

Gender Assessment

FP045: Ground Water Recharge and Solar Micro Irrigation to Ensure Food Security and Enhance Resilience in Vulnerable Tribal Areas of Odisha

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Gender Analysis Report

“Ground water recharge and solar micro-irrigation to ensure food security and enhance resilience in vulnerable tribal areas of Odisha”

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1 Project Back Ground

1.1 The state of Odisha is highly vulnerable to climate change due to high monsoon variability. Groundwater is highly vulnerable to the impacts of climate change. The rising temperature may result in greater heat stress for people and ecosystems and it would enhance energy and water drawl, induce drought and impact food security. Many districts in Odisha state face multi-hazard scenario as 13 districts (out of 30 districts) are severely food insecure and 5 are extremely food insecure. Lack of adequate infrastructure for enhanced run off has implication on water conservation and overall enhancement of risk and vulnerability for the people living in the fringe. As of now as per Census 2011 in Odisha, around 38.5% families travel at least half a km to fetch drinking water in villages. The number of such families was 32.5% in 2001, which increased by 6% in 10 years.

1.2 To respond to these challenges the project on “Ground water recharge and solar micro-irrigation to ensure food security and enhance resilience in vulnerable tribal areas of Odisha” is prepared with an objective to enhance groundwater recharge through community ponds by structural adaptation measures and use of solar pumps for micro irrigation to ensure water security and food security in the vulnerable areas of the state. The project is expected to achieve (i) Augmentation of ground water recharge to improve water table and water quality for health and well-being of about 5.2 million vulnerable communities through water security (ii) Improved food security through resilient crop planning (through irrigation) through installation of Ground Water Recharge Shaft

(GWRS) in 10,000 tanks. (iii) Use of 1000 solar pumps for irrigation is not only improve energy access but also will be part of low emission climate resilient crop planning strategy of the state.

2 Gender Status and Background

2.1 The Constitution of India conveys a powerful mandate for equality and rights of women in its Preamble, Fundamental Rights, and Duties and also provides for specific provisions for affirmative actions. India is also a signatory to a number of UN Conventions, primarily Convention on Elimination of all Forms of Discrimination against Women (CEDAW), Beijing Platform for Action and Convention on Rights of the Child where the commitment of the nation to protect and empower its women and girls is quite pronounced. The recent endorsement by India, of the ambitious 2030 Sustainable Development Goals (SDGs) will further change the course of development by addressing the key challenges such as poverty, inequality, and violence against women, which is critical for the global success of the goals as well. Notwithstanding the Constitutional mandate, the discourse on women's empowerment has been gradually evolving over the last few decades, wherein paradigm shifts have occurred – from seeing women as mere recipients of welfare benefits to mainstreaming gender concerns and engaging them in the development process of the country.

2.2 The Indian Constitution guarantees the right to equality. Article 15(1) of the Constitution explicitly states that the State shall not discriminate on the ground of sex, among others. Having regard to these constitutional provisions the Government made a series of legislations to improve the social status of woman. Various acts were enacted to protect the rights of women like protection from domestic violence, maintenance rights, dowry prohibition, protection from sexual harassment at workplace, maternity leave benefits, inheritance rights and many more.

2.3 In India women have special status in the society and no one has the right to disrespect them. Any disrespect of women is strongly addressed at village level. Equal wages are provided to men and women in India. Keeping this in view, women have equal opportunities in work and division of labour is based on the level of skill, nature of work, etc. The National Employment Policy (draft 2008) aims for equality for women in the labor market including increased access to opportunities across sectors. The Equal Remuneration Act 1976 has provisions for equal pay for similar work and equality in recruitment, promotions, and training. High priority has been given to ensuring women's representation in decision-making, by both central and state governments. Since the 73rd and 74th Constitutional Amendments of 1992 that established the panchayat (rural local government) structure and urban local bodies, a one-third reservation for women has applied to local decision making. This is reiterated in specific programs, such as the Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS), which sets a target of at least 33% participation by women and also mandates equal pay.

2.4 On one hand a liberalised economy has offered better education, jobs, decision making powers and opportunities for women. However, discrimination related to

economic, political, religious, social and cultural aspects remains major issue. The gender gap persists across both rural and urban, agricultural and non-agricultural jobs, regular-casual employment. The government has recognised these paradoxes and attempted to address these in policies, legislation and programmes.

2.5 During 2011–12, for both males (51 per cent of workers) and females (56 per cent of workers), majority of the workers were engaged in self-employment. The share of casual labour employment in the total workforce of both males and females was significant—29 per cent among male workers and 31 per cent among female workers. In the rural areas, the share of casual labour in the total workforce of males and females was almost the same (36 per cent for males and 35 per cent for females); self-employment was higher for females (55 per cent for males and 59 per cent for females) and regular wage/ salaried employment was higher for males (10 per cent for males and 6 per cent for females). Among the female workers, about 63 per cent were engaged in agricultural sector while about 56 per cent of the male workers were engaged either in secondary sector and tertiary sector. In rural areas, nearly 59 per cent of the male workers and nearly 75 per cent of the female workers were engaged in the agricultural sector. Fifty five per cent of the MGNREGS workers were women in 2014–15. Most states achieved the threshold of 33 per cent women being employed.

2.6 Government is making efforts through policy interventions and various programme and projects to address gender disparities present in the State of Odisha. The child sex ratio is higher than in most states, but is declining. Maternal mortality is poor. And although more women work in Odisha compared to some Low-Income states, there has been a sharp decline in female labor force participation after 2005. There are fewer non-farm job opportunities for women in rural Odisha, and fewer salaried jobs for urban women. On a positive note, gender gaps in schooling are starting to close for younger girls. Labour force participation rate in Odisha in rural areas was 35% against 85% of male. Female labour force participation of women in Odisha is close to national average. About 69% of women are employed in farming related activities, against 59% of men.

2.7 Women SHGs have gained prominence with major livelihood initiatives for poverty reduction in the country, utilising this institutional form to mobilise women and enable them to access financial and livelihood services. As on 31 December 2015, there were 5.95 lakh SHG groups were credit linked and penetration of the SHG for gender empowerment in the state of Odisha is better compared to many states in India.

2.8 Fortunately in tribal areas of Odisha gender equity is better than other areas of the state and gender roles too are relatively equitable. Sometimes, in many other areas and non-tribal societies of the project districts however, women may be more disadvantaged than men in similar circumstances. This may impact negatively on various dimensions of women's lives including property right, economic opportunities, education, health and participation in management and decision-making processes. When this is the case, special provisions have to be made so that women can overcome the obstacles that have prevented them from participating and

benefitting in the past. This project result framework, criteria for certain activities have been made gender sensitive.

3 Gender considerations under project:

3.1 As per the Green Climate Fund guidelines this project is committed to three dimension of gender planning (a) Gender equity (b) Gender equality (c) Gender sensitivity. While development of proposed project these aspects have been taken into consideration. The project design, formulation, implementation monitoring and evaluation takes into consideration the equality, equity and sensitivity aspects related to gender consideration.

3.2 As per Census 2011 in Odisha, around 38.5% families travel at least half a km to fetch drinking water in villages. The number of such families was 32.5% in 2001, which increased by 6% in 10 years. Though the state government is taking care of the water needs by providing tube wells, wells in rural area, the woman has to struggle hard to fulfil her water requirements. About 3% of the state population still collects drinking water from rivers and canals. Those along the large rivers sometimes walk miles to fetch drinking water. 29% of the population collect potable water from dug wells and 27% from tube wells¹. Poor sanitary practices and non-availability of toilets is equally alarming. The women in many of the tribal areas are still not well armed to fight both the abundance and scarcity of water. The water quality in Odisha gets adversely impacted due to both abundance and scarcity of water. In the livelihood system and property right in many areas some degree of in-equity still remain and this project would try to address through this policy and safeguards. The core indicator of the project is already satisfying gender equality criteria. The project has been structured in a policy framework where many gender related equity issues are inbuilt so that there will be no inordinate delay in gender mainstreaming.

3.3 The project has been designed based on the wider gender consultation with primary stakeholders. The issues concerning gender aspects were given specific focus while development of the project in-terms of design of interventions and implementation aspects. The various community consultation indicated the specific gender issues related to water availability, impact on livelihoods, agriculture production, livestock, and drudgery for fetching of water.

3.4 Gender mainstreaming at a project level means that projects are designed to ensure that both women and men are entitled to equally participate and benefit from a project. This is because

- i. Various manifestations of climate change, such as water scarcity (as seen in the context of this project) add more to the domestic burdens of women as compared to men

¹ Water Crisis in Odisha, Indian Water Portal

- ii. As women tend to rely more on natural resources for their livelihood, the decline in land and biomass productivity affects women more than men
- iii. Poverty and hunger affects women more because many times they are the last one in the family to get food and many of them suffer from mal-nutrition.

3.5 Women's high workloads are exacerbated by deficiencies in basic water and sanitation services in urban and rural areas. Deficiencies in basic services increase the time and effort expended on household water collection, waste disposal, and family hygiene; women are usually responsible for these duties, which can constrain the time available for income-earning. The project aims to mainly address the issue related to the access of water which would create positive bearing on these aspects.

3.6 A large proportion of dairying activities at the household level are carried out by women. The base line study of National Dairy Plan (NDP)² shows that women's share of total time spent in dairying is 64 per cent; while women spend more time on activities done at home, men spend more time on activities outside home. Despite their considerable involvement and contribution, significant gender inequalities also exist in access to technologies, credit, information, inputs and services, probably because of inequities in ownership of productive assets including land and livestock. Though women spend more time in animal rearing (mainly small ruminants), their participation in trainings and demonstrations was much lower than that of the men.

3.7 Project recognizes that participation of women will have a large bearing on the successful outcomes. Against this, mechanisms to ensure their participation have been developed in most components (livelihood planning), solar energy management and also some of the off-farm enterprises apart from bringing in linkage to anganwadi (pre-primary schools) set up of the Women and Child Development Department for health and nutritional security.

4 Applicable regulatory framework:

4.1 At the national level, National Water Policy, 2012 has given clear guidance on governance and participation of women and other vulnerable groups in water institutions "Local governing bodies like Panchayats, Municipalities, Corporations, etc., and Water Users Associations, wherever applicable, should be involved in planning of the projects. The unique needs and aspirations of the vulnerable communities, women and other weaker sections of the society should be given due consideration". *At the state level* under the Pani Panchayat Act, 2008 there is no discrimination between a women and man land owners to be the member of the water user association. However it is male dominated as of now. The project will have *jalsathis (field level water champions)*, one

² The base line study was carried out in 2012-13 and covered 14,992 households in 1,257 villages in 420 talukas (sub-district revenue unit) of 14 states.

third of which would be women. As per the [Pani Panchayat Act 2002](#), of Odisha, all land holders are eligible to be member of Pani Panchayat. The "land holder" means an owner of land or a tenant or both recorded as such in the record of rights under the Odisha Survey and Settlement Act, 1958. Further fish farmers are also covered under the Act as per the [Amendment in 2008](#).

4.2 Project would follow National Employment Policy which aims for equality for women in the labor market including increased access to opportunities across sectors as well as The Equal Remuneration Act 1976. Further, works under Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS), mandates at least 33% participation by women and equal pay. Further, other regulatory frameworks specific to project implementation aimed gender equality and equity would be followed under the project.

5 Key areas to be addressed in this project:

- Rights of access to tank and water resources (will have equal access)
- Division of labour (MNREGA guidelines shall apply for equality)
- Existing knowledge systems and skills regarding CCA (the *jalsathi* or water companions- 33% will be women)
- Power and decision-making (project will invest in empowerment issues especially, health, education and women led activities for livelihood around tank system)
- Embedded inequalities in policies and institutions, both formal and informal
- Perceptions of risk and resilience (this aspect will clearly mapped during the baseline vulnerability assessment and social assessment during formulation and clearly gender disaggregated)

6 Gender dimensions in the project outcomes and result indicators

6.1 Project recognizes that participation of women will have a large bearing on the successful outcomes. Against this, mechanisms to ensure their participation have been developed in most components (livelihood planning), solar energy management and also some of the on-farm and off-farm enterprises. Following specific outcome parameters and result areas are linked to gender:

- a) The project is aimed to cover 5.19 million vulnerable population of which 50.19% are women Increased resilience of health and wellbeing of 5.1 million vulnerable communities through food security and water security. The same would be tracked by gender disaggregated monitoring report, case studies.

Annexure 6

- b) Rejuvenation of 10000 tanks with ground water recharge structures: The tank improvement and management plan by water user associations will have mandatory gender consultation during the preparation. Public awareness for women would be important aspect to ensure participation at local level. The project would ensure the same. All the women would have equitable access to the water resources as well as to the ground water sources created at community level. Representation of women as per the existing requirement under WAU (as per Pani Panchayat Act 2002) would be followed. Efforts would also be made to vulnerable people to be part of the WUA as members including tenant farmers and fisher farmers.
- c) Tank renovation: As part of the project intention execution related to water budgeting, water master plan preparation. Gender-sensitive Household surveys would be taken up to understand household need of water. The crop water budgeting would be done including focus of crop to promote women involvement such as kitchen garden, nutritional aspects.
- d) Solar Pump installation for 1000 pumps: Women entrepreneurs in the village to be given priority for solar pump maintenance and related supply, recycling as barefoot technicians trained by vendors. Women SHGs would be encouraged to get linked with vendors of solar panel to work out business modalities.
- e) Capacity Building Plans: The capacity building plans would include specific trainings for women based on the training need assessment and livelihood aspects including post-harvest management and marketing. As part of the Farmers Producers Organisation development intervention, business plan enterprises suitable for women would be given priority. As part of the training programmes women SHGs would be given preference and 50% of the livelihood trainees for off farm activities would be women.
- f) Quality Monitoring for ground water governance: The quality monitoring of the project would include the quality manual for water and would reflect women's issues. Similarly, the project management would include gender parameter tracking interms of access to water resources.
- g) Knowledge management: Knowledge management system would track the best practices by women groups, women para professionals and the extent of resilience and adaptive capacity enhancement. Specific crop production technologies including farm equipment requirements with gender sensitive approach would also be studied during project implementation and the same would be communicated to research / engineering institutions.

Further,

6.2 The social norm on water sharing by users (pani panchayat) and cost recovery (through water tax) and crop water budgeting will enhance sustainability and reduce social conflict. Special support to landless and women by promoting off-farm initiatives including fisheries related activities would ensure inclusion.

6.3 Tanks are also at the helm of a socio-cultural and economic system of a village and this will help in its conservation. The access is fairly equitable as it is a common property resource. Any deviation from this norm is not anticipated in near term.

6.4 Leasing of ponds for Fishery activity to Women SHGs are already part of the fishery policy of the state and this will act as enabler.

6.5 The women members who are the primary users of tank water for cooking are worst affected along with children due to water contamination. Shortage of ground water too increases drudgery. The project is aimed at improved water quality as well as improved access. Access to water would also impact positively with regard sanitation and that would contribute indirectly to women's health positively. Further, promotion of kitchen garden, small-holder poultry will help improving health status.

7 Gender Checklist & Responsibility

Dimension	Gender Criteria	Responsibility
Governance dimension	Representation of women members in the Pani panchayat	DoWR, Government of Odisha (Executing Entity – EE)
	Prioritisation of fishing lease to Women SHG members	EE, Department of Fishery & ARD , Government of Odisha
	Share of women staff members in the project	EE / PMU
Administrative Guidelines	% of women jalsathis to be 33%	EE
	Priority to women headed households in WUA	EE
	Priority allocation for livelihood activities to landless women for off-farm and home-based livelihood options i.e. managing grain bank, assembling solar devices	EE / Resource Agency
Capacity building	Modules will have gender components, empowerment issues and at least 33%	EE / Resource Agency

Annexure 6

	women would be trained in climate resilience agriculture value chain, water conservation and management, health and water quality related issues, as well livestock management (small ruminants)	
Knowledge Management	Case Studies on Women empowerment issue, women entrepreneurs in solar, agriculture, no-farm. Analytical work on gender disaggregated data from baseline, mid line and end-line to assimilate impact on gender and other correlations	EE / Resource Agency

The gender Action Plan is presented separately as Annexure 6 (A).