

# Energy and Gender capacity Building Workshop in South Asia



## Alternative Energy Promotion Centre RE Programme/Projects and its impact to the Gender



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## Introduction of AEPC

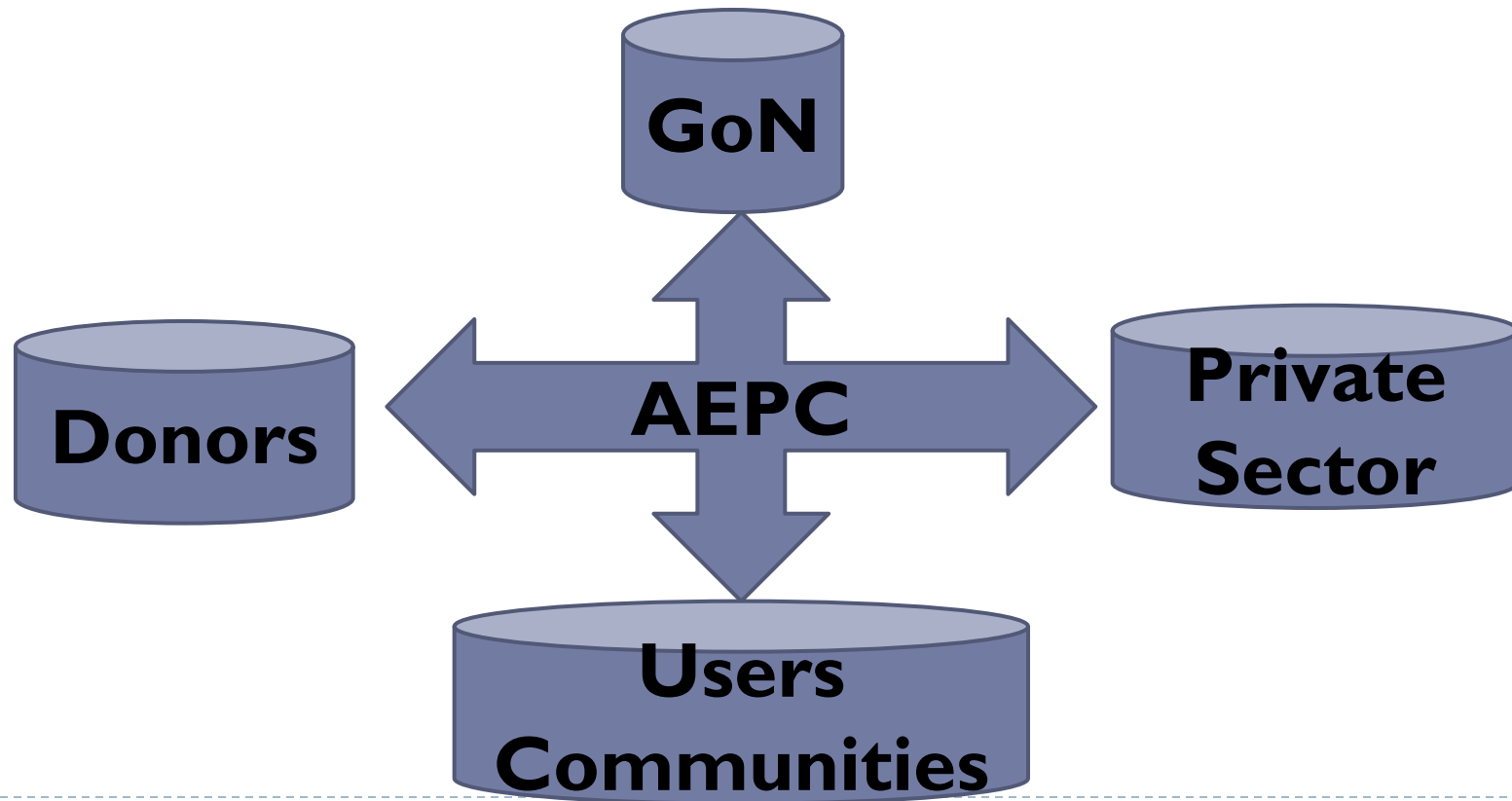
- National Executing Agency for Renewable Energy (RE) programmes and projects
- Mandate for policy/plan formulation, resource mobilization, technical support, M & E, quality assurance and coordination of RET promotion
- Main objective : Promotion and development of Renewable Energy

### Technologies:

- to improve the livelihoods of rural people;
- to protect the environment;
- ▶ ● to promote the RETs related industries

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## AEPC's Working Modality: Four Pillars



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## Major RE Programmes - AEPC

- Energy Sector Assistance Programme, ESAP II (2007 - 2012) – DANIDA, Norway and KfW: Micro hydro, Solar Energy, Biomass and Institutional Strengthening
- Rural Energy Development Programme, REDP III (2007 - 2012) - WB and UNDP: Community managed micro hydro
- Improved Water Mill Programme (2003 - 2010) - SNV

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## Major RE Programmes – AEPC...

- Biogas Support Programme BSP IV(2003 - 2011) – SNV & KfW: Domestic Biogas Plants
- Renewable Energy Project (2003 - 2011) – EU: Institutional Solar Energy Systems for communities
- Khimti Neighbourhood Development (KiND) Project – UNDP, HPL – MH rural electrification
- Nepal Government's Special Program
  - Rukum Ujalyo Program ( Ujalyo Nepal)
  - ▶ • Bio-Fuel (Jatropha promotion)

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## Status of RE in Nepal (as of July 2009)

SN	RE Type	Unit	Progress	Number of HHs benefited
Access to Electricity from RE			9 % Population	
1.	Biogas Plants	Number	214,000	214,000
2.	Micro hydropower	kW	11,200	112,000
3.	Solar Home System	Number	180,000	180,000
4.	Solar Tuki	Number	59,120	59,120
5.	Solar Cooker/Dryer	Number	2,500	2,500
6.	Improved Cook Stoves	Number	300,000	300,000
7.	Improved Water Mill	Number	5500	147,270
8.	Institutional Solar PV	Number	241	38,680
	<b>Total HHs benefitted</b>			<b>10,53,570</b>

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## Governments Strategy on RE

- Within the next 20 years,
  - 10% of Energy Consumption from RE
  - 30% of population electrified through RE
- At least one RET in every rural household
- Mainstreaming and commercializing RE
- Decreasing dependency on subsidy and gradually replacing it by credit line

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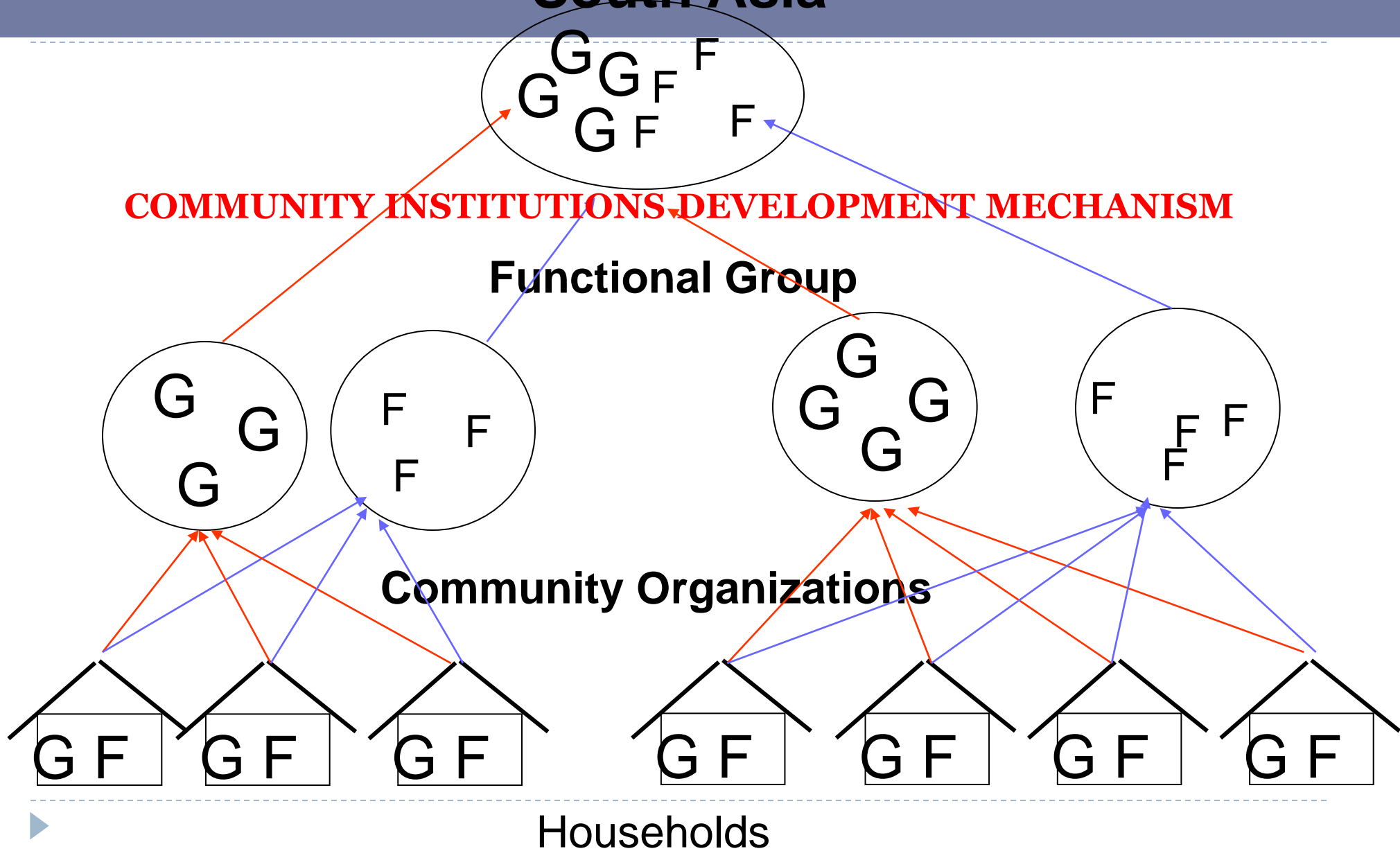
- The REDP implementation modality require equal participation of women in decision making at each phase of the project cycle through the operationalization of appropriate institutional arrangement.
- The formation of separate COs for women at the grassroots guarantees their participation in project activities. Similarly, representation of both male COs and female COs in all FGs provide them with equal opportunity to participate in community affairs and be involved in the decision making process
- In REDP supported communities:
  - ✓ Girls are equally sent to school as boys. However in higher classes, boys number is still little higher. In the nearby school, 40% of the total students are girls.
  - ✓ Electricity at home and agro processing units in the community also improved women's life style and provided certain free time to interact in the community.



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- ✓ 41% of total energy based enterprises are owned by women entrepreneurs.
- ✓ 25% of total energy based enterprises are owned by Dalit, Jjanjati and ethnic minorities
- ✓ Reduction in hours expended on fuel wood collection and agro processing for both men and women. On an average, time saving is estimated as 3 hours daily.
- ✓ Social involvement of both men and women significantly increased (almost doubled). In women COs, women are the chairpersons and managers. In some MHFGs, women have been working as the chairpersons and also as managers.
- ✓ Women involvement in small scale and cottage enterprises has

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## *Community Organization*

		<b>Female</b>	<b>Male</b>	<b>Total</b>
Community Organization (Nos.)		4,876	5,651	10,527
	<b>Ethnic</b>	<b>Dalit</b>	<b>Other</b>	<b>Total</b>
Community Members (Nos.)	110,226	62,373	95,190	267,789
Weekly Saving (Rs.)	25,965,163	13,089,222	19,814,933	58,869,318
Cumulative Investments (Rs.)	49,363,033	25,277,081	35,426,382	110,066,496



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## REP: Social Inclusion and Gender Equality

### ▶ **Apportioning the Quota**

- The CESP should have at least 33% female members and this proportion should also be maintained while setting up the CESP .
- The apportioning of the quotas will have to be transcribed in the Coop/CO charter, regulations and bye-laws.
- Allow Dalits or poor women to contribute labour to the project for the values of shares could be award membership to the female member of a household in case of individual membership.



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## Life without Biogas ...





# Energy and Gender capacity Building Workshop in South Asia And Life with Biogas.



- Biogas brings multiple Socio-economic & environmental benefits.
- Bio-slurry or bio-compost is equally useful product.



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## High Quality Organic Fertilizer



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Scope of the ESMAP Funded TA to AEPC included four components

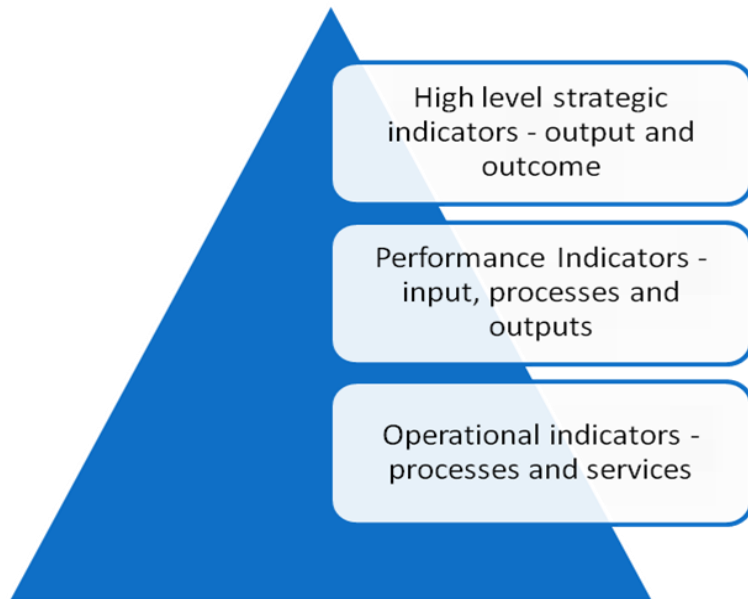
- ▶ Component 1: Establishment of a Integrated Monitoring Framework
- ▶ Component 2: Development of a MIS
- ▶ Component 3: Establishment of an evaluation of rural electrification with micro-hydro facilities
- ▶ Component 4: Development of a diagnostic and a forward-looking business plan for AEPC as an input to the ongoing Strategic Organization Development Plan (SODP)





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The proposed Monitoring Framework aims to fulfill multiple objectives



- Align and design to meet AEPC's vision, mission and strategic priorities.
- Use M&E as a strategic planning tool.
- Optimize the existing set up
- Establish a drill down feature for analysis of information
- Generate MIS reports at every level

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KPI Results Chain follows Inputs to Outputs to Outcomes to Impacts

**Inputs:** Financial, human, and other technical resources mobilized to support activities undertaken by AEPC

Examples include funds utilized, value of land, number of awareness generation programs for community mobilization, etc.

**Outputs:** Interventions by AEPC in terms of technical aspects

Examples include such as systems installed, number of households connected; capacity building such as number of staff trained, and community participation such as number of community organizations, etc.

**Outcomes:** Measure the uptake, adoption and use of services by the project beneficiaries

Examples include access, affordability, operating efficiency, reliability, and financial sustainability.

**Impacts:** Long term outcomes near or at the end of the results chain

Examples include effect of provision of electricity on employment, health, education, income.

Since this information needs to be collected at a household level, it is suggested to be collected every 2-3 years based on a survey.

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Benefits of access to RE (Micro-hydro) .

## ➤ Women Empowerment

- The women with access to MH have been found to be independent in decision making process, which is mainly because of their involvement in planning, implementing and managing of MH scheme.



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## Benefits of access to Micro-Hydro Plants MH Advantage – Educational Outcomes

Impacts of MH access on educational outcomes (age 5-18)

Outcomes	MH HHs	Non-MH HHs	Difference	PSM estimates (nearest neighbor matched)
Boys' completed schooling years	4.53	4.12	0.405 (1.50)	0.024 (0.10)
Girls' completed schooling year	4.28	3.73	0.551 (1.97)*	0.304 (1.82)*
Boys' evening study (minutes/day)	50	34	16 (3.63)**	13 (3.32)**
Girls' evening study (minutes/day)	40	30	10 (2.19)**	7 (1.81)*

- Boys' educational outcomes are slightly better than that of the girls regardless of MH connectivity.
- Boys and girls from MH households reveal higher study times than their counterparts from non-MH households.



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## Benefits of access to Micro-Hydro Plants MH Advantage – Health Outcomes

Outcomes	MH HHs	Non-MH HHs	Difference	PSM estimates (nearest neighbor matched)
<b>Respiratory problems</b>				
Men (age=>18)	6.2	5.4	0.84 (0.29)	3.01 (1.51)
Women (age=>18)	5.1	9.7	-4.62 (-0.91)	-6.15 (-1.68)*
Boys (age<18)	1.4	5.1	-3.63 (-1.75)*	-4.23 (-2.50)**
Girls (age<18)	1.3	8.2	-6.90 (-1.93)*	-8.09 (-3.03)**
<b>Gastrointestinal problems</b>				
Men (age=>18)	0.9	2.1	-1.18 (-0.70)	-1.41 (-1.65)*
Women (age=>18)	2.2	4.7	-2.41 (-0.80)	-2.55 (-1.15)
Boys (age<18)	1.0	0.9	0.10 (0.08)	-0.82 (-0.76)
Girls (age<18)	0.3	1.7	-1.40	-0.50

- Adult males from MH households suffer less (about 1.4 hours less per month) from GI diseases than those from non-MH households.
- MH connectivity lower boys suffering of respiratory diseases by 4 hours and girls suffering by 8 hours

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## Benefits of access to Micro-Hydro Plants MH Advantage – Women Empowerment

- ▶ Women from MH households spend more time in income generation and leisure activities than their counterpart women from non-MH households
- ▶ MH access has enabled women to use their time more productively in IGA and study, while allowing them more leisure time
- ▶ Independence in women's decision-making is higher in MH households than that in non-MH households.



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## Issue and challenges of Gender in RE

- ▶ The promotion of RETs must be considered incomplete without a clear measure of the differences and inequalities existing between different groups
- ▶ Determination should be clear to ensure equitable access to energy sources and related benefits.
- ▶ Improvement in the participation and access of men and women belonging to disadvantages groups (Dalits, Janajatis) should be reached effectively.
- ▶ Development of GMSI Strategy and Action Plan will be the first step towards understanding the persisting socio-cultural contexts and the barriers mainly discriminatory practices which prevent the disadvantaged women, Dalits, from exercising their rights and capabilities.



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## Issue and challenges of Gender in RE

- ▶ GMSI Strategy should be designed to address the issues at the organizational level and program/project level.
- ▶ The strategy will need to focus on:
  - a. Revisit the existing internal policies/ programme and targeting
  - b. Institution Building
  - c. Capacity Building
  - d. Access, Voices, Influence
  - e. Advocacy
  - f. Monitoring and Evaluation
  - g. Gender budgeting and participatory gender audits





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▶ Thank You

