

# Inclusive and Gender-Balanced Community Participation as an Essential Element for the Successful Implementation of Micro-hydro Power Projects

A Case Study of RVWRMP supported Hydropower Projects in Far-Western Development Region of Nepal



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## Abstract:

Equity is the corner stone for sustainable development. The planning and preparatory phase of the micro-hydro project should include gender-friendly community participation and social inclusion. The implementation phase of the micro-hydro project is the most critical phase and without wide participation, transparency and inclusiveness, it is impossible to complete the project. The post implementation of micro-hydro project is the phase where there are possibilities to establish a large number of micro-enterprises utilizing the available electricity. The productive use of water and energy must be linked with gender-friendly community participation to promote equity for a successful post-implementation phase. Generation of electricity creates livelihood opportunities at local level in the rural communities. The real benefits for women in micro-hydro projects are the economic benefits and the leadership opportunities they create. This paper analyzes gender-friendly and inclusive community participation of sixteen micro-hydro projects implemented by the Rural Village Water Resources Management Project (RVWRMP). The generation of 550.5 kW power output and irrigation facilities of 164.4 hectares of land through the sixteen projects has created multiple benefits and opportunities for the communities. This paper also highlights the productive end-use of electricity with equitable and inclusive exploitation for the benefit of the community people. This paper emphasizes the importance of gender-friendly and inclusive community participation for the successful implementation of micro-hydro projects.

Key Words: Participation, Transparency, Gender, Inclusiveness, Equity, End-use, Human Development

## 1. Introduction

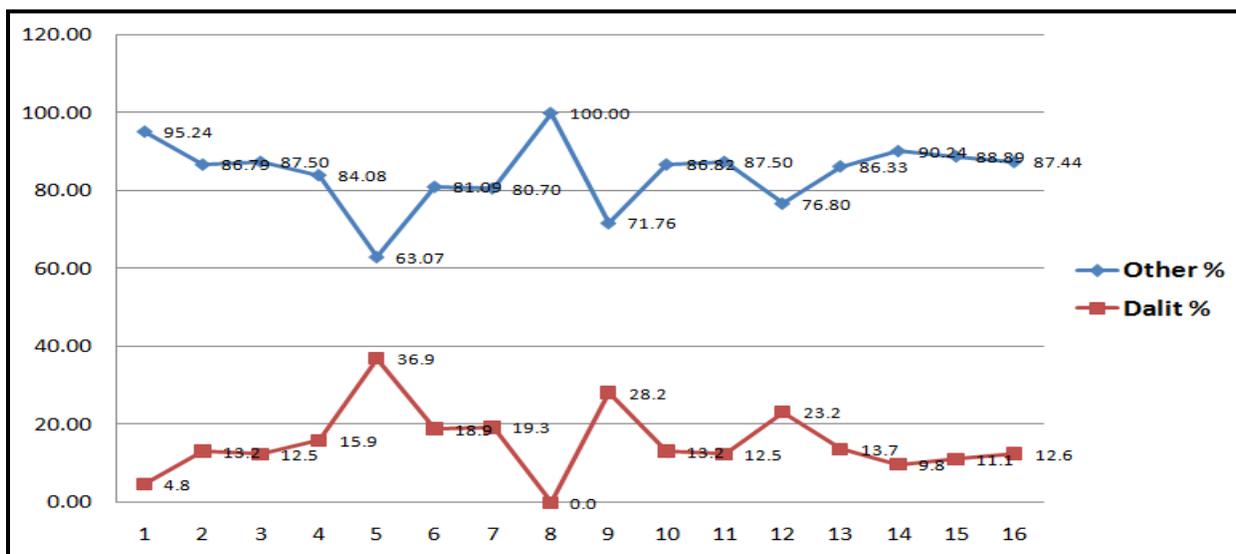
The Rural Village Water Resources Management Project (RVWRMP) is supported by the Government of Nepal and the Government of Finland. RVWRMP works through district based subprojects under the District Development Committees (DDCs). It is active in ten districts in Far- and Mid- Western development regions of Nepal, namely: Achham, Baitadi, Bajhang, Bajura, Dadeldhura, Dailekh, Darchula, Doti, Humla, and Kailali. RVWRMP is a water resources management project which in addition to water supply and sanitation supports community-based irrigation, micro-hydro power, improved cooking stoves and water mills, number of

environmental improvements as well as agriculture based sustainable livelihoods and institutional capacity building activities. The project area is located in the least developed Far- and Mid-Western region of Nepal. The districts where the project has been implemented were ranked either as “poor” or “very poor” in the Nepal Human Development Report 2014 by UNDP. The Human Development Index (HDI) varied from 0.425 for Bajura to 0.430 for Bajhang which are in the 75<sup>th</sup> and 74<sup>th</sup> position respectively out of 75 districts. Poverty, remoteness and lack of education are the biggest challenges in the development of the region. More than 80% of the population lives in the rural areas of the region.

This paper is based on the sixteen completed RVWRMP supported micro-hydro power projects for the study of gender-friendly and inclusive community participation and its impact on human development. The total power output generated is 550.5 KW which is serving a total of 37,962 people from 6,211 households in the sixteen projects. This paper highlights the importance of gender-friendly and inclusive community participation to promote equity for the successful implementation of micro-hydro projects.

## 2. Data Analysis for Gender and Social Inclusion in Micro-hydro power Project:

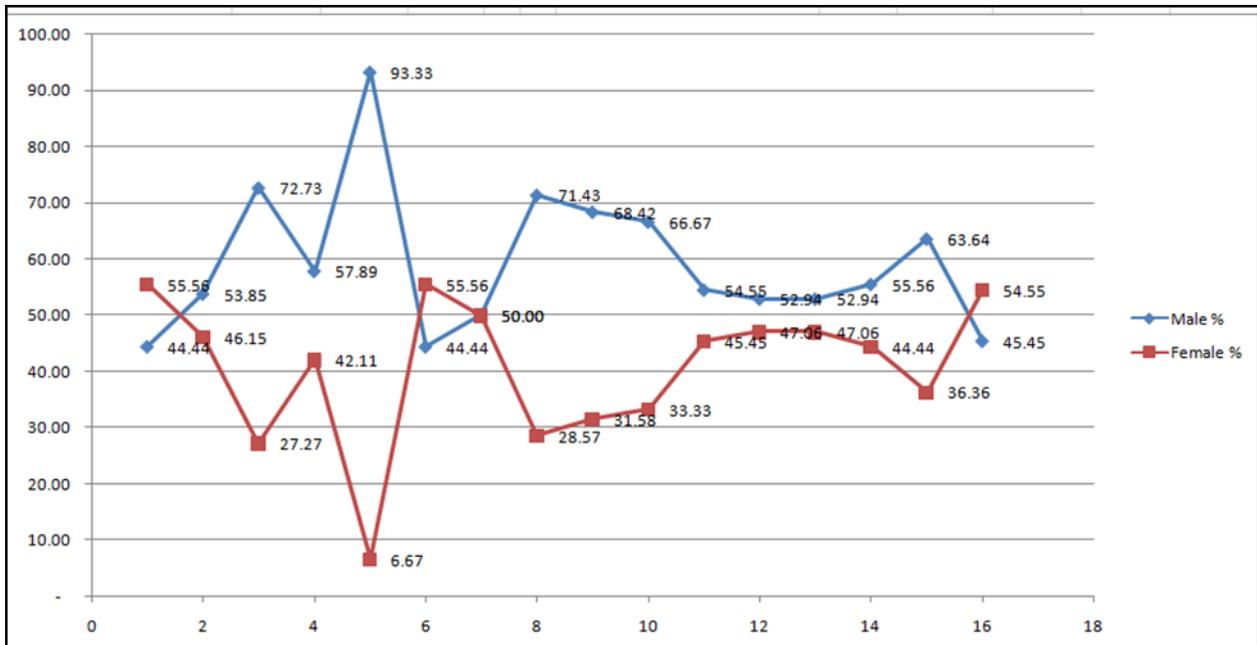
Graph 1 shows the baseline information of ethnicity of the projects. 14.9% of the population are Dalit and 85.1% are other households based on the RVWRMP baseline report 2011.



Graph 1: Ethnicity in baseline (2011)

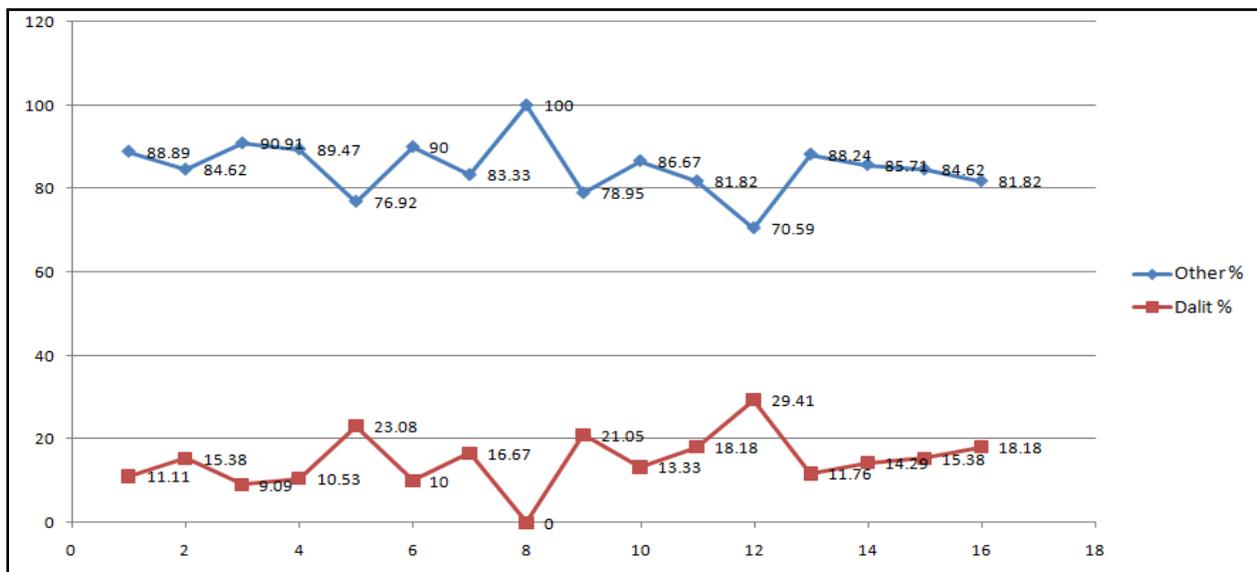
Graph 2 shows the male and female representation in the User Committee (UC) for each project. The overall male percentage is 58.4 % and female is 41.6 %. For genuine gender balance it should be a 50-50 share in the UC structure, but in actual the males are overrepresented. The women should take an equal decision making role in all aspects for a genuine gender balance in micro-hydro power projects. We can see that in a few projects the representation of women is very poor compared to the men.

The presence of women is more significant in number; it means women are more encouraged for energy based micro-enterprises, though the men should also be equally encouraged.



Graph 2: Male & Female in Users Committee (%)

Graph 3 shows the representation of Dalit and Other in user's committees (UC). The overall representation of Dalit in UCs is 15.5% whereas the total Dalit households are 14.9% (baseline 2011). Inclusion of Dalit is significant, and social inclusion is important to mainstream in development.



Graph 3 : Dalit & Others in Users Committee (%)

### 3. Gender and Social Inclusion during Implementation of MH Project:

Gender equity, social inclusion and women's empowerment are integral to human development. Gender equity and social inclusion creates ownership in the society, which is very important for the sustainability of the micro-hydro power projects. Only sustainable projects can have a positive impact on human development. Without gender equity and social inclusion the success of

implementation of the micro-hydro power project cannot be confirmed. Poor participation leads to poor implementation and poor implementation makes the project vulnerable to climate change, natural calamities like flood and landslides. If the projects are not sustainable then the impact of the project will be negative to the society. There will be disharmony and mistrust among the people and poor accountability of the project, which will lead to poor human development. In the implementation of micro-hydro power projects, gender equity means almost equal participation of both men and women in all decision making processes. In micro-hydro power projects, there are many tasks to be performed by the community members themselves. Participation of both men and women, not only in the UCs, but also in the transportation and construction phase, is the real example of gender inclusion in the micro-hydro power project implementation.

Public audits and mass meetings are such community level activities which govern the transparency of the micro-hydro power projects. Both men and women should be involved in the public audits and mass meetings, as well as in the decision making processes. The decision making process must have the appropriate gender balance for the successful completion of the micro-hydro power project. Having women in key decision making positions will increase the empowerment of women in general.

## Gender Equity and Social Inclusion during Implementation



Figure 1: Gender equity and Social Inclusion on MHP Implementation

The implementation of the micro-hydro power project supported by RVWRMP in Far-Western Development Region is gender friendly and inclusive in nature although some gaps still remain. All

the completed micro-hydro power projects are functional and contributing for socioeconomic impact in the Far-Western Region of Nepal.

#### 4. Gender Equity and Social Inclusion in Micro-Enterprise of Micro-Hydro Project

After successful implementation of the micro-hydro power project, the completed micro-hydro power project brings socioeconomic opportunities to the society. These opportunities contribute in human development and gender development in the local communities. The socioeconomic opportunities must be gender friendly and inclusive in nature.

### Gender Equity and Social Inclusion in Micro Enterprise of MH Project



Figure 1: Gender Equity and Social Inclusion in Micro-Enterprise of Micro-Hydro Projects

Community people are very satisfied with micro-hydro power projects as well as its overall socioeconomic impact to the society. Many economic opportunities were created after successful implementation of micro-hydro power projects. The energy based micro-enterprises have contributed have had a very good impact in the society. The energy based micro-enterprises were found to be gender friendly and inclusive in nature.

## 5. Conclusion

Gender equity and social inclusion is very important in the micro-hydro power project implementation and post implementation and it has a very good impact on human development. Reaching the gender balance means there is equal empowerment of male and female which is very important in the development management. The sustainability of the project depends on how the community people perceive the projects. Micro-hydro power projects are one of the important sectors of development for the rural community. The micro-hydro power projects create a socio-economic impact in the society. Gender equity and social inclusion improves the overall situation of both male and female as well as Dalit and Dis-Advantaged Groups (DAG). It also contributes to social, economic and political empowerment. Being empowered in every sense means the ownership has increased and this in turn improves the sustainability of the micro-hydro power projects.

These are the specific recommendations for micro-hydro power projects for sustainability. The end-use promotion activities must be accelerated for economic growth of the community. End-use promotion is also directly linked with the sustainability of the micro-hydro power project. It furthermore contributes to the Human Development Index (HDI), Gender Development Index (GDI) as well as Gender Empowerment Measures (GEM) if gender and social inclusion is adopted meaningfully. Micro-enterprises may be promoted through the subsidy policy mechanism. They contribute to empower the rural poor people and it should be inclusive. RVWRMP has supported productive end-use promotion activities in the completed micro-hydro power projects in a gender friendly and socially inclusive way. The end-use promotion activities are the main source of cash inflows as revenue for the micro-hydro power project. The long term sustainability of the micro-hydro power projects depends on the end-use promotion activities strategy and plan.

The sustainability of the micro-hydro power projects and micro-enterprises is extremely important because only sustainable projects contribute to the human development of the society. If the implemented project is not sustainable, the impact on the human development is probably negative. Sustaining the micro-hydro power projects and micro-enterprise is very complicated and possible only through meaningful gender equity and social inclusion.

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