TRAINING OF TRAINERS PROGRAMME

Gender and Climate Change
Adaptation and Resilience

SESSION 02

Local and Sectoral Adaptation Models and Gender

(Insert Name and Organisation of the Presenter)
Understanding Adaptation

- Adaptation refers to adjustment in ecological, social, and human systems in response to actual and expected climatic stimuli and their effects
  - Primarily, adaptation means risk management and reduction of vulnerability to climate variability, uncertainties, and climatic extreme events
  - Adaptation helps to cope better and harness benefits from the changed situation
- Adaptation to climate change involves anticipating the adverse effects of climate change and taking appropriate action to prevent or minimize the damage they can cause
- The goal is to reduce vulnerability and exposure to the harmful effects of climate change (like sea-level rise, extreme weather events, or food insecurity)
- It also encompasses making the most of any potential beneficial opportunities associated with climate change (for example, longer growing seasons or increased yields in some regions)
Adaptation Models

• Adaptation models can be **short-term** (less than 10 years), addressing impacts that are already occurring and are likely to rise in the immediate future.

  • These are often **local measures, infrastructure or service-oriented** and often targeted to a specific risk (EWS)

• Many adaptation models are **medium or long-term responses**

  • These focus on **enhancing adaptive capacity** or the ability of a system (human, natural or managed) to adjust to climate change
Local Adaptation Models
Local Adaptation Plans of Action (LAPA) in Nepal

- Initiated in 2013 as part of NAPA
- Also included in the NAP process
- LAPA is a spatial approach to adaptation planning.
  - Prepared at the local government level with coverage of a decentralized administrative or geographical unit
- May be with or without community participation
  - Although in most cases, LAPAs have mainstreamed participatory processes
- Consist of seven steps for integrating climate change resilience into local-to-national planning processes
Seven Steps of LAPA

Step 1: Climate Change Sensitization
Gender analysis and mobility mapping

Step 2: Vulnerability and Adaptation Assessment
Identification of vulnerable men and women across social groups in the hotspots

Step 3: Prioritization of Adaptation Options
Gender sensitive multi-criteria ranking to prioritize adaptation actions based on gender needs and priorities

Step 4: LAPA Formulation
Setting milestones and targets with focus on ‘how to ensure equitable benefits for women’

Step 5: LAPA Integration into planning process
Systems for gender and social inclusion including Gender Responsive Budgeting

Steps 6 and 7: Implementation and Progress Assessment
Gender inclusion in decision making processes and M&E based on gender, age, class, class and ethnicity disaggregated data
City-Resilience Action Plans

• Defines Urban Resilience as

  • the capacity of individuals, communities, institutions, businesses, and systems within a city

  • to survive, adapt and grow

  • no matter what kinds of chronic stresses and acute shocks they experience

• Uses multiple strategies to help cities understand their vulnerabilities and prepare for climate impacts and disasters
The City-Resilience Framework

• The City Resilience Framework (CRF) describes the essential systems of a city in terms of four dimensions
  • Health and Wellbeing
  • Economy and Society
  • Infrastructure and Environment
  • Leadership and Strategy

• Each dimension contains three “drivers” – a total of 12 goals

• These are further broken into 52 indicators which reflect the actions that cities can take to improve their resilience
## CRF for health and wellbeing

<table>
<thead>
<tr>
<th>CITY RESILIENCE DIMENSION</th>
<th>RELATED DRIVERS/GOALS</th>
<th>DESCRIPTION OF GOALS</th>
<th>GENDER AND INCLUSION CONSIDERATIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>HEALTH AND WELL-BEING</td>
<td>Minimal human vulnerability</td>
<td>Indicated by the extent to which everyone’s basic needs are met.</td>
<td>Access to food, water, shelter and basic assets for everyone especially vulnerable groups is critical.</td>
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<tr>
<td></td>
<td>Diverse livelihoods and employment</td>
<td>Facilitated by access to finance, ability to accrue savings, skills training, business support and social welfare.</td>
<td>An inclusive approach to livelihoods ensures that all citizens in a city have unrestricted access to legitimate occupations, regardless of race, ethnicity, gender or sexual orientation.</td>
</tr>
<tr>
<td></td>
<td>Effective safeguards to human health and life</td>
<td>Relying on integrated health facilities and services, and responsive emergency services.</td>
<td>Accessible and affordable day-to-day individual healthcare, as well as appropriate population-based interventions. Services or facilities that target vulnerable groups ensure that preventive and responsive strategies are inclusive and able to reach the entire population.</td>
</tr>
</tbody>
</table>
Infrastructure-based Planning

• The approach stipulates an integration of climate change considerations in each phase of project implementation by:
  
  • Taking into consideration future climate conditions (along with past and current climate conditions); or
  
  • Considering uncertainty in the review and use of climate data through sensitivity testing and adjusting the design (for example, through a greater safety margin) or, at a minimum, adjusting the performance or service expectations of the designed structures.

• While these projects per se may seem gender-neutral, they may not essentially also benefit women due to the ‘Male norm’ influence in designs
Gender-responsive infrastructure planning

- Gender-responsive infrastructure planning requires that
  - Rights, priorities, and needs of women and those with other gender identities are also considered
  - Women, along with men, are meaningfully included and represented in the planning, design, and management of the new infrastructure
  - The gender-differentiated access over infrastructure and related services is kept in mind while designing such services
  - This involves mainstreaming gender across all steps of infrastructure planning and development
## Infrastructure planning process

### Development and Comparison of Adaptation Responses
- How should engineering design be adjusted to account for climate change impacts?
- What are the optimal (multi-criteria) responses?

#### Project Appraisal
- Further refine options (e.g., cost benefit)

#### Resource-Base Analysis
- Availability of and access to resources

<table>
<thead>
<tr>
<th>Selection of the appropriate adaptation strategy</th>
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### Adaptation responses, new designs should consider more gender-friendly options (For e.g., shelters should be designed keeping in mind the need for privacy and dignity of women).

### STEP 4 Adaptation Strategy

### STEP 5 Implementation

#### Best Practices
- Incorporate lessons learned in future design and planning process

#### Monitoring and Evaluation
- Monitor and evaluate for change in risk status

| Best practices should highlight options that create jobs for women. All projects should have a clear target for training and hiring women |
Ecosystem-Based Adaptation (EbA)

• Use of environmental assets and natural protection measures as solutions to address climate change and disasters
  • For example, “floodplain forests and coastal mangroves provide storm protection, coastal defences, and water recharge, and act as safety barriers against natural hazards such as floods, hurricanes, and tsunamis; while wetlands filter pollutants and serve as water recharge areas and nurseries for local fisheries”

• Central to the EbA concept is the importance of adopting a holistic approach to maintaining ecosystem structure and functioning, and ecosystem service provision

• However, ecosystems have limits beyond which they cannot function
  • Thus ecosystem resilience builds on developing and maintaining “capacity of a system to tolerate impacts of drivers without irreversible change in its outputs or structure”
EbA and inclusion

- EbA often provides greater opportunity to target vulnerable groups whose livelihoods directly depend on natural resources
- EbA also provides a larger space for women’s involvement
  - The knowledge that women have as managers of natural resources can provide important insights into the design of effective strategies

However, gender integration is not a default process, and it is important to take steps that include local and gender-based experiences in EbA planning processes.
Community-Based Adaptation (CBA)

- CBA is a community-led process, based on communities’ priorities, needs, knowledge, and capacities, which should empower people to plan for and cope with the impacts of climate change.

- CBA is generally driven by multiple components:
  - Involves working in partnership with place-based communities to improve their capacity to adapt to climate risks and impacts.
  - Knowledge enhancement of the communities- of both likely future changes in the climate and possible adaptation strategies.

- CBA is more like a movement since it involves a community with a shared interest in advocating for institutional and financial support for vulnerable communities to adapt to climate change.
Key steps of a CBA model

• Focus on adaptive capacity-building than adaptation action
• Sustained mobilization for trust building among communities and with other stakeholders
• Recognise existing local power relations and create spaces for participation of vulnerable groups
• Integration of local wisdom and scientific knowledge through capacity building on complexities of climate change
• Community-based vulnerability assessments and resilience planning approaches
• Addressing underlying causes of vulnerability- building an integrated model
• Negotiating institutional barriers and coordination with government
Gender mainstreaming in CBA

Gender mainstreaming is a critical factor to the success of a CBA project

This requires:

• Ensuring that women are part of all discussions of local vulnerability assessments

• Applications of participatory gender analysis tools to highlight the gender roles and gender-based vulnerabilities in the community

• Focus on knowledge and information sharing and capacity-building of women
Section 2

Sectoral Adaptation
Climate Smart Agriculture (CSA) and Food Security

• Climate Change will have an effect on the agriculture ecosystem, especially in Asia
  • Reduced average yields of most crops, especially rice, wheat, and maize
  • Sea level rise also threatens coastal and deltaic rice production areas
  • Indo-Gangetic Plains are under threat of a significant reduction in wheat yields
  • With reduced yields and production of rice and wheat, there is bound to be a “food production shortfall”
Gender and CSA

- Women and girls will be more impacted
  - As they have the responsibility of ensuring food security within their households
  - Existing social discrimination and cultural practices with women and girls eating last and being the first to forgo nutrition in case of shortage will impact health
  - Increase water stress, will increase the work burden of women subsistence farmers who need access to water for food production and preparation
  - Changes in vegetation cover and frequent disasters will also affect women’s livestock-based livelihoods more
  - Women and girls will be more impacted

- Climate Smart Agriculture (CSA) thus needs to be more gender-responsive
## Potential Gender Considerations in CSA projects

<table>
<thead>
<tr>
<th>CSA-Sensitive Practices</th>
<th>Gender Impact</th>
<th>Requirements for Adoption Practice</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Women’s Control of Income from Practice</td>
<td>Relative Amount of Time Until Benefits are Realized</td>
</tr>
<tr>
<td>Conservation Agriculture</td>
<td>Low</td>
<td>High</td>
</tr>
<tr>
<td>Improved Home Gardens</td>
<td>High</td>
<td>Low</td>
</tr>
<tr>
<td>On-Farm Tree Planting</td>
<td>Low-Medium</td>
<td>High</td>
</tr>
<tr>
<td>Small-Scale Irrigation</td>
<td>Low-Medium</td>
<td>Low</td>
</tr>
<tr>
<td>Livestock Genetic Improvement</td>
<td>Low-High</td>
<td>High</td>
</tr>
</tbody>
</table>
## Gender Responsive Strategies for CSA projects

<table>
<thead>
<tr>
<th>PROMOTING WOMEN’S LIVELIHOODS IN AGRICULTURE</th>
<th>GENDER PREPAREDNESS FOR CLIMATE-SMART AGRICULTURE</th>
<th>ADDRESSING STRUCTURAL CHANGES TO REDUCE GENDER BARRIERS AND DISCRIMINATIONS IN AGRICULTURE</th>
</tr>
</thead>
</table>
| > Analyze the impact of introducing new varieties and promote a more equitable distribution of reproductive work.  
  > Adapt promoted practices to the existing gender division of labour for agriculture and livestock management.  
  > Provide training on agricultural extension and climate smart agriculture to women.  
  > Make marketing facilities available.  
  > Institutionalize alternative provisions to accommodate women, women’s groups and cooperatives that are unable to provide the collateral needed for accessing agricultural credit. | > Utilize local agricultural knowledge and engage women and men, to ensure indigenous crop varietals are used where possible.  
  > Build community resilience on food security through the establishment of local climate-smart seed banks owned and managed by women.  
  > Involve women and men in conservation of biodiversity.  
  > Provide specific nutritional supplements for women and girls. | > Facilitate equitable access to and control of resources, as well as the distribution of their benefits (including productive resources, jobs, training and credit).  
  > Improve women’s land tenure security.  
  > Encourage equity in having access to irrigated land ownership.  
  > Expand access to credit, insurance and other financial mechanisms.  
  > Revise the existing strategies that enable the flow of credit from public/commercial banks and financial institutions to support and increase women’s access to credit.  
  > Adapt participation/membership criteria and reduce participation barriers for women’s active participation and leadership in decision-making bodies at all levels (i.e., forestry, watershed management, irrigation water, coastal management, biodiversity conservation and disasters). |
Climate Change Adaptation with focus on Public Health and Epidemics

• Climate change is projected to increase threats to human health through direct effects of extreme events such as
  • heat-waves
  • floods and storms

• Additionally, it will have health impacts through
  • more complex pathways of altered infectious disease patterns like rising mosquito lines
  • negative effects on food and nutrition security and water scarcity
Gender and health

• Women’s time-poverty due to health care responsibilities will increase

• Mortality and health risks for women in Asia is also likely to be higher than men
  • Cultural practices leading to higher mortality risks during storms and flood events, greater risk of developing post-traumatic stress disorder (PTSD)
  • Higher impact of heatwaves, water, and vector-borne diseases (especially malaria)
  • Access to water and sanitation facilities, health care services, especially sexual and reproductive health services, will also be impacted during disasters

• There is also evidence of increased gender-based violence, child marriage, and trafficking

• It is thus important to adopt gender-responsive climate change adaptation strategies and practices in the health sector
### Gender Responsive Adaptive Strategies

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<th>GENDER RESPONSIVE ADAPTATION PRACTICES</th>
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<tr>
<td>- Provide safe shelters and homes for both women and men</td>
<td>- Gender-sensitive disaster preparedness</td>
</tr>
<tr>
<td>- Training on gender-sensitive disaster risk reduction and early warning systems</td>
<td>- Gender-sensitive early warning systems</td>
</tr>
<tr>
<td>- Promote programmes that facilitate men to seek help for psychosocial problems</td>
<td>- Ensure women’s participation on equal basis in all policy and programme cycles</td>
</tr>
<tr>
<td>- Empowerment of women to strengthen their capacity to question and change harmful behavioural norms that put them at risk in the case of extreme events</td>
<td>- Target women and men differently in communication campaigns and health promotion strategies, taking into account their gender norms and roles</td>
</tr>
<tr>
<td>- A gender perspective must be incorporated into infectious disease analysis and research to target policies and programmes</td>
<td>- Adopt strategies at all levels of programming to change norms and practices that prevent women or men from appropriate responses and coping mechanisms in situations of natural disasters</td>
</tr>
<tr>
<td>- Collected data must be disaggregated by sex, age, socioeconomic status, education, ethnicity, and geographical location, where appropriate</td>
<td>- Ensure better availability and access to, and support by, health systems for both women and men, but especially for women, given their caregiving roles</td>
</tr>
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<td>- An understanding of gender and its implications for health and health-seeking behaviour should be incorporated into the training of health professionals and development of health-sector responses</td>
<td>- Support outreach activities, using gender-sensitive information, education, and communication strategies and materials for advocacy and training</td>
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<td>- Promote childcare facilities and other approaches to support women’s caregiving role, while trying to transform related gendered roles and norms</td>
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### Gender Responsive Health Sector Adaptation

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<td>Promote water-saving practices that take into account the different uses and roles related to water for women, girls, and men</td>
<td>Ensure affordable drinking water, taking into account the different roles and needs of women and men</td>
</tr>
<tr>
<td>Address salination and arsenic contamination of water, proposing specific actions that consider the different patterns of exposure and impacts on women and men</td>
<td>Empower women and facilitate their equal participation in management of water resources at national, regional, and grassroots levels</td>
</tr>
<tr>
<td>Counter social stigma attached to the effects of arsenic poisoning on women and men</td>
<td>Appropriate technologies for assuring potable water closer to where families live</td>
</tr>
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<td>Strengthen forestation and water harvesting mechanisms, considering the different roles, needs, and impacts on women and men</td>
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<td>Promote women’s rights to own land and ownership of land use certificates</td>
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<td>Effective implementation of water policies that consider women’s and men’s different needs and roles for water use, provision, and consumption</td>
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<td>Ensure equitable access to resources also in relation to payments for environmental services</td>
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<td>Build strong and supportive networks for both women and men</td>
<td>Policy initiatives in the health, education, finance and labour sectors to be conceived as a part of a cohesive national/international violence prevention effort that includes women, girls, men, and boys</td>
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<td>Promote gender-sensitive training to eliminate violence against women, girls, and boys</td>
<td>Implement appropriate health services that respond to the specific needs of women and men based on their respective needs, roles and capacities</td>
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<td>Capacity building within the health system to ensure early detection of domestic or sexual violence</td>
<td>Design effective referral systems for cases of domestic violence Design referral system for cases of sexual harassment</td>
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<td>Involve women in management of shelters and distribution activities</td>
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Strategies continued

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<tr>
<td>➢ Promote programmes that facilitate men to seek help for psychosocial problems</td>
<td>➢ Target women and men differently in post-disaster relief, taking into account gender norms, roles and relations</td>
</tr>
<tr>
<td>➢ Empower women to enhance their capacities to look after themselves and their families and specifically to use available social and other networks to cope with increased burdens and tensions</td>
<td>➢ Training on agricultural extension for both women and men</td>
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<tr>
<td>➢ Involve women and men in conservation of biodiversity</td>
<td>➢ Better nutrition supplements for needy families</td>
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<td>➢ Build strong and supportive networks for both women and men</td>
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Climate Change Adaptation and Disaster Management in Coastal Zones

• Coastal and marine systems are under increasing stress from both climatic and non-climatic drivers in Asia. These would involve
  • damage to the coastal ecosystems
  • increase in disasters due to storm surges and tropical cyclones

• Causing loss of livelihoods and social impacts, especially the poor and women. For example,
  • Women involved in processing fish, preparing for market, and small-scale harvesting –activities that are close to the shore
  • Decline in near-shore resources will impact food security
  • Salt-water intrusion and disruption of water systems during extreme events will increase women’s workload for fetching water
Climate Change Adaptation and Disaster Management in Coastal Zones

• There is an observed gendered disparity in mortality during disasters, especially storms
• There is also evidence of increased gender-based violence, child marriage, and trafficking
• It is thus important to adopt gender-responsive climate change adaptation strategies and practices in coastal zones
Gender Responsive Coastal Zone Adaptation

• Encourage leadership and women’s effective participation in organizations and all decision-making processes

• Involving of women in designing and construction of spaces (physical barriers like sea-walls, gabions, etc) around them

• Shelters should be safe and have sufficient space to ensure privacy

• Providing opportunities for women in coastal adaptation infrastructure construction

• Early warning systems should be accessible to women

• Involve women in mangrove regeneration and ecosystem restoration projects

• Reproductive health needs to be incorporated in disaster relief and management programmes

• Fisheries and tourism sectors should focus on gender-sensitive research, engagement of women in planning and management, and capacity building of women for job opportunities

• Include gender criteria in Environment Impact Assessments (EIAs)
Thank You!

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