

GENDER, BIODIVERSITY AND CLIMATE CHANGE ADAPTATION

Living in harmony
with nature



United Nations Decade on Biodiversity



Convention on
Biological Diversity

Objectives



- To offer an overview of the impacts of climate change on biodiversity
- To discuss how biodiversity can contribute to climate change mitigation and adaptation
- To present the links between gender, biodiversity and climate change issues
- To discuss the importance of gender-responsive ecosystem-based approaches to climate change adaptation

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Biodiversity and Ecosystem Services



- **Biological diversity** – the variability among living organisms from all sources including terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems
- **Ecosystem** – a dynamic complex of plant, animal and micro-organism communities and their non-living environment interacting as a functional unit
- **Ecosystem services** – are the benefits people obtain from ecosystems
 - *provisioning services* such as food, water, timber, and fiber
 - *regulating services* that affect climate, floods, disease, wastes, and water quality
 - *cultural services* that provide recreational, aesthetic, and spiritual benefits; and
 - *supporting services* such as soil formation, photosynthesis, and nutrient cycling

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Climate change and biodiversity loss



Changes in weather patterns and sea level rise contribute to shifting the boundaries of ecosystems, causing habitat changes

- Changes in the distribution of plants and animals are already noticeable
- Changes in growing seasons and reproduction
- Some species do not have the time or space to adapt → extinction
 - Montane species are particularly vulnerable

Climate change also drives biodiversity loss through:

- Changes in disease distribution
- Ocean acidification
- More frequent extreme weather events



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Climate change and biodiversity loss



Climate change can exacerbate the effects of other stressors, such as habitat loss and invasive alien species

Particularly vulnerable ecosystems: mangroves, wetlands, coral reefs, mountains, freshwater habitats, and cloud forests

The human dimension:

- Climate change → Biodiversity loss → Impacts on ecosystem services
- Social, economic, political and cultural repercussions
- Loop: impact on carbon storage



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Biodiversity as a solution: Ecosystem-based adaptation



Conserving and restoring ecosystems is both a climate change mitigation and adaptation strategy: **Ecosystem-based Adaptation**

“Ecosystem-based adaptation uses biodiversity and ecosystem services in an overall adaptation strategy. It includes the sustainable management, conservation and restoration of ecosystems to provide services that help people adapt to the adverse effects of climate change”



Biodiversity as a solution: Ecosystem-based adaptation

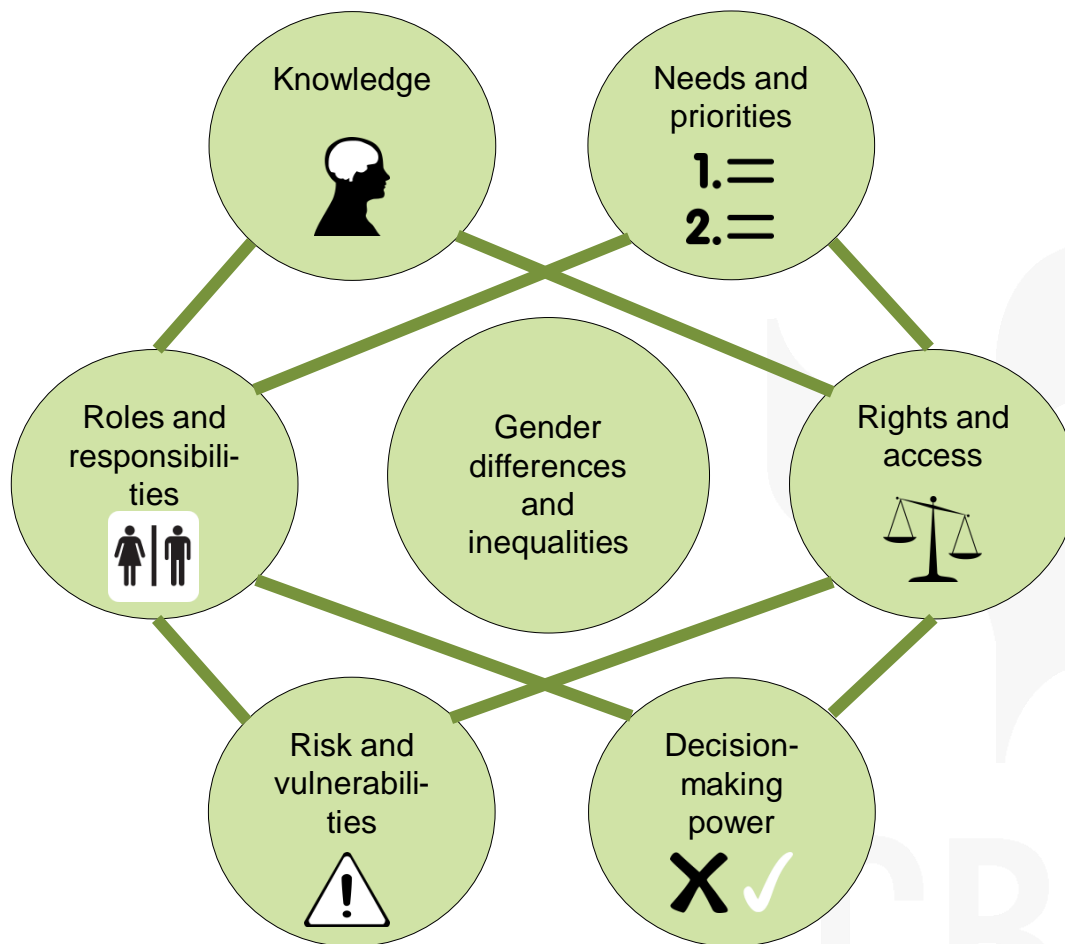


Ecosystem-based Adaptation:

- Mitigates climate change
- Conserves biodiversity
- Maintains ecosystem services necessary for food, water, income, subsistence, health and the well-being of local communities
- Is financially and technically accessible
- Strives to integrate consideration of traditional knowledge, local values, community participation, equity and gender equality

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Gender and Biodiversity Framework



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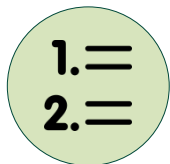
Gender, Biodiversity and Climate Change



Biodiversity has considerable implications for the gender issues relevant for climate change



- Biodiversity is an important component of women's and men's livelihoods and well-being, particularly in rural areas
- Decline in biodiversity therefore can have substantial impacts on food security, health and income generation
- Access to and control over biodiversity and ecosystem services play a role in the resilience of women and men to the effects of climate change



- Dependency and vulnerability
- Capacity to adapt



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Problem of Biodiversity- and Gender-blind Climate Change Adaptation



Carbon mitigation incentives that do not account for biodiversity can present risks for sustainable livelihoods and overall resilience

Example: use of monocultures, non-native species

- Negative impact on biodiversity
- Negative impact on mitigation
 - Decrease in carbon stock compared to native forests
- Negative impact on adaptation
 - Reduce availability of non-timber forest products collected and used by local women and men
 - Reduce resilience of local communities



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Gender Equality, Sustainable Development and Climate Change

- Promoting gender equality for biodiversity and climate change adaptation
- Gender and biodiversity and sustainable development links – SDGs



FINANCIAL RESOURCES
Women are granted fewer and smaller loans than men

PRODUCTIVE RESOURCES
Women make up **43%** of the agriculture workforce in developing countries
If women had equal access to productive resources as men, they could increase yields on their farms by as much as **20% - 30%**

ACCESS TO DECISION-MAKING FORAS
Women hold **14%** of management positions in the agricultural sector
At the UN Climate Change Summits between 2000-2010, only **30%** of registered country delegates were women

KNOWLEDGE AND TECHNOLOGY
2/3 of the world's illiterate adults are women
One study showed that women's education contributes to **43%** reduction in child malnutrition

LAND & WATER
In developing countries **10% - 20%** of all land holders are women
Farms managed by female-headed households are between half to **2/3** the size of farms run by male-headed households

SERVICES & MARKET
Agriculture extension services are accessible to only **5%** of women that make up the agriculture workforce in developing countries
Energy services in West Africa have:
- reduced women's daily work by **2-4** hours
- increased women's incomes
- improved education and school enrolment

EQUAL ACCESS TO RESOURCES AND POWER
for
FOOD SECURITY in the face of **CLIMATE CHANGE**

AVAILABILITY | STABILITY | UTILIZATION | ACCESS ADAPTATION | MITIGATION

www.fao.org/climatechange/micca/gender
www.fao.org/gender

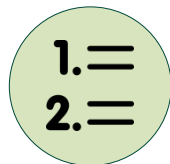
Gender, Biodiversity and Climate Change



Consideration of gender and biodiversity links → solutions for climate change adaptation



- Women and men have different and equally valuable knowledge, experience and skills relevant for adaptation
- Women and men can make different contributions to climate change mitigation and adaptation efforts



“Successful long-term solutions to address climate change must recognise the important contributions of women, along with men, as decision-makers, stakeholders, educators, caretakers, and experts—across the spectrum of sectors, from forests and fisheries to large-scale energy infrastructure and sustainable cities.”



*Roots for the future: The landscape and way forward on gender and climate change
2015, IUCN & GGCA*



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Gender-responsive Ecosystem-based Adaptation



Leasehold Forestry Programme, Nepal

- Involvement of both husband and wife from participating households in planning, capacity-building and training
- Increased in vegetation cover, from an average 32% to 90%, after 7 years
- Increased fodder availability
 - Has freed women's time to participate in meetings and training



Women farmers are taking the lead in managing leasehold forestry programmes in rural Nepal. Credit: Naresh Newar/IPS

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Conclusion



- Applying **ecosystem-based approaches**, which preserve biodiversity and enhance ecosystem services, can **contribute to climate change mitigation and adaptation**
- Considering the **links between biodiversity and gender** is important in the design and implementation of ecosystem-based approaches, and in the promotion of effective solutions for climate change adaptation

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