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## WATER CONFLICT-A REFLECTION ON FARMERS vs. INDUSTRYIN HIRAKUD DAM

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### Abstract:

*Water is essential for human survival and for every human activity including agriculture, industry and power generation etc. water is unique and vital resource for which there is no substitute. It ignores political boundaries, fluctuates in both space and time and has multiple and conflicting demands on its use. Water is unlike other scarce resource is consumable to fuel all factors of society from biologic to economics to aesthetics to spiritual practice (wolf 2008).*

### INTRODUCTION:

A proverb used in Odia “Jala bahule srusti nasa, jala bihune srusti nasa” it means lack of water is the cause of destruction at the same time excess water is the cause of destruction. Man construct big dam for the sake of both flood and water.

### HIRAKUD DAM

After a series of floods in Mahanadi basin during 1937 Sri. M Vishwesharya advised preparation of storage dam for flood control in Mahanadi basin. The recommendations of Flood Advisory Committee (1938-42) were accepted in the flood conference in 1945 at Cuttack under the chairmanship of Dr. B.R. Ambedkar. After wards the Central Waterways Investigation and Navigation Committee (C.W.IN.NC) now CWC suggested three major dams at Hirakud, Tikarpur and Naraj but finally Hirakud is selected. The foundation stone of Hirakud Dam was laid by Sir Howthorne Lewis, the Governor of Orissa on 15th March 1946. The project report was submitted to Government in June 1947. The first batch of concrete was laid by Pandit Jawaharlal Nehru on 12th April 1948. The project was formally inaugurated by Prime Minister Pt. Jawaharlal Nehru on 13th, January 1957. Power generation along with supply for irrigation started progressively from 1956 and full potential achieved in 1966.

Hirakud dam is the first post independence major multipurpose project in India, the longest earth dam of the world consist 15,478 feet long earth masonry and concrete flanked by earth dykes 32,275 feet, 60 meter high and the spill way consist of 64 sluices gates and 34 crest gates, gross storage capacity original 6.60 MAF but now reduced into 3.77 MAF in 2007. The project giving priorities into three main purposes one flood control, second irrigation and lastly power generation. It provide flood protection to 9500 km of delta area in district of Cuttack and Purl, it has two power generation houses at Burla and Chiplima having capacity of 331.5MW. It irrigate through three main canals, Bargarh main Canal, Sasan Main Canal and Sambalpur Distributory and irrigate 1,556 km<sup>2</sup> of kharif and 1,084 km<sup>2</sup> of rabi in districts of Sambalpur, Bargarh, Bolangir, and Subarnpur.(HLTC Report Orissa 2007).

### CONSTRUCTION EFFECT:-

The construction of the dam heavily affected the native part of western Odisha. It submerges 325 villages covering 1,83,000 acres of cultivable land from 191 villages from Odisha and 34 villages from M.P and displaced about 26,501 families. Nearly 150,000 people were affected by the Hirakud project. Most of the displaced villagers were dependent on agriculture from many centuries (Nayak 2010). "If you are to suffer, you should suffer in the interest of the country." Indian Prime Minister Nehru, spoke to those who displaced by Hirakud Dam in 1948.

### WATER CONFLICT:

Fresh water is limited in the earth; it is the key source of development. The demand of fresh water is rapidly increasing simultaneously conflict over it and meanwhile many states have to rely on shared source with other states as well. Pollution, depletion and natural limits affect the availability of water. Dams are usually made as solution for "agricultural water need for flood control and drought mitigation. There for naturally they benefit some around the area but at the same time dramatic diversion of water arguable is not fair way of allocating transboundary fresh water. This inevitably leads to arguments of water ownership especially from those who do not benefit from dams (Maeda 2004). The diversion of Hirakud water for industrial purpose creates water crisis for agriculture and conflict emerge between farmers and Govt. authority.

### WATER RESOURCES IN HIRAKUD DAM:-

The Hirakud dam slowing in a dying course due to the mushrooming industrial set-ups will exploit its water for their commercial greed. This decline has brought down the hydroelectricity generation into 90 mw, at the same time Chhattisgarh govt. formed 30 big and small dam on the river and heavy siltation has reduced the holding capacity of the reservoir. This vindictive attitude of diverting water to plants at the cost of agriculture has enraged the farmers and the civil society activists (Mohanty 2010)

In Nov, 26, 1990 the Govt. first permitted 0.350 million acre feet (MAF) of reservoir water for industrial purpose when dam storage capacity may 4.72 MAF but now it is decreasing drastically studied by central water commission in 1995 and 2007, 4.72 MAF to 3.77 MAF but now it has badly falling at the same time industries are growing rapidly and using a huge amount of water illegally and govt. becomes silent observer and not taking any action against industry while repeated complain by farmers (Mahapatra 2007).

Before April 1997, when the irrigation ministry became the MOWR (Ministry of Water Resource), total allocation to industry from the reservoir was only 31,912 lakh gallons per year (LGY). After the formation of the MOWR, the task of allowing water for industry was vested with an allocation committee? Astonishingly in only nine years, this committee has allocated 27 times more water than the pre-April 1997 level. But post-1997, the industrial water allocation has gone up six times higher and dam failed to meet her primary objective due to shortage of water (Mahapatra 2007). It creates power cut and unable to irrigate cultivated land. It is seems that not only people are getting water shortage but also dams are getting same problem but co-incidentally industry are getting sufficient water and power for its industrial production.

### INDUSTRIALIZATION IN ODISHA:

Now industry are flocking to Orissa because it is mineral rich and its per capita water availability is 9,203 liters a day is impressive in comparison to the national average is 4,886 liters (Mahapatra 2007). The construction of Hirakud Dam provide power at cheaper rate and the investor friendly development policies has become an attractive investment destination for large corporation (Mathur 2008). As a result number of industries setup near reservoir and uplifting a huge quantity of water and natural resources. 1. OPGC/ Ib Thermal take 53 cusec, 2. Bhusan Steel takes 112 cusec, 3. Aditya Birla takes 52.63 cusec, 4. Starlite take 172.5 cusec, 5. SSPS Sponge Iron take 30 cusec, 6. Indal Hirakud takes 10 cusec, 7. Orient Paper Industry takes 247.6 lakh gallons, 8. MCL Brajaraj Nagar takes 600 lakh gallons, 9. MCL Belpahad take 12 lakh gallon, 10 MCL Lakhapur take 45 lakh Galan, 11. BITS Bandhbahal take 652 lakh gallons, 12. Tata Refectory take 674 lakh gallon, 13. Railway Jharsuguda take 412.281 lakh Galan, 14. Indal Hirakud (CPP) takes 10 cusec, 15. Rathi Steel takes 10 cusec, 16. SSC Power take 1 cusec, 17. NCPC Dharapali take 160 cusec, 18. SMS Power Hirma takes 2.4450 cusec, 19. Shyam DRI Rengali take 2.405 cusec, 20. Vedanta Alumina take 54.900 cusec, 21. Biraj Steel Energy Ltd., 22 Nipa Metalix take 3.8 cusec, 23. Deo Mineralx takes 6 cusec, 24. Deo Mines and Mineral take 6 cusec water from Ib, 25. In future Reliance Energy take 600

cusec and 26. ACC Cement takes 10 cusec and in future 27 industries have permitted to withdrawal water and in future 12 industries are in queue, from 1997 it has goes up 2.5 times (Saroj 2008).

#### **FARMERS MOVEMENT:-**

According to water act of Odisha 2007 it clearly define water use is for drinking and domestic use, environmental balance, irrigation, agriculture and fisheries, power generation and industries including agro/industries and last navigation and other usages. Water allocation to industry is the bottom of the priority (national water policy 2007), at the same time Hirakud water is meant for agriculture not for industry as it primary objective clearly mentioned. But the present Govt. divert water for industrial purpose at the cost of agriculture. It creates a strong resentment among farmers and they started a peaceful movement against dam authority and state Govt. under the leadership of Odisha Krushaka Sangathan. In June 2005 the local newspaper reported that after two years of renovation work the 600 cusec/day water for the irrigation purpose is discharged into Sasan canal but in reality there was no water in the canal. The farmers went to the district collector for irrigation water issue. District collector visited the site of Sasan canal where he observed that the mouth of the Sasan canal is dry and reservoir water is far away from the mouth of canal and affected 24,280 hectares agriculture land and livelihood of 60,000 families. This triggered the inquest. Later they found that Bhushan Steel plant in the vicinity had built a 2 km-long kuchha road up to the reservoir to access its water off-take point. The off-take point is where the tributary Ib merges with the reservoir and obstructing to canal flow water from the Ib and the company lifting most water and the canal top was left dry. The same situation prevailed in 2006. The local magistrate threatened to stop water to Bhushan Steel plant yet the road was not destroyed when Down To Earth visited that area the road was still there (under water). "In the summer the road will again stop the flow of the Ib water into the reservoir. Interestingly, this is the same area where Vedanta is also setting up a water lift-off facility. The company's contractor was laying the pipes without any notice or permission from the dam authorities even though this area is highly restricted point but Industries have been setting up water-lifting plants very near the canal head and affecting availability of water in the canal, just beside the Bhushan Steel's water off-take plant. The state governments own technical committee set up to examine the Vedanta and Hindalco's water off-take plants recommended in August 2007 that their locations would impact water availability for agriculture. The location has not changed and Vedanta was working for his second water pipeline along the existing one. In that year, the protests have attracted huge public participation. The farmer's anger became more intense due to less or no water for irrigation. This region nearby Sasan canal and Ib River is heavily industrialized which increases further water demands. On 15th Aug 2006 the western Odisha farmer's movement coordination committee planned number of agitations against state government on this issue. At the end of agitations the large number of farmers gathered in Chetavani Samavesh in Bargarh on 10 Jan, 2007. This gathering put pressure on state government; the protests sparked when nearly 20,000 farmers formed human chain around reservoir on 26th Oct 2006. Further protests resulted in to civil disobedience through entering in to notified area of reservoir on 6th Nov 2007, where

Police lathi charged and injured 50 protesters. On 11 Nov 2007 farmers marked 'Chasi Rekha' (Farmer line) on the bank of reservoir from where the Vedanta corporate house planned to lift water. Through the farmer line farmers assert their right on the reservoir water (Panda 2008).

Odisha farmers make it clear that Hirakud water is for irrigation, not for industry. The protest demonstrated the desperation of farmers over the availability of irrigation water from the dam. The protest, marked by posters and public meetings, was bigger than the anti-dam protests during the early 1950 (Mahapatra 2007).

#### **GOVERNMENT MAJOR INITIATIVE TAKEN TOWARDS FARMERS MOVEMENT:-**

The large scale of protests worried CM (Naveen Patnaik) and he addressed the media four times a day, 13 meetings with his cabinet and ministerial colleagues in a fortnight to talk about the fallout of the protests. It's a serious concern of personal and political crisis. Political because the protesting farmers came from 46 assembly constituencies and the state elections are just a year away. Personally, his industrialization drive now faces the severest criticism. At the same time Kalinganagar incident where the police had killed 13 tribal people protesting against land acquisition. Immediately after Nov 6 rally, Patnaik issued a statement that not a single drop of water would be given to industrial units, within a day he changed his statement, saying only "surplus" water from the dam would be given to the industries and raise the height of the dam to increase water and also to desalt the dam. He sent four cabinet ministers to talk with agitating farmers but the farmers were not agreed to meet them and rejected all suggestions of the chief minister. The farmers' association wants a few demands to be met before any discussion with the government. "First, the

government should give an assurance that the irrigation should be under original plan. This means another 40,470 ha have to be linked to the dam's irrigation canal network. This is a gigantic task given that the dam has not been able to reach water regularly to the 215,655 ha (currently) irrigated. The government's own assessment shows that existing irrigation network, 8,090 ha no more get water due to silting and damage to the canal network. Despite this 280 ha already reduced within 10 years. The government has ordered its officials to plan the canal network needed to reach the entire command area as planned originally but local water resource offices do not have the original plan and said "Overnight we have been told to lay out the canal network it is impossible". The existing network is also in ruins,' says a tehsil office surveyor in Sambalpur. It is a similar situation in Sonapur, Bargarh and Jharsuguda districts. In another twist, on November 26 the chief minister meet farmers' "representatives" in Bhubaneswar where he declared Rs 200-crore package" for the renovation of canal network in Hirakud Reservoir, the package is a part of World Bank loan for the Odisha Water Sector Improvement project (Mahapatra 2007).

The government is also under tremendous pressure from the industrial lobby not to cancel water allocation to industries from the dam since it has signed MoUs worth Rs 300,000 cores with industry in the past few years, mostly to mine and use the state's vast mineral resources (Mohapatra 2007). The state water resources principal secretary Aurobinda Behera says "there is no compulsion for the state government to give water to industries under various agreements; the government will give water to industries only after taking care of the irrigation and drinking water needs. After this we have a surplus of 10 per cent water in the reservoir. That is meant for industries." In this case also we have no legal compulsion to give water to industries. The government makes people militant by not listening to them when they are peaceful. The wall demarcating in Talab is a stark reminder. If this demand is not carefully planned, water will become the biggest point of conflict between industry and the people who currently use this water. (Panda 2007, Info Change News & Features).

#### CONCLUSION:-

No doubt industrialization play an important role for the economic growth of a nation at the same time it creates severe impact on environment and people. The rapid scale of industrialization particularly in western Orissa creates huge scarcity and strong resentment among farmers and Govt. authority. This diversion of Hirakud water to Industry will vanish our agriculture system. In this construction of huge reservoirs and big dams reflects a similar accumulation process through dispossessions of downstream users, displacement of local communities and imposed restraint on upper catchment land-users, for seemingly designed benefit to capital accumulation through power, irrigation and industrial uses. In Orissa it should be viewed from a blending of local and regional perspectives and answers have to be searched through consideration of alternate paradigm of development of waterspaces including accumulation through expanded reproduction by poor and marginal communities.

#### REFERENCES:-

- 1) Wolf Aaron T.(2008), "Healing The Enlightenment Rift: Rationality Spirituality and Shared Waters", Journal of International Affairs/Spring/Summer, Vol.61.No.2. The Trustees of Columbia University in the city of New York.
- 2) Mohanty C Shirish (2010), "Maha Bipati for Mahanadi", The Industry and Mines Observer, Aug-1-15, 2010, pp.3-4.
- 3) Mohanty C Shirish (2010), "Neglect Agriculture for Industries?", The Industry and Mines Observer, Aug-1-15, 2010, pp.5-6.
- 4) Nayak Arun Kumar(2010), "Big Dams and Protests in India: A study of Hirakud Dam", EPW, Jan.9, 2010, Vol.XLV.No.2
- 5) Panda Ranjan(2008), "Choppy Water: Poll – bound Odisha Govt. struggles to appease Farmers", Down to Earth-Vol-16, 2007-08, april.30, 2008.
- 6) Report of the High Level Technical Committee to Study various Aspect of Water Usage for Hirakud Reservoir (Jayseelan Committee Report) August, 2007.
- 7) Maeda Sayeka (2004), Environmental Pressure Conflict and Conflict Resolution, Lumes Master's Thesis 2003-2004, Lund's University, Sweden.
- 8) Vinogradov Patricia Wouters and Jones Patricia (2003), University of Dundee, UK, SC-2003/WS/67.
- 9) "UN Water Thematic Initiatives- Coping with Scarcity"- A Strategic issue and Priority for System- Wide Action, August-2006.

- 10) National Water Policy 2007.
- 11) Govt. of Orissa Water Resource Department 2007, Report of the High Level Technical Committee to study various aspect of water storage for Hirakud Reservoir.
- 12) Turton Anthony (2002) & Henwood Roland, 'Hydropolitics in the developing world: A Southern African Perspectiv', African water issue Research Unit (AWIRU)
- 13) Mathur Hari Mohan (2008), "A New Deal for Displaced People: Orissa's Involuntary Resettlement Policy", Social Change, Dec. Vol.38 No.4, pp-553-575.
- 14) Behera Bhagirathi & Reddy V. Ratna(2002), "Environment and Accountability Impact of Industrial Pollution on Rural Communities", EPW, Jan 19.
- 15) Ohilson Leif (1991), Water Scarcity and Conflict, Starr, Joyce "Water Wars" Foreign Policy 82(1991): 17-36).
- 16) Roy Prodipto(2008), "Tremors in India's Mining Fields, Social Change", Sept.2008, Vol.38, No.3.
- 17) Saroj & Rabishankar(2008), "Chasira Rekha", Western Odisha Farmers Association.
- 18) Panda K. Ranjan (2008), "A New Dimension of Water Conflict in Odisha: Industry vs. Agriculture", Feb-15, 2008, MASS, Sambalpur, Odisha
- 19) Mahapatra Richard & Panda Ranjan (2008), "Ground Swell", Down To Earth magazine, Vol.-16, 2007-08, pp.22-31.
- 20) Panda K Ranjan (2007), "Industry vs. Agriculture: The Battle Over Water in Hirakud" , Infochange (news and analysis of on social justice and development issues in India) Web site-[www.infochangeindia.org](http://www.infochangeindia.org)



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