
A Regional Gender Assessment of Energy Policies and Programmes in South Asia

Improving gender-inclusive access to clean and renewable energy in Bhutan, Nepal and Sri Lanka

ENERGIA
INTERNATIONAL NETWORK ON
GENDER AND SUSTAINABLE ENERGY





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Preface

Improving Gender-Inclusive Access to Clean and Renewable Energy in Bhutan, Nepal and Sri Lanka is an Asian Development Bank (ADB)-supported project (JFPR Grant-9158 REG). The project aimed to increase rural poor women's access to affordable and reliable clean energy sources and technologies in selected project sites in Bhutan, Nepal and Sri Lanka. It was implemented by ENERGIA, the International Network on Gender and Sustainable Energy, in collaboration with the Royal Society for Protection of Nature (RSPN) in Bhutan; Centre for Rural Technology Nepal (CRT/N); and Practical Action Sri Lanka. ENERGIA is an international network working on training, research and institutional development in the area of gender and sustainable energy.

The project had three components: Component A was a gender review of the energy sector; Component B consisted of direct interventions supporting gender-inclusive access to energy and energy-based livelihoods; and Component C was the designing and use of a project performance management system. As part of Component A, gender reviews of national energy sector policies and programmes in the three DMCs were undertaken. These were complemented with a Regional Review, including lessons from the three assessments and from other South Asian countries. The Regional Review assessed the gender inclusiveness of the energy sector at three levels: policy, programmes and organisations. The review largely focused on electricity access, including grid extension and off-grid electrification options, though experiences in other sectors were also assessed, primarily to identify good practices that could be applied to the electricity sector.

The regional gender review was undertaken by Soma Dutta and Sheila Oparaocha, and reviewed by Govind Kelkar, Indira Shakya and Anoja Wickramasinghe. The team would like to acknowledge the support and inputs from the Asian Development Bank and the Department of Renewable Energy, within the Ministry of Economic Affairs and Bhutan Power Corporation limited) (BPCL), Bhutan; Nepal Electricity Authority (NEA); and the Ceylon Electricity Board, Sri Lanka.

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Abbreviations

ADB	Asian Development Bank
AEPC	Alternative Energy Promotion Centre, Nepal
ASTAE	Asia Alternative Energy Program
BSP	Biogas Support Programme, Nepal
CEDAW	Convention on the Elimination of All Forms of Discrimination Against Women
CRT/N	Centre for Rural Technology Nepal
DMC	developing member country
GESI	gender equality and social inclusion
GII	Gender Inequality Index
IEP	Integrated Energy Policy
NDP	National Development Programme
NPAG	National Plan of Action for Gender
NPR	Nepalese Rupee
NRREP	National Rural & Renewable Energy Programme
PPMS	Project Performance and Monitoring System
RERED	Renewable Energy for Rural Economic Development
RGoB	Royal Government of Bhutan
RSPN	Royal Society for Protection of Nature
SARD	South Asia Department
SAARC	South Asian Association for Regional Cooperation
SEWA	Self Employed Women's Association
VDC	village development committee



Electricity c

A community consultation in Zhemgang, Bhutan

Photo: RSPN

Background and Introduction

Background and objectives

ENERGIA, the International Network on Gender and Sustainable Energy¹, in collaboration with the Royal Society for Protection of Nature, Bhutan (RSPN); Centre for Rural Technology Nepal (CRT/N) and Practical Action Sri Lanka, implemented the Grant-9158 REG: Improving Gender-Inclusive Access to Clean and Renewable Energy in Bhutan, Nepal and Sri Lanka (Feb 2012–Dec 2015).

The project objective is to increase rural poor women's access to affordable and reliable clean and renewable energy sources and technologies in selected project sites in three SARD (South Asia Department) Developing Member Countries (DMCs): Bhutan, Nepal and Sri Lanka. Three interrelated activity clusters were implemented:

- Component A: Gender review of the energy sector, documenting good practices in incorporating pro-poor and gender-related aspects in energy sector policies, laws and regulations identified in SARD DMCs
- Component B: Direct interventions supporting gender-inclusive access to renewable energy and energy-based livelihoods will be implemented in the three countries
- Component C: A Project Performance and Monitoring System (PPMS) designed and used for tracking and documenting social and gender-related processes and impacts of interventions

This report presents the findings of review of national energy policies for the region. This report is structured in five sections, as follows:

- A summary of key gender and development issues in the region, in chapter 2
- Gender issues as they relate to the energy sector in the region, in chapter 3
- A comparative assessment of national level energy sector policies in the three participating SARD DMCs, for their gender responsiveness, in chapter 4
- Documentation and analysis of good practices in gender-inclusive energy and development policies and programmes implemented by national governments, the ADB, and development partners, in chapter 4
- Proposed recommendations to strengthen gender mainstreaming in national policies as well as in the ADB energy sector portfolios, in chapter 5

¹ **The International Network on Gender and Sustainable Energy (ENERGIA)** is an international network working on training, research and institutional development in the area of gender and sustainable energy. It is hosted by the ETC Foundation in the Netherlands.

Methodology and scope of the Regional Review

This report is based on a review of available literature, including national level reports, publications and web-based resources, as well as reports from regional organisations and development partners. It undertakes a comparative assessment of the energy sector policies in the three SARD countries using gender reviews and interactions with stakeholders in Nepal, Bhutan and Sri Lanka as part of Component A of the JFPR grant. Additionally, energy policies of Bangladesh, Maldives and India are reviewed. A list of the literature reviewed is attached as Annex 1 to this report.

Specific elements examined as part of this gender review include:

- Gender and energy poverty issues that affect men and women, in terms of access to and control of energy services, resources, and decision making processes
- Analysis of energy policies and planning processes, and links between gender, energy, and national development goals
- A review of select energy programmes in terms of how they increase access to modern energy services for women and the poor, identifying good practices and lessons learned

The methodology included a desk review of secondary data and literature focusing on status and trends in the energy sector, organisational and institutional settings and gender and development issues of the countries, through both published and unpublished reports. Documents reviewed include national development plans, energy sector policies, documents related to major energy programmes; acts and regulations related to electricity and renewable energy.

In addition, the report draws from the deliberations at the three national knowledge-sharing workshops conducted to share findings from the gender review of the energy sector policies and programmes in the respective countries. The national knowledge sharing events were held in Colombo, Sri Lanka on 16 August 2013; in Kathmandu, Nepal on 22 September 2013 and in Thimphu, Bhutan on 1 October 2013.



Discussion with stakeholders at knowledge sharing workshop in Bhutan

Gender and Development Issues in the South Asia Region

The Asia-Pacific region has witnessed remarkable economic development in recent decades. While overall indicators for economic prosperity, access to education and healthcare have improved over the recent decades, gender gaps remain. Two of the five countries (Nepal and Sri Lanka) under this review have undergone political unrest and prolonged conflict, which has affected women adversely. This section presents an overview of the gender quality issues in South Asia, including the legislations on women's empowerment and gender equality and political commitments, institutional arrangements and mechanisms, and the differential conditions experienced and the inequalities between women and men in key sectors of agriculture, education, health, energy, labour force participation and political decision making.

Framework for women's rights and gender equality in South Asia region

In most developing countries including those in South Asia, the legal systems draw on certain basic principles of equality and non-discrimination. All South Asian countries have made formal commitments to the development goal of gender equality, and instruments such as the Convention on Elimination of All Forms of Discrimination against Women (CEDAW), endorsement of the Platform for Action of the Fourth World Conference on Women in Beijing and the millennium development goals are in place.² However, many provisions of the international instruments have yet to be translated into laws and policies at the national levels.³ In Nepal for example, the CEDAW requires the government to change approximately 85 laws and 137 legal provisions that are discriminatory, a task which has not been completed.⁴

All South Asian countries, through their constitutions and development plan documents, guarantee equal rights, without discrimination on the grounds of sex. Sri Lanka made a commitment to gender quality many years ago when international instruments arose and women received the right of franchise in 1931, together with men. Social policies on health and education introduced in the 1940s and 1950s guaranteed equal access to women and girls. The governments have also adopted policies that promote gender equality, and established separate or joint ministries for addressing women's issues. In Nepal, the Interim Constitution of 2007 specifically includes women's rights,

² UNDP. 2010. *Power, Voice and Rights. A Turning Point for Gender Equality in Asia and the Pacific*: Asia Pacific Human Development Report. Colombo, Sri Lanka: Macmillan Publishers India Ltd.

³ ADB. 2011b. *Sri Lanka Country Partnership Strategy 2012–2016*. Manila.

⁴ DFID Nepal and World Bank Nepal. 2006. *Unequal Citizens: Gender, Caste and Ethnic Exclusion in Nepal*, January 2006. (<http://web.worldbank.org/external/default/main?noSURL=Y&theSitePK=1324361&piPK=64252979&pagePK=64253958&contentMDK=22327728>)

gender equality and the empowerment of women as a responsibility of the State:⁵ the proportionate representation of all groups in the state structure and the right to education in one's mother tongue. It makes special provisions based on positive discrimination to various groups, including women in all areas—political representation among them. The Interim Parliament (2006–2008) passed a bill to ensure at least 33% women's representation in all state machinery. Likewise, the Royal Government of Bhutan sought to provide a national framework for gender mainstreaming in all development sectors covering the period 2008–2013 through the adoption of a National Plan of Action for Gender (NPAG).⁶ Gender is also highlighted as a major theme in the 11th Five Year Plan, which requires all concerned sectors to be responsible for addressing gender gaps by integrating them into their plans and programmes on the basis of gender analysis. The NPAG also plans that subject to relevance, laws, legislations and policies will be reviewed from a gender perspective; gender focal points will be established in government ministries; a gender responsive budget strategy will be implemented; and the institutional capacity of the National Commission for Women and Children will be enhanced.

In spite of these mechanisms, gaps persist, especially in family, property and inheritance laws, and these gaps affect women adversely. In addition, unquestioned attitudes shape laws, policies and public institutions, including those commonly viewed as 'gender-neutral', and render them blind to distinct gender needs while resulting in barriers to change. Inheritance practices upheld by custom and/or law prevent women from gaining ownership of land and other assets. For example, the Hindu Succession Amendment Act 2005 recognised women's equal rights to inheritance and land, however socio-cultural barriers and institutional patriarchy have not permitted its effective implementation. Education systems encourage girls to go to school, but then may teach them, including in state-approved curricula, that they are most suited to stereotypically 'female tasks' that tend to pay less and be more insecure. In particular, an area where gaps in laws are wide and longstanding is violence against women. In South Asia, nearly half of the countries have no laws on domestic violence.

Under the Muslim law in Bangladesh, India, and Sri Lanka, women inherit property but not on an equal basis with their male counterparts. Under the Hindu law in Nepal, unmarried daughters and sons inherit equally but women return their ancestral property to their brothers when they marry. Under the Tamil law in Sri Lanka, widows keep separate property, receiving half the property acquired during marriage (footnote 5).

⁵ NPC. 2007. *Three Year Interim Plan (2007/08–2009/10)*. Unofficial translation. National Planning Commission (NPC), Government of Nepal. (<http://www.npc.gov.np/new/navigationMenu/navigationRedirectPage.php?catId=10&&name=Plans/Programs>)

ADB. 2013a. *Gender and urban poverty in South Asia—Proceedings report of the 2012 Subregional workshop*. Manila. SNV. 2012. *Renewable (Rural) Energy Policies: Gender Equality and Social Inclusion Analysis Report*. Prepared for Alternative Energy Promotion Centre (AEPIC)/ Energy Sector Assistance Programme (ESAP). (http://www.aepc.gov.np/index.php?option=com_docman&task=doc_download&gid=507&Itemid=120)

⁶ Royal Government of Bhutan. 2008. *National Plan of Action for Gender, 2008–2013*. Gross National Happiness Commission, National Commission for Women and Children, Royal Government of Bhutan. ([http://www.ncwc.gov.bt/en/files/publication/National%20Plan%20of%20Action%20for%20Genfer\(2nd%20March\).pdf](http://www.ncwc.gov.bt/en/files/publication/National%20Plan%20of%20Action%20for%20Genfer(2nd%20March).pdf))

Where the region stands on gender equality

The South Asian sub region lags on some aspects of gender equality in relation to other developing regions of the world. South Asia's rankings for many gender gap indicators—health, adult literacy, economic participation—are often close to or lower than those in sub-Saharan Africa (Figure 1). Women in the region are more vulnerable to poverty than men, not simply because they have lower incomes, but also because their ability to access economic opportunities is constrained by discriminatory attitudes that restrict their mobility, limit employment choices and hinder control over assets (footnote 2). India, the largest country in the region, has recorded an impressive growth in recent decades, however, it lags behind on gender indicators. According to the gender inequality index of the United Nations Development Programme, India's performance lags behind that of other countries in the region, including countries with lower per capita gross domestic product (GDP) (Table 1).

Figure 1. Key Gender Indicators for the Region

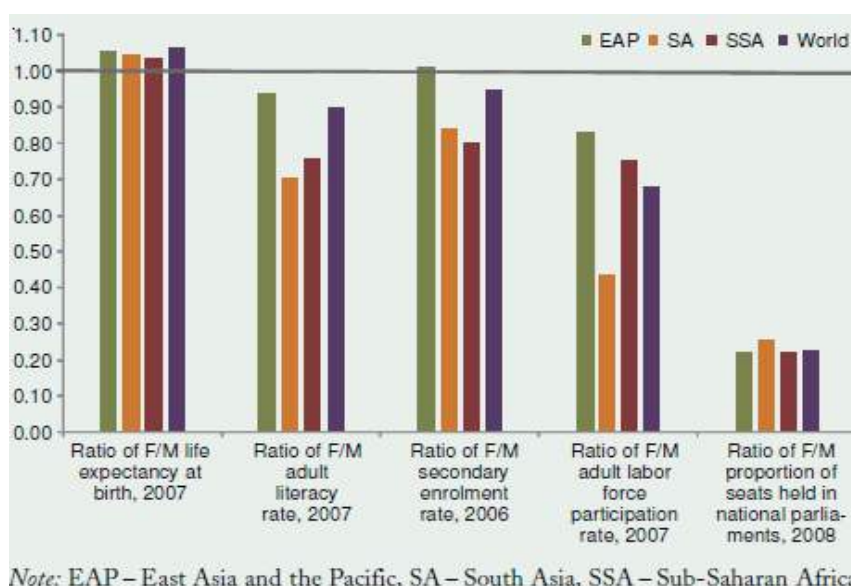


Table 1. Gender Inequality Index

Country	Gender Inequality Index (GII), 2012	GDP per capita (GDP per capita (2005 PPP \$))
Bangladesh	0.518	1,568
Bhutan	0.464	5,096
India	0.617	3,203
Maldives	0.357	7,834
Nepal	0.485	1,102
Sri Lanka	0.402	4,929

Source: <https://data.undp.org/dataset/GII-Gender-Inequality-Index-value/bh77-rzbn>

Ironically, while the legal, political and institutional frameworks for gender equality are in place, implementation is often weak due to lack of financial and human resources. For example, even where there are designated gender focal points within government entities, there is often no institutionalized linkage between their gender mandate and the main work of the concerned organisation, as reflected by the gender reviews undertaken as part of the JFPR Grant. Figure 1 shows the performance of the South Asian region vis-à-vis other regions in the world, which shows that while women in South Asia live almost as long as others, they are less literate and have less participation in the workforce.

Box 1: The Case of Sri Lanka and Bhutan: A Case Study

Among the South Asian countries, Bhutan and Sri Lanka are regarded as having a high level of gender equality. In Sri Lanka, educational outcomes for women are at par with or better than those of men, and life expectancies are higher for women. Sri Lanka also has the lowest maternal mortality ratio in the whole region, and has made good progress in achieving gender equity in health and education through giving women the right to vote, free education and health services. Universal adult franchise introduced in 1931 and free education system put in place in 1945 contributed substantially to make a progressive change in the lives of women. Sri Lanka has almost achieved the MDG targets for universal primary education and gender equity in education. In 2006, it attained a primary enrolment rate of 97.5%, and practically reached gender parity in primary education, with the ratio of girls to boys at 99%. However, there are still some areas where the Sri Lankan women continue to remain marginalized. While there is a high level of basic literacy among women, in practice, traditional patriarchal attitudes limit the interaction of a vast majority of women in community decision making and in commerce. In conflict-affected areas, women bear the brunt of social instabilities, with gender-based violence having increased due to the overall environment of violence and insecurity over the past 20 years. For women, labour force participation rates are low; they are paid less than men, a difference not explained by their productive capacity—and true for all sectors. A related area for improvement is women's role in decision making. From 2004 to 2010, less than 6% of the 255 members of Parliament were women; inclusion in governance mechanisms at the sub-national level is lesser. The country gender assessment carried out by the ADB showed that gender discrimination in employment has resulted in widespread inequality, with women engaged in low-paying, low-skill jobs and mostly in the informal sector, thus reinforcing the conditions for women's inequality and poverty.

Bhutan recounts a similar story. On the Social Institutions and Gender Index (SIGI), Bhutan ranks only second after Sri Lanka; Bhutan had a lower mortality ratio among adult women (194 per 1000 adults) than men (256 per 1000) in 2009, and the country has a positive sex ratio of 1.04 (male to female births). Bhutan's first Gender Pilot Study (2001) showed that women in Bhutan do not face overt discrimination; and institutionalized forms of discrimination against women do not exist. Nevertheless, Bhutanese women do face challenges. They lag behind in areas such as politics and decision making, tertiary education and the economy, with the rural women being more vulnerable. Literacy rate among women is lower; they are under-represented in the Parliament (5% after the July 2013 elections) and among the elected representatives at local government level (7%). Unemployment continues to be higher for women (4.5%) than for men (1.8%), and women constitute 70% of the unemployed population. Rural women are inadequately represented in decision making forums in community-level groups although they make up the majority in group membership.

Sources: UNDP. 2012. *Sri Lanka Human Development Report 2012: Bridging Regional Disparities for Human Development*. Sri Lanka: United Nations Development Programme.

ADB. 2011a. *Sri Lanka Poverty Assessment: Background Paper for the Country Partnership Strategy, 2012–2016*. Colombo.

ADB. 2008. *Country Gender Assessment Sri Lanka*. Manila.

Recently, the Human Development Report developed the Gender Inequality Index (GII), which reflects gender-based inequalities in three dimensions: reproductive health, empowerment and the labour market. The value of the GII represents the loss of potential human development attributable to inequality between female and male achievements in these three dimensions. It ranges from 0, which indicates that women and men fare equally, to 1, which indicates that women fare as poorly as possible. The GII indicates that within the region, India has the highest gender inequality and Maldives the lowest. Sri Lanka's GII is high at 0.558 compared to other countries in the medium human development category. On the indicators considered for the GII, Sri Lanka performs well on maternal mortality and education, but could considerably improve performance on labour force participation and parliamentary representation (Table 1).

Households headed by women in South Asia are a category that deserves a special mention. World Bank data show that the proportion of households headed by women in South Asia in 2009 ranged from about 13% in Bangladesh and India to 28% in Nepal and 35% in the Maldives.⁷

An older ADB publication reported Maldives as having one of the highest rates of female-headed households in the world, at 47%.⁸ Almost a quarter of these had no income-earning member, with only 21% economically active in the week preceding the census. Many female-headed households receive remittance income from absent partners working in Malé or on resorts. However, female-headed households are more likely to live in poverty than male-headed households. In Sri Lanka, over 20% of households are headed by women. Women who experienced the armed conflict in the North and East felt the reversal of earlier gains in education, health, employment and political participation and were subjected to wartime rights violations as well.⁹

The following section describes the performance of men and women on select parameters.

Literacy and women's education

Data between 1990 and 2000 show that less than half of the adult women in South Asia were literate. This progressed to just above half by 2007—still the lowest percentage in the world (Figure 2).

More recent data shows significantly improved literacy rates among women (Table 2). What stands out is that while gender disparities in literacy are practically absent among the youngest age group, the number of girls able to move up to secondary and tertiary levels of education levels is considerably lower. The gender gap in literacy begins in the 10–14 year old age group, with the gap widening with age (Table 2). In Bhutan, for example, only two

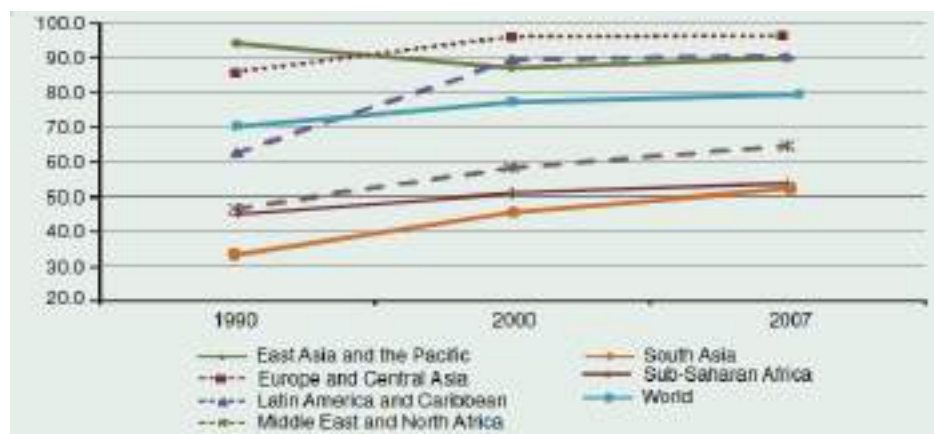
⁷ World Bank. 2013. *The Little Data Book on Gender from the World Development Indicators*. (<https://openknowledge.worldbank.org/bitstream/handle/10986/13206/9780821398203.pdf?sequence=1>)

⁸ ADB. 2007a. *Maldives: Gender and Development Assessment. Strategy and programme Assessment*. Manila.

⁹ ETC. 2013b. *Gender Review of National Energy Policies and Programmes in Sri Lanka: A Report to ADB under a project entitled, Improving Gender-Inclusive Access to Clean and Renewable Energy in Bhutan, Nepal and Sri Lanka (ADB GRANT-9158 REG)*. Unpublished.

girls are enrolled at tertiary level for every five boys.¹⁰ Similarly, the adult literacy rate remains lower for women (47%) than for men (71%), and this is particularly true in rural areas.

Figure 2. Literacy Among Adult Women, 1990–2007



Source: UNDP. 2010. *Power, Voice and Rights. A Turning Point for Gender Equality in Asia and the Pacific: Asia Pacific Human Development Report*. Colombo, Sri Lanka: Macmillan Publishers India Ltd.

Table 2. Primary School Completion and Literacy Rates by Gender

	Data available for year	Primary school completion rate		Adult literacy rate	
		Male	Female	Male	Female
Bangladesh	2011	70	80	62	53
Bhutan	2011	89	95	65	39
India	2011	96	97	76	51
Maldives	1990–1992	98	92	96	96
Nepal	2008–2011	76	57	71	47
Sri Lanka	2008–2011	100	99	93	90

Source: <http://wdi.worldbank.org/table/2.13>

Women's health and nutrition

Female life expectancy (at birth) has steadily risen in all Asia-Pacific sub-regions. While behind East Asia, South Asia is now ahead of sub-Saharan Africa. By 2007, female life expectancy in South Asia fell short of the world average by just 5 years—compared to 10 years in 1980. A summary of key health indicators is presented in Table 3.

Nepal has seen significant progress in the health sector, which has improved access to health care and decreased gender disparities. In Nepal, women's life expectancy has increased to 65.7 years, compared to 61.9 years for men. The maternal mortality ratio is high in comparison to many developed countries, but it has almost halved from 539 deaths

¹⁰ Ministry of Education, Royal Government of Bhutan, 2011. *Annual Education Statistics, 2011*. <http://www.education.gov.bt/documents/10180/12664/Annual+Education+Statistics+2011.pdf/12229a4e8-fc7c-479f-ad13-59f9d32fd30e?version=1.0>

per 100,000 live births in 1996 to 281 deaths per 100,000 in 2006. Access to maternal health care has increased, but it varies among groups of women.¹¹ In India, on the other hand, the 2011 census found a continuing decline in the sex ratio among children under age 7: the ratio was 927 girls per 1,000 boys in 2001 and it was further reduced to 914 in 2011.¹²

Unfortunately, improved services are more restricted to urban and peri-urban areas and rural areas, especially remote ones continue to face poor access to health services, poor infrastructure, lack of sufficient and qualified staff and socio-cultural barriers. Women in rural and remote areas suffer from reproductive health issues, respiratory illnesses and HIV/AIDS. Factors that contribute to lower health outcomes for women and girls include their low status, low education levels, and female shame about the body and reproductive functions.¹³

Table 3. Gender and Health Indicators

	Life expectancy at birth		Maternal mortality ratio (per 100,000 live births)	Births attended by skilled health staff, 2011 (percent of total)
	Male	Female		
Bangladesh	64	66	340	32
Bhutan	67*	63.6*	440*	65
India	63	66	230	52
Maldives	68.7*	67.2*	37	95
Nepal	65	69	380	36
Sri Lanka	65	76	39	99

Sources: UNDP. 2012. *Sri Lanka Human Development Report 2012: Bridging Regional Disparities for Human Development*. Sri Lanka: UNDP.

World Bank. 2013. *The Little Data Book on Gender from the World Development Indicators*. (<https://openknowledge.worldbank.org/bitstream/handle/10986/13206/9780821398203.pdf?sequence=1>)

* Data from UNDP 2010 (for year 2006)

Leveraging assets and productive resources

Assets—land, housing, livestock, common property resources, businesses, health and financial assets—are critical because they can be leveraged to acquire other assets, sustain enterprises or diversify livelihoods. Women in the region are more vulnerable to poverty than men, not simply because they have lower incomes, but also because their ability to access economic opportunities is constrained by discriminatory attitudes that restrict their mobility, limit employment choices, and hinder control over assets.

There are significant variations in asset ownership within the region. The UNDP Human Development Report showed that on asset ownership by women, Nepal had a score of 1 on a scale of 0 to 1 (0 = full and 1 = impossible) in terms of women's access to land, and 0.7 in terms of women's access to loans (0 = full and 1 = impossible), both

¹¹ ADB. 2010a. *Overview of Gender Equality and Social Inclusion in Nepal*. Manila.

¹² ADB. 2013b. *India Gender Equality Diagnostic of Selected Sectors*. Manila.

¹³ ETC. 2013a. *Gender Review of National Energy Policies and Programmes in Nepal: A Report to ADB under a project entitled, Improving Gender-Inclusive Access to Clean and Renewable Energy in Bhutan, Nepal and Sri Lanka* (ADB GRANT-9158 REG). Unpublished.

lowest in the South Asia region. According to the 2001 Population Census in Nepal, only 11% of households reported some land under female legal ownership¹⁴, but around 90% owned less than one acre (Table 4). (footnote 2) In 2011, 19.71% of households reported the ownership of land or house or both in the name of female member of the household. In urban areas, 26.77% of the households show female-ownership of fixed assets while the percentage stands at 18.02 in rural areas.¹⁴

Table 4. Access to Assets and Productive Resources

Country	Women's access to land	Women's access to loans	Women's access to assets other than land
Bangladesh	0.8	0.3	0.5
Bhutan	N/A	N/A	N/A
India	0.5	0.5	0.5
Maldives	N/A	N/A	N/A
Nepal	1	0.7	0.6
Sri Lanka	0.5	0	0

* The values vary between 0 and 1 (0 = full and 1 = impossible).

Source: UNDP. 2010. *Power, Voice and Rights. A Turning Point for Gender Equality in Asia and the Pacific: Asia Pacific Human Development Report*. Colombo, Sri Lanka: Macmillan Publishers India Ltd.

Employment opportunities and labour force participation

The female labour force participation rate is the highest in East Asia and the Pacific among all regions in the world. In South Asia, however, the female labour force participation rate of 35.7% in 2007 was much lower than that of sub-Saharan Africa at 59.9%, as well as the world average of 52.7% (footnote 2). More recent data for 2011, collected by the World Bank, also shows a vast gender gap in labour force participation rate (footnote 7). The largest gap is seen in India, where the percentage of men working is almost three times that of women (Table 5).

Table 5. Labour Force Participation Rate in South Asia

	Labour force participation rate, 1990 (15 plus population),		Labour force participation rate, 2011 (15 plus population)	
	Male	Female	Male	Female
Bangladesh	88	62	84	57
Bhutan	78	50	77	66
India	85	35	81	29
Maldives	77	20	77	56
Nepal	91	80	65	55
Sri Lanka	78	36	77	35

Source: World Bank. 2013. *The Little Data Book on Gender from the World Development Indicators*. (<https://openknowledge.worldbank.org/bitstream/handle/10986/13206/9780821398203.pdf?sequence=1>)

UNDP. 2012. *Sri Lanka Human Development Report 2012: Bridging Regional Disparities for Human Development*. Sri Lanka: UNDP.

¹⁴ CBS. 2011. *Nepal Living Standards Survey, 2010/11*. Central Bureau of Statistics, National Planning Commission Secretariat, Government of Nepal. (http://cbs.gov.np/wp-content/uploads/2012/02/Statistical_Report_Vol2.pdf)

Women's entry into the workforce in South and Southeast Asia has largely been in the informal economy. There has not been a substantial movement of women into the so-called formal workforce i.e. those employed in registered, corporate units with the various benefits that workers are expected to get, like provident fund, medical insurance, etc. Despite laws guaranteeing equal pay for equal work, women still earn only 54% to 90% of what men earn in Asia-Pacific countries. Wage gaps arise from women's predominance in lower-paid positions; interruptions in their work life, which are often related to family concerns; and the lower valuation of typically female occupations. Other obstacles include biases of some employers and women's weak bargaining power (Table 6) (footnote 2).

Table 6. Employment by Sector

	Data available for year	Agriculture		Industry		Service		Vulnerable employment	
		Percent of male employment	Percent of female employment	Percent of male employment	Percent of female employment	Percent of male employment	Percent of female employment	Unpaid family workers and non account workers, male	Unpaid family workers and non account workers, female
Bangladesh	1990–1992	54	85	16	9	25	2	N/A	N/A
Bhutan	2008–2011	53	68	10	9	37	24	60	83
India	2008–2011	46	65	24	18	30	14	79	85
Maldives	1990–1992	28	14	18	39	50	43	41	57
Nepal	2008–2011	75	91	4	1	20	8	N/A	N/A
Sri Lanka	2008–2011	41	39	14	23	28	28	40	46

Source: <http://wdi.worldbank.org/table/2.3>

In urban areas, a visible trend is an increase in female labour force participation. However poor women are mostly employed in family enterprises or as piecemeal workers, street vendors, or domestic helpers near their homes, with low wages and no job protection. Limited access to skills training and safe and affordable public transport, along with inadequate working conditions, restrict women's access to job opportunities outside the home, such as factory work, nongovernment organisation (NGO) work, teaching, health care jobs, or civil service employment. In the Sanjay slum of Delhi, a study by the United Nations Human Settlements Programme (UN-HABITAT) found 75% of men working within 12 kilometres of their homes, while women worked within 5 kilometres of their homes, indicating their mobility constraints due to household responsibilities, cultural norms, and unsafe, inaccessible transport services (footnote 5).

In rural areas, a large number of women are engaged in the agricultural sector in all South Asian countries, except for Maldives (footnote 8). Almost 70% of employed women in South Asia and more than 60% of employed women in sub-Saharan Africa work in agriculture.¹⁵ In India, a high proportion of rural women continue to be engaged in agriculture (79% of women, compared with 63% of men in 2009–2010) and the shift to other sectors has been slower for women than men (comparable data of 1977–1978

¹⁵ FAO. 2011. *The State of Food and Agriculture: Women in Agriculture, Closing the Gender Gap for Development*. (<http://www.fao.org/docrep/013/i2050e/i2050e.pdf>)

was 88% of women and 81% of men).¹⁶ (NSSO. 2010). In Nepal, for example, the National Labour Force Survey 1998 shows that:¹⁷

- 72% of women are working in agriculture versus 48% of men and this pattern holds across all ethnic/caste groups.
- The proportion of men currently employed in the formal non-agricultural or “modern” occupational sector is much higher (21%) than that of women (6%).
- Women continue to be confined primarily to unpaid family labour. Nearly 60% of currently employed women fall in this category, compared to 21% of men.
- Due in part to their lower education levels, women earn less than men. Women’s daily wages in the agricultural sector are NRs.47 per day compared to the average male wage rate of NRs.63; women’s daily wages in the non-skilled, non-agricultural sector are NRs.54 compared to NRs.104 for men; and for skilled non-agricultural labour women get an average of NRs. 126 compared to NRs. 315 for men.
- 77.5% of females and 66.0% of males have main jobs in the non-agricultural informal sector. In absolute numbers, women have about 984 thousand jobs outside agriculture, but 763 thousand of these are in the informal sector.

Rural-urban migration, which is mainly male, is one reason women become the primary source of labour in agriculture. Time use studies and GNH (Gross National Happiness) surveys in Bhutan reveal that women work longer hours in the field than men (ranging from 14–18 hours/day) and have less leisure time. These women face growing farm labour shortages, increasing pressure to care for their household and the elderly, and subsequently have no time to participate in community activities and meetings, especially if they are far from home¹⁸

Additionally, it is important to note that female labour force participation only partially reflects the contribution of women to the economy as a whole. Official statistics miss unpaid economic activities, such as work on family farms and enterprises, and contribution to the care economy, both of which have larger societal benefits.

Decision making and participation in governance

Women are underrepresented in decision making positions in government in the region, although there is some recent evidence of improvement (footnote 2). Women’s participation in governance, especially at higher levels, continues to be low despite constitutional guarantees of equality, policy statements about commitments to equal representation, and sustained activism and advocacy by civil society organisations. Women’s low participation and representation in governance and decision making limit opportunities for their voices to be heard, and for their knowledge, needs, and priorities to be considered in planning and investments.

¹⁶ National Sample Survey Organization. 2011. *NSS Report No. 537: Employment and Unemployment Situation in India: 2009–2010*. para. 5.8.2. (http://www.indiaenvironmentportal.org.in/files/file/NSS_Report_employment%20and%20unemployment.pdf)

¹⁷ Central Bureau of Statistics. 2009. *Report on the Nepal Labour Force Survey, 2008*. (http://www.ilo.org/wcmsp5/groups/public/@asia/@ro-bangkok/@ilo-kathmandu/documents/publication/wcms_118294.pdf)

¹⁸ ATC. 2013c. *Gender Review of National Energy Policies and Programmes in Bhutan: A Report to ADB under a project, Improving Gender-Inclusive Access to Clean and Renewable Energy in Bhutan, Nepal and Sri Lanka*. Unpublished.

Even in Sri Lanka, where women are major contributors to the country's foreign exchange earnings and economic growth, and where literacy rates for women are the second highest in the region, their participation in governance and decision making is incredibly low. In Sri Lanka, less than 6% of parliamentarians are women, compared to other SAARC countries, where the figure ranges from 6.5% in the Maldives to 33.2% in Nepal.¹⁹ In Bangladesh, despite the National Policy for Women's Advancement, adopted in 1997, which ensures that at least 25% of seats in town councils are reserved for women, municipal leaders are not informed about participatory development, the role of women in urban governance, and gender mainstreaming. Most of the female ward councillors elected to reserved seats are not effective in the decision making process due to lack of awareness and training, which would allow them to take a proactive role in carrying out their assigned responsibilities (footnote 5).

In Nepal, women's participation in governance at the grassroots level is considerable. The Local Self Governance Act (1999) of Nepal has a provision to ensure a reserved seat for women in each ward of the Village Development Committee (VDC). In the 1999 local election, approximately 40,000 women were elected, due, in part, to the Act's passage. The representation at higher levels, however, continues to be low. In the Central Executive Committees of the parties, female membership was less than 10% (footnote 4, p. 3). Between 1990 and 2002, ten different governments were formed, three of which were composed solely of men. In the other governments only 1–2 women parliament members were appointed as ministers (in the Parliamentary secretariat). The Unified Communist Party of Nepal (UCPN) (Maoist) party set an example for women's participation, with women composing 40% of their party in the Interim Parliament. The three governments formed after the Constituent Assembly elections failed to achieve the 33% figure and only 13% of ministers in the three successive governments were women.²⁰ Currently, 24.5% of serving ministers are women; and the political parties are largely run by men.²¹ In the judiciary, female judges account for 2.29% in the courts, while the Supreme Court has just 1 female justice and 17 male

Table 7. Women's Participation in Decision Making in South Asia

	Female legislators, senior officials and managers (percent of total) 2007–2011*	Seats in parliament held by women (2009)** (percent of total)
Bangladesh	N/A	18.6
Bhutan	27	13.9
India	14	10.3
Maldives	N/A	6.5
Nepal	N/A	33.2
Sri Lanka	24	5.8

** UNDP 2010

* World Bank, 2013

¹⁹ UNDP. 2012. *Sri Lanka Human Development Report 2012: Bridging Regional Disparities for Human Development*. Sri Lanka: UNDP.

²⁰ M. Chautari. 2011. Deadlines, Democracy and a Popular, Democratic Constitutions. *Policy Paper No. 5, June 2011*. (http://himalaya.socanth.cam.ac.uk/collections/journals/mcpb/pdf/MC_PolicyBrief_05_ENG.pdf)

²¹ D. Khakurel. 2011. *Women's Participation in Nepal: Debate of Inclusive Proportional Representation*. (http://www.idea.int/asia_pacific/nepal/participation-nepal-debate-inclusive-proportional-representation.cfm)

justices (footnote 21). Until August 2010, women composed only 12.97% of the civil service, with two women serving in the post of Secretary (footnote 21). There are no women in either the National Planning Commission or the Election Commission. Similarly, there is negligible representation of women in the security forces, such as the Nepal Police and Army of Nepal.

At the local level, the Bhutan Living Standard Survey (BLSS) 2012 report states that there is gender disparity in participation in community groups' decision making, with male members being more active than the female members. The leaders were made up of 70.9% males and 29.1% females, while those who participated actively comprised of 71.7% males and 28.3% females. The BLSS also states that female-headed households accounted for 39% of membership in community forest groups, 46% in credit/saving groups, 36% in farmer groups-production, 39% in welfare and charity groups, and 56% in women's associations.

In summary, it can be said that as a group, women in South Asia have made progress, especially in areas of basic education and health. Many areas still need attention, however, such as women's engagement in labour, economic empowerment, and involvement in governance mechanisms—especially at higher levels.

Gender, Energy and Poverty Linkages in South Asia

Brief overview of the energy sector

The South Asian countries depend on a mix of energy sources including coal, gas, oil and hydropower for electricity generation. The Bangladesh energy sector is heavily dependent on natural gas, while hydropower is the most precious tradable resource of Bhutan and Nepal. In both countries, however, the utilization of available potential is low: in Bhutan, the current level of utilization is around 6%, while in Nepal, it is less than 1%. In South Asia, India is the biggest consumer of energy, with coal as the primary fuel, contributing to almost 70% of the electrical energy generation. Maldives is completely dependent on imports to meet its fuel-based primary energy demands.²²

Every household in the Maldives is electrified, and Sri Lanka does not lag far behind. By 2012, nearly 4.9 million consumers in Sri Lanka, including 4.4 million domestic consumers (94% of population) were served by the national grid. The government envisages reaching a 100% target in countrywide electrification by 2015, with at least 10% coming from renewable energy. At present, commercial energy in Sri Lanka is dominated by hydropower and oil. India has been expanding electricity access at a rate of about 4 million households every year, though 25% of the population (290 million people) lack access to electricity and 66% use traditional biomass as their primary source of energy.²³ Table 8 shows rural and urban access to electricity in each South Asian country.

Table 8. Access to Electricity (percentage of population, 2012)

	Rural	Urban	Total
Bangladesh	49	90	60
Bhutan	53	100	76
India	70	98	79
Maldives	100	100	100
Nepal	72	97	76
Sri Lanka	86	100	89

Source: World Bank. 2015. Progress towards sustainable energy 2015. Global Tracking Framework Report. Washington DC: International Bank for Reconstruction and Development/The World Bank and the International Energy Agency.

In expanding energy services, electrification—grid-based electrification in particular—continues to be dominant, in terms of investment as well as number of people reached.

²² A. N. M. Obaidullah. 2013. Energy Sector of South Asia: A critical review. *Energy and Power*, 11 (1), 69-73. (<http://ep-bd.com/pdf/volume11issue1.pdf>)

²³ REN 21. 2013. *Renewables 2013. Global Status Report*. (http://www.ren21.net/Portals/0/documents/Resources/GSR/2013/GSR2013_lowres.pdf)

At present, South Asian countries are facing rapidly rising energy demand coupled with increasing energy shortfalls, typically in the form of recurrent, costly, and widespread electricity outages. Electricity is still not available to about half of the region's population, especially in rural areas, which adversely affects the efforts to reduce poverty and create better opportunities for all.²⁴ Electricity services for businesses or households are often unreliable and of poor quality. This is coupled with high technical and commercial losses, and service providers' poor commercial performance.

About half of developing countries have set up electricity access targets at the national, rural and/or urban level. Energy sources for cooking, on the other hand, has received less attention, with just a few developing countries with targets for access to modern cooking fuels or improved cookstoves, or targets for reducing the share of the population relying on traditional biomass. Some efforts have been made, but the impacts of these new initiatives have yet to be seen. In 2009, the Government of India has launched the National Biomass Cookstoves Initiative to develop next-generation, cleaner biomass cookstoves and deploy them to all Indian households that currently use traditional cookstoves. In September 2010, a new public-private partnership, the Global Alliance for Clean Cookstoves was launched, with the '100 by 20' goal that calls for 100 million homes to adopt clean and efficient stoves and fuels by 2020. Other significant initiatives with renewable energy include the micro-financing models of Grameen Shakti in Bangladesh, the Alternative Energy Promotion Centre of Nepal, and the barefoot solar engineers of India.

In most countries, energy sector management remains centralized. In comparison to other sectors, such as forestry and agriculture, which have adopted participatory planning and policymaking processes, the energy sector is comparatively less open to input from stakeholders and advocacy groups representing households and small businesses. Procedures for setting national energy priorities do not often take into account gendered usage and needs for energy in both productive and service sectors. Despite their key roles in energy collection, purchase and usage, most women, including housewives, entrepreneurs, advocates and energy professionals, have been disenfranchised from energy decision making and are not targeted as primary beneficiaries of energy services. From a staffing perspective, energy institutions tend to be dominated by male staff at all levels, including the front-line units that work with household and small business customers. Women professionals tend to be more often segregated into administrative and accounting job categories while men tend to be in technical and field-based jobs. Women have generally joined energy institutions later than men and have not achieved parity with men at the senior levels of management.²⁵

Gender, energy and poverty issues in South Asia

South Asia is the home to approximately 1.6 billion people, or one-fourth of the global population. By 2020, the population of South Asia will reach approximately 1.86 billion. Many live below the poverty line; hunger, malnutrition, child mortality, extreme poverty and lack of female empowerment present major challenges.

²⁴ World Bank. 2015. *South Asia: Regional Cooperation and Integration. Energy: Opportunity for Trade*. (<http://web.worldbank.org/WBSITE/EXTERNAL/COUNTRIES/SOUTHASIAEXT/0,,contentMDK:21510953~pagePK:146736~piPK:146830~theSitePK:223547,00.html>)

²⁵ USAID. 2010. *Gender Assessment: South Asia Regional Initiative for Energy: Draft Final Report*. (http://pdf.usaid.gov/pdf_docs/Pnads874.pdf)

Access to affordable energy services is an essential prerequisite to achieving economic growth and poverty reduction. Energy services are linked to well-being and have the potential to impact almost every area of human life, from increased economic activity to improved child literacy, safe drinking water and female empowerment. Worldwide, 2.9 billion people still rely on traditional biomass for cooking and heating, and another 1.1 billion lack electricity—an estimated 70% of whom are women, whose access to resources and decision making is limited.²⁶ Furthermore, women’s primary responsibility for energy procurement and management (and the invisibility of these tasks in international energy statistics) gives energy poverty a gender bias.

Box 2: The Gender-Energy-Poverty Linkage

Women represent up to 70% of the rural poor, earn only 10% of the world’s income and own only 1% of the world’s property; they also account for 2/3 of the total number of illiterate adults.

Women play a major role in the survival strategies and economy of poor rural households across all geographical regions. Women comprise, on average, 43% of the agricultural labour force in developing countries, ranging from 20% in Latin America to 50% in Eastern Asia and sub-Saharan Africa.

Women are more acutely affected by energy scarcities, as they are responsible for nearly every aspect of the domestic energy system, especially in rural areas.

Research findings suggest that there are welfare and efficiency gains from improving women’s education level, access to resources and infrastructure, and control over income.

Increasing the economic productivity of the rural poor is largely about enabling women to realize their socio-economic potential more fully and improve their own and their families’ quality of life.

Energy services can contribute to increasing women’s economic and social empowerment.

Source: CBS. 2011. *Nepal Living Standards Survey, 2010/11*. Central Bureau of Statistics, National Planning Commission Secretariat, Government of Nepal. http://cbs.gov.np/wp-content/uploads/2012/02/Statistical_Report_Vol2.pdf; World Bank (2005). *Gender Issues in Monitoring and Evaluation in Rural Development: A Tool Kit*, World Bank;

In South Asia, energy is critical in women’s daily lives. They need enormous quantities of energy for their household chores, such as cooking and space heating; for agricultural uses, including irrigation, weeding, harvesting, post-harvest processing; and for rural industry uses, such as milling and process heating. In the absence of modern energy services, they devote long hours to gathering biomass for energy, often across long distances, and on unpaid household and farming tasks, leaving little time for much else. Energy poverty²⁷ has a disproportionate effect on women and girls.

Source

The most obvious and well-documented burden is that as fuel resources become increasingly scarce, women are forced to walk longer distances and invest a greater

²⁶ World Bank. 2015. *Progress towards sustainable energy 2015. Global Tracking Framework Report*. Washington DC: International Bank for Reconstruction and Development/The World Bank and the International Energy Agency.

²⁷ Energy poverty has been defined as the absence of sufficient choice in accessing adequate, affordable, reliable, high quality, safe and environmentally benign energy services to support economic and human development

portion each day gathering fuel, wood and water. This burden falls disproportionately on women and the implications are many.²⁸ Collecting traditional fuels is physically draining and time-consuming, with women and girls spending 2 to 20 (or more) hours on this task every week.²⁹ Biomass fuel collection often entails walking long distances, carrying heavy headloads, and safety hazards. Household air pollution caused by burning biomass in inefficient cook stoves with poor ventilation contributes to respiratory illness and a range of other diseases, including cataracts and possibly cancer (footnote 28). WHO estimated that over 4 million premature deaths were attributable to the household air pollution created from a primary reliance on solid fuels for cooking, more than 99% of which occur in developing countries (footnote 25).

Gender inequalities in energy access have their genesis in the fact that in much of South Asia, gender inequalities are prevalent in society and within households. This means that women generally have less access to productivity-enhancing resources, such as labour, collateral, credit facilities, information, and training. These inequalities stem from household-based discrimination and from broader societal and cultural constraints, and restrict their ability to benefit from available opportunities. Specifically in the energy sector, several issues hinder women's participation and their ability to benefit from interventions: women's restriction largely to non-commercial (and non-monetized) activities; their low representation in decision making bodies; their limited engagement in formal communication channels and consultation processes; and the prevalent inequalities in women's knowledge, access to productive resources and financial capacity. This section highlights some of the key implications of energy poverty on women.

Existing energy use pattern in South Asia has disproportionate negative impacts on women

Energy use patterns in South Asia, especially in rural areas, are predominantly based on traditional-biomass fuels. South Asia is home to about 1.1 billion people who cook primarily with solid fuels, followed by Sub-Saharan Africa and East Asia, which together add another 1.4 billion (footnote 25). In 2007–2008, over 85% of households in rural

²⁸ M. Ezzati et al. 2002. Selected Major Risk Factors and Global and Regional Burden of Disease. *The Lancet*, 360, 1347–1360.

K. Smith et al. 2000. Greenhouse Implications of Household Stoves: An Analysis from India. *Annual Review Energy Environment*, 25, 741–763.

K. Smith et al. 2004. The Global Burden of Disease from Household Use of Solid Fuels: A Source of Indoor Air Pollution. *Comparative Quantification of Health Risks: The Global Burden of Disease due to Selected Risk Factors*. Geneva, World Health Organization.

WHO. 2006. *Evaluation of the costs and benefits of household energy and health interventions at global and regional levels*. Geneva, Switzerland: World Health Organisation.

WHO. 2011. *Indoor Air Pollution and Health*. Geneva: World Health Organization.

WHO. 2009. *World health statistics 2009*. Geneva: World Health Organization.

ADB. 2007b. *Energy for All: Addressing the energy, environment, and poverty nexus in Asia*. Manila.

Global Alliance for Clean Cookstoves. 2011. *Igniting Change: A Strategy for Universal Adoption of Clean Cookstoves and Fuels*. (<https://cleancookstoves.org/binary-data/RESOURCE/file/000/000/272-1.pdf>)

The World Bank. 2011. *Household Cookstoves, Environment, Health, and Climate Change*. A new look at an old problem. Washington D.C.: The International Bank for Reconstruction and Development / The World Bank.

²⁹ UNDP. 2007. *Gender Mainstreaming: A Key Driver of Development in Environment and Energy*. (http://www.undp.org/content/undp/en/home/librarypage/environment-energy/sustainable_energy/gender_mainstreamingakeydriverofdevelopmentinenvironmentenergy.html)

India depended on firewood, dung cake and coal/charcoal for cooking, with only 9% using LPG and a negligible percentage using electricity for cooking.³⁰ In Nepal, firewood is the predominant energy carrier, accounting for more than 75% of consumption, and in rural Nepal, more than 92% of total cooking energy consumed is traditional biomass, of which fuelwood constitutes 75%. The dependence on solid fuels is presented in Table 9.

Table 9. Reliance on Biomass Fuels (percentage of population, 2010)

	Rural	Urban	Total
Bangladesh	95	63	91
Bhutan	55	<5	40
India	86	23	58
Maldives	9	<5	8
Nepal	90	33	82
Sri Lanka	85	34	75

Source: USAID. 2010. *Gender Assessment: South Asia Regional Initiative for Energy: Draft Final Report*. http://pdf.usaid.gov/pdf_docs/Pnads874.pdf

The burden of this heavy reliance on biomass fuels falls disproportionately on women. The time spent per day on collecting such fuels ranges from 40 minutes to 2 hours with women in some parts of India, such as Rajasthan, walking as far as 1–2 kilometres for fuel wood.³¹ These traditional fuels are inefficient, often unreliable, create health risks, and contribute to environmental degradation. Estimates show that about 800 million days of potentially productive work are lost due to diseases related to indoor air pollution caused by burning of biomass (footnote 30).

At the same time, women use huge quantities of energy for their daily tasks. Women's work days are longer than men's with regards to providing human energy for survival activities, such as fuel and water carrying, cooking, food processing, transport, agriculture and small enterprises, and non-monetized work—which is largely invisible in national energy accounts and labour force statistics.

Energy sector investments do not recognise women's primary energy needs and priorities

Energy access is not an end in itself, and energy projects aim to supply energy services that meet users' needs. Users include both men and women, who often have different energy roles, needs and priorities. The primary emphases in energy policy and investment are petroleum fuels and electricity, a reduction in subsidies on fossil fuels, with limited investment in non-commercial energy. In India, the 11th five-year plan (2007–2012) detailed an investment of more than US\$100 billion in the energy sector but less than 2% of this is likely to alleviate the burden on women and girls, who collect close to 28% of primary energy (footnote 30).

³⁰ Government of India. 2010. *Household Consumer Expenditure in India, 2007–2008. NSS 64th Round (July 2007–June 2008)*. National Sample Survey Organization, Ministry of Statistics and Programme Implementation, Government of India.

³¹ Integrated Research and Action for Development. 2009. *Gender Analysis of Renewable Energy in India: Present Status, Issues, Approaches and New Initiatives*. (<http://www.irade.org/Gender%20Cover.pdf>)

The current energy sector portfolios of ADB in Nepal, Bhutan, Sri Lanka, Bangladesh and India do not include any projects that address women's energy needs. That said, the cooking sector has garnered more attention in recent years, with the launch of several projects and partnerships. The Global Alliance for Clean Cookstoves, a public-private partnership launched in September 2010, has a '100 by 20' goal that calls for 100 million homes to adopt clean and efficient stoves and fuels by 2020. Within the region, following the successful execution of the Rural Electrification and Renewable Energy Development (RERED) project in Bangladesh, the World Bank launched a follow-up project that focuses on household energy, with a specific focus on clean cooking solutions for rural households. Apart from providing technical support, the programme aims to disseminate 1 million clean cookstoves and 20,000 biogas digesters over the next 5 years. The Nepalese Government has committed to making all Nepali homes smoke-free by 2017 through reducing the use of traditional biofuels and promoting alternative energy.³² In 2012, India launched its "National Cookstove Programme," which aims to avoid 17% of the premature deaths and disabilities associated with traditional biomass emissions that would otherwise occur by 2020 (footnote 22).

Even with electrification, women and men are often seen to use electricity differently from men (Box 3). However, these differentiations are typically not taken into consideration while designing electricity sector policies and strategies.

Box 3. Gender Issues in Electrification

The EnPoGen Study launched by the ASTAE (Asia Alternative Energy Program) to assess the impacts of rural electrification in Sri Lanka (Masse and Samaranayake 2002) revealed that the major benefit to the women is the time they save by avoiding otherwise necessary journeys (taking batteries to be charged, going to the city to buy kerosene, etc.).

Decisions on how and where electricity and electricity services are provided to households and communities influence women's ability to take advantage of these services.

Electrification can bring about significant improvements for women, through making home industries like basket making, net weaving and tailoring possible for women. Electrification of rice mills and other grain, oil and food processing facilities can reduce women's workload in the home—as post-harvest food processing is one of the most tedious of tasks women face in rural areas.

The technical staff on electrification projects is usually men and they have stereotypical concerns about women's ability to read meters, change plugs, and use electricity safely. Experience has shown, however, that semi-literate women have learnt about manufacturing and assembling electrical appliances, and acquired skills in reading meters, billing, collecting payments and repairing minor faults.

Source: R. Masse and M. R. Samaranayake, 2002. EnPoGen study in Sri Lanka. *Energia News* 5(3): 14-16.

H.J. Khan. 2001. Battery operated lamps produced by rural women, Bangladesh. In M. Salome and G. Karlsson, eds. *Generating Opportunities: Case Studies on Energy and Women*. New York: UNDP.

Women are not always able to benefit from energy investments

The legal framework in all South Asian countries supports gender equality and female empowerment. Yet the persistence of traditional practices, women's lack of awareness of their legal rights, and gaps in law enforcement, means that women have less

³² Practical Action. Smoke Free in Nepal. (<http://practicalaction.org/smoke-free-in-nepal>)

access to productivity-enhancing resources, such as land, house, technology, labour, collateral, credit facilities, information, and training. These inequalities often restrict women's ability to benefit from available opportunities, so it cannot be assumed a priori that energy interventions that benefit men will necessarily benefit women as well. In consequence, there may be a need to create conditions that will ensure that women can access energy services and benefit from them equally. As it stands, female-headed households are less likely to have financial resources to connect up to the grid, household electrification is not geared towards improving women's livelihoods and their needs for production such as agriculture, small and medium scale enterprises for cooking energy technologies are not prioritised within household expenditure. Women are also poorly represented in organisations at all levels of the energy sector, and lack the voice to make their needs known and choose energy options.

Energy services can contribute to increasing women's economic and social empowerment in four major ways:

- increasing productivity, earnings, and employment opportunities
- reducing women's and girls' burden of household chores and saving time
- raising the welfare and living standards of households
- contributing to social and political empowerment

Modern energy services can be a means to promote gender equity.

Women spend vast amounts of time doing subsistence activities, including fetching fuel, fodder and water. As a result, access to modern energy for lighting, cooking, heating, refrigeration, pumping, and communications can free up the time women would have spent on these tasks. Less time spent on basic subsistence activities coupled with access to modern energy services can contribute towards other income-generating activities both within and beyond the household. More efficient, productive work and savings in both energy and health expenditures can improve household economies, which can lead to improved access to education and the empowerment of both young girls and boys.³³ When women become energy entrepreneurs—manufacturers/ assemblers of energy technologies—they become empowered.

Given opportunity, women have demonstrated their roles as producers and suppliers of energy products and as service providers. Unfortunately most of these projects are pilots and have not been scaled up, meaning that women continue to be an unrealized asset for the development of the energy sector. In most settings, a variety of constraints impinge upon women's ability to participate in energy markets as producers and operators, which need to be addressed systematically. These constraints include lack of control over productive resources such as land, housing, new technology, credit and banking, information and mobility. These are compounded by low technical skills and lack of complex numeracy.

³³ Norad. 2011. *Gender Equality in Financing Energy for All. Gender-responsive energy financing can contribute to basic human rights and economic efficiency.* (<https://www.norad.no/globalassets/import-2162015-80434-am/www.norad.no-ny/filarkiv/ren-energi/gender-and-energy/gender-equality-in-financing-energy-for-all.pdf>)

Gender in Energy Sector Policies in South Asia

Within the region, the policies that affect how women participate in and benefit from energy interventions can be divided into three broad categories.

- At the national policy level, the countries' developmental policies, articulated in national development strategies, Poverty Reduction Strategy Papers (PRSPs), commitment to MDGs, and policies on women, provide the overarching framework for all sectoral policies, including the energy sector.
- Within the energy sector, some countries have sector-wide policies, such as the Integrated Energy Policy of India,³⁴ the Renewable Energy Policy of Bangladesh,³⁵ National Energy Policy and Strategies in Sri Lanka and the Rural Energy Policy of Nepal.³⁶
- Specific policies and programmes deal with particular technologies or sub-sectors, such as electrification, renewable energy, cooking energy, etc.

This chapter presents a gender review of the national policies at each level.

National development policies

In all South Asian countries, national development goals and policies highlight the importance of development that is inclusive and focuses on disadvantaged sections of the society including women, thereby providing a framework conducive to gender-sensitive sector policies and programmes.

In Sri Lanka, the national development processes are driven by 'Mahinda Chintana'³⁷ the National Development Programme (NDP), the Regional Development Programme of the Ministry of Economic Development and the activities implemented under the Ministry of Women's Affairs. Mahinda Chintana identifies women as pioneers of development, and prioritizes empowering women and reducing inequalities between men and women. The key elements of Mahinda Chintana National Development Programme include:³⁸

³⁴ Government of India. 2006. *Integrated Energy Policy*. Report of the Expert Committee. Planning Commission. New Delhi.

³⁵ Government of the People's Republic of Bangladesh. 2008. *Renewable Energy Policy of Bangladesh*. (http://www.powerdivision.gov.bd/pdf/REP_English.pdf)

³⁶ Ministry of Science, Technology and Environment, Government of Nepal. 2006. *Renewable (Rural) Energy Policy*. (http://www.aepc.gov.np/index.php?option=com_content&view=category&layout=blog&id=87&Itemid=116)

³⁷ The *Mahinda Chintana* vision of the government is based on the economic philosophy that the growth in Gross Domestic Product (GDP) alone would not bring economic prosperity to the society.

³⁸ Ministry of Finance and Planning. 2010. Sri Lanka: *The Emerging Wonder of Asia, Mahinda Chintana Vision for the Future: The Development Policy Framework*. Sri Lanka: Department of National Planning.

- Promoting quality and productive employment and gainful economic activities for women (promoting women entrepreneurs, credit facilities, marketing and high technology)
- Expanding women's skills (technical and vocational training and education)
- Addressing gender concerns in labour markets, working conditions and services for women (equal wages, access to childcare, agreements to protect female migrant workers)
- Sufficient representation of women in community consultation (increase female nominations to contest local elections, organizing grass roots women)
- Ensuring nutritional standards by providing nutrient supplements to pregnant mothers (nutritional supplements, good hygiene practices, special quality health care services)
- Creating a supportive institutional framework (a special framework for marginalized women in conflicts and displacement, legal provisions to recognise women as heads of household and equal rights of access to productive resources)

The goal of the National Plan of Action for Gender (NPAG), developed by the Royal government of Bhutan (RGoB), is to provide a national framework for gender mainstreaming in all development sectors covering the period 2008–2013 (footnote 6). Gender equality is a recurring theme in the 11th Five Year Plan, which states that all concerned sectors will be held responsible for addressing gender gaps by integrating gender analysis into their plans and programmes. Subject to relevance, laws, legislations and policies will be reviewed from a gender perspective; gender focal points will be established; a gender-responsive budget strategy will be implemented; and the institutional capacity of the National Commission for Women and Children will be enhanced. Each sector will mainstream gender issues while formulating the Eleventh Plan, which will strengthen the collection of sex-disaggregated data.

Energy sector policies

In the energy sector, policies can broadly be divided into those dealing with electrification and those on cooking fuels and technologies. As far as energy sector policies and programmes are concerned, most policy documents are silent on gender, with the focus on 'people' (terminology tends to focus on households, people, communities and families) with an implicit assumption that women are included within families and people. The goal of the document "National Energy Policy and Strategies in Sri Lanka", for example, is to provide affordable energy services to support socially equitable development of the citizens, without specific consideration of men and women.³⁹ This policy primarily focuses on electricity, but fails to mention cooking fuels and biomass, except to state that biofuels are a source of commercial energy. While the government has a target of 100% electrification, there is no target for clean energy or cooking fuels. A limited attention on biomass, which contributes nearly 50% to the total energy supply, and affects the majority of rural communities, especially women, is a noticeable absence. At the same time, commercial development of biomass for renewable energy remains a promising, untapped avenue for women to engage in energy enterprises.

³⁹ Ministry of Power and Energy, Government of Sri Lanka. June 2008. *The Gazette of the Democratic Socialist Republic of Sri Lanka. National Energy Policy & Strategies of Sri Lanka (Extraordinary)*.

In Bhutan, the reference to gender and women in the energy sector policy documents, such as the Bhutan Sustainable Hydropower policy 2008,⁴⁰ and the Alternative Renewable Energy Policy 2013, is virtually non-existent.⁴¹ The renewable energy policy makes a mention of stand-alone renewable energy technologies (including improved cookstoves), apart from which there is no mention of cooking energy, in spite of the extensive use of electricity for cooking in urban areas, and the fact that about half of rural households (49%) continue to use wood. The present institutional arrangement, outlined in the policy, has no mention of organisations with experience with women and gender-related issues. The role of civil society is limited to the provision that CSOs, NGOs, communities, companies and individuals based in Bhutan may initiate and undertake stand-alone renewable energy-based projects following the guidelines prescribed by the government. The policy would have benefitted from inclusion of the National Commission for Women and Children (NCWC) in its institutional arrangements, to bring to the fore issues related to women and their energy needs. Besides the policy documents, the Bhutan Energy Efficiency Baseline Study report 2012, prepared for the DRE and UNDP to enable the formulation of a National Energy Efficiency Policy, does not mention gender or women.⁴²

In general, the thrust of national energy policies has been on electrification, where there is almost no mention of women or gender. The assumption is that men and women benefit equally from electrification, and implicit in that is the assumption that men and women have equal capacities to use electricity to meet their needs.

Two energy sector policies that do emphasize women and gender are India's Integrated Energy Policy and the Rural Energy policy Nepal.⁴³ The 2006 Rural Energy Policy of Nepal was progressive in its recognition of women's primary role in the collection and management of traditional fuel as well as the implications of traditional fuel on their health as well as on children's education. It also made note of women's participation in community management of renewable energy systems, and linked energy with other sectors in ways that are supportive of women. Yet the policy did not recognise and suggest ways to address the barriers women face with regard to rural energy technology projects, including difficulties in accessing benefits generated from the projects, getting employment, or influencing decisions made by users' committees and construction companies. In 2009–2010, the Gender, Energy and Water Network (GEWNet) managed by Centre for Rural Technology, Nepal (CRT/N) together with Indoor Air Pollution and Health Forum (IAPH Forum) managed by Practical Action Nepal undertook a review of the national energy policies and recommended the following to be considered whenever the policy is revised:⁴⁴

Clear articulation of gender issues

- Identify women as a separate target group in the objectives instead of an overall mention of social justice as is mentioned in the current policy.

⁴⁰ Royal Government of Bhutan. 2008. *The Bhutan Sustainable Hydropower Policy 2008*. Thimphu.

⁴¹ Royal Government of Bhutan, 2013. *Alternative Renewable Energy Policy 2013*. Thimphu.

⁴² Ernst & Young Private Limited. 2012. *Bhutan Energy Efficiency Baseline Study: Final Report, December, 2012*. Prepared for the Department of Renewable Energy (DRE), Bhutan and United Nations Development Programme (UNDP), Bhutan. (<http://www.moea.gov.bt/documents/files/pub0qf8969oz.pdf>)

⁴³ This is currently being revised.

⁴⁴ Centre for Rural Technology, Nepal and Indoor Air Pollution and Health Forum, and Practical Action Nepal. 2010. *Policy Brief on Strategy for Mainstreaming Gender in Rural Energy Policies in Nepal*. (<http://www.crtnepal.org/docs/projects/Policy%20Brief.pdf>)

- Identify concrete measures for enhancing access to clean energy technologies for women and marginalised groups. Presently, the issues are identified, but no concrete measures have been suggested.

Gender disaggregated energy needs

- Highlight gender differences in energy needs, and address issues of physical accessibility to energy, problems of affordability, and lack of information regarding energy use according to gender.
- Recognise women's involvement and their right to appropriate remuneration as per government norms in management of energy projects and programmes. Presently, women are involved mainly as labour or as beneficiaries.

Necessary enabling mechanisms

- Enhance women's access to credit and their capacity to influence decisions. Explicitly include women and marginalised groups at all levels of the project cycle.
- Promote measures for increasing women's access and control of resources through making the information available as well as soft loans and other incentives; co-ordinate with women-based organisations to involve women in these programmes.

Gender-sensitive planning and monitoring

- Use monitoring indicators that explicitly recognise the gendered and social implications of energy technologies. Measure and track the quality of women's participation.

The Nepalese renewable energy subsidy policy is another example of specific, targeted attention to disadvantaged sections of society, including women. In 2013, the Renewable Energy Subsidy Policy recognises and addresses income-related barriers and aims to enable low-income and remote, rural households to use renewable energy technologies and attract private sector entrepreneurs. The policy has specific subsidies targeted to women and socially excluded groups:⁴⁵

- Additional subsidy of Rs.2,500 per household will be provided to households with single women, victims of natural disasters, conflict-affected populations, and poor and endangered ethnic groups as identified by the Government of Nepal.
- For solar thermal technologies in rural areas, additional Rs.20,000 will be provided if at least 50% of the target groups are single women, conflict-affected populations, and poor and endangered ethnic groups as identified by the Government of Nepal.
- For biogas and metallic cookstoves, additional subsidies are offered to single women, conflict-affected populations, and poor and endangered ethnic groups as identified by the Government of Nepal.

In line with this policy, the National Rural Renewable Energy Programme (NRREP) managed by AEPC, a 5-year programme that started in 2012, is an integrated version of different smaller programmes or projects. The NRREP programme mandates that 'specific affirmative action will be planned, implemented and monitored across all component activities, aiming to empower women and marginalised groups through enhancement of their technical capabilities and assisting them to take up ownership of technologies.'

⁴⁵ Alternative Energy Promotion Center. *Subsidy Delivery Mechanism for Renewable Energy 2070*. (http://www.aepc.gov.np/old/index.php?option=com_content&view=article&id=219:renewable-rural-energy-subsidy-delivery-mechanism&catid=89:re-subsidy-delivery-mechanism&Itemid=118)

India's Integrated Energy Policy (IEP) Report prepared by the Planning Commission, provides the broad framework for guiding national energy policies (footnote 33). By looking at household and non-commercial energy resources (and not only in the industrial and commercial sectors), the report paves the way for more gender-aware energy policies. In particular, it emphasizes the negative impacts of traditional biomass fuels for cooking and notes that along with dung cakes, biomass-based fuels provide 81% of domestic energy. The IEP underlines that ensuring electricity and clean fuels for all while addressing women's disproportionate burdens is crucial. At the same time, it recognises that women's empowerment and energy security are closely linked since a sustainable supply of energy is vital for the energy-intensive income-generating activities conducted by women in rural areas.

The IEP report makes a number of recommendations that are of relevance:

- Empowering women's self-help groups to manage franchises running local electricity networks and encouraging decentralized distributed generation systems so that communities can organise their own reliable electricity supply.
- Setting "a goal to provide clean cooking energy such as LPG, natural gas (NG), biogas or kerosene to all within 10 years from now".
- Establishing neighbourhood fuelwood plantations within one kilometre of each habitation to ease the burden and reduce the time taken in gathering and transporting wood.
- Financing a large-scale experiment to operate community-sized biogas plants and for women's groups to form cooperatives to develop and manage fuelwood or oilseed plantations requiring the same effort as they currently put into searching for and gathering fuelwood.
- Improving the "efficiency and convenience of using biomass through wood gasification or biogas plants".

All of these policy statements are potential entry points for ADB's work on gender and energy. Unfortunately, the gender principles upheld in the Integrated Energy Policy document are reflected minimally in India's 12th Five Year Plan. The 12th plan does make reference to ending gender based inequities, discrimination and all forms of violence against women, and enabling women to participate fully in the development process, and in fulfilling their social, economic, civil and political rights.⁴⁶ This is not carried through, however, in the sectoral plans. The chapter on energy recognises that women, being the main energy users and primary energy suppliers, are most affected by restricted LPG supply, and that this poses one of the most difficult barriers to the empowerment of women. Apart from this, however, the focus is overwhelmingly on electricity and includes little information of the government's plans related to cooking energy. Among cooking energy technologies which affect women the most, there is mention of biogas plants, and of the National Biomass Cookstoves Programme, which plans to universalize access to improved biomass cookstoves by providing assistance in exploring a range of technology deployments, biomass processing and delivery models leveraging public-private partnerships.⁴⁷

⁴⁶ Planning Commission, Government of India. 2013a. *Twelfth Five Year Plan (2012–2017). Faster, More Inclusive and Sustainable Growth*. Volume 1. (http://planningcommission.gov.in/plans/planrel/12thplan/pdf/12fyp_vol1.pdf)

⁴⁷ Planning Commission, Government of India. 2013b. *Twelfth Five Year Plan (2012–2017). Economic Sectors*. Volume 2, Chapter on Energy. (http://planningcommission.gov.in/plans/planrel/12thplan/pdf/12fyp_vol2.pdf)

Sub-sectoral policies and programmes: Good practices

Good practices for integrating gender in energy service provision are being employed. Even though some of these are from sub-sectors ADB is not currently engaged in, the gender strategies and practices are relevant.

National Rural Renewable Energy Programme (NRREP), Nepal

The NRREP in Nepal is a good example of a clear articulation of gender issues at a programme level, supported by concrete institutional mechanisms. The Alternative Energy Promotion centre (AEPCC), the nodal agency for renewable energy in Nepal, is currently executing a framework programme called National Rural & Renewable Energy Programme (NRREP) with support from external development partners. This 5-year programme that started in July 2012 is an integrated version of different smaller programmes or projects. NRREP is funded by the governments of Nepal, Denmark, Norway, Germany (KfW) and the United Kingdom (DFID), and receiving technical assistance from the UNDP, SNV and GIZ. NRREP has an initially committed budget of around US\$ 164 million for different technology-linked components (community electrification, biomass, biogas and solar energy) as well as other support components on business development and productive end-use, institutional development, subsidy and credit financing. The targets include 475,000 ICS, 130,000 domestic biogas plants, 7,500 solar cooker/dryer, 600,000 Solar Home Systems and community electrification for 150,000 households through generation of 25 MW from micro hydropower plants.⁴⁸

The development objective of NRREP is ‘to improve the living standard of rural women and men, increase employment of women and men as well as productivity, reduce dependency on traditional energy and attain sustainable development through integrating the alternative energy with the *socioeconomic activities of women and men in rural communities*’.

The NRREP programme document mandates GESI (Gender Equality and Social Inclusion) mainstreaming, stating that specific affirmative action will be planned, implemented and monitored across all component activities, aiming to empower women and marginalized groups through enhancement of their technical capabilities and assisting them to take up ownership of technologies.

In NRREP, GESI is integrated in all programme elements, starting with the



Local community carrying cables for electrification in Nepal

⁴⁸ Saroj Rai. 2013. *Background Paper for Clean Cooking Market Place 2013, Nepal*. (http://www.nepalcookstoves.org/downloads/background_paper_on_clean_cooking_market_place_2013_nepal.pdf)

development objective, the immediate objectives, in outputs and activities, in indicators and targets as well as in monitoring. The programme level measures for GESI include:

- A clear articulation of commitment to gender and social inclusion issues by including it in the development objective.
- Inclusion of GESI in the immediate objectives two of the three components (Technical Support and Business Development for Renewable Energy and Productive Energy Use Components). The Central Renewable Energy Fund Component description is silent on GESI.
- The immediate objective of the Technical Support Component; envisaged to accelerate renewable energy service delivery with better quality, comprising various technologies, to remote rural households, enterprises and communities, to benefit men and women from all social groups, leading to more equitable economic growth. It mandates that...“in community electrification projects, more women and socially disadvantaged groups must be included in decision making and leadership. This is envisaged to be achieved by 55% quota requirements (30% women and 25% from deprived groups) on governing bodies such as user committees. In solar energy component, the development and promotion of solar pumps has been prioritised as a product with potential to ease the burden of women and girls.”
- The immediate objective of the Business Development for Renewable Energy and Productive Energy Use Component is to contribute to an increase in income and employment generation potential for micro, small and medium sized enterprises in rural areas, particularly for men and women belonging to socially and economically disadvantaged groups.
- Enabling measures and institutional mechanisms for consideration of gender issues within the programme’s implementation.

A number institutional mechanisms have been put in place to incorporate GESI in NRREP:

- Representatives from women’s organisations and socially excluded groups to be included in NRREP Coordination Committee
- Agreed-upon gender balance in the Coordination Committee and within the advisory group
- Appointment of a programme manager dedicated to GESI (among 9 programme managers)
- Plans to include GESI in the Functional Analysis
- Development and implementation of GESI mainstreaming plan (e.g. developing policies, plans and strategies in support of women having access to, and control of, RE programmes)
- Development and application of a GESI Toolbox, and training staff to implement GESI activities
- Advocacy targeting policymakers to create a conducive policy and legal environment for GESI
- A Public Disclosure System for transparency and accountability
- Development and implementation of a results-based monitoring system (integrating GESI agenda)
- Development of relevant internal organisational mechanisms for AEPC including systems that are essential for AEPC to become more effective and efficient

SEWA, India: Addressing credit needs to access energy technologies

One of the key areas for enabling women's use of improved energy equipment is credit and finance, which would enable them to purchase such equipment. Women face several constraints in accessing loans from traditional sources. However, as lending conditions exclude poorer borrowers without collateral, the legal status of women often limits property ownership, and women have limited literacy and mobility. Among the numerous micro-credit programmes targeting women as participants and beneficiaries, Bangladesh's Grameen Bank is the most well-known. The Self Employed Women's Association (SEWA) in India is a more recent example (footnotes 5 and 24).⁴⁹

SEWA, founded in 1972, is an organisation of poor, self-employed women workers who earn a living through their own labour or small businesses. They do not obtain regular salaried employment with welfare benefits like workers in the organised sector. SEWA launched a bank that lends to women and provides financial management. As of now, SEWA Bank has 125,000 self-employed female depositors and has disbursed loans without the need for collateral, of over Rs.350 million.⁵⁰ Of the SEWA's account holders, 80% reside in urban areas and 20% reside in rural areas.

In 2006, SEWA partnered with India's Solar Electric Light Company (SELCO) to create Project Urja in order to provide alternative power to the poor through a microfinance scheme for energy products. Key elements of the project Urja strategy include:

- Requiring a savings account in SEWA Bank to obtain loans for energy products
- Providing banking services through 'Banksathis',⁵¹ which identifies potential borrowers, identifies their credit needs, provides information about the products, trains women on how to use the product and monitors loans.
- Displaying vans with solar-based products or systems to raise awareness and to popularize the loan mechanism of SEWA Bank.
- Making SELCO technical staff responsible for installing and servicing systems.

The loans allow women to purchase solar lanterns and smokeless gas stoves for cooking. Additionally, the solar lanterns are used to light vegetable stands and tea stalls. SEWA has already provided more than 6 million rupees (USD 124,000) in loans for solar appliances to approximately 10% of their 300,000 members.

Matale Regional Economic Advancement Project, Sri Lanka

The IFAD-funded Matale Regional Economic Advancement Project (M-REAP) aimed to provide micro finance services for the poor, including women and their organisations, to strengthen their capacity for enterprise development and to enter the market economy.⁵² Programme components included block loans to financial institutions to

⁴⁹ S. Dutta and S. Oparaocha. 2010. *Energy Services for Productive Uses: A Route to Women's Empowerment*. Paper prepared for Expert Group Meeting on 'Gender and Productive Resources: Women's Entitlements to Land, Livestock and Energy', New Delhi, India, August 17-18, 2010

⁵⁰ http://en.wikipedia.org/wiki/Self-Employed_Womenpercent27s_Association_of_India

⁵¹ Meaning "friends from bank"

⁵² A. Wickramasinghe. 2005. *Evaluation Study on Micro-Finance programme for Women Organizations, Matale Regional Economic Advancement Project (M-REAP)*, Matale, Sri Lanka, [IFAD Funded Project]

extend credit for enterprise development; grants to grassroots women's organisations to disburse loans to members through a revolving system; individual loans and direct grants for enterprise development. Micro enterprise development programmes provided vocational and technical training for women, market access and financial services.

The programme helped women in many ways; women have been successful in securing credit for income-generation activities, mechanisms like group collateral were instituted, and a savings culture was created. Thirty-seven women's organisations received grants to operate credit schemes to support women's income-generating activities. Women started enterprises, increased their production through improved technologies and expanding home-based production to market enterprise. Approximately 80% of the credit offered was successful: most managed to either adopt new technologies or partially-mechanized the production process by gaining access to electricity. Women who started with home-based enterprises secured electricity service connections through savings, and then secured machineries to speed up the production process and transformed small-scale home-based food processing into a commercial-scale industry (footnote 9).

Some of the lessons learned are as follows:

- Women need to be supported over a long period of time, and with continuous mentoring.
- Credit for women provides a stepping-stone for women to enter the market economy.
- Once women start to earn an income, households make adjustments that enable women to get support from men. In many cases, gender relations changed, and women were recognised as lead entrepreneurs, income earners and business managers.
- Use of electricity resulted in extended hours, improved quality of products, increased output, labour efficiency and reduced manual labour.
- Growth in home-based enterprise helps create job opportunities for women in the neighbourhood—the rolling effects of credit for women's enterprise development is worth recognising.

Biogas Support Programme, Nepal

Launched in 1992, the Biogas Support Programme (BSP) Nepal has disseminated over 250,000 biogas plants in Nepal. Used for cooking and lighting (in select areas), the technology has benefitted more than 260,889 households, reducing the workload of women and girls by about 3 hours per day. This saved time is used for education, income-generation activities and much sought after leisure time.

Over the years, the project has adopted measures to mainstream gender equity and social inclusion targeting poorer sectors of the population, including the following:

- Collaborating with the right partners: NGO partner selection based on past experiences of working with women and disadvantaged communities
- Capacity building: Focused trainings for women as users of technology, enabling them to undertake repair and maintenance activities; capacity development of staff and partners on gender mainstreaming and social inclusion
- Empowering women: Training on leadership and skills for women enabling them to become supervisors/owners of construction companies; to repre-

sent in the Board of Biogas Construction Companies; to effect safety/security provisions for female staff, code of conduct

- Enable access and increase affordability: Work closely with micro-financing organisations, especially women led/focused credit groups
- Engaging with the private sector: Construction companies (special training for women; inclusion of women as Board members, safety for female staff, code of conduct); Fabrication Units (provide information on user's needs to modify appliances); MFIs (coordinate with women-operated MFIs, provide seed money for loans, house-to-house repayment collection).
- Tracking Changes: Gender and poverty-sensitive project monitoring
- The achievements of the BSP are the following: Women own 23% of biogas plants installed
- Loan provision encouraged through women's savings and credit groups, 36% of women cooperatives mobilized for providing biogas 'credit plus' services
- Women own 11 construction companies (out of 107)
- 8 female masons and 44 supervisors are part of the work force
- Collaboration with 92 micro financing institutes operated by women (out of 267 total MFIs in the sector)

Community Micro-Hydro for Sustainable Livelihoods, UNDP Bhutan

In an effort to expand women's economic opportunities in Bhutan, "Community Micro-Hydro for Sustainable Livelihoods" was implemented by UNDP from August 2005–June 2009 (footnote 18). It provided electricity to 57 remote community households. The success of the project can be attributed to community capacity-building; a focus on productive uses of energy; coordinated efforts by multiple local-level agencies; and the development of guidelines and manuals, which were subsequently used in the design of a national micro-hydro policy.

Among other results, the project helped increase women's income through engaging in activities such as weaving and it helped to increase rural women's literacy rate. The availability of lighting meant women had more time for non-formal education (NFE) classes in the evenings. Through use of rice cookers and water boilers, the project was able to bring down the use of firewood, thereby reducing the pressure on natural resources. In the winter of 2006, fuelwood used in Sengor totalled 25.5 truckloads supplied by the Government and 11,835 backloads collected from the forest. After the advent of MHP in 2008, these quantities were reduced to 13 truckloads, with backloads eliminated entirely.

The project was in line with Bhutan's 2020 Vision of environmentally sustainable and equitable socio-economic development, which is promoted by the RGoB through the Gross National Happiness philosophy. Lessons learned from the project have informed Bhutan's efforts to electrify remote communities that were not connected to the national grid. Some of the lessons and good practices include:

- **The need to establish an enabling environment:** Expansion and replication of projects like Sengor MHP requires an enabling environment that includes coherent policies; harmonisation of government and donor efforts; inter-agency coordination; national capacities; and a sustainable financing mechanism.
- **Align donor efforts with government plans:** Grants and soft loans from the Asian Development Bank and other donors are available for extensions to

the grid and for solar photovoltaic (SPV) systems. No new funding for MHP projects has been forthcoming, except for the 2006 Chendebji MHP project. Ideally, community-based micro-hydro development and RGoB rural electrification plans should complement one another. In fact, it almost appears that the two are in competition with each other. Measures to align donor efforts in the sector with RGoB plans are urgently needed.

- **Align project objectives with national priorities:** Project formulation and design must align with RGoB policy and plans. The Sengor project was designed in the context of the 9th Five-Year Plan and the goal of electrifying the country by 2020. The project is consistent with Bhutan's laws, which encourage rural electrification (including off-grid and renewable solutions, and with Bhutan's development philosophy by promoting:
 - equitable and sustainable socio-economic development;
 - preservation and promotion of culture;
 - conservation of the environment; and
 - good governance.

Lessons from experience with gender-sensitive energy service provision

Some of the good practices visible in gender-responsive energy sector interventions are as follows:

- Social mobilization combined with information dissemination and community education has proved effective in building the voice of the excluded and the poor and their capacity to influence decisions. Where communities have been mobilized to reflect on the social norms that perpetuate gender-based discrimination, there has been an increase in access to services and greater involvement in community-level planning for these groups.
- Setting quotas for women and excluded groups in user groups/committees, along with creating training opportunities, has ensured their representation and participation in development activities, and strengthened their access to resources and benefits. Still, further efforts are needed to reach socially excluded groups and women of these groups in particular and promote their representation in key decision making positions in executive bodies and their ability to influence decisions.
- Internal monitoring systems to track resource allocation effects on women, the poor and excluded groups, have been successfully employed by multiple programmes. This has helped transform the way in which these institutions allocate and deliver services, and enabled programmes to identify the causes of change in livelihood and social-inclusion outcomes. The Livelihood Forestry Programme⁵³ (through its livelihood and social-inclusion monitoring) uses the three domains of change to track change in voice, influence and agency, and whether the poor and excluded have been able to shift policies and institutions in their favour.
- Social-accountability mechanisms like social audits have provided increasing opportunities for civil society, including community groups, to press for greater accountability and responsiveness from service providers. While these have become accepted tools and processes, they still need to be implemented more

⁵³ Discussion with Meena Kuwar, present Chief of Rupantar Nepal, former staff of LFP which has been dissolved since 2 years back.

effectively, with meaningful participation of women, proportionate representation of the poor and excluded, and follow-up actions that demonstrate the value of participation.

Based on experiences from energy and other sectors, ADB provides guidance to aid the design of projects, as presented in Box 4.



Photo: RSPN

Awareness raising programme with school children in Zhemgang, Bhutan

Box 4. Tip sheet on Questions and Design Features for Gender Mainstreaming in ADB Projects: Energy

Illustrative outcomes of ADB projects and related possible gender equality outcomes*	Examples of questions to consider in analyses to formulate project strategies and gender-related design features	Examples of possible gender-related design features, measures, and activities that might be relevant (or adaptable)
<p>Increased public awareness of energy efficiency and/or conservation and improved household practices</p> <ul style="list-style-type: none"> o Women empowered as change agents 	<ul style="list-style-type: none"> • What are the choices available to poor women and poor households for clean energy and technologies (for cooking, grinding grains, etc.)? • Are women informed about energy efficiency, conservation, greenhouse gas issues? Where do they get their information? Do awareness and information sources differ by sex? 	<ul style="list-style-type: none"> • Explore measures to increase access to clean energy sources and efficient nonpolluting technologies. • Target women and women’s organizations for information and awareness campaigns and to participate in delivering public information campaigns about household conservation and efficiency practices.
<p>Improved employment policies and practices in energy sector institutions</p> <ul style="list-style-type: none"> o More equitable employment opportunities for women 	<ul style="list-style-type: none"> • What is the representation of women on staff of public sector energy agencies and ADB partners, in management as well as lower levels? Have there been any initiatives to identify reasons for low participation? • Are there opportunities to support greater participation by women at professional, technical, and decision-making levels? 	<ul style="list-style-type: none"> • Provide technical assistance to assist partner energy agencies to develop equal opportunities policies (for recruitment, promotion, training, working conditions). • Build links between energy sector partners and vocational and professional training institutes to support increased access to training and follow-up employment for women.

Box 4. Tip sheet on Questions and Design Features for Gender Mainstreaming in ADB Projects: Energy *(continued)*

Illustrative outcomes of ADB projects and related possible gender equality outcomes*	Examples of questions to consider in analyses to formulate project strategies and gender-related design features	Examples of possible gender-related design features, measures, and activities that might be relevant (or adaptable)
<p>Temporary employment arising through project construction work</p> <ul style="list-style-type: none"> o Equitable access to temporary project jobs o Better recognition of women's rights to equal pay and appropriate working conditions 	<ul style="list-style-type: none"> • Are women active in the construction sector in the project area? At what skill and pay levels, and how do these compare with men's? • Are workers and employers and/or contractors aware of core labor standards and workers' rights, including women's rights to non-discrimination and equal pay? 	<ul style="list-style-type: none"> • Set meaningful, achievable targets for women's participation at different skill levels (given labor supply, local conditions). • Hold briefing sessions for contractors to advise them of their responsibilities for equitable pay and working conditions, and help them to achieve and monitor this. • In any project-financed training, include targets that ensure that women have equitable access at all skill levels.
<p>Successful resettlement of those displaced by new infrastructure</p> <ul style="list-style-type: none"> o Restoration of women's livelihoods and income o Maintenance or rebuilding of social networks o Strengthened property rights of women 	<ul style="list-style-type: none"> • Are there barriers to women's participation in consultation processes (e.g., related to transport availability or costs, household duties, local social mores about women's mobility or public role)? How can these be overcome? • What will be the impacts of displacement or resettlement on women's livelihoods? Are there adequate and affordable transport services to reach places of employment? Can previous livelihoods in self-employment or trade be reestablished and be viable? Is retraining required? What other services have been disrupted (e.g., child care, schooling)? • Is the information gathered on property and assets sex-disaggregated? Are women and men informed about their rights in relation to land and/or compensation? • Develop a consultation strategy that addresses the barriers identified to ensure that women in various types of households are reached (female-headed households, widows, married women, single women). 	<ul style="list-style-type: none"> • Develop and fund a plan to facilitate reestablishment of livelihoods (responding to findings of analysis on needs). • Include information on government commitments to women's property ownership and women's land rights in consultation sessions. • Follow up government commitments to strengthen women's land rights in resettlement processes (equitable land allocations to women and direct transfer to women). • Provide training and support to assist partner ministries or agencies to better understand the gender dimensions of resettlement and rehabilitation

* Related possible gender equality outcomes refer to changes that reduce gender gaps or otherwise benefit women.

Gaps, Opportunities and Recommendations

Summary of gender equality issues that affect women's ability to benefit from energy interventions

Gender equality issues in energy have to do with the gaps that exist between the energy paradigm and the local contextual base, where women have a key role as energy managers for their homes, for the small enterprises they operate, and the livelihoods they are engaged in. Issues that hinder their participation in energy sector management and affect their ability to benefit from interventions can be summarised as follows:

- Since women are largely involved in the non-commercial (and non-monetized) energy sector, the key equality issue is their invisibility and deprivation in the formal sectors. This situation deepens due to lack of a gender-sensitive policy framework and opportunities for women to engage in mainstream activities, including those in the energy sector.
- Another issue is the lack of support services for enhancing women's capabilities to engage in the formal system of engagement and consultations. Women's extremely low representation in decision making bodies obstructs their engagement in formal communication channels and consultation processes. Lack of representation by the poor and disadvantaged groups, including women, in decision making structures means their voices are not heard regarding their needs, constraints, and priorities.
- Inequalities in financial capacity: Women's low/lack of income hinder their decisions on energy sources, usage and appliances. The reasons for using three stone hearths instead of semi-enclosed mud-stoves are often not economic but due to the lack of information on the efficiency of using such locally adoptable solutions. Field discussions held in Mahaoya with a group of women in January 2013, stated that, 'even if electricity comes to our village, we are not in a position to get service connections to our houses; and even if the service connections are secured using Samurdhi loans the maximum usage will be limited to lighting because we have no capacity to purchase even an iron or a grinder to help our work'.

Recommendations

Based on the experience of the JFPR Grant 9158 and the review of literature, the following recommendations are made towards a better achievement of gender equality results.

Enabling men and women to benefit from energy interventions

Promote use of energy for productive purposes for women

Women make a vital contribution to household incomes, particularly in the case of households headed by females. Energy sector strategies and interventions need to enable women to enhance their incomes and livelihoods, for example, through processing of food and crops. They also need energy services for their traditional income-generating activities (e.g. small-scale farming, food processing and informal production and marketing activities) as well new types of entrepreneurial activities.



Discussions on repairs and trouble shooting of sewing machines in Ampara, Sri Lanka

Additional inputs needed to translate energy access into improved incomes: capacity building of women in business management, technical skills, leadership and links with convenient financing options to support new business opportunities. Such targeted policies and actions can relieve women's household burdens and enable them to engage in more profitable enterprises, which can then lead to greater economic independence and security for women. Supporting the national government in undertaking pilots that train and empower women to use energy services including elec-

tricity for income-generation and livelihood strengthening and scaling up successful pilots. The on-going JFPR Grant is a step in this direction, and lessons learned from this grant should be integrated into other energy sector projects and programmes.

Provide women with energy-related information and training

Involve women in training on technical and business development aspects of energy projects, and ensure that they have access to information on available energy options and provisions. Alternative communication channels may need to be employed for dissemination of information to women, especially in remote locations, such as internet cafes, rural radio, women rural development societies etc.

The Gramashakthi programme in Sri Lanka offers loans to provide affordable renewable off-grid electricity to members of rural communities. In principle the process in identifying households and approving the package of services would allow women to discuss their needs, but in practice men attend the consultations and women are only involved indirectly. In Rambukoluwa, for example, the micro hydro project initially concentrated only on lighting without considering the energy needs of women. Later discussions with women encouraged the technical staff to enable them to use the electricity generated during the day for grinding grain and pumping water. In that context, it is important to train women how to use the electricity generated in order to manage the systems on their own.

Some practical suggestions for conducting training for women, from the draft final report (July 2015) on Improving Gender-Inclusive Access to Clean and Renewable Energy in Bhutan, Nepal and Sri Lanka (44135-012), are as follows:

Training venue

- Should be as close to home as possible.
- Should be a socially acceptable place.

Duration

- Spread the training over a longer period and ask women to be present for half a day, depending on their convenience.
- Do not conduct training during harvest/ sowing season.

Conditions to keep in mind with female entrepreneurs

- Women have to obtain permission from their husbands to attend trainings
- Young mothers come with babies
- Women are not as literate as men (and hold back in mixed trainings)
- Women can come for trainings only after completing or organising their daily domestic chores
- Women find it difficult to travel alone, especially for residential training

Composition

- If possible, don't conduct mixed (men and women together) training. Women, not being as literate as men, do not open up if men are around.
- Conducting training for men and women together during refresher courses works well—when they are at par with each other and can learn from and support each other. First time round, however, separation is necessary to boost women's basic skills and confidence.
- If conducting mixed training cannot be avoided, ensure a critical mass of women who can support each other.

Mode of training

- Reduce dependency on written word during training: rely instead on role plays, open discussions, breakout groups, practical work and learning by doing.
- Use pictures, slide shows, using charts and tamper proof communication/ learning material that they can carry back with them.

The social mediation processes in rural electrification needs to target both genders.

Some of the questions, also from the draft final report (July 2015) on Improving Gender-Inclusive Access to Clean and Renewable Energy in Bhutan, Nepal and Sri Lanka (44135-012), include:

- Who is the primary user of rural electrification?
 - Who (men/women) is the primary point of contact for promotion?
 - Who controls investment and power point location decisions?
 - Who receives promotional information and user training in maintenance?
- Are female-headed households able to connect equally with male-headed households? Are female-owned businesses able to connect equally with male-owned ones?
- Are women employed by local contractors and in electricity sector institutions?

Ensure participation of women in energy planning and decision making through consultations

Stipulate targets for representation of existing women’s associations and women’s NGOs in energy policy planning through public consultations, and provide leadership and confidence-building training to these organisations to ensure their effective participation in the public consultations. In addition, energy infrastructure programme documents should set out explicit objectives for women’s energy access, participation in managerial and decision making, and labour mobilisation. The programme documents should also specify time frames, budgets and human resources needed to achieve this, including training of personnel, and appropriate implementation and organisational procedures.

Establish targeted programmes for female-headed households

Identify female-headed households, which constitute over 20% of the population, and women from disadvantaged communities as a specific category requiring targeted interventions in energy programmes, and use awareness-raising initiatives and financial instruments, such as revolving loan funds, to enable the female-headed households to finance upfront electricity connection costs and costs of purchasing other energy services. Use “Result Based Financing” instruments that include performance targets on the number of female-headed households accessing these loans as conditions for continued donor support to revolving funds.

The Nepalese Renewable Energy Subsidy Policy, 2013 recognises and addresses income-related barriers and aims to enable low-income and remote rural households to use renewable energy technologies and attract private sector entrepreneurs. The policy provisions for around 40% of the total cost to be covered by subsidy, 40% by soft loan from financial institutions and the rest (20%) by the community or households in kind and cash.



Resource persons at an awareness raising programme on electricity use in Zhemgang, Bhutan

Gender-sensitive policy development and programme processes

Establish gender-sensitive targets and indicators for energy programmes

Integrate gender aspects in energy planning processes, supported by guidelines, tools and financial allocations. Energy programmes need to have clear targets, outcomes and monitoring frameworks that consider women and disadvantaged groups. Adding gender specialists to programme teams can facilitate this. For example, the Electricity Act does not differentiate between different end uses within the household, and by failing to recognise the range of energy-intensive tasks that women are engaged in, it misses some of the positive impacts that electrification could have on women's lives. In all energy sector projects, track to what extent women and disadvantaged groups are able to access electrification inputs. This can ensure equitable economic benefits from such projects and maximize the effectiveness of investments. (Projects also need to track other non-monetary benefits that energy services offer such as improved security, improved safety for children, more available time, and improved health.)

Integrate gender in on-going processes

Surveys, evaluations and sector reviews provide strategic entry points for women's input. The Sri Lanka Sustainable Energy Authority Act specifies the need to undertake a socio-economic survey of those who will benefit from a project. An important consideration is how men and women will benefit from energy services and how the benefits of each can be maximized, and this sort of information needs to be identified clearly as an area to be examined. Where socio-economic studies incorporating gender concerns are done prior to implementation, there also should be clear mechanisms for linking these to programme design.

Build on national and provincial decentralised governance systems

In all DMCs, the decentralised planning processes and government systems provide a good mechanism to engage grassroots women and men in designing, implementing and monitoring local energy initiatives. Electricity Consumer Societies in Nepal and in Sri Lanka, which enables community members to participate in small-scale energy supply, can potentially empower local people, including women, in energy resource governance. Small hydro project for village electrification and pico-hydro units utilize a water resource that is traditionally managed by women and often operate in catchments managed mostly by women engaged in land-based activities. The decentralized governance system of Nepal provides a framework for making development interventions responsive to local issues, needs and options. For example, the Ministry of Local Development (MoLD) established a programme providing production credit for rural women programme, using field-based women development officers, and requiring that user groups must have at least 30% women members. Provisions like these can be used by the energy sector to ensure grassroots representation in policies, decision making, planning and disbursement of state allocations through public consultations.

Build local capacity to engender energy programming

Strengthen institutional capacities at the national and provincial levels to integrate gender aspects in energy planning processes by providing technical advice and gender



Photo: RSPN

Posters used for awareness programme on electricity use in Bhutan

expertise to relevant government institutions during the preparation of operational plans, programmes and budgets. Develop user-friendly manuals, guidelines, tools and training materials for gender-sensitive planning, budgeting and programming. Implement gender-training programs for relevant decision making and technical practitioners. Improve the quality, collection, analysis and management of gender-disaggregated data in national and provincial energy initiatives for effective tracking of gender targets and results.

