paper, it is evident that establishing further industries without solving the drawbacks or the previous problems will continue to threaten the sustainable livelihood of local people including Adivasis, and Moolvasis. Moreover, it was found that government is not conducting cost-benefit analysis before setting up the industries, and is blindly signing MOUs keeping aside the interests of landholders, especially in scheduled tribe areas. Furthermore, it proved that industrialization in Jharkhand has hardly helped the local people to develop rather has destroyed their self-governance system, their rich socio-cultural system and their livelihood.

Due to all these reasons, people have been resisting against these large development projects. That's why it compels the local people of Jharkhand to think about the alternatives to industrialization. The alternatives were explored along the lines of sustainable development concept. As a result, few alternatives were explored such as agriculture, forest and forest produces, herbal medicines, renewable energy, and tourism. These were believed to have mainly positive impacts on the lives of local people and the environment. This further helps them to secure their food on a sustainable basis rather struggling to acquire new skill to grab a livelihood opportunity. In addition, they will not be displaced from their land and this ownership of land remains for many generations. Furthermore, it will not effect the environment severely as it is in the case of industrialization.

Based on the evidences and discussions, I believe there is a need to capacitate people's traditional skills, and develop further the resources including land, water, and forest. This would further enhance their productive capacity and their livelihood security can be ensured. In conclusion, I would say that instead of enforcing a new development model on the people, we should develop the people's existing idea.

Based on the evidences, I have argued, firstly, that development model should focus on development of overall society as well as it should be based on preserving their societal values rather than destroying it. Secondly, industrialization development model causes threat to sustainable development and that's why industrialization should be used to meet the basic needs rather than for generating surplus. Moreover, this development should be need based rather than the surplus production. Thirdly, development needs to be redefined from cultural perspective rather than more production and more consumption. Furthermore, this development should preserve the traditional values and cultures. Moreover, this concept of sustainability should combine societal and environmental aspects. Fourthly, the emphasis should be made more on intra-generational equity rather than inter-generational equity. This is because in developing countries like India, where majority of present generation people are struggling for meeting basic needs, it will be unfair to debate about future generation without satisfying the needs of present generation.

I believe the present social movements in many part of India will continue to protest against large development projects. In addition, their protest is directed towards the concept of sustainable development by preserving their culture with a view to sustain the society and the environment. Moreover, based on the findings of this research, I would like to make a few suggestion to promote sustainable development concept, which are outlined below:

1.For state with regard to: Existing industries
- ❖ Conduct study on environmental, and social impact assessment of large development projects (include people with different backgrounds and

knowledgeable people from the same region, who understand the reality/ground situation)

❖ Resolve previous set backs of already installed industries based on the studies available findings

❖ Proper management of abandoned mines to make the land reusable

New proposed industries
❖ Discard new proposed industries
❖ Stop further land acquisition

New alternatives
❖ Promote and invest agriculture related activities
❖ Promote and invest on forest and forest produce related activities
❖ Conduct study to assess the usefulness of already installed large development projects meant to support agriculture like big dams, canals
❖ Capacitate local people
❖ Engage traditional self-governance system to implement these activities

2. For further research
❖ For a comprehensive study and better results, there is a need to increase the sample size, cover other parts of the state
❖ More time and financial resource should be directed for this research

I would like to conclude this research with the words of James Y.C. Yen (Cited in Sharma, 2001: 257) as:

> *Go to the people*
> *Live among the people*
> *Learn from the people*
> *Plan with the people*
> *Work with the people.*

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Annexure -1: Rough checklist of questions

1. Could you please give a brief history about industrialization in India and in Jharkhand?
2. Do most of the people favoring or opposing industrialization?
3. If favoring, then how industrialization is benefiting local people and the state?
4. If opposing, why they are opposing?
5. What are the likely impacts of industrialization in
   a. Social aspects
   b. Economic aspects
   c. And environmental aspects of people?
6. What role different sections of society are playing in favoring or opposing industrialization? Like NGOs, GROs, traditional chiefs, traditional governance systems at village level (Gram Sabha, Panchayat), Political parties? And why (their interest)?
7. Do they have proposed alternatives to industrialization?
8. If yes, what are the alternatives to industrialization?
9. How these alternatives will benefit people in contributing to social, economic, and environmental aspects?
10. Do you think these alternatives are sustainable?
11. Do you think social movements and tribal politics have focused on environmentalism?
12. If yes, how?
13. If no, then why not?

Annexure -2: List of interviewees

Sl	Name of person	Status/Rank	Organization	Remarks
1	Fr. Stan Lourduswamy	Director	Bagaicha, Ranchi	Intellectual, human rights activist
2	Subhash Gayali	Core member	JMACC, Ranchi	State level alliance on mining and mining affected communities
3	Sunil Minz	Activist	Ranchi	
4	Philip Kujur	Coordinator	BIRSA MMC, Ranchi	NGO works for mining related issues
5	Mr. Devendra Nath Champia	Ex-MLA, Ex-Speaker Bihar Bidhansabha	Congress Party, Chaibasa	National Party
6	Fr. Clement Kujur	Director	Tribal Research and Training Centre, Chaibasa	
7	C B Deogam	Director	BIRSA Human Rights Centre, Chaibasa	Advocate, and Adivasi intellectual
8	Fr Sevanand Melookunnel	Jesuit	Associated with Tribal Research and Training Centre, Chaibasa	Working especially on Sustainable Agriculture
9	Sanjiv Kr. Biruly	Professor	Cooperative Law College, Jamshedpur	Adivasi intellectual
10	Demka Soy	Associated with Adivasi issues	Jamshedpur	
11	Respondent	Tata Company Employee	Jamshedpur	
12	Kumar Ch. Mardi	Coordinator	Jamshedpur	Activist
13	Bamia Majhi	Zila Parishad	Zila Parishad Office, Manoharpur	Manoharpur
14	Prabha Toppo	Coordinator	Manoharpur	Women's Self Help

			Group
15	Mr. Sushil Barla	MLA Candidate	Congress Party, Manoharpur	National Party and previously an social activist
16	Seerat Kachhap	Intellectual	Ranchi	
17	Bineet Mundu	Coordinator	BIRSA Land Desk, Ranchi	Registered organization and an Adivasi intellectual
18	Sanjay Bosu Mullick	Coordinator	Jharkhand Jangal Bachao Andolan, Ranchi	GRO focused on forest protection
19	Ajitha S. George	Coordinator	Omon Mahila Sangathan, Noamundi	Women's group
20	Gladson Dungdung	Intellectual and human rights activist	Ranchi	