



Training Module on Gender & Aquatic Resources Management

Published by

Deutsche Gesellschaft für
Internationale Zusammenarbeit (GIZ) GmbH

Registered offices:

Bonn and Eschborn

Protection and Sustainable Management of Aquatic Resources in the Northeastern Himalayan Region of India (NERAQ)

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Design and Layout

Mensa Design Pvt. Ltd.

Photo credits

Cover photo: GIZ

GIZ is responsible for the content of this publication.

On behalf of the

German Federal Ministry for the Environment, Nature Conservation,
Nuclear Safety and Consumer Protection (BMUV) under the International Climate Initiative (IKI) New Delhi, 2024

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Training Module on **Gender & Aquatic Resources Management**



Acknowledgements

This document was developed by GIZ-GmbH in collaboration with the Ministry of Environment, Forest, and Climate Change (MoEFCC) as part of the NERAQ Project (Protection and Sustainable Management of Aquatic Resources in the Northeastern Himalayan Region of India). The project is funded by the German Federal Ministry for the Environment, Nature Conservation, Nuclear Safety, and Consumer Protection (BMUV) through the International Climate Initiative (IKI).

I would like to extend my heartfelt gratitude to the women of Manipur and other parts of Northeast India for their patience and generous sharing of their time and knowledge, which enriched this work.

My appreciation also goes to IORA Ecological Solutions for their efforts in preparing the Gender Module. Their foundational materials and insights greatly helped to the development of this module.

This publication would not have been possible without the substantial, creative, and constructive feedback provided by many individuals. I am especially thankful to Usha Dewani Das, Aja Zinyu, Kenneth M Pala, Dr Indrani Phukan, and Patricia Dorn for their time and valuable comments on the draft report. A special thanks to Usha Dewani Das for contributing the photograph featured in this publication.

Lastly, I am grateful to the members of the Environment Cluster Gender Working Group for their suggestions, encouragement, and support throughout the process.

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About the Module

1

Incorporating a gender perspective into aquatic resource management is feasible, but it necessitates customized strategies rather than a universal approach. Organizations that are interested in incorporating a gender perspective into their internal policies and procedures for aquatic resource conservation can make use of this comprehensive module. The objective of this module is to raise awareness among their partners and stakeholders about the importance of gender equality in aquatic resource management. It also aims to implement concrete actions that will contribute to the creation of more just and inclusive management approaches, with a focus on promoting equal opportunities and eliminating gender-based discrimination.

Any methods and approaches chosen to promote gender equality must align with the specific goals of each aquatic resource conservation initiative, programmes or schemes. The modules may assist in planning and designing syllabi for academic institutions and expanding gender competencies for teachers, lecturers, and students. It will also provide guidance for statisticians to gather and generate effective gender data, enabling them to convey important messages to policymakers effectively. Therefore, the module target to imply activities that will assist practitioners, NGOs, and government officials in effectively integrating this perspective into their respective programmes, schemes & projects.

By the end of the module, learners will be able to:



Recognize the Importance of Gender Equality in the Sustainable Use of Aquatic Resources



Proficiency in Evaluating and Incorporating Gender Considerations into Aquatic Resource Management



Exhibit Gender-Sensitive Knowledge and Attitudes When Implementing Natural Resource Management Projects



Gender Definition & Terms

2

Definition by United Nations

Gender refers to the roles, behaviors, activities, and attributes associated with women and men, established by a given society at a given moment. This social construct also defines the responsibilities, opportunities, and relations between men and women. These roles, behaviors, and relations are not static but are changeable over time, from place to place, and in a single location.

Definition by German Development Cooperation:

Gender refers to the socially constructed roles and responsibilities of women and men. The concept of gender includes expectations about the characteristics, abilities, and behaviours of women and men - what people believe women and men can and should do. These roles and expectations are learned and vary across different cultures.

Definition by World Bank

Gender refers to the social, behavioural, and cultural attributes, expectations and norms of behaviour associated with being male or female.

Definition by International Labor Organization

Gender is a set of psychological, social, and cultural characteristics assigned to persons on the basis of their sex. These characteristics are historical and changeable over time, and are, therefore, modifiable. Gender is a constituent component of social relations. It is a social construct that presumes a set of tacit or explicit agreements developed by a given community at a given moment in time and includes teaching and learning processes.

As per The United Nations Department of Economic and Social Affairs

‘Gender refers to the different roles, rights, and responsibilities of men and women and the relations between them. Gender does not simply refer to women or men, but to the way their qualities, behaviours, and identities are determined through the process of socialization’.

2.1 Terms & Concepts related to Gender

Gender identity: Gender identity is the gender with which an individual identifies. Gender diversity is based on feelings of belonging to a particular gender and includes various gender identities, such as being a woman, a man, transgender, intersex, or other local and indigenous self-identities, such as Hijra in India.

Sex refers to the biological distinctions between women and men. These differences exist for reproduction purposes and are essentially fixed.

Sexual orientation: A person's sexual orientation refers to the gender they are emotionally, physically, and/or sexually attracted to. Different orientations include lesbian, gay, heterosexual, bisexual, and asexual. The acronym LGBTIQ represents lesbian, gay, bisexual, transgender, intersex, and queer.

Sexual harassment: Sexual harassment is a form of gender-based violence that encompasses unwanted physical, verbal, or non-verbal conduct of a sexual nature. These actions are intended to, or result in, a violation of the victim's dignity, creating an atmosphere that is intimidating, hostile, degrading, humiliating, or offensive. Individuals of any gender can be both victims and perpetrators of sexual harassment. This encompasses various behaviors, including, but not limited to: unwanted physical closeness; inappropriate touching or sexual assault; gestures and non-verbal cues of a sexual nature; sexually explicit comments about individuals or their bodies,

behaviors, sex lives, or sexual identities; derogatory language and remarks aimed at undermining one's dignity, such as sexual jokes; demands for sexual acts; the sharing or display of pornographic or sexist images; and stalking with a sexual motivation. The impact of sexual harassment is particularly severe when it exploits a person's hierarchical dependence in educational or workplace settings, especially when threats of personal or professional disadvantages are made or when advantages are promised.

Gender justice: Gender justice is the primary objective of gender mainstreaming and encompasses more than just the basic right to gender equality outlined in the Basic Law. It entails equal rights, opportunities, access, decision-making authority, responsibilities, and potential, as well as fair treatment of the interests, needs, and priorities of all genders in their full diversity. Achieving gender justice requires that decision-making processes fully consider the interests of all genders and the effects on them.

Empowerment: Empowerment involves strategies and actions that enhance the independence and self-determination of individuals or communities. Its goal is to enable people to advocate for their own interests by reclaiming personal agency, responsibility, and autonomy. The term often refers to targeted, proactive support that aims to improve or strengthen pertinent areas. The following elements may be relevant to the empowerment of women: i) boosting self-confidence; ii) affirming their right to make decisions; iii) reinforcing their access to opportunities and resources; iv) enhancing their ability to make personal choices, both in private and public spheres; v) increasing their capacity to drive social change towards a more equitable socio-economic landscape.

Gender analysis: Gender analysis is an essential examination of how variations in roles, activities, needs, opportunities, and rights/entitlements influence genders within specific policy areas, situations, and contexts. This involves gathering and assessing quantitative gender-disaggregated data (though often limited to binary classifications) alongside qualitative information. Such analysis aids in understanding the differences and disparities between genders, recognizing gender-related impacts and risks, determining strategies to mitigate negative consequences for genders, and identifying opportunities to address gender-based inequalities. Therefore, conducting a gender analysis is fundamental for programs and projects in development policy aimed at promoting social change and facilitating social transformation.

Gender mainstreaming: Gender mainstreaming is a worldwide strategy aimed at systematically addressing the diverse needs and circumstances of various genders, as well as the effects of actions taken on them, with the goal of achieving gender justice. It involves the (re)organization, enhancement, development, and assessment of political and non-political activities and processes at all levels. This ensures that the experiences and needs of all genders are fundamental components in the design, execution, and evaluation of all policies and programs. The objective is to minimize discrimination and inequalities, guarantee equal benefits for all genders, and leverage their potential.

Gender-responsive: Gender-responsive refers to the acknowledgment of gender norms, roles, and relations in order to actively address gender-based disadvantages, inequalities, and discrimination, alongside recognizing potential opportunities. Gender-responsive approaches pinpoint and underscore existing gender-related needs, priorities, power dynamics, challenges, and possibilities, integrating these findings into the formulation, execution, and assessment of strategies and actions. The aim is to ensure that these strategies and actions do not have unintended negative effects, and that all individuals can participate in and benefit from these initiatives, regardless of their gender.

Gender-transformative: Gender-transformative approaches aim to do more than address the effects of gender-based inequalities; they seek to alter gender roles, power imbalances, social norms, and rules that perpetuate inequality, discrimination, and exclusion. Achieving gender justice requires a thorough analysis of the root causes that sustain gender-based inequalities and discrimination, followed by implementing changes to address these underlying issues.

Gender equity: Gender equity is described as the "fairness of treatment for women and men, according to their respective needs." This concept reflects how social justice issues affecting women are interpreted, often influenced by tradition, customs, religion, or culture. However, the United Nations has deemed the term "equity" in relation to women's rights as unacceptable, advocating instead for a rights-based approach, as indicated in the definition."

Gender Equality: Gender equality is defined as the "enjoyment of equal rights, opportunities, and treatment by men and women, and by boys and girls in all areas of life." The primary goal of equality policies is to eliminate structural, societal, and social inequalities in the treatment of different genders. Historically, these efforts focused on eradicating discrimination against women. Today, the scope has expanded to include policy measures for women, men, non-binary, intersex, and transgender individuals.

2.2 Gender centric projects, programmes and schemes in India

A. Swayamsidha Project

It is a centrally sponsored scheme implemented under Integrated Women Empowerment Programme (IWEP) with the following objectives:

- Establishment of self-reliant women's self-help group
- Creation of confidence and awareness among member of self-help group regarding women's status, health, nutrition, education, sanitation and hygiene, legal rights, economic upliftment and other economic and political issues.
- Strengthening institutionalizing the habits in rural women and their control over economic resources.
- Improving access of women to micro credit.
- Involvement of women in local level planning and
- Convergence of services of department of women and child development and other department

B. Support to Training and Employment Programme (STEP)

Department of Women and Child Development, Ministry of Human Resource Development, Sashtri Bhavan - New Delhi has given financial support to impart training under this programme.

- The programme aims to increase the self-reliance and autonomy of women by enhancing their productivity and enabling them to take up income generation activities.
- It provides training for skill up gradation to poor and asset less women in the traditional sectors viz – agriculture, animal husbandry, dairying, fisheries, handlooms, handicrafts, Khadi and village Industries, sericulture, social forestry and wasteland development.

C. Setting up of Employment-cum-Income Generating units (NORAD)

This programme, partially assisted by NORAD (presently known as SWABALAMBAN), aims to improve the lives of poor women by training them in traditional and non-traditional trades viz.- electronics, watch assembly, basic and advanced computer training, garment making, secretariat practice, embroidery etc. and to ensure their employment in these areas given training.

D. Short stay homes for Women and girls (SSH)

The SSH scheme for Women and girls who have no local support systems due to family problems, mental strains, social ostracism, exploitation and other causes. The services extended in these homes include medical care, psychiatric therapy, educational cum vocational training, recreational facilities etc.

E. Swadhar Greh Scheme

The Ministry of Women and Child Development is implementing the Swadhar Greh Scheme, which

targets women who are victims of difficult circumstances and are in need of institutional support for rehabilitation.

A scheme for women in difficult circumstances with the following objectives:

- To provide primary need of shelter, food, clothing and care to the marginalized women, girls living in difficult circumstances who are without any social and economic support
- To provide emotional support and counselling to such women.
- To rehabilitate them socially and economically through education, awareness, skill up gradation and personality development through behavioural training etc.
- To arrange for specific clinical, legal and other support for women/girls in need of those intervention by linking and net working with other organizations in both Govt. Non-Government sector on case-to-case basis.
- To provide such other services and will be required for the support and rehabilitation to such women in distress.

F. Pradhan Mantri Matru Vandana Yojana (PMMVY)

Through its former Maternity Benefit Program, it provided pregnant women and nursing mothers with financial incentives for better health and nutrition, which helped to foster a more supportive atmosphere.

G. Pradhan Mantri Mahila Shakti Kendra

It aims to educate girls between the ages of 11 and 18 in nutrition, life skills, household skills, and vocational training in order to empower and uplift them.

H. National Crèche Scheme

It intends to offer childcare services to employed working women with children ranging in age from six months to six years.

I. Rashtriya Mahila Kosh (RMK)

It aims to provide microcredit to disadvantaged women under favourable terms for a variety of livelihood assistance and income-generating activities in an effort to boost their socioeconomic development.

J. UJJAWALA

This is a comprehensive programme for stopping human trafficking as well as for rescuing, rehabilitating, reintegrating, and returning victims of trafficking for sexual exploitation in the workplace.

K. Gender Budgeting Scheme

It serves as a tool for mainstreaming the gender perspective during various planning, budgeting, implementation, and impact assessment phases, as well as when analysing policy/program objectives and money allotments. The Scheme supports institutional structure improvement and training for a wide range of stakeholders in order to integrate gender concerns in Central and State Governments.

L. Mission Shakti

The mission aims to strengthen interventions for women's safety, security, and empowerment. It seeks to realize the Government's commitment to women-led development by addressing issues affecting women throughout their lives and making them equal partners in nation-building through convergence and citizen ownership.

2.3 Misconceptions about Gender Terms in Management of Aquatic Resources

By understanding gender roles, relationships, and inequalities, we can better understand the decisions individuals make and the various roles they play. The disparities and inequalities between women, men, non-binary, inter and trans people impact how people react to changes in the management of natural resources, including aquatic resources. Engaging all genders in integrated aquatic resources management initiatives can enhance the effectiveness and efficiency of aquatic resource conservation and management projects. The concept of gender identity and its related terms can be intricate and are observed to be frequently misconstrued. There are several common gender-related misconceptions in the aquatic resource conservation discourse. For examples:

- Aiming exclusively on the participation of women in fishing/aquaculture is the definition of gender equality.
- Considering all women as a vulnerable group in aquatic resource utilization.
- Aquatic resource management is an authority/governance matter, so it has nothing to do with gender issues.
- Gender sensitivity means understanding that women are more susceptible to resource utilization.
- Gender equality can be accomplished merely by including a greater number of women in fishing practices, by attendance in meetings and fishery related trainings.
- Focusing solely on the "sensible needs" of both men and women as the key to addressing gender issues in fisheries.
- No differentiation on gender is required if the interventions/activities benefit all including men and women.
- "I'm a woman so the gender perspective is covered".

2.4.1: Practice True or False	True	False
Giving advantage to women on aquaculture training instead of men is gender equality	<input type="checkbox"/>	<input type="checkbox"/>
Competition between men and women on quantity of fish caught from wild is gender equality.	<input type="checkbox"/>	<input type="checkbox"/>
Gender equality can lead to economic growth, increased yield, and a more equitable distribution of natural resources.	<input type="checkbox"/>	<input type="checkbox"/>
Gender equality is about reversing power dynamics in resource management.	<input type="checkbox"/>	<input type="checkbox"/>
Gender equality encourages men to take a more active role in their children's lives (shared parenting responsibilities) when women go for fishing.	<input type="checkbox"/>	<input type="checkbox"/>
Being a woman in aquatic resource managers or chairperson of the management committee automatically ensure that all gender-related issues are addressed.	<input type="checkbox"/>	<input type="checkbox"/>
Inclusive aquatic resource management helps to reduce conflicts over resource use by ensuring that men make decisions about how resources are managed and used, and women agree on that.	<input type="checkbox"/>	<input type="checkbox"/>

Why Gender Equality in Aquatic Resource Management

3

3.1 Relationships between Gender and Aquatic resource conservation

Aquatic resource conservation refers to the sustainable utilization and protection of all forms of aquatic flora and fauna and their natural habitats. Understanding the relationships between men and women with the element of these resources can unveil gender-based opportunities and constraints, contributing to the transition towards sustainability. There is clear evidence that incorporating gender considerations into the conservation of aquatic resources leads to better outcomes. Knowledge about the uses and management of wild fish is often localized and specialized. Current management approaches often overlook the connection between gender and the functional aspects of these resources.

- The roles of men and women in aquatic resource management **vary across different times, sites, and regions** according to changing norms, culture, practices, and technologies. Women and men - *derive different types of resources and benefits from aquatic environments such as lakes, rivers, ditches, ponds, streams, springs, bogs, and wetlands.* The knowledge and practices related to fishing, and gathering other aquatic organisms vary between women and men.
- The use and reliance on aquatic resources differ according to their gender-specific roles and the fishing domain of men and women are not necessarily the same. While men mostly go out to catch big fishes, **women frequently play unique roles in community stewardship efforts**, organizing collective actions such as *promoting sustainable fishing practices and determining appropriate handling practices to reduce losses due to rejection or spoilage.* Their involvement is often grounded in a deep sense of responsibility for the well-being of their families and instilling the desired social and moral values in the community members at their young age.
- Promoting gender equality in aquatic resource conservation **enhances the effectiveness and sustainability of management efforts by leveraging diverse perspectives and experiences.** *Control and decision-making in aquatic resource management, such as determining the timing of harvests, the choice of nets and gear, and the selection of species to target, differ between women and men.* These differences are often shaped by gender roles, access to resources, and levels of authority within their communities.
- The **societal construct positions** of men and women play a crucial role in developing different relationships with the aquatic environment, their resource utilization patterns, and their strategies. The collective action of men and women has hitherto concentrated on the co-creation of appropriate conservation outcome but there is an **emerging recognition of the social capital** (i.e. relations of trust and common values) as also equally important in resource management.

To effectively relate gender equality with aquatic resource management, it is important to highlight the above points in project planning and implementation by recognising and valuing the 'invisible work' contributed by different sections of the society. Women and men utilise aquatic resources in distinct ways. Women, in particular, have a wealth of unique knowledge, skills, and experience that are crucial for conservation. Acknowledging the value of the diverse and significant knowledge held by women enables better use of available knowledge and human resources.



3.2 Gender in Common Property Resources (CPRs) management

The socioeconomic condition, age, and gender significantly influence how men and women access and utilise aquatic resources. The **societal setup that includes norms, values, customs, and traditional institutions control over resources use, prevailing power structures, decision-making processes, and subsistence strategies.**

In India, particularly in the Northeastern region, the indigenous tribal people have historically managed and conserved fishing grounds including rivers and lakes using their local knowledge. They are closely connected to the forests and other natural resources and utilise wild fish with traditional fishing gears. This prolonged connection has rendered a deep sense of affinity in most people that was built on common beliefs within a community on rivers and lakes. Further, the socially constructed roles and responsibilities assigned to men and women in a specific community are integral to the decision-making processes concerning access to and management of aquatic resources.

These communities establish and enforce norms for resource use, which have evolved over time and are often unwritten. In many cases, breach of these norms is punitive whereby penalties are imposed through traditional courts. These community-owned and managed resources, or Common Property Resources (CPRs), provide both tangible and intangible livelihoods to their dependents. Women have traditionally retained a higher status in production systems that depend on common-pool resources. For example, indigenous Gond women of Kanhalgaon village in Maharashtra are reclaiming their traditional rights to a water body and taking on the responsibility of restoring and practicing fisheries. The management of these resources is influenced by the composition and cultural patterns of the community, such as a village or town.

Case study: 3.1: Community fishing in Lotha and Sumi tribes of Nagaland

In a study conducted by Ovung and his team on community fishing practices, they documented the unique community fishing activity by the Lotha and Sumi tribes of Nagaland using Piscicidal plants. The unique fishing practices is usually carried out during April when the water level is low before the onset of monsoon rains. Initially, the village chief (*Gaon burah*), village elders and officials of both the villages of the two participating tribes call a meeting to discuss and plan events for the whole fishing process, while also fixing the ideal date for the venture. This usually happens weeks, or even months, beforehand. During this period, the plan of the operation and traditional customs which have to be followed are shared among the participating tribes, and the location is also decided. This study revealed that only men are allowed to participate in the activity right from the start of the operation. However, during the harvesting of the fish, women are then allowed to participate. Traditional fishing within the tribe (intra-tribal activity) is carried out under the direction of the Gaon burah, elders and a chairperson. Thereafter, members of the community gather for a meeting to discuss the procedures and the elders share traditional values/customs related to the fishing practice.

Aquatic resources cannot be managed and conserved without the active participation of local communities. The increase in population, introduction of market values, and rise in immigration and emigration are observed to erode the power of traditional authorities, thereby rapidly changing community beliefs and traditional social values. As such, it is imperative to consider social and gender analysis by:

- Recognising the **social aspects of resource management dynamics** including its cultural practices that are interdependent
- Systematically **addressing the elements of resource dynamics** such as Habitat Characteristics, Community participation and Equitable access, Regulatory and Management Frameworks, Biodiversity components, and ecological interactions
- **Relating to the historical and sociopolitical forces** that determine division of labour.

3.3 Status of women in Aquatic Management segment

According to the FAO, women make up about 43% of the global agricultural labor force, including fishing activities in the Global South. They account for 47% of the global fisheries workforce, and in India, they constitute 72%. The expanding global economy is driving rapid changes in aquatic resources, significantly impacting gender roles and rights in local communities. It was estimated that about 180 million people employed in fisheries or fisheries-related activities worldwide are women. The contributions of women's roles in fisheries are often 'invisible' or 'undervalued' due to exclusion of certain allied activities of fisheries from accounting systems and statistical surveys.

- About 90% of the world's fishers are in the small-scale sector. However, aquatic resource data often focus primarily on large-scale fisheries, **paying much less attention to subsistence fisheries**, especially those for household consumption. In the inland fisheries sector, men predominantly engage in fishing of large fishes, women play a critical role in numerous aspects of small-scale fisheries.
- In India, women make up approximately 69% of the workforce involved in post-harvest activities in the fisheries sector. Women mostly involve in processing and preservation of all type of fish products such as drying, salting, smoking, fermentation by traditional methods to ensure its availability in long-term. Despite their well-known roles in these activities, the **post-harvest management such as sorting and grading resources, including processing fishery products, is generally undervalued.**
- While men might primarily focus on fishing for larger species, women particularly among tribals in Northeast India generally practice **collecting small fish, invertebrates and in gathering edible aquatic plants and insects which are not widely acknowledged.** This variation is influenced by their distinct experiences, cultural roles, and responsibilities within their communities
- Women are also **engaged in retailing fish, and preparing food for fishers, and involved in other value-added activities that are often unacknowledged or undercounted as employment.**
- Beyond their roles in family care, they significantly contribute to various tasks such as **mending nets and responsible for family finances (such as accounts keeping).** In India, women are more involved in the marketing chain about 73.6% are in marketing (CMFRI report). In recent years, women tend to save from and contribute to family earnings by participating in women's Self-Help Groups (SHGs).
- Women also manage the household, taking care of the health and dietary needs of their families. Hence, their involvement in aquaculture and fisheries improves the health and nutrition of their families and communities, particularly in areas where malnutrition is a significant concern.



Pic: Mending of net by women fishers in Assam (photo: Shaikhom)

Women have **historically been excluded from formal decision-making platforms in the aquatic resource management sector.**

The non-recognition of these activities reduces opportunities to empower women, makes them invisible in management plans, and decreases their participation in decision-making. This disparity is particularly visible in the unequal access to and control over aquatic resources and the inequitable sharing of the benefits from their use.




Achieving sustainable management of aquatic resources requires the active participation of all community members, including women, non-binary, inter and trans people, particularly in development projects. This ensures the involvement of women fisherfolk in the planning process of resource-oriented management programmes. Gender mainstreaming is a supplementary strategy and not intended as a substitute for policies, legal provisions, institutional mechanisms or interventions which are specifically aimed at gender equality.

Mainstreaming Gender in Aquatic Ecosystems Conservation Programmes

Policies that ignore the differential impact on gender groups are often gender-blind and potentially detrimental to sustainable development. Gender mainstreaming involves systematically assessing how planned actions, including legislation, policies, and programmes, affect all genders at all levels and in all areas. It intends to integrate gender perspectives and promote equality by ensuring that gender considerations are central to decision-making processes and outcomes.

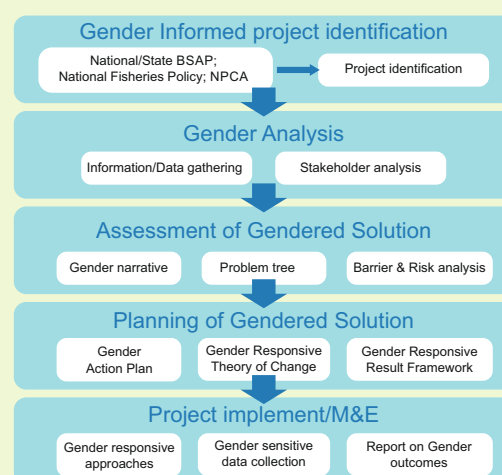
Gender mainstreaming aims to bring about significant changes in the goals, strategies, actions, and results of initiatives, ensuring that all genders can actively shape, participate in, and benefit from aquatic resource management interventions. It is a process for achieving gender equality in the most effective, inclusive and efficient manner.

Gender mainstreaming has traditionally focused on women in isolation, but the methods should consider both women and men as beneficiaries. Major challenges in mainstreaming gender include funding and resources, the lack of available gender-disaggregated data, and collaboration among multiple stakeholders.

- Integrating a gender perspective into conservation planning can lead to more efficient and effective implementation of projects, programmes, and initiatives. Leveraging women's unique knowledge about various aspects of aquatic biodiversity—including their uses, challenges, threats, and conservation ideas—can be highly beneficial
- Practitioners, implementers, and policymakers should consider potential indicators of progress, identify key entry points for action, and ensure adequate technical capacity and human resources for the successful implementation of gender mainstreaming. Some examples of entry points are
- Policy and advisory:** Develop a clear and transparent policy statement or strategy that commits the organization or institution to promoting gender equality in the management of aquatic resources. 
- Capacity building and trainings:** A gender component is included in all trainings, workshops, meetings, and seminars related to the sustainable management of aquatic resources, including topics such as Aquaculture, Stock Assessment, Sustainable Fishing Practices, Ecosystem-Based Management, and Sustainable Use Concepts. 
- Governance, management, and decision-making:** Ensure that decision-making processes, including the establishment of responsibilities 

How to mainstream gender into aquatic resource conservation

The best ways of integrating gender considerations, ensuring that they get integrated into priorities, strategies, action items and financing. Gender mainstreaming in aquatic resource management is a crucial process that ensures both men and women are equitably involved and benefit from resources and their management. The following outlined are key steps to effectively integrating gender considerations into aquatic resource management projects.



Adapted from: UN Women. (2016). Leveraging co-benefits between gender equality and climate action for sustainable development: Mainstreaming gender considerations in climate change projects. New York

and authorities at various levels (local, state, or national), achieve near gender parity, while considering the rights and needs of all stakeholders, including women's associations.

- **Fairness and equal opportunities in drafting of regulation/rules for management:** Enhance gender equality considering the differences in needs, roles, challenges, and opportunities between women and men, non-binary, inter and trans people, particularly within lake or river management committees, village authorities, fishers' groups, fish sellers' associations, and river monitoring teams, etc.



4.1 Applying gender lens in sustainable uses of aquatic resources

While planning for sustainable uses of aquatic biodiversity, careful deliberation and examination of all the implications of the intervention in terms of gender must be considered. Various factors, including socioeconomic status, cultural norms, age, and gender, play a crucial role in how men and women utilize and manage aquatic resources. Hence, researchers or statisticians may **consider gender as an institution rather than merely as an individual characteristic**. The contribution of fisherwomen to household income and food security through subsistence fisheries is often overlooked.

Case Study 4.1:

In Manipur of Northeast India, the Meitei women folk are engaged in different activities of fisheries in addition to their household work. Their participation in fisheries is strongly connected with Traditional Knowledge (TK) transferred over successive generations. Traditional knowledge dictates different roles and fishing gears for men and women, often based on historical practices and social norms. Women of Meitei community are actively involved in fishing, particularly in the context of small-scale or subsistence fishing. They might use traditional methods and gear, and their role can be crucial in ensuring food security for their families.

Long khonba is a type of community fishing exclusively performed by the women folk of Meitei community. Post monsoon, groups of women move to the waterlogged swampy areas, including shallow rivers, wetlands, marshy and other low lying paddy fields for fishing. Long is a type of gear made of bamboo splits which are woven into a half-elliptical shaped basket. They also usually tie a bamboo basket called Tongol at their waists for keeping the harvested fishes. The indigenous gears are light weight and can be easily handled by the women folk (Figure 1).



Figure 1. Long Khonba Community fishing with fishing tools- Long (right) & Tongol (Left)Source: Inaotombi & Mahanta, 2016

The Meitei women often engage in marketing fish and other aquatic products. They sell their catches at local markets and through street vendors, contributing to their family's income and economic stability while preserving cultural practices and maintaining community connections. Traditional knowledge and practices have been sufficient to sustain livelihoods in the past but in a world of rapid globalisation, pressure on resources has been increasing. Thus, this knowledge needs to be preserved for sustainable development in the region.

A gender lens should not only value fishing activities but also integrate and encompass the entire fisheries supply chain, including household activities, societal roles, and knowledge contributions. There is a lack of information on women's harvesting activities using traditional light gears, which remain unrecognized and undocumented. Numerous studies have shown that men and women play crucial roles with distinct characteristics, needs, preferences, and contributions in the sustainable management and conservation of aquatic resources. Women play an active role in the unrecorded fisheries sector, making significant economic and other contributions. In many fishing communities, women are primarily involved in handling, preserving, and processing fish products. They assist in unloading boats and nets during post-harvest work. In processing, they perform tasks such as sun-drying, salting, smoking, preparing fish paste, and fermentation. These activities involve time-consuming and physically demanding tasks such as transport, cleaning, grading, packaging, etc. For example, the degree of participation of men & women during fish drying process in Frezarganj area of Sunderbans (study by Mitra, et al., 2017) is given below:

Activities under fish drying process	Role Distribution	
	Men	Women
Washing	***	*
Cleaning (scaling and gutting)	***	*
Transport from boat	***	0
Fish grading	0	***
Drying	0	***
Watch and ward	0	***
Purchase of packing materials	*	***
Packaging	***	*
Marketing of Dry fish(vending)	**	**
	*	***

0 – Nil * - Low/little participation ** - Moderate participation *** - High participation

Adapt from: Roy, A., Sharma, A. P., Bhaumik, U., Pandit, A., Singh, S. R., Saha, S., & Mitra, A. (2017). Socio-economic features of womenfolk of Indian Sunderbans involved in fish drying. *Indian Journal of Extension Education*, 53(2), 142-146.

As participatory management efforts strive to increase women's involvement in fisheries management, it is important to gain a better understanding of the specific roles that women play within fisheries and the broader fishing economy. Gender disparities directly influence control over aquatic resources, existing power structures, decision-making processes, and subsistence strategies. It is crucial to recognise the wide range of diverse fishing roles and practices of women in order to address the well-documented marginalisation of women in fisheries-related management institutions and practices, including local community-based management initiatives.

4.2. Gender Inclusive aquatic biodiversity conservation approaches

In 2022, the United Nations Biodiversity Conference of the Parties (COP) to the UN Convention on Biological Diversity (CBD) made a historic acknowledgment of 'inland waters' as a distinct realm. This decision set specific targets and established a framework for monitoring and conserving these ecosystems and their biodiversity. Targets 20–23 of the Kunming-Montreal Global Biodiversity Framework (GBF) prioritise capacity building, gender responsiveness, and equitable participation, with a special focus on women. These targets are important for promoting fairness and nurturing the social interactions that are vital to the Convention on Biological Diversity (CBD) and the successful achievement of all its goals. The Draft Post-2020 Monitoring Framework aims to ensure the effective integration and implementation of the post-2020 gender plan of action.

The motto of “leave no one behind” has become the principle enshrined in the 2030 Agenda for Sustainable Development, aiming to spur unprecedented change for the world’s most excluded people. The aquatic resource sector addresses a broad set of interrelated goals such as SDG 14 (Life Below Water), SDG 5 (Gender Equality and Women’s Empowerment), and SDG 8 (Inclusive and Sustainable Economic Growth), SDG 2 (Zero hunger /Food security), SDG 3 (Nutrition/Good health and well-being). One of the key steps is to increase the availability of disaggregated data on all kinds of aquatic resources viz, subsistence fisheries, marketing, social capital, access and control over assets, etc. and recommend activities in programmes to ensure that it goes beyond gender, geography, and age, making visible those marginalised groups in aquatic resource management.

The generic impactful features to integrate gender in aquatic environment settings for inclusive biodiversity conservation approaches shall include *Biophysical, Ecological, Social* and *Economic* elements:

- *Biophysical (Site specific cognoscente)*: Gender plays a crucial role in the sustainable use of aquatic resources, as women access different areas, utilise distinct resources, and may have priorities that differ from men. It is essential to know who is doing what and where in aquatic resource-inhabiting sites. **Numerous small waterbodies, including small lakes, streams, ditches, springs, marshes, swamps, and bogs, are critical for freshwater biodiversity and are largely accessed by women.** Considering the specific knowledge and expertise of these fisherwomen is crucial for effective aquatic biodiversity management.
- *Ecological (Resource specific pundits)*: Although, fishes are a common aquatic resource that support income, a wide variety of **wild edible aquatic animals such as crabs, frogs, crayfish, edible molluscs/ snails, shellfish, invertebrates (including edible insects), etc. contribute to the diets of large numbers of people,** particularly in developing countries. Women normally have critical roles in collection and processing of such resources that support food security for the locals. Analysis and focus of those resources in gender differentiated freshwater provision services key elements that cannot be ignored in management and policy.
- *Social (Linkages of gender-norm-caste-ethnicity)*: Various forms of associations, including traditional institutions, fishing societies, ethnic groups, and women's self-help groups, play a significant role in managing natural resources at the local level. Within these institutions and traditional networks, people are well-connected and work together to address declining yields and the depletion of aquatic resources, making them more likely to maintain stewardship and protection. However, the customary laws and practices of such groups continue to restrict women's rights to ownership and decision-making. Using intersectional analysis to **understand how multiple axes of social difference (gender, ethnicity, caste, etc.) intersect to affect people's interactions with aquatic ecosystems** is essential. Emphasis should be placed on **practices that empower and promote social transformation** by examining forms of power that define inequality.
- *Economic (in-depth understanding of economic contributions)*: In small-scale fisheries, economic asymmetries between men and women are common and present significant management challenges. Despite women being economically active and responsible for household care, their contributions are often neither registered in official records nor recognised by society. **A critical understanding of the economic aspects of fisheries should encompass not only economic yield and food supplies but also the entire living situation,** including the value chain through which livelihoods are constructed.

4.3 Gender gap analysis & Differential opportunities

Gender gap analyses have concentrated on identifying and documenting disparities between women and men in access to and control over aquatic resources. Women are frequently held back by family responsibilities and their social connections, which restricts their involvement in collective groups and gain credit. As a result, women often place significant importance on more accessible and marginalised inland water bodies such as rice fields, ditches, and streams. Men have less involvement in net-making activities as well as post-harvest tasks such as pre-processing, processing, drying, and salting.



Pic: Women fisher fishing in small streams by traditional gears (Photo: Shaikhom)

It needs to identify potentials for promoting gender equality and possible unintended negative impacts of the project on gender equality. It not only highlights disparities but also assess differences in roles, activities, needs, opportunities, and rights among the genders. In many cases, women are not recognized as significant stakeholders in the management and decision-making processes in governance. A thoughtful approach that empowers women to articulate their needs and preferences can effectively bring their priorities to the forefront.

4.4. Empowerment of women in economic value chains in fisheries

Women's roles in fisheries aquaculture are substantial, being involved in multiple stages in the value chain, from fishing to processing to marketing, although this is often underestimated or concealed in both formal and informal assessment of value chains and capacities. This might be attributed, in part, to women contributing to management strategies and product utilisation and sales, yet not necessarily being the ultimate decision-makers. Additionally, their contributions are obscured by the prevalent ownership of ponds and land by male household members, either formally or informally. Similarly, in the context of aquatic resources, which are common pool resource, marginalised groups may not always be part of decision making or planning processes, and their needs not accounted for in value chain development and livelihood security strategies.

Empowerment of women, girls and other non-binary people is an imperative for inclusive and sustainable development. Involving them in economic value chains not only enhances their socio-economic status but also fosters equitable growth. By enabling access to resources, education, and decision-making, empowerment promotes self-reliance and reduces vulnerability. It is also recognised that there is significant potential to provide small and short-term loans to members at lower interest rates through women self-help groups (SHGs) in India. Integrating these groups into value chains unlocks untapped potential, diversifies perspectives, and enriches innovation. This in turn builds the resilience of the entire community.

Case Study: Gender Roles in the Fisheries Value Chain at Jaisamand Lake

(Concept sources: Yadav, Rajpal, et al. "Gender Role in Fisheries Value Chain in Asia's Second Largest Artificial Lake-Jaisamand, Rajasthan." *Indian Journal of Extension Education* 57.1 (2021): 20-25.

Jaisamand Lake, also known as Dhebar Lake, is Asia's second-largest artificial lake, situated in Rajasthan, India. This lake is a critical resource for the local community, particularly in supporting agriculture and fisheries, which are primary sources of income for many families. The case study focuses on the gender roles within the fisheries value chain, analyzing how labor and resources are divided between men and women.

Key Findings: Both men and women are involved in fishing, with about 95% participation from both genders due to the requirement for two people to operate nets efficiently. In shrimp culture, women comprise approximately 40% of the workforce in juvenile/post-larva catching. Net-mending activities see participation from both genders, with 72.5% carried out by men and women together.

Around 67.5% of households involve both men and women in money management, while 12.5% of households have women managing finances independently. Only 10% of family decisions are made solely by women, indicating lower female participation in decision-making processes within fisheries management.

Men predominantly handle boat repair (57.5%) and marketing activities, including loading and unloading fish catch, with only 2.3% of women involved in these activities. Women play a significant role in fish marketing and processing, although their contributions are often unrecognized and unpaid, as they also handle household work, childcare, and elder care.

Men generally have more access to resources like land and family equipment, while both men and women have access to family cash, labor, training, and education for children. Despite this shared access, men typically have more control over these resources.

The study highlights the varied and evolving roles of men and women in the fisheries sector at Jaisamand Lake, shaped by cultural norms and economic needs. While both genders contribute significantly to the fisheries value chain, women often face limited recognition and control over resources. This calls for a greater acknowledgment of women's contributions and the need for policies promoting gender equality in resource management and decision-making processes.

4.5. Gender-transformative approaches (GTAs) in aquatic resource management

Gender equality is essential for enhancing conservation efforts for aquatic resources and building resilience, resulting in positive outcomes. However, gender inequality persists, and many interventions struggle to fulfil their commitments in practice. Women continue to have insufficient control over social and political resources. This is mainly due to invisible social constructs embedded in complex socio-ecological contexts that perpetuate inequities, hindering efforts to achieve gender equality. Hence, there is a need to seek constructive approaches beyond the current 'business-as-usual' approach to transform the root causes of gender inequalities.

Gender-transformative approaches (GTAs) aim to fostering examination of gender dynamics and transforming structural barriers between women, men, and non-binary gender identities. GTAs go beyond individual self-improvement and have the potential to create more resilient and sustainable management by prioritising the removal of persistent barriers to gender equality. It often focuses on reshaping different aspects of gender by restructuring resources, and norms, attitudes, social systems and collective action that uphold them.

Many interventions in the aquatic resource sector target women for training and technologies to strengthen their individual agency within existing social structures. However, the real challenge lies in achieving structural changes, particularly in altering norms.

- The socially constituted rules differentiate women's and men's expected roles in aquatic resource utilization and management systems. These rules **vary across contexts and interact with other aspects of identity, such as assets, technology, ethnicity, etc.**
- These norms **operate at multiple levels, including the household, social group, community, market system, policy, legislative environment, and within the aquatic ecosystem.**
- They are tied to **deeply rooted value systems and beliefs that inform day-to-day practices, maintained by social interactions and psychological processes.**
- Consider appropriate **pursuits and assets for women and men, the value and recognition placed on each gender group** for performing them, and the distribution of benefits derived from these activities.

Develop and apply a range of gender transformative strategies & mechanisms through which the change can happen:

Strategy	Action	Outcome	Indicators
Strategy to conserve inclusive inland aquatic biodiversity	Structural changes in making decision for regulating mesh size of gears for juvenile/small fishing & sustainable uses of other non-conventional aquatic resources (other than fishes)	Seek for inclusion of key elements (actors) for gendered differentiated freshwater provision/extraction in management	Control over decision making Control over resources
Conserve overwintering area, spawning ground and other valuable/ key areas for aquatic organisms	Changes in composition of members of community-based management committee, village authority who set local fisheries regulation or norms and demarcation of no fishing zones.	Consider changes in models or norms that embedded in informal institutions for fishing regulation	Control of assets
Adopt alternative livelihood or enhance income initiatives in riverine communities	Preference for livelihood opportunities differs among men and women. Keeping varied choices of livelihood options, and capacity to exercise choice related to these livelihoods.	Marginalised groups or women (who manage in household income) be part of decision making and accounted for livelihood security strategies.	Control over income & labour
Adoption of new technologies for not only on fishing (including small scale fisheries) but also on processing (value added)	Women's access to and use of new technology	Increasing women's access to improved processing technologies has reduced product loss	Power within skills and capacities
Community fishing practices, traditional fishing methods	Ease restrictions on women's (and men's) roles in community fishing due to cultural beliefs.	Intervention seeks to transform the harmful norms at the community level and incorporate undervalued knowledge	Authority with collective action Intensity within psychological resources

To overcome structural constraints, it needs to look on the following deep structural barriers and entry points for supporting the marginalized groups to actualize transformative change.

- Complex interdependent processes that highlight the reasons of subordinating women, non-binary, inter and trans people.
- Tensions and adverse outcomes at different levels (household, groups, community, villages, districts, national institution, markets, policy) of changes.
- Incorporating elements of intersectionality into gender transformative approaches involves developing affordable, adaptable, and scalable strategies for aquatic resource management.

To effectively scale GTAs, diverse and synergistic contributions, collaboration, and learning across various stakeholders about the core principles of GTAs are essential. Networking among stakeholders to develop technical skills and provides opportunities to connect and build confidence in a 'safe' space is particularly crucial in sectors where women are significantly under represented in official statistics.



Addressing Gender Equality in Sustainable Use Practices

5

5.1 Gender in implementation of aquatic resource management projects

Women and men experience gender inequality in different ways, impacting their involvement and effective participation in fisheries projects. These inequalities can have a negative impact on projects, often leading to unequal opportunities and outcomes for each gender. Some limitations in incorporating gender issues into the implementation of aquatic resource management projects are:

- **Limited experience in social sciences** among resource managers and a refusal to acknowledge the importance of gender issues (gender blindness) by research and scientific partners.
- **Scientific researchers have different interests and starting points** regarding gender issues, and while their networking with social scientists has potential benefits, however its collaboration is not easy.

Most rural tribal women possess distinct expertise and have grassroots professionalisation in survival strategies. They typically dwell near shallow wetlands, rivulets, and pond ecosystems. Despite their close connection to these environments, they often feel they are not technically competent and do not participate in management ideas and conservation decisions. For example, despite possessing extensive local knowledge at the ground, women's expertise is often overlooked or considered less relevant compared to formal scientific knowledge. It is necessary to consider the following crucial questions and integrate them into intervention strategies to successfully implement sustainable aquatic resource management projects:

- Who participates in research activities?
- Who is involved in policy development?
- How exactly are they involved?
- Who benefits from these initiatives?
- Who remains excluded or isolated?
- Who involved in decision making?

Addressing these questions will help develop comprehensive strategies, including understanding gender roles and needs, inclusive planning and design, capacity building and empowerment, equitable access and benefit sharing, monitoring and evaluation, policy and institutional support, and addressing gender-based barriers. Integrating these strategies into all aspects of aquatic resource management projects will ensure that these initiatives are more equitable, inclusive, and effective in achieving sustainable outcomes.

5.2 Gender Analysis in Aquatic Resource Management programmes

Gender analysis is a crucial component of any gender mainstreaming strategy, as it reveals the connections between gender and the aquatic resource management issues addressed by the project. It provides quantitative and qualitative data on gender-related roles, gaps, and opportunities in the context of aquatic resource management projects. The results of the analysis may serve to enable a gender-responsive and, wherever possible, specific gender-sensitive capacity development measures, or gender-transformative project implementation. Failure to conduct an adequate gender analysis can make it difficult to ensure equitable representation, disproportionately disadvantaging women, and other non-binary people..

Utilising the insights from gender analysis to customize the design of aquatic resource management programmes and projects is crucial. A gender analysis to be conducted in the planning phase of all projects in order to ensure that gender is comprehensively taken into account in project design and benefits all genders equally. It will also influence all subsequent phases of the programme, including implementation, monitoring, and evaluation.

Methods & tools for gender analysis in aquatic resource

In aquatic resource management, gender analysis utilises a range of methods to delve into and comprehend the interactions between women,men, and other gender groups. This involves assessing their access to resources, the roles and activities they undertake, and the distinct challenges and barriers they face in comparison to each other.

Exercise 1: In a focus group discussion, the following table may be filled to gain insight into gender dimensions in the region (briefly) with respect to aquatic resource management.

Parameters/factors	Women	Men
Role & responsible analysis		
Fishing		
Collection of other resources (shellfish, insects, aquatic plants, etc		
Preparation, & mending of nets, & fishing gears		
Segregation of fishes/resources (size)		
Post harvest management		
Engaging in other value-added activities		
Marketing		
Other		
Aquatic resource assess analysis		
Fishing at river, or lakes, pond, swamps		
Aquaculture/pond management		
Leader in and Self-help group or management committee		
Members in fisher’s folk		
Aquatic resource control analysis		
Fishing sites information		
Income from selling/marketing of fishes		
Decision for no fishing season & zone		
Involve in management policy, rules, regulation		
Situation analysis	Constraints	Opportunities
Community culture, norms & practices		
Societal factor		
Political influence		
Institutional structure		
others		

Gender is not only about women. It refers to the specific roles and characteristics of men and women shaped by social, cultural, and also religious norms in society. Gender-specific roles define, for example, the division of labour between men and women in the household or behavioural norms in society. In the context of natural resources management, it is important to analyse how these roles interact with utilisation of resources, how their access to natural resources is impacted and what are the interventions that can provide for gender sensitive inclusion and empowerment of target groups.

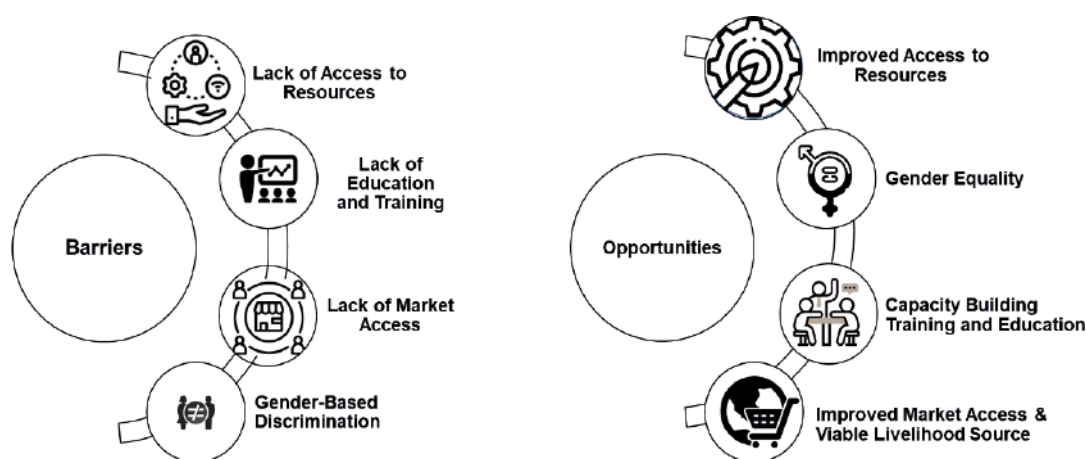


Figure: Gaps and scope of opportunities for women in aquatic sector

Promoting gender equality often necessitates positive discrimination towards women to ensure that both women and men can enjoy equal rights and opportunities. In our context, this translates to ensuring that women and men have equal participation in the planning, management, and implementation of activities aimed at sustainable resource management, such as the protection and regulation of aquatic resources. A crucial element in advancing gender mainstreaming and addressing gender disparities within resource management is fostering awareness and understanding of gender-specific gaps and inequalities among men and women. Effective strategies frequently involve encouraging men to re-evaluate their perceptions of women, recognise their potential and the challenges they face, and address the dynamics of power that exist between genders. (cf. CDKN, 2016; GCF, 2015; Kapoor, 2011). Building on this understanding of gender, the following **categorisation** are highly recommended:

Gender-Blind	No reference to any particular gender aspects or differences between men and women.	Rolled out of traditional fishing methods without acknowledgement that men and women have different roles, knowledge and power. Women might not be able to use cast nets as effectively as men in river environments due to differences in physical strength or skill. Restriction on uses of handnet/bamboo-net can lead to unequal opportunities and outcomes in the adoption of new fishing practices.
Gender-Aware	Awareness of gender issues but actual activities do not follow a gender approach consistently from design to implementation to Monitoring and Evaluation (M&E).	Intervention to subsidies fisher's that acknowledges women and men have different roles, knowledge, and levels of power. Direct financial support to fishers primarily benefits the men who are often directly involved in fishing activities, offering subsidies for making/knitting stake nets and accessories can benefit the whole family.

Gender-Sensitive	Gender-sensitive methodology (gender analysis, gender-disaggregated data, gender-sensitive indicators and activities, etc.) able to promote gender equality.	When a fisher's cooperative schedules extension meetings at times that accommodate women's availability—such as after morning meals or domestic duties—it acknowledges their time constraints but does not address whether women can benefit/ empowerment from the fisheries on par with men.
Gender-transformative	Gender-sensitive methodology to promote gender equality and foster change and challenge gender discriminatory norms and/or root causes of vulnerability to climate change and of unsustainable development	A fishery intervention that recognizes existing inequalities in the aquatic management system, where men often hold priority in ownership and decision-making roles, and women are frequently emphasis on time consuming tasks like net knitting. The intervention seeks to challenge and transform the harmful norms at the community level that often lock women and men into positions of inequity. This could involve organizing inclusive family meetings that encourage dialogue about how household tasks, responsibilities, ownership & decision-making role can be more equitably shared.

Source: Modified from Gender analysis report GIZ-NERAQ

5.3 Gender sensitive indicators for aquatic resources management

Gender-sensitive indicators are metrics, such as numbers, facts, opinions, or perceptions, that highlight specific conditions or situations and track changes over time. These indicators offer a robust foundation of information for fisheries policy initiatives aimed at enhancing aquatic resource management and addressing inequities stemming from gender-based social constructs. It helps to illustrate socio-economic and gender-sensitive changes in aquatic resource management over time. Additionally, it ensures that gender considerations are integrated into the monitoring and evaluation (M&E) of aquatic resource conservation projects or programs.

Gender-sensitive indicators can be utilized at the project level to track changes in response to project interventions, or at regional and national levels to monitor broader impacts of policies and programs. The key criteria for selecting gender-sensitive indicators include aligning them with the project objectives and ensuring they can measure changes using baseline data. However, some indicators are difficult to measure and there is no agreed-upon method for measuring it. There are two types of gender sensitive indicators:

- (i) **Quantitative (objective):** This will be represented by numerical information such as the number of women involved in community fishing practices, the ratio of preferred fish varieties used by women and men in species selection for aquaculture, etc.
- (ii) **Qualitative (subjective):** This is characterized by sociological information derived from participatory learning approaches and observation. For example, information on impacts mesh size regulation of fishing nets on women fishers.

The indicators can be either non-person-related or person-related, and they can inform the policymaking process or measure changes in relations between women and men over time in specific activities. They are also used in monitoring and evaluating the implementation of programs and projects.

Type of indicator	Measurables	Example indicators
Non-person-related	The adoption aquatic resource management modules that contribute towards promoting gender equality.	The modules on Gender & Aquatic resource management is adopted by the Ministry of Environment.
	Development of training courses that address gender dimensions within a fisheries resource management.	A training course on gender-responsive post-harvest management of fishes for staffs of fishery departments in the states has been developed by the Ministry of Fisheries.
Person-related-indicators	Access to and/or control over	xx % of the target population benefits from improved access to sustainable fishing in lake with 50% of the beneficiaries being women.
	Knowledge and/or skills	xx % of the zz responsible village authority members have the necessary knowledge to implement gender-responsive sustainable fishing practices at river.

Source: adapted from GIZ Guidelines on designing a gender sensitive results-based monitoring (RBM) system

A project can support women by ensuring their participation, providing benefits they value, or strengthening their ability to make choices through the **“Reach-Benefit-Empower-Transform”** framework. Simply reaching women does not guarantee that they will benefit from aquatic resource projects. Even if women do benefit, such as through increased income from fisheries, it does not guarantee that they will be empowered, for example, in making decisions about fishing grounds. Transformation objectives involve working toward and achieving profound, enduring changes in gender norms, attitudes, and behaviours that support gender equality.

Gender-sensitive indicators capture existing gender differences and also strive to empower women. Empowerment involves individuals taking control of their lives by setting their own goals, acquiring new skills, boosting self-confidence, solving problems, and fostering self-reliance. Therefore, indicators of empowerment should reflect personal, socioeconomic, and political changes.

5.3.1 Indicators in gender empowerment

In Northeastern India, decision-making in wetland management is primarily dominated by fishermen. In the Amguri-Bosapathar-Herheri wetland of Golaghat district, Assam, the local government has adopted a community-based fisheries management approach. A wetland development committee was established to ensure effective use of the natural fisheries resources by marginalized wetland users. This committee includes a significant representation of women, far exceeding their previous involvement. With the active participation of both fishermen and women, decisions regarding the management and utilization of resources were collectively made. These communities experience stronger claims to area-based fishing rights, improved productivity and economic returns. Learning from these gender-inclusive fishing communities can enhance women's engagement in fisheries management, resulting in benefits for all.

5.4. Practice 5: Q & A

Strategy To Engendered in Aquatic Resource Management

6

Creating a space for subsistence and small-scale fishers should also consider the situation of women in household activities. There is a need to propose strategic interventions that go beyond addressing their practical needs for the sustainable use of aquatic resources. The development of analytical strategies allows researchers and policymakers to consider gender data by exploring societal elements that obscure recognition of the nuances in decision-making.

6.1 Challenge: Lack of gender-disaggregated data

Men dominate direct production work in fisheries and aquaculture. Women's work, including gleaning, diving, post-harvest processing, and vending, is often unrecognized or poorly recorded, despite its significant economic and other contributions. In small-scale inland fisheries, women outnumber men due to the number of women working in processing. However, the presence of women in small-scale fisheries and supply-chain jobs outside production is poorly recorded, so the percentage of women may be even higher. Gender-disaggregated data are not routinely collected, leading to little policy attention being given to women and the gender dimension of the sector. Without access to data on the use and management of aquatic resources, the formulation of informed policy becomes impossible. Furthermore, in a self-fulfilling cycle, the absence of a topic in standardised databases leads to the assumption that it is unimportant.

6.1.1 Action: Produce gender-disaggregated statistics

It is also important to consider the adequacy of the tools being used to measure and understand women's roles in aquatic resource conservation. To better understand the gender patterns of work, gender disaggregated data should be systematically considered.

- Any baseline data on aquatic resource conservation project should be disaggregated by sex, socioeconomic grouping, age, and ethnicity, and should reveal the situation in the project area before intervention.
- Gender-disaggregated data showing the number of women and men involved in the sustainable use of aquatic resources are necessary to demonstrate the impacts of including women. However, beyond the numbers, we also need to understand how women are involved and what power and agency they have over conservation and aquatic resource management.
- Additional individual-level data, particularly on asset ownership, rights and entitlement to fishing grounds, would provide insights into the changes in patterns of asset ownership as economies evolve.
- Data on the contributions and roles of women in fisheries should be included in national accounting systems and statistical surveys.

6.2 Challenge: Lack of recognition of women's roles in management

Failure to recognize differentials among women, as well as gender differences, can lead to costly and undesirable outcomes.

6.2.1 Action: Carry out gender analysis on aquatic resources management project

Before and during the implementation of projects and programs, it's important to conduct a comprehensive analysis of gender and systems. This will ensure a nuanced and locally relevant understanding of gender roles and norms, and how they intersect with conservation and natural resource management efforts.

6.3 Challenge: Unequal decision-making power in fisheries management

In some parts of India, women are often excluded from local aquatic resource management meetings due to social norms that confine them to domestic and caregiving roles.

6.3.1 Action: Empower women and aware men for more sustainable management.

There is also a need to better understand what women's empowerment means in the context of fisheries resources management.

- Women's knowledge in aquatic biodiversity conservation needs to be appreciated, and women's participation in every aspect of aquatic biological conservation, including education, training, and technology, needs to be embraced to achieve women's empowerment.
- To achieve sustainable management of aquatic resources, empowering women requires changing gender norms and deep-seated attitudes affecting relationships between men and women.
- Programs should aim to foster changes in the attitudes of not only family members but also community members.

6.4 Challenge: Relying solely on formal education for resource management

Many women in rural riverine areas come from poor families with low educational levels, which prevents them from fully integrating into decision-making processes in resource management.

6.4.1 Action: Value women's knowledge, regardless of their education in fisheries.

- Women frequently have a deep understanding of the resources available to them. However, their lack of formal education can restrict their participation in projects. It's important to make targeted efforts and allocate resources to involve women who have been excluded from conservation projects due to low literacy levels.
- Enhance the knowledge and skills of women involved in the execution of community-based aquatic management programs through non-formal education.

6.5 Restriction due to societal norms & social taboos

Current societal and cultural norms often limit women's participation in conservation and aquatic resource management. Women have unique interactions with river and lake environments compared to men, so excluding them may result in missing out on their valuable knowledge and perspectives regarding specific conservation actions. The traditional norms conspire to limit the public visibility of women, leading them to withdraw from decision-making processes in resource management. Women in the fisheries sector often face societal pressures that expect them to take on the majority of household duties and childcare, leaving them with limited time to engage in fishing activities. Additionally, social taboos and restrictions, such as limitations during menstruation, further constrain women's access to fisheries. Conservation practitioners often lack an understanding of societal norms, or the skills needed to effectively address them.

6.5.1 Action

Social norms are not fixed; changing circumstances can create opportunities to transform gender-discriminatory norms, perceptions, and beliefs within the broader context of societal, local, and political processes. Transform traditional systems to release the potential of poor women, enabling them to better contribute to and benefit from aquatic resource management.



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