

Feminisation of poverty: rural Indian women and the environment

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Introduction

This paper examines and evaluates the vulnerability of poor, rural women in India due to environmental degradation. It explores the effectiveness of the Indian “gender-engaging approach” which seeks to overcome poverty, promote gender equality and empower women in order to achieve the Rio aspirations, Millennium Development Goals and protect their human rights as laid down in the Indian Constitution. This approach is a combination of domestic policy and laws, non-governmental organisations (NGOs) and women’s self-help groups (SHGs) with special reference to environmental recognition, environmental entitlement and environmental stewardship.

However, engendering ecology is a global challenge. Twenty years ago, the 1992 Rio de Janeiro United Nations Conference on Environment and Development (UNCED) aimed to “elaborate strategies and measures to halt and reverse the effects of environmental degradation in the context of strengthened national and international efforts to promote sustainable and environmentally sound development in all countries”.¹ The nations represented at UNCED agreed to Agenda 21, an action plan to promote sustainable development by adopting national strategies, plans, policies and processes supported and supplemented by international cooperation.²

To achieve the goal of sustainable development, UNCED and Agenda 21 stressed the need for effective participation of all stakeholders, including women. Principle 20 of the Rio Declaration recognised that “women have a vital role in environmental management and development”. Chapter 24 of Agenda 21, entitled “Global action for women towards sustainable development”, contains several commitments with specific recommendations to

1 UN General Assembly Resolution 44/228, para. 3.

2 P Birnie, A Boyle and C Redgwell, *International Law and Environment* (Oxford: OUP 2009); A C Kiss and D Dinah, *Guide to International Environmental Law* (Leiden: Martinus Nijhoff 2007); P Sands, *Principles of International Environmental Law* (Cambridge: CUP 2003).

strengthen the role of women in sustainable development and eliminate obstacles to their equal and beneficial participation, particularly in the decision-making process.³

Despite international recognition of the gender dimensions of sustainable development, social and economic inequities persist. The worst sufferers are women and children. They form the majority of the world's poor. The UN estimates that approximately 70 per cent of the 1.3 billion people living on less than one dollar a day are women, and these figures are rising with the current food, fuel and financial crisis.⁴ Two-thirds of the world's poor are found in the Asian and Pacific Regions and of these two-thirds are females who live in rural areas.⁵

Twenty years on, the Rio plus 20 took place in June 2012 to secure renewed political commitment for sustainable development, to assess progress, identify remaining gaps in the implementation of sustainable development and address new and emerging challenges.⁶ There are two thematic areas: a green economy in the context of sustainable development; and poverty eradication; as well as progressing institutional frameworks for sustainable development.⁷

Integrating women as key actors in a sustainable green economy and institutional framework will help promote a transition to a more equitable and sustainable world. At the time of writing, the Global Women's Major Group had submitted its recommendations for the zero-draft for Rio plus 20. It called upon governments to renew and support their commitments through action and direct financing to support gender-equitable sustainable development.⁸

In the light of the spirit of Rio plus 20, this paper critically examines the existing gender inequities facing rural Indian women affected by environmental degradation in terms of limited recognition, rights and access to productive programmes, all of which lead to the feminisation of poverty. Despite attempts to bridge the gaps between policy, law and implementation concerning gender equality, there remain contradictions which reflect systemic failure arising from bureaucratic, patriarchal and deeply conservative mindsets that place rural Indian women in a position of subservience.

There is reliance on illustrative material throughout this article. Data-gathering in India represents a major task and challenge, not simply because of the size of the population and rural inaccessibility. Representative data concerning women can be affected by the gender insensitivity of the investigators, usually male; poorly constructed questionnaires; culturally constructed, work-related formats; and the unwillingness to deconstruct the daily lives of rural women into paid and unpaid work, family support and agricultural labour. Personal histories become increasingly valuable and are used throughout this paper. They represent primary source material for researchers reviewing the issues raised herein.

3 To strengthen the role of women in sustainable development, Agenda 21's recommendations included: reviewing policies and increasing the proportion of women as decision-makers, managers, planners; strengthening women's NGOs; eliminating illiteracy among females by providing education; supporting and strengthening equal employment opportunity and equitable remuneration for women; facilitating and increasing rural women's access to credit and agricultural inputs; eliminating negative images, attitudes and prejudices against women; establishing and strengthening preventive and curative health practices.

4 UN Bureau of Social Affairs, UN Department of International Economic and Social Affairs, *Report on the World Social Situation* (New York: UN 1997); see also UNDP, *Taking Gender Equality Seriously: Making progress, meeting new challenges* (New York: UNDP 2006), p. 9.

5 Asian Development Bank, *Fighting Poverty in Asia and the Pacific: The poverty reduction strategy Policy Document 1999* (Manila: Asian Development Bank 1999), p. 12.

6 www.uncsd2012.org/rio20 (last accessed 4 June 2012).

7 Ibid.

8 Rio + 20: Global Women's Submission for the Rio + 20 zero-draft document.

This paper is divided into five sections. Section 1, “India”, presents and illustrates the impact of environmental degradation on the daily routines of rural Indian women. Section 2, “Environmental recognition: women–environment interdependence”, recognises the role of women as environmental managers. Section 3, “Environmental entitlement: towards a legal framework” critically examines legal entitlements in terms of agriculture, wages, governance and decision-making. It also presents the failure of legislation to address fully the gender differences of those who live and work in rural India. Section 4, “Environmental stewardship: a participatory approach”, examines the grassroots, bottom-up approach to the formation of women’s SHGs supported by NGOs, the Indian government and international initiatives. Section 5 offers concluding comments.

1 India

“Mahatma Gandhi was asked: ‘When we plan for our country what should we remember the most?’ His reply was: ‘Think about the last man. Invariably the last man is a woman.’”⁹ In India the rural woman is invisible, deprived, disadvantaged and subject to discrimination. This inequality claim is supported by evidence found in the United Nations Development Programme (UNDP) Human Development Report 2010. It states that India, in the gender inequality index, is placed 122nd out of 138 countries. Females in the neighbouring states of Bangladesh and Pakistan are ranked at 116 and 112 respectively.¹⁰ Notwithstanding India’s “tiger economic growth”, inequality is rising as a consequence of the uneven pattern of human development. Such development is not simply about health, education and income. It is also about people’s active engagement in shaping development, issues of equity and sustainability and the ability of people to lead lives they have reason to value.¹¹

Limited access to natural resources, schools and health centres, along with unpaid employment and unequal asset ownership contribute towards the “feminisation of poverty”. This is a complex and multidimensional problem that particularly impacts on rural women. No other group is more affected by environmental destruction than poor, village women:

Every dawn brings with it a long march in search of fuel, fodder and water. It does not matter if the women are old, young or pregnant: crucial household needs have to be met day after weary day, ever longer and more tiresome. As ecological conditions worsen the long march becomes even longer and more tiresome.¹²

In India, environmental degradation and displacement from their land, changes in land usage and agricultural patterns have made the lives of rural women much harder.¹³ They are more likely to becoming “resourceless”. Basanti Bai, an underprivileged, displaced woman from the Bargi Dam area of Madhya Pradesh, said: “the land is not ours, the forest is not ours, water is not ours – what then is ours? They either belong to the government or

9 A Agarwal, “Towards green villages” (2004) *Gobar Times Down to Earth Supplement*, Centre for Science and Environment, New Delhi, 15 July, pp. 66–7.

10 J Klugman, *Human Development Report (20th Anniversary Edition): The real wealth of nations: pathway to human development 2010* (Basingstoke: UNDP/Palgrave Macmillan 2010)

11 See M ul Haq, *Human Development in South Asia: Crisis of governance* (Karachi: Human Development Centre 1999).

12 Agarwal, “Towards green villages”, n. 9 above.

13 See, generally, International Fund for Agricultural Development (IFAD), *Enhancing the Role of Indigenous Women in Sustainable Development: IFAD experience with indigenous women in Latin America and Asia, Third Forum on Indigenous Issues* (Rome: IFAD 2004); B Agarwal, *Gender, Environment and Poverty Interlinks in Rural India: Regional variations and temporal shifts 1971–1991* Discussion Paper (Geneva United Nations Research Institute for Social Development April 1995).

to men. What do we get when all these are taken away?”¹⁴ Women of Ichassar and Dev Nagar, near Shimla town, stated “some time ago, it took very little time to collect wood, but now the forest wood is scarce because of too much cutting. Now we have to go about two kilometres or more to find wood.”¹⁵

Thomas Hobbes wrote in *Leviathan*, 1651, that “the life of man [sic] is solitary, poor, nasty, brutish and short”.¹⁶ Let us consider, briefly, the life of the rural Indian woman in 2012. In the Indian Himalayas on a one-hectare farm, a pair of bullocks is made to work annually for 1064 hours; a man works for 1212 hours and a woman works for 3485 hours.¹⁷ In Gujarat, gathering and cutting wood takes three hours a day whereas in the foothills of the Himalayas, it takes a full day to gather firewood.¹⁸ In Garhwal, women carry 35–40 kilograms of firewood over a distance of 5–8 kilometres taking them up to three walking hours. This is a daily task.¹⁹ Women in Pura, a village in Karnataka, spend 46 per cent of their waking hours on agricultural, industrial and domestic work. Men in that area devote 37 per cent of their time to these tasks. Pregnant women in western Uttar Pradesh work daily between 14 and 16 hours.²⁰ Women not only undertake the household tasks but are also the backbone of agricultural production. They sow, weed, hoe, harvest, process and store the crops. In Himachal Pradesh, women input 61 per cent of the total work as opposed to that of men who perform 39 per cent.²¹ These are not isolated illustrations. Several studies confirm that the working days of rural women last between 14–18 hours with shorter rest periods than men.²²

Despite the long working hours and drudgery, women’s labour remains largely unrecognised and undervalued, yet it constitutes a major invisible contribution.²³ As a result of the deeply rooted, patriarchal culture and social bias against women, such work is perceived as “unproductive”, especially in the agricultural and unorganised labour sectors. Work is defined as activities performed for pay or profit.²⁴ Women normally perform work for which no payment is made. Their labour falls outside the formal definition of “work”. These home-based activities are relegated to a secondary position, while the male is

14 E G Thukral “Poverty and gender in India: issues and concerns defining an agenda for poverty reduction” (2002) 1 *Proceedings of the First Asia and Pacific Forum on Poverty* 246.

15 B Cranney, *Local Environment and Lived Experience: The mountain women of Himachal Pradesh*, Livelihood and Environment Series (India: Sage Publications 2001).

16 T Hobbes, *Leviathan* (Oxford: Bail Blackwell 1960)

17 Food and Agricultural Organization (FAO), *Sustainable Development: People, gender and development: Asia’s women in agriculture, environment and rural production: India* (Rome: Sustainable Development Department FAO 1997).

18 UNDP, *Human Development Report* (New York: UNDP/Oxford University (1995), p. 93.

19 S N Sidh and S Basu, “Monetisation of women’s unpaid work and time use survey in Garsain block of Garhwal Himalayas” (paper presented at X11 National Conference of the Indian Association for Women’s Studies, Lucknow, 7–10 February 2008).

20 Agarwal, “Towards green villages”, n. 9 above.

21 Environmental Information System (ENVIS), *Women and Environment* (Himachal Pradesh: ENVIS Centre State Council for Science, Technology and Environment 2007); see also J P Bhati and D V Singh, “Women’s contribution to agricultural economy in hill regions of north-west” (1987) XX11(17) *India Economic and Political Weekly* 7–11.

22 S Kaur and R Punia, “Performance and satisfaction from household work” (1986) 16(4) *Indian Journal of Home Science* 215–20; J Kishtwaria, R Aruna and S Sood, “Work pattern of hill farm women: a study of Himachal Pradesh” (2009) 3(1) *Studies on Home and Community Science* 67–70; M Chander and R Mukherjee, “Indigenous cattle for sustainable development in Himalaya Region of India” (1995) 20 *Asian Livestock* 141–3.

23 UNDP, *Human Development Report*, n. 18 above.

24 See, K Sankaran and R Madhav, *Gender Equality and Social Dialogue in India* WP 1/2011 (Geneva: International Labour Office 2011); R M Krishna, “Women’s work in Indian census; beginnings of change” (1990) XXV(48 and 49) *Economic and Political Weekly* 1–8; J Renu and G Deepti, “Work participation of females and emerging labour laws in India” (2010) 2(1) *Asia-Pacific Journal of Social Sciences* 161–72.

promoted to the head of the family and sole breadwinner. Women's invisible work is a given. For example, one husband was asked what his wife did. He answered that she does not work and stays at home. The wife's response was that she worked all the time, all the days and that there was no escape from the daily work schedule.²⁵ The Human Development Report states that \$16 trillion of global output is "invisible" of which \$11 trillion is produced by women.²⁶

The combination of poverty, illiteracy, patriarchy and social subordination result in rural women being amongst the most vulnerable and marginalised groups. Despite 65 years of independence, continuous gender-related inequities have put millions of women into continuous cycles of disadvantage. Calls have been made for India to adopt a gender-engaging approach for sustainable development that recognises women's involvement. Gender-engaging approaches include planning, design, analysis, advocacy, research, implementation, monitoring and evaluation of policies and their strategic application.²⁷ Such actions would transform the current relationship between rural men and women by producing a redistribution of power and status. It is argued here that addressing gender equality is the key to protecting the environment and supporting sustainable development.

Empowering women through environmental recognition, environmental entitlements and environmental stewardship will support regeneration, development, transformation and general improvement in the political, economic and social status of rural Indian women.

2 Environmental recognition: women–environment interdependence

Rural women and the environment are inextricably linked. Recognising and promoting this relationship is crucial. Indian traditions and customs reflect this women–environment nexus.²⁸ It is one of reciprocity, symbiosis, harmony and interrelatedness.²⁹ This interdependence is indicative of an emotional and intellectual bond, whether knowingly or unknowingly. Women's sensitivity to the ecology and developmental processes and their roles as producers, managers, income-generators and educators must be respected.³⁰ They are the repositories of traditional knowledge and related skills. Simply put, they know what works and what does not within their local environment.

As de facto managers, women are traditionally responsible for many of the conservation activities, such as protecting the soil, water, forests and promoting reclamation of land previously damaged by poor husbandry. A study in the hilly areas of Himachal Pradesh discovered that women preferred a mixed forest which could meet their demands for fuel, fodder and fruit. This also maintained the biological diversity of the area.³¹ Local

25 D Neera and T Usha, *Women in Indian Society* (New Delhi: National Book Trust India 2001), p. 18.

26 UNDP, *Human Development Report*, n. 18 above, p. 97.

27 See M Laudazi, *Gender and Sustainable Development in Drylands: An analysis of field experiences* (Rome: FAO 2003).

28 The Hindu traditions and customs view the earth as distinctly feminine – a living being, a mother, a woman, a Goddess who is to be loved, respected and nurtured, as she (earth) nurtures humanity. In Hindu traditions, Mother Earth has a name: Bhū Devi. In Sanātana Dharma, the dual issues of respecting the way of nature and women are inseparable. For instance, the peepul tree, known for being sacred and antique is worshipped by village women as it is considered a symbol of fertility and progeny. Similarly, tulsi plant, an ancient variety of basil, is grown in Hindu households and women offer daily prayers for protecting the family against danger and difficulties.

29 M Mies and V Shiva, *Ecofeminism* (London: Zed Books 1993); V Shiva, *Staying Alive: Women, ecology and development* (London: Zed Books 1988).

30 FAO, *The State of Food and Agriculture (2010–2011): Women in agriculture – closing the gender gap for development* (Rome: FAO 2011).

31 B Archita, "Himachal villagers resist pine monoculture, reclaim forest for fodder", *Down to Earth*, 15 November 2007.

knowledge and skills in exercising natural resource management allow women to take decisions that promote environmental rehabilitation. In the above study, women resisted the plantation of pine trees in Karsog village in the Mandi district. They knew a pine monoculture produces no cattle feed or fertiliser. They were aware of the inflammable nature of pine needles and the increased likelihood of forest fires. Instead, the women planted broadleaved species such as oak, amla (Indian gooseberry), pomegranate and similar trees. One campaigner, Maina Devi of Mahader Banboru village, said “the forest belongs to us and let us decide”.³²

Women of the Bajeeana village in Almora district (Uttarakhand) used their local knowledge and skills to revive depleted underground water resources that had decreased because of the reduction in forest cover. Consequently, they became involved in tree plantation and built water-harvesting structures. Recharge ponds were also built that increased the water resources threefold.³³

Studies reveal that women are active in small-scale livestock rearing that produces eggs, milk and poultry. Consequently, their financial position is enhanced.³⁴ An estimated two-thirds of livestock keepers, totalling approximately 400 million people are women.³⁵ A study in Rajasthan’s Jhunjhunu district shows the impact of cattle and buffalo-rearing on the economic development of women. Rajasthan has 6.06 per cent of the cattle and 11.2 per cent of the buffalo numbers in India. It produces 8.05 million tons of milk annually, being 10 per cent of all Indian production.³⁶

However, it is in the area of forest products that women display their special awareness and skills. Women are particularly knowledgeable in matters of medical plants, building materials, leaf collection and materials for household usage. Some 51 per cent of the non-timber forest produce (NTFP) workforce, in the small industry sector are women.³⁷ Significantly, the export of NTFP has brought valuable foreign exchange earnings to India.³⁸ The quantity and value of NTFP exports amounted to 989,457.08 tonnes, realising a value in lakh rupees 167,855.92 (\$397,386,174).³⁹ These figures suggest that rural women are an integral part of the global value chain and this should have an impact on reducing the feminisation of poverty and gender disparity. Unfortunately, wage inequality, limited

32 Archita, “Himachal villagers”, n. 31 above.

33 P Rakesh, “Communities revive traditional water springs” (2010) September *Leisa India* 14–15.

34 FAO, *The State of Food*, n. 30 above, p. 14; ENVIS, *Women and Environment*, n. 21 above; V K Taneja, “Women in livestock production and economics” (1998) *Indian Farming* 48–55.

35 R L Kruska, R S Reid, P K Thornton et al., *Mapping Poverty and Livestock in the Developing World* (Nairobi: ILRI (International Livestock Research Institute 2002), available at www.ilri.org/Link/Publications/Publications/Theme%201/Kruska%20et%20al%20Livestock%20systems%20Ag%20systems.pdf (last accessed 4 July 2012).

36 K Poonam, R Rajendra and K Manoj, “Livelihood improvement of farm women through cattle and buffalo rearing in Jhunjhunu district of Rajasthan” (2009) 16(1) *International Journal of Rural Studies* 39–40.

37 S Hasalkar and V Jhadav, “Role of women in the use of non-timber forest produce: a review” (2004) 8(3) *Journal of Social Science* 203–6.

38 NTFP has been broadly grouped into 12 categories, namely, edible products, medicinal products, spices, essential oils, oil seeds and fatty oils, gums/resins, tans/dyes, fibres/flosses, bamboo/canes, miscellaneous plant origin, animal origin and mineral origin. In international trade terms, there are at least 150 products considered as important export commodities.

39 M P Shiva, “MFP trade trends urge to switch over to NTFP-oriented sustainable forest management” (2009) XIX(3) *MFP News* 1–4. The Indian Rupees (INR) are converted to US dollars. The conversion rate as on 27 February 2012 is 1US\$ = 42.24 INR.

access to market information, inability to bargain on equal terms with distributors and retailers, have all placed limits on these anticipated gains.⁴⁰

Nevertheless, a feature of women as managers is their ability to work together for effective action. Integrating plurality and diversity based upon individual and collective experiences promotes sustainability and empowerment. Although rural women are not a homogenous group, environmental movements such as Chipko and Stri Mukti Sangharsh Calval⁴¹ demonstrate women's ability to unite in common cause despite differences in caste, class, language and education.

3 Environmental entitlement: towards a legal framework

Amartya Sen and Leach's work offers an explanation of the terms "entitlement" and "environmental entitlement". Sen states that entitlements represent "the set of alternative commodity bundles that a person can command in a society using the totality of rights and opportunities that he or she faces".⁴² Thus, entitlements are effective demands that people gain from their endowments (rights in legislation) to improve their well-being or capabilities. Leach et al. describe environmental entitlements as:

alternative sets of benefits derived from environmental goods and services over which people have legitimate, effective command and which are instrumental in achieving well-being. These benefits may include direct uses in the form of commodities, such as food, water or fuel; the market value of such resources or of rights to them; and the benefits derived from environmental services, such as pollution sinks or the properties of the hydrological cycle.⁴³

Entitlements, in turn, enhance people's capabilities.

In the normative sense, environmental entitlements create the legal foundation for maintaining and protecting environmental value. They empower people by offering a guarantee regarding access to benefits through law and policy (statutory and customary), both internationally and nationally.

3.1 INTERNATIONAL ENTITLEMENTS

In the international context, taking gender equality seriously in matters of environmental protection and sustainable development was unheard of until the 1980s. Women's voices were neither heard nor registered. The focus of the international community was on issues such as

40 M Carr and M Maria, *Gender and Non-timber Forest Products: Promoting food security and economic empowerment* (Rome: IFAD 2008).

41 The well-known Chipko Movement of 1974 began in Uttar Pradesh's Chamoli district. The movement saw the active involvement of village women to preserve Himalayan ecology by using Gandhian techniques of protest. Women encircled and hugged trees to save them from commercial timber operators axes, thereby ensuring long-term gains of saving the forest and the environment. The women told the tree-cutters that they would first have to cut off the women's heads. Scholars have interpreted the Chipko Movement either as an example of women's special relation to nature or in the context of peasant movements. Stri Mukti Sangharsh Calval (Women's Liberation Struggle Movement) had its genesis in the Mukti Sangharsh Movement, a peasant movement aimed at eradicating drought by constructing a small dam, the Bali Raj Memorial Dam, in Sangli district, South Maharashtra. The peasants, including women, demanded the right to use the sand in their area in a non-damaging way to finance the dam. Gradually, Stri Mukti Sangharsh became a broad platform of ecological movement from 1990, advocating *hirvi dharti*, *stri Shakti*, *manav mukti* (green earth, women's power, human liberation).

42 A Sen, "Rights and capabilities" in A Sen (ed.), *Resources, Values and Development* (Oxford: Basil Blackwell 1984), pp. 307–24.

43 M Leach, R Mearns and I Scoones, "Environmental entitlements: dynamics and institutions in community-based natural resource management" (1999) 27(2) *World Development* 233.

migration, disarmament or technology transfer.⁴⁴ It was at the Nairobi Forward Looking Strategies 1985 that the role of women as active and equal participants in progressing sustainable development was first recognised “to enhance awareness by individual women and all types of women’s organisations of environmental issues and the capacity of women and men to manage their environment and sustain productive resources”.⁴⁵

From the 1990s many international instruments and decisions have recognised environment and development as interdependent and mutually re-enforceable themes, while women and development have been accorded a separate and equal status. For example, Agenda 21 emphasises global action by women towards sustainable and equitable development. An active involvement of women decision-makers, planners, technical advisers, managers and extension workers in the environmental and development fields is vital for the success of Agenda 21. In addition, the World Summit on Sustainable Development contains 30 references to gender and stresses the importance of a gender-sensitive approach to decision-making and a participatory process.⁴⁶

Within the international context, the gender dimension has been accepted with a view to integrating it in policies and associated agreements. Yet the issues of gender, knowledge of existing resources and expertise on gender matters and the collection and use of sex disaggregated data need to be addressed to mainstream gender in sustainable development.⁴⁷ India is a signatory to these international instrument but there remains the challenge of establishing and protecting environmental entitlements at the national level.

3.2 NATIONAL ENTITLEMENTS

In India the constitution commits to democratic social order which in turn promotes the rights and legitimate aspirations of women to be treated as equal citizens. Current legal and policy frameworks in India aim to ensure equality for women. In reality, there is still much to be achieved in order to bring practice up to the level of policy statements. For example, in regard to gendering ecology, the National Conservation Strategy and Policy Statement on the Environment and Development⁴⁸ recognises the active involvement of women at the grassroots level in the conservation programme. It should be income-generating, self-financing and sustainable on a long-term basis.⁴⁹ Paradoxically, many projects undertaken by women complement and contribute to income-generating projects basically aimed at men. There women are usually involved in the implementation rather than at the planning stage. The principle “those who till the soil are the best avenue for feedback” is not applicable to women. For example, the planting of what proved to be inappropriate species of trees, such as eucalyptus, deodar and chili, without general consultation, was criticised by rural women.⁵⁰ This illustrates the practical importance of gender mainstreaming at the

44 K A Patel, *Women and Sustainable Development: An international dimension* (India: Ashish Publishing House 1995).

45 UN Department of Public Information, *The Nairobi Forward-Looking Strategies for the Advancement of Women* (New York: UN 1986), pp. 53–4.

46 The Fourth World Conference on Women, Beijing 1995, asserted that human beings are at the centre of concern for sustainable development and that women have an essential role to play in the development of sustainable and ecologically sound consumption and production patterns and approaches to natural resource management, para. 246, Platform for Action. See also the Convention on Biological Diversity 1992.

47 Laudazi, *Gender*, n. 27 above, p. 7.

48 Government of India Ministry of Environment and Forests (1992).

49 *Ibid.* para. 8.8.

50 See M Singh Neera, “Women and community forests in Orissa: rights and management” in S Krishna, *Livelihood and Gender: Equity in community resource management* (India: Sage Publications 2004), pp. 306–24; M Sarin and R Khanna, “Women organize for wasteland development: a case study of Sarthi in Gujarat” in A Singh and N Burra (eds), *Women and Wasteland Development in India* (New Delhi: Sage Publications 1993), pp. 91–127.

planning stage where women's knowledge and opinions regarding suitability, needs and benefits can help ensure best practice is implemented.

Equality is a cornerstone of Indian democracy⁵¹ and the constitution guarantees, in Article 14, the right to equality.⁵² Discrimination on the grounds of sex is prohibited by Article 15.⁵³ It covers all state activities although by the "substantive equality clause" the state can make special provision for women and children. This allows issues of socio-economic backwardness affecting women to be addressed. For example, under gender equality, both job opportunities and reservations are possible.⁵⁴ However, nearly 93 per cent of women working in the unorganised sector⁵⁵ are not covered by labour laws.⁵⁶

India presents a legal picture of duality – promising and reassuring in theory but of limited effectiveness in practice. Discrimination is evident when applied to ecological issues, particularly concerning rural women and agriculture, land and access to resources, wages and governance issues.

3.2.1 Agriculture and land

India feeds itself but is dependent upon an effective agricultural sector that accounts for 18 per cent of gross domestic product.⁵⁷ The involvement of Indian rural women is widespread in the agricultural sector. Their roles range from managers to marginal workers, which includes cultivators and landless labourers. The national average for women's share of time use in agriculture is 32 per cent.⁵⁸ The National Agricultural Policy makes a reference to mainstreaming gender. It initiates structural, functional and institutional measures aimed at empowering women by improving their access to inputs, technology and other farming resources and encouraging them to participate in farming activities.⁵⁹

Gender is not simply about "more women numbers", but also about contextualising and integrating them at the point of constructing policies and programmes. It takes into account the socio-cultural relationship between the sexes and its effect and differentiating impact. Previously, Indian policymakers were blind to the contribution of women. Today their vision is merely blurred! An effective agricultural policy needs to implement a sustainable economy that recognises women and men as equals in terms of productivity and participation. Such progress would help achieve the Millennium Development Goal of reducing poverty and hunger.

51 *Indra Sawhney v Union of India* AIR 1993 SC 477.

52 Article 14 of the Constitution of India states: "The State shall not deny to any person equality before the law or the equal protection of the laws within the territory of India."

53 Article 15 of the Constitution of India states: "(1) The State shall not discriminate against any citizen on grounds only of religion, race, caste, sex, place of birth or any of them. (2) No citizen shall, on grounds only of religion, race, caste, sex, place of birth or any of them, be subject to any disability, liability, restriction or condition with regard to (a) access to shops, public restaurants, hotels and palaces of public entertainment; or (b) the use of wells, tanks, bathing ghats, roads and places of public resort maintained wholly or partly out of State funds or dedicated to the use of the general public. (3) Nothing in this article shall prevent the State from making any special provision for women and children."

54 *Government of Andhra Pradesh v Vijay Kumar* AIR 1995 SC 1648; M P Jain, *Constitutional Law* (Wadhwa Nagpur: LexisNexis/Butterworths 2011), p. 993.

55 <http://labour.nic.in/ss/InformalSectorinIndia-approachesforsocialsecurity.pdf> (last accessed 4 June 2012).

56 K Sankaran and R Madhav, *Gender Equality and Social Dialogue in India* WP 1/2011 (Geneva: International Labour Office 2011).

57 Department of Agriculture and Cooperation Ministry of Agriculture, National Policy for Farmers 2007, Government of India.

58 SOFA Team and Doss Cheryl, *The Role of Women in Agriculture ESA Working Paper No 11-02* (Rome: FAO March 2011).

59 National Policy for Farmers, n. 57 above.

One legal change that would improve the standing of rural women is redefining the official meaning of “farmer”. The National Policy for Farmers 2007 defines the farmer as:

a person actively engaged in the economic and/or livelihood activity of growing crops and producing other primary agricultural commodities and will include all agricultural operational holders, cultivators, agricultural labourers, sharecroppers, tenants, poultry and livestock rearers, fishers, beekeepers, gardeners, pastoralists, non-corporate planters and planting labourers, as well as persons engaged in various farming related occupations such as servi-culture, vermi-culture, and agro-forestry. The term also includes tribal families/persons engaged in shifting cultivation and in the collection, use and sale of minor and non-timber forest produce.⁶⁰

The Minister of Agriculture, Sharad Pawar, applauded the National Policy for Farmers by stating that the term farmer is defined both holistically and comprehensively.⁶¹ Although the National Policy for Farmers is more positive than that of the government in terms of encouraging female participation in farm productivity and crop livestock integrated farming systems, the definition remains inadequate. The term farmer continues to imply male farmer. Female farmers continue to be presented as performing caring activities as wives operating in the shadow of the male farmer. The deeply rooted patriarchal system within rural India fails to recognise women as farmers with consequential failures not simply of appreciation but of policy, planning and implementation of agriculture purpose and its social impact. There is no word in the official language of India, Hindi, for female farmer. This linguistic failure of recognition applies to the term farmer although words exist for female workers in other traditional occupations.⁶² It is argued that a policy that explicitly defines “farmer as both men and women” would promote both rural community awareness and gender equality.

Access to land and agricultural support services are essential for poverty reduction, sustainable development and female empowerment. Limited access to land ownership, as a consequence of historical, cultural, customary and personal laws, has relegated women to positions of subordination and subjugation. Land ownership in the Indian psyche is associated with male lineage in a horizontal line of descent. Despite the Hindu Succession Act 1956,⁶³ which provides a right to women to inherit, societal pressures and family taboos are so powerful as to pressurise women to relinquish these legal rights particularly in matters of land. Institutional functionaries are a part of this social milieu and accordingly implement the decisions with a mindset that is often biased or prejudiced against the notion of woman’s right to share in the property.⁶⁴ The Food and Agricultural Organization database states that only 9.21 per cent of Indian women farmers own farmland.⁶⁵ As a consequence, limited access to land ownership reduces their incentive to maintain soil, thereby affecting food production.

Male bias amongst the agricultural support services, which include technology, information, training and credit facilities, increase female vulnerability and women’s marginalisation. There is evidence that most of the technology is focused on male usage so that mechanical equipment such as combined harvesters and tractors are seen as male

60 National Policy for Farmers, n. 57 above, para. 3.2.

61 Ibid. “Preface”.

62 Neera and Usha, *Women*, n. 25 above; see also Country Report, *Fourth World Conference on Women: Beijing* (New Delhi: Government of India 1995).

63 Hindu Succession Act 1956, s. 6.

64 See Thukral “Poverty and gender”, n. 14 above, and Neera and Usha, *Women*, n. 25 above.

65 www.dnaindia.com/india/report_only-9-21pct-women-own-farm-land-in-country-fao_1350710 (accessed 29 June 2012).

preserves while the women undertake the menial, unskilled work.⁶⁶ Information and training regarding innovative practices are not easily accessible to women. They have low levels of education, are often illiterate and have to undertake the additional traditional tasks of housework and child care.⁶⁷ In addition, rural women are poor risks when the issue of credit at reasonable rates is addressed. They cannot offer collateral to banks and credit unions as they are effectively without assets: land.

However, international commitments coupled with initiatives of grassroots activists⁶⁸ have impacted at the political and bureaucratic levels. The government of India has launched gender-specific programmes for economic empowerment and sustainability. These programmes include Support to Training and Employment Programmes (STEP), Rashtriya Mahila Kosh (RMK) and Swarnajayanti Gram Swarozgar Yojana (SGSY). STEP aims to enhance and broaden the skills and knowledge of poor, rural women in traditional occupations.⁶⁹ Its function is to encourage employment opportunities that include self-employment and the promotion of entrepreneurship. Services include training, extension, infrastructure, market and credit linkages. In 2008–2009, some rupees 1602.28 lakhs (\$3,253,948.43) were released as funding under STEP.⁷⁰ The National Credit for Women scheme (RMK) provides loans and microfinance to poor women to set up small enterprises, including agriculture, with help from NGOs, Women Development Corporations (WDCs) and certain state government agencies. RMK established a quasi-informal, credit delivery mechanism. It is client friendly and uses a relatively simple and flexible repayment procedure. Since its establishment in 1993 and up to the end of 2009, some rupees 28,413.09 lakhs (\$57,701,980.66) were sanctioned for loans. Of this sum, rupees 23,490.89 lakhs (\$47,705,859.54) were distributed and 662,177 women were beneficiaries of the scheme.⁷¹ Under the SGSY, a programme initiated by the Ministry of Rural Development, 70.77 per cent of the beneficiaries were women. They formed SHGs, commenced employment and entered the cash economy.⁷²

A holistic approach to the agricultural sector in relation to gender should be promoted by establishing women as farmers. Situation specificity, project flexibility, farmer participation and mainstreaming women's programmes will have a meaningful and sustainable impact.⁷³

3.2.2 Wages

Unequal employment opportunities in development programmes contribute to gender-related inequalities. Eco-development programmes seek income generation and empowerment of women but, in reality, experience disappointing participation. The segmented labour force – with women perceived as an uneducated, supplementary, labour

66 See A Stephens, *Gender Issues in Agriculture and Rural Development Policy in Asia and the Pacific*, Regional Consultation on Gender Issues in Agricultural and Rural Development Policy, 1–5 November 1993 (Bangkok: FAO 1993); A Rodda, *Women and Environment* (London: Zed Books 1991), p. 102.

67 J Jiggins, R K Samanta and J E Olawoye, "Improving women farmers' access to extension services" in *Improving Agricultural Extension: A reference manual* (Rome: FAO 1997), pp. 74–82.

68 See further below.

69 These include agriculture, animal husbandry, dairying, fisheries, handlooms, sericulture, social forestry and wasteland development.

70 National Institute of Public Cooperation and Child Development, *Statistics on Women in India 2010* (New Delhi: NIPCCD 2010), pp. 274–5.

71 Ibid. p. 276.

72 Ibid. p. 278.

73 World Bank, *Towards a Gender Strategy for Nigeria: Integrating Women's Issues into the Development Agenda* (Washington DC: World Bank 1992).

force, unsuitable for commercial and technological involvement – deepens women’s economic vulnerability. This position is in contrast to population statistics that show that women constituted 48 per cent of the population⁷⁴ and 30.79 per cent of the rural labour force in 2001. There was a rise in female rural workers to 41.6% per cent in 2004–2005.⁷⁵

The pay gap remains a major issue, particularly given the data provided by international reports. The International Trade Union Confederation (ITUC) report of 2008 states that there is a gender pay gap of 30 per cent in India.⁷⁶ In 2010, the Global Gender Gap Report⁷⁷ stated that India had the lowest ranking on gender parity, including pay parity, among the BRIC countries (Brazil, Russia, India and China). In no Indian state do males and females working in the agricultural sector have pay parity.⁷⁸ An estimated 60 per cent of agricultural operations are undertaken by women and, on average, the hourly wage rates vary from 50 to 75 per cent of the male rate.⁷⁹

Protective legislation, including the Equal Remuneration Act 1976 (ERA) and the Minimum Wages Act 1948, has proved to be of limited effect.⁸⁰ It is paradoxical that the constitutional mandates found in Articles 39,⁸¹ 42⁸² and 43,⁸³ which guarantee economic equality, remain unfulfilled. Yet the mandates underpin a nation’s commitment to the concept of social justice through such rights as an adequate means of livelihood, equal wages and an appropriate standard of living.

The ERA not only addresses equal pay for equal work but also prohibits the employer from reversing pay scales in order to achieve equality of wages.⁸⁴ This was recognised in the *Mackinnon Mackenzie* case.⁸⁵

74 R Jamwal and D Gupta, “Work participation of females and emerging labour laws in India” (2010) 2(1) *Asia-Pacific Journal of Social Sciences* 164.

75 See n. 55 above, pp. 6–7.

76 International Trade Union Confederation (ITUC), *Gender (In)equality in the Labour Market: An overview of global trends and developments* (Belgium: ITUC 2008), available at www.ituc-csi.org/IMG/pdf/GAP-O9_EN.pdf (last accessed 29 June 2012).

77 R Nagrajan, “Unequal pay for equal work dogs working women in India: study”, *The Times of India*, 9 March 2011, available at http://articles.timesofindia.indiatimes.com/2011-03-09/india/28671960_1_gender-parity-equal-remuneration-act-wage-discrimination (last accessed 4 June 2012).

78 Swayam, “The status of women: a reality check facts on inequality and crimes against women”, leaflet available at www.swayam.info (last accessed 4 June 2012).

79 S Ahmed and P Maitra, “Gender wage discrimination in rural and urban labour markets of Bangladesh” (2010) 38(1) *Oxford Development Studies* 83–112; M Fontana, “Gender Dimensions of Rural and Agricultural Employment Differentiated Pathways out of Poverty” (paper presented at the FAO-IFAD-ILO Workshop on Gaps, Trends and Current Research in Gender Dimensions of Agricultural and Rural Employment: Differentiated Pathways Out of Poverty, FAO, Rome, 31 March–2 April 2009).

80 India has also ratified the Equal Remuneration Convention 1951 No 100, Discrimination (Employment and Occupation) 1958.

81 Article 39 of the Constitution of India provides for certain principles of policy to be followed by the state, one of them being equal pay for equal work for both men and women.

82 Article 42 of the Constitution of India provides that the State shall make provision for securing just and humane conditions of work and for maternity relief.

83 Article 43 of the Constitution of India provides that the state shall endeavour to secure, by suitable legislation or economic organisation or in any other way, to all workers agricultural, industrial or otherwise, work, a living wage, conditions of work ensuring a decent standard of life and full enjoyment of leisure and social and cultural opportunities and, in particular, the state shall endeavour to promote cottage industries on an individual or cooperative basis in rural areas.

84 S. 4 of the Equal Remuneration Act 1976.

85 *Mackinnon Mackenzie and Co. Ltd v Andrey D Costa* AIR 1987 SC 1281. See also *S Nagaraj v State of Karnataka* (1993) 4 SCC 595; *Vijay Kumar v State of Punjab* AIR 1994 SC 265; *State of West Bengal v P Chatterjee* AIR 2003 SC 3569.

The equal pay legislation addresses industry and those sectors that employ a set minimum number of workers.⁸⁶ The Supreme Court of India also added a rider directing that the law is effective only in organised sectors where work is performed under the orders and control of competent authorities.⁸⁷

The unorganised sector faces discrimination. Women suffer the most. To overcome this problem and provide social security, Parliament enacted the Unorganised Workers Social Security Act 2008, which provides social security and welfare benefits through various government schemes.⁸⁸ However, there are serious criticisms concerning its definitions and scope.⁸⁹ A precondition for the application of the Act is the earning of a monthly wage as notified by the central or state government. This clearly suggests that unpaid women workers and women dependent for their livelihood on resources such as forests fall through the legislative net and remain without recourse to law. The “invisible work” undertaken by rural women is indeed “invisible” and therefore is not notifiable by the authority.

Gender inequality is also illustrated in the setting of minimum wages. The Minimum Wages Act 1948 sought to prevent labour exploitation through payment of low wages in respect of scheduled employment. The government reviews and revises the minimum rate of wages at least every five years.⁹⁰ On 1 April 2011, the central government revised the National Floor Level Minimum Wage (NFLMW), a non-statutory measure, from rupees 100 (\$2.03) a day to rupees 115 (\$2.34) a day, and requested all states to implement this change in such a way that in none of the scheduled employments the minimum wage is less than the NFLMW.⁹¹

Studies indicate that gender-related wage inequity is experienced by female agricultural labourers whose wages in most states remain lower than the official minimum wages. These women accounted for 41.6 per cent of the agricultural workforce of 259 million in 2004–2005.⁹² The National Commission for Enterprises in the Unorganised Sector (NCEUS) states that:

most studies that have examined the application of minimum wage legislation to workers in the unorganised sector show that the Act has not been used to protect the interests of the poor and the unorganised sector worker. The “technical”

86 Sankaran and Madhav, *Gender Equality*, n. 56 above.

87 *Ajmer Vidut Vitran Nigam Ltd v Navin Kumar Saini* (29 October 2010).

88 Schedule 1 of the Act lists ten schemes that have been accorded the status of social security schemes. These are Indira Gandhi National Old Age Pension Scheme, National Family Benefit Scheme, Janani Suraksha Yojna, Handloom Weavers Comprehensive Welfare Scheme, Pension to Master Crafts Persons, National Scheme for Welfare of Fishermen and Training and Extension, Janshree Bima Yojana, Aam Aadmi Bima Yojana, Rashtriya Swasthya Bina Yojana

89 See J John, “Social Security Act: the great Indian tamasha on unorganised workers” (2008) 6(6) *Labour File* 5–11; V Shankar, “Unorganised Workers Social Security Act 2008: a beginning for bigger struggles!” (2009) *Liberation Central Organ of CPI (ML)*, available at www.cpiml.org/liberation/year_2009/feb_09/commentary_3.html (last accessed 29 June 2012); T Sankaran, “A critique of India’s Unorganised Worker’s Social Security Act 2008” (2009) *South Asia Labour Activist Library*, available at www.sacw.net/article658.html (last accessed 4 June 2012).

90 Paycheck India, “Minimum wages India – current minimum wages rate India” (2011), available at www.paycheck.in/main/officialminimumwages (last accessed 4 June 2012).

91 www.pib.nic.in (last accessed 4 June 2012).

92 M van Klaveren et al., *An Overview of Women’s Work and Employment in India* Working Paper 10-90 (Amsterdam: Amsterdam Institute for Advanced Labour Studies University of Amsterdam May 2010); NCEUS, *Report on the Conditions of Work and Promotion of Livelihoods in the Unorganised Sector* Research Paper (New Delhi: National Commission for Enterprises in the Unorganised Sector Government of India 2007); P Chavan and R Bedamatta, “Trends in agricultural wages in India 1964–1965 to 1999–2000” (2006) 41(38) *Economic and Political Weekly* 4041–51.

coverage of the Minimum Wages Act was 38.1% of the labour force, but the effective coverage was only a fraction. The proportion of female casual workers receiving less than the required minimum was 95% as against 74% in the case of male workers.⁹³

Wage differential, particularly in the agricultural sector, is a complex matter when “skill” is taken as the criterion that determines the wage. Rural women, within the patriarchal society, have little opportunity to acquire the skill sets that would move them to parity with males.

An inherent weakness in the Minimum Wages Act in relation to gender parity is the exclusion of unpaid work. The calculation of minimum wages in India proceeds on the assumption that an earning member should support another adult and two children.⁹⁴ Males are assumed to be the principal workers. The dividing line between skilled and unskilled or paid and unpaid is very thin depending on the work-based situation. Defining activities complicates the issue, thus placing women in a disadvantageous and vulnerable situation in a changing economy.

The failure of social engineering to alter deep-seated rural male dominance has resulted in the legislation failing to address the wider issues that beset women. A consequence is that the legislation has had limited impact on the economic standing of rural women.

On the other hand, a progressive step to close the gender gap is seen in the passing and subsequent activities of the Mahatma Gandhi National Rural Employment Guarantee Act 2005 (NREGA). It offers a legal entitlement to work and has revised the employability status of rural women. NREGA targets the underprivileged, including women, by providing a legal guarantee of at least 100 days a year of unskilled manual work to each rural household at the statutory minimum wage. This has had a positive impact on the lives of rural women. Visible positive impacts under NREGA include an increase in agricultural wages and also in cultivation, building and reviving water conservation structures and a decline in distress migration. The National Report 2011–2012 states that 3.31 crore (331 hundred thousand) of persons were employed for a total of 96.23 crore (9623 hundred thousand) of “person days” out of which 50.1 per cent were women.⁹⁵

NREGA is a powerful instrument for producing rural transformation, especially for women. However, its implementation remains partial. Structural issues such as work record-keeping, delayed payments for work completed and inadequate attention to the quality of the assets created in conjunction with the issue of fraud, misuse of funds, negligence, incompetence, and the ever-present problem of corruption ensure that the social impact of the legislation has yet to be fully realised.

3.2.3 Governance and decision-making

Women’s participation in governance and in the decision-making process has a transformative impact on empowerment. In turn, decentralisation of power towards the grassroots level strengthens democracy and promotes local responsibility. The Constitution

93 NCEUS, *The Challenge of Employment in India: An informal economy perspective, vol. 1 Main report* (New Delhi: NCEUS/Government of India 2009), p. 141.

94 *Workmen v The Management of Reptakos Brett and Co. Ltd* AIR 1992 SC 504; P Belser and U Rani, *Extending the Coverage of Minimum Wages in India: Simulation from household data* Conditions of Work and Employment Series 26 (Geneva: International Labour Organization 2010), p. 8.

95 <http://nrega.nic.in/netnrega/home.aspx> (last accessed 4 June 2012).

of India, in the 73rd⁹⁶ and 74th⁹⁷ constitutional amendments, provides for the establishment of strong, effective and democratic local administration (panchayat) both in urban and rural areas. In *Bihari Lal Rada v Anil Jain (Timu)*,⁹⁸ the Supreme Court of India observed that:

economic development and implementation of schemes securing social justice may not be possible without providing for adequate representation to the weaker sections of society. Its paramount objective was to empower the vulnerable sections of the society who were hitherto precluded from participating in the local self-government for various historical reasons due to which the constitutional objective of securing social justice remained unfulfilled.

The constitutional mandate made possible women's participation in governance with a 33 per cent reservation in certain key positions within the panchayat. Nationally, elected women representatives account for about 10 lakh out of 28 lakh of elected panchayat representatives.⁹⁹

There has been a mixed response to women panchayat members' involvement in natural resource management. In some states, including Himachal Pradesh, Maharashtra and Bengal, women have gained confidence within the male-dominated society and thereafter have made contributions at grassroots levels. Elected women members have encouraged village women to use bio-gas systems, to plant and protect small areas of forest near their villages, to oppose limestone quarrying in hilly regions and to lobby for gender budgets for rural development, including education, water and improved sanitation. These activities have helped redefine the gender roles within the participatory process which in turn has enhanced self-respect and women's independence.¹⁰⁰

On the other hand, the elected women are sometimes little more than proxies because their husbands, fathers or male siblings are the de facto decision-makers. Illiteracy, lack of awareness, confidence and general isolation from public life have contributed towards their non-participation.¹⁰¹ The Panchayati Raj Ministry has received complaints of non-participation of elected women members. Consequently, the ministry, in an advisory capacity, has requested state governments to ensure that male relatives of elected women members are excluded from meetings.¹⁰²

96 The main features of the 73rd Amendment are: 1 Constitution of a three-tier structure of Panchayats in every state (at village, intermediate and district levels) having a population of 20 lakhs (Article 243B). 2 Reservation of seats for scheduled castes, scheduled tribes and women (Article 243D). 3 Fixed tenure for panchayat bodies (Article 243E). 4 Transfer of powers, authority and responsibilities to panchayats, including 29 subjects listed in the 11th Schedule (Article 243G).

97 The 74th Amendment classifies urban settlements as corporations, municipalities or nagar panchayats (a hybrid designed for settlements in transition from rural to urban). All these three categories, broadly labelled as nagarpalikas, are to be constituted with representatives elected from territorial constituencies called wards. One-third of the seats as well as the chairperson positions are to be reserved for women.

98 (2009) 4 SCC1.

99 PTI, "Women empowerment in Panchayati Raj remains unrealised", *The Economic Times*, April 25 2010, p. 2.

100 See S Akerkar, *Gender and Participation Bridge* Overview Report (Brighton: Institute of Development Studies 2001); S Akerkar, "Panchayats working women" (1998) 7(13) *Down to Earth*.

101 B Agarwal, *Gender and Governance: The Political economy of women's presence within and beyond community forestry* (New Delhi: OUP 1998); A Behar and Y Kumar, *Decentralisation in Madhya Pradesh India: From Panchayati Raj to Gram Swaraj (1995–2001)* Working Paper (London: Overseas Development Institute 2002).

102 PTI, "Women empowerment", n. 99 above.

3.2.4 Legislative vacuum

Integrating gender into conservation laws is one area that requires special attention. There is a need to promote greater harmony and synergy between policy frameworks and legal measures. For example, in matters of forestry and biological diversity there remains a distance between policy and legislation.

An illustration of the failure of legislation to bring about change to women's status is found in the Forest (Conservation) Act 1980 as amended in 1988. The amendment did not meet an objective of the National Forest Policy 1988.¹⁰³ The policy emphasised the environmental protection and conservation of forests through the creation of a widespread people's movement that included women.¹⁰⁴ This broad-based participatory approach was the required procedure for the success of this policy. The Ministry of Environment and Forests, having administrative jurisdiction over national forest policy, issued circulars to the State Forest Secretaries in 1990 concerning the adoption of Joint Forest Management (JFM).¹⁰⁵ The policy stresses the involvement and participation of people, in particular, women, but the Forest (Conservation) Act 1988 Amendment nowhere reflects the intention of this policy. The preamble to the Act provides for the conservation of forests and, thereafter, the provisions adopt a "command and control" approach by imposing restrictions on the de-reservation of forests and the use of forest land for non-forest purposes. Critics argue that the amended 1988 Act prevents the restoration of degraded lands and watershed development through a participatory procedure.¹⁰⁶ Policy is a plan of action to influence future actions. The 1988 policy stresses a participatory process, involving women. This is not found in the Forest (Conservation) Act thereby producing a failure of a policy which aimed to produce popular participation and gender equality.

A further illustration of legislative failure regarding gender balance is that of the Biological Diversity Act 2002 (BDA). It was considered progressive legislation but it fails to explicitly include women as stakeholders in matters of local conservation and management of biodiversity and the associated traditional knowledge. There is no provision for this in the Act, which directly spells out the need for a participatory approach that includes women. For instance, practitioners of traditional medicine, vaidis and hakims, have always been males. However, women also practise traditional medicine as midwives. Their role is undervalued by their exclusion from this legislation. The denial of recognition of women for their abilities and skills as local managers of biodiversity is also a denial of environmental entitlement.

India is proud of its commitment to implement global conventions at the national level by introducing reflective legislation and appropriate strategies, policies and programmes. The enactment of the BDA is one such example. India ratified the United Nations Convention on Biological Diversity 1992 (CBD). One of the preambular objectives of CBD is "recognising the vital role that women play in the conservation and sustainable use of biological diversity and affirming the need for full participation of women at all levels of policy making and implementation for biological diversity convention".¹⁰⁷

It is disheartening to note that there is legislative invisibility of women's role in the BDA. Whilst recognising that under general Indian law "he" also includes "she", this fails to appreciate that within a deeply conservative patriarchal society the semiology of the legal

103 Ministry of Environment and Forests, Government of India, No 3-1/86-FP, 7 December 1988.

104 Ibid. para. 2.1.

105 A Rosencranz and S Divan, *Environmental Law and Policy in India* (New Delhi: OUP 2002), p. 292.

106 Ibid, p. 293.

107 Preamble, UN Convention on Biological Diversity 1992.

“he” reinforces patriarchal domination in its social interpretation and application, thereby extenuating gender inequality.

The relationship between biological diversity and women is one of adaptation and co-existence for the purpose of livelihood. Livelihood comprises capabilities, assets (including both material and social resources) and activities required for means of livelihood.¹⁰⁸ It is suggested that a gender-sensitive approach needs to be adopted within general policy (law) for creating entitlements and their effective implementation.

The Indian judiciary is known for its willingness to make expansive and proactive decisions in environmental cases.¹⁰⁹ Expanding and fortifying the participatory approach, with reference to women, would be a significant step towards gender equality for rural women.

4 Environmental stewardship: a participatory approach

Environmental stewardship is a value system of responsibility to protect and conserve natural resources for present and future generations. Environmental stewardship in the USA envisions a positive contribution in improving human prosperity and environmental quality by encouraging and adopting long-term strategies, programmes and practices for a sustainable future.¹¹⁰ In an ideal world, regulation is replaced by stewardship – an inherent respect for the environment. In this concept of stewardship, everyone takes responsibility for their actions and use of resources for the benefit of the community.¹¹¹ In the UK, environmental stewardship involves an agri-environment scheme that provides funding to farmers and other land managers in England to deliver effective management of the land.¹¹²

In a holistic perspective, environmental stewardship achieves sustainability by embracing a mindset of continuous improvement by leveraging partnerships, voluntary programmes, market incentives and collaborative functioning.

In India, environmental stewardship is less of a political movement being more of a transitional step towards sustainability committed to ideals of community development, land ethics, grassroots activism and governmental support.¹¹³ For poor rural women, environmental stewardship is not a choice but a necessity for poverty alleviation and empowerment.

In fact, the bottom upwards and horizontal approaches of women taking charge of their natural resource base and contributing towards overall improvement and sustainability indicates the success stories of environmental stewardship. Self-initiated micro-level programmes have paved the way for financial benefits, leading to the formulation of new policies and collaborative programmes.

108 R Chambers and G R Conway, *Sustainable Rural Livelihoods: Practical concepts for the 21st century* Discussion Paper No 296 (Brighton: Institute of Development Studies 1992); see also Foundation for Ecological Security, *Biodiversity Conservation, Land Use, Land Use Change and Forestry (LULUCF) Programmes: Ideas for implementation* (New York: UNDP 2008).

109 *M C Mehta v Union of India* AIR 1988 SC 1037; *T N Godavarman v Union of India* AIR 1997 SC 1228; *India Council for Enviro-Legal Action v Union of India* 1996 (3) SCC 212; *Narmada Bachao Aandolan v Union of India* AIR 2000 SC 3753.

110 Environmental Protection Agency (EPA), Environmental Stewardship Staff Committee, *Everyday Choices: Opportunities for environmental stewardship* Technical Report (Washington DC: EPA 2005).

111 *Ibid.*

112 Natural England, “Environmental Stewardship” (2011), available at www.naturalengland.org.uk/ourwork/farming/funding/es/default.aspx (last accessed 4 June 2012).

113 A Carr, *Grass Roots and Green Tape: Principles and practices of environmental stewardship* (Australia: Federation Press 2001).

There is a gradual realisation that the successful implementation of any environmental programme is based upon collaborative partnerships between governmental agencies and people's participation, including NGOs and civil rights activists.¹¹⁴

The Government of India (Ministry of Women and Child Development) launched the National Policy for the Empowerment of Women 2001 and the National Mission for Empowerment of Women 2010. The policies aim to build and strengthen partnerships with those NGOs that help in the advancement, development and empowerment of women. Favouring women, the National Mission 2010 mandates achieving social, economic and legal empowerment of women by identifying gaps in developmental goals and setting up appropriate institutional frameworks to overcome bottlenecks in the process of ensuring coordinated and effective service delivery to women at grassroots level.¹¹⁵ For the implementation of these policies and the inter-sectoral convergence of all-women-centric programmes that interface with the environment, government departments are now reviewing gender budgeting.¹¹⁶

Gender budgeting is an evolving area that needs better understanding and appreciation in order to address gender equity in the developmental process and public expenditure and policy. The figures for the national budget outlay for women have increased from rupees 56,294.22 crores (\$11,432,364,427.28) (2009–2010) to rupees 67,749.801 (\$13,758,791,131.80) (2010–2011).¹¹⁷ This is a welcome step in schemes that have 100 per cent provision for women and other schemes where the allocation for women constitutes at least 30 per cent.

4.1 PARTNERSHIP AND GRANTS PROGRAMMES

In the Indian context, environmental stewardship obtains support through partnership and grant programmes, in terms of skills and innovative approaches to sustainability. These programmes encompass a two-pronged strategy by addressing economic development coupled with personal and family development. Economic development focuses on the immediate need to transform the lives of poor women by creating opportunities to earn money and access independent income, thereby making them self-reliant and self-sufficient. Personal and family development, going beyond economics, is a long-term strategy to readdress the inequalities of opportunities, empowering women without destabilising their families, and leaving a positive impact on men. This development provides voice to the "marginalised" by integrating them into social programmes and decision-making processes and helps in capacity building of women through education, training and awareness programmes. Mainstreaming gender is not about exclusion of men but it is a process of women becoming equal partners.¹¹⁸

114 EPA, *Everyday Choices*, n. 110 above, p. 17; S Vadaon, "Role of NGOs in environmental conservation and development" (2008) *Karmayog*, available at www.karmayog.org (last accessed 4 June 2012).

115 Press Information Bureau Government of India (2010) <http://pib.nic.in/newsite/erelease.aspx?relid=59237> (last accessed 4 June 2012).

116 A Parikh, S Acharya and M Krishnaraj, "Gender budgeting analysis – a study in Maharashtra" (2004) 39(44) *Economic and Political Weekly* 4823–30.

117 www.indiaonline.com/Budget/Budget-Details/Detailed-Union-Budget-2010-11/435512 (last accessed 4 June 2012).

118 R Bhat, "Feminisation of Poverty and Empowerment of Women: An Indian Perspective and Experience" (paper presented at James Cook University, 3–7 July 2002); K Acharya, "Women farmers ready to beat climate change" (2009) InterPress Service News Agency, available at <http://ipsnews.net/news.asp?idnews=46131> (last accessed 4 June 2012).

4.1.1 NGOs and SHGs

Partnership programmes aim to involve NGOs as a resource base for women's involvement and confidence building at the rural level. The NGOs are crucial to fostering a gender participatory approach. The involvement of NGOs came about from a

post-emergency euphoria of the restoration of democracy [that], coupled with the recognition that the state alone cannot deliver the goods in an iniquitous market-oriented society, led to the emergence of new movements, new organizations, new activities, new actors and new issues. Concerns of gender, environment and human rights were taken up in a new entitlement framework.¹¹⁹

The NGOs have been actively involved in redesigning gender-responsive development projects and participatory governance through dialogue process, networking and monitoring the implementation of existing policies.¹²⁰ The strength of NGOs lies in encouraging all stakeholders to share a common platform for effective sustainable solutions.

The NGOs emphasise an overall integrated development of poor rural women by facilitating programmes, including financial, that are locally self-managed and self-sustaining. Organizing mahila mandals and sanghas (village level organisations of women)¹²¹ and initiating the formation of SHGs has proved beneficial for rural poverty reduction and female empowerment. The SHG movement is an entrepreneurial venture combining low-cost financial services with a process of self-management and development for women who are members. The SHGs mobilise their own savings which are used as loans to their members. SHGs are seen as empowerment organisations that improve women's access to micro-credit, economic resources, bank linkages and community platforms and also address social issues such as abuse of women, alcohol abuse or the dowry system.¹²² For example, the Deccan Development Society undertakes commendable work in 75 villages in the arid, interior part of Andhra Pradesh, South India. It supports 5000 dalit women from the lowest strata of society, through SHGs that manage agricultural systems. They plant interspersing crops that do not need extra water, chemical inputs or pesticides. The women formed sanghas, evolved and mapped crop-financing, sold and distributed food. Not only did these dalit women become economically stronger but they have also been able to educate their children, build new houses and buy cattle and land.¹²³ The crops have been labelled with Participatory Guarantee Scheme (PGS) certification: a scheme endorsing ecologically sound practice that helps combat global warming.

The NGOs have received support from government agencies to form SHGs. The government launched the Swayamsidha Scheme in February 2001 and aimed for a holistic empowerment of women in the ongoing sectoral programmes. Against a target of 645,000 SHGs, 69,803 SHGs were formed and 1 million women were covered by the scheme.

119 V Ramachandran, "Literacy, development and empowerment: conceptual issues" in R Wazir, *The Gender Gap in Basic Education: NGOs as change agents* (New Delhi: Sage Publications 2000).

120 Aga Khan Foundation, "Rural development in India" (2007) The Aga Khan Development Network, available at www.akdn.org/rural_development/india.asp (last accessed 4 June 2012).

121 S Medhapurkar, "From subjects of change to agents of change: a travelogue in Himachal Pradesh" in S Krishna (ed.), *Livelihood and Gender Equity in Community Resource Management* (New Delhi: Sage Publications 2004); K Marathi, "People's land reform initiatives: a note on the Bundelkhand-Baghelkhand area" in *ibid*.

122 EDA Rural Systems Pvt Ltd, *Self Help Groups in India: A study of the lights and shades: CRS, USAID, CARE, GTZ and NABARD* (Guragaon: EDA 2006); C Datar and A Prakash (2004) "Engendering communities rights: women access to water and wasteland in Gujarat, Maharashtra, Madhya Pradesh, Andhra Pradesh and Karnataka" in Krishna, *Livelihood*, n. 121 above.

123 Acharya, "Women farmers", n.118 above.

During 2007–2008, rupees 2287.3 lakhs (\$4645,103.38) were released as funds, covering 335 districts and 650 blocks. The scheme closed in March 2008.¹²⁴

SHGs have emerged as an effective, financially viable instrument in terms of micro-finance transactions. Currently, studies are in progress to evaluate issues of guidance, the knowledge of women's groups regarding financial aspects of improving record-keeping and transparency, and credit facilities in SHGs' initial years of formation.¹²⁵

4.1.2 Forestry

The JFM is an important area involving a participatory approach of "care and share". It lays emphasis, with the help of NGOs, on the involvement of local communities for the protection, afforestation and sharing of benefits. The involvement of NGOs in encouraging stakeholders, particularly women, to be a part of forest conservation activities has gained momentum in the last decade primarily for two reasons: a changed mindset of forest department personnel towards forest management; and pressure from international funding agencies to involve NGOs.¹²⁶

The JFM was established by the National Forest Policy 1988 and the subsequent guidelines of Ministry of Environment and Forests (MOEF) in 1992,¹²⁷ 2000¹²⁸ and 2002,¹²⁹ thereby giving impetus to the participation of village stakeholders in the management of degraded forests. The MOEF 2000 guidelines specifically considered the potential and need for women's participation in the JFM programmes and suggested at least 50 per cent membership of the JFM general body should be women and 33 per cent of the JFM Executive/Management Committee, out of which at least one office should be filled by a woman. Most states passed their own resolution according to local socio-economic status and cultural characteristics.

For sustainable forests, the MOEF formulated the National Afforestation Programme (NAP) to be implemented through the JFM. NAP – a flagship programme of MOEF – is implemented through Forest Development Agencies (FDAs) that work in conjunction with the Joint Forest Management Committees (JFMCs) under a memorandum of understanding. The funding, both nationally and internationally, is sanctioned by FDAs to the JFMCs, thereby making JFM an integral part of afforestation projects.¹³⁰ JFM became a centre of attraction for officials when funds came from external bodies including the World Bank, OECF-Japan, DFID-UK, SIDA-Sweden, UNDP and Germany.¹³¹ In 1990, rupees 4,220 crores (\$857,007,662.30) were given for the programme, making the JFM a campaign and target-oriented scheme rather than a region-specific measure to address the issue of forests and forest people.¹³²

Equity in participation and benefit-sharing constitute the core components of JFM, creating employment opportunities and income generation with emphasis on marginalised groups, including women. In relation to gender, equity in participation presupposes the active involvement in the decision-making process and determining forest management

124 See National Institute, *Statistics*, n. 70 above, p. 286.

125 See EDA Rural Systems, *Self Help Groups*, n. 122 above.

126 K Balooni and M Inoue, "Joint forest management in India: the management change process" (2009) *IIMB Management Review* 6.

127 No 6-21/89 PP (1 June 1990).

128 No 22-8/2000 (21 February 2000).

129 No 22-8/2000 JFM (FPD) (24 December 2002).

130 Balooni and Inoue, "JFM", n. 126 above, p. 9.

131 S Bera et al., "Is JFM relevant?", *Down to Earth*, Centre for Science and Environment, 15 September 2011.

132 *Ibid.*

policies. Despite legal backing of the government's policies and regulations, meaningful participation of women lags behind the stated objectives. Studies indicate women either as active participants or meek spectators in the JFM programmes.¹³³ The active participants are vocal about their opinions and eager to take initiatives in order to protect their forests. A sense of responsibility towards the forests entuses confidence to carry out forest activities on an equal footing with men. One woman states: "The forest does not belong to just men. Its protection is everyone's responsibility. In fact, for women the forest feels like home and gives more benefits than to men. So even if we go to pick a small thing like a datun, we keep our eyes open for any misuse."¹³⁴

On the other hand, traditional and cultural constraints make some women act as meek spectators, showing indifference or lack of interest in forestry activities. Factors such as constant invisible work, a condescending attitude of men towards women as "knowing nothing or incompetent", the inability or shyness to express an opinion, lack of awareness about forestry activities, absenteeism from meetings due to men's drunkenness or women's avoidance due to lack of confidence, all contribute towards low female participation. The position is made worse when forest officials identify and nominate women to take up office-holder positions simply to achieve their statutory targets. To quote: "I am unable to handle this post. There are no protection activities, no one goes to the forests and no one listens to me. I had even submitted my resignation but the forest department people told me to continue till I end my tenure. So here I am."¹³⁵

Equity in benefit-sharing derived from protected forests affects both men and women equally. States have passed their own resolutions for benefit-sharing between villagers and forestry departments, making it a contentious issue.¹³⁶ Questions are being raised about the effectiveness of JFM programmes as "villagers are disillusioned and dejected with the tricky money mathematics that forests officials use to bring down the monetary share to nothing; few states give cash to communities".¹³⁷

Presently, there is a debate about the effectiveness of the JFM programme. There is mounting pressure to abolish it as it has neither reduced rural poverty nor strengthened social security. Factors such as lack of clarity, no working plans, bureaucratic interference and enactment of new laws such as the FRA and PESA¹³⁸ have put a question mark on the government's flagship programme. In fact:

133 B Agarwal, "Participatory exclusion, community forestry and gender: an analysis for South Asia and a conceptual framework" (2001) 29(10) *World Development* 1623–48; R Ghate and D Mehra, "Does leadership matter? A study of self-initiated forest management from central India" (2003) 13(1) *Asia-Pacific Journal of Rural Development* 89–104; C A Drijver, "Peoples participation in environmental projects in developing countries" (1991) 20 *Landscape and Urban Planning* 129–39; C Correa, *Gender and Joint Forest Management: Research in Uttara Kannada District Karnataka* (Dharwar: Indian Development Service and Society for Promotion of Wastelands Development 1997); M Gupte, "Participation in a gendered environment: the case of community forestry in India" (2004) 32(3) *Human Ecology* 365–82.

134 D Mehra, "Does Lead Role of Women in Local Forest Governance Guarantee Gender Equity in Costs and Benefits from Forests? A Study of Four Case Studied from Vidharbha Region of Maharashtra" (paper presented at 13th Biennial Conference of the International Association for the Study of Commons (IASC) on Sustaining Commons: Sustaining our Future, Hyderabad, India, 10–14 January 2011).

135 Ibid.

136 S Bera et al., "Promised moon, paid pittance – Madhya Pradesh"; "Lost in interpretation – Maharashtra"; "Sour and sweet – Gujarat"; "No transparency – Andhra Pradesh" (2011) *Down to Earth*, Centre for Science and Environment, 15 September 2011 (studies in four states of India).

137 Bera et al., "Is JFM relevant?", n. 131 above.

138 FRA (Forest Rights Act 2006) and PESA (Panchayat Extension to Scheduled Areas Act 2006) confer rights to tribal and forest dwellers over forests resources and their management.

JFM never sought to make the system of forest governance fundamentally reoriented towards recognising rights of the communities along with achieving conservation objectives. Rather these programmes were largely conceived as a tool for getting some local participation in pre-defined goals of conventional conservation by extending some concession or wage labour benefits.¹³⁹

4.2 UNITED NATIONS DEVELOPMENT PROGRAMME, GLOBAL ENVIRONMENT FACILITY (SMALL GRANTS PROGRAMME)

Nevertheless, the UNDP-GEF SGP India¹⁴⁰ provides hope and expectation for rural women. The SGP India programme has adopted a community-led ownership, participatory and gender-sensitive approach. At the project level, the programme is open, critical and is learning by doing. Spread across India, the programme has provided support to 303 projects, in six thematic areas, namely, biological diversity conservation, climate change mitigation, prevention of land degradation, protection of international waters, phasing out persistent organic pollutants and multi-focal areas.¹⁴¹

The programme focuses on partnership for action on sustainable development and a green economy. Gender-driven, innovative, small-scale and local entrepreneurship provides a foundational approach, integrating social, economic and environmental benefits. The very “hands-on management style” and “do it” approach have accelerated transition towards a green economy by motivating women to identify their potential as stewards for a sustainable future. Nearly 2000 villages, 50,000 households and 1 million people have been directly supported by the programme. There are nearly 7000 female SHGs with 150,000 members producing savings of rupees 45 lakhs (\$91,387.07) and access to additional credit from banks and institutions of nearly rupees 250 lakhs (\$507,705.96).¹⁴²

Successful projects often benefit from strong and dynamic leadership, such as UNDP-GEF SGP India, where the national coordinator, Prabhjot Sodhi, fills a crucial post. The role of the national coordinator is like a fulcrum, maintaining a balance between stakeholders for the smooth functioning of the programme. Despite challenges, conflicting situations and biases, the national coordinator of India has networked with nearly 300 NGOs to generate a financial resource of nearly US\$12 million and nearly US\$10 million from various other sources.¹⁴³ As a consequence, the “voiceless women” have benefitted as a homogenous group.

4.2.1 Case studies

Two case studies help to understand and evaluate the role of rural women as entrepreneurs, their impact on poverty reduction and environmental protection at the micro-level.

¹³⁹ Bera et al., “Is JFM relevant?”, n. 131 above.

¹⁴⁰ The Small Grants Programme (SGP) is funded by Global Environment Facility (GEF). SGP believes that community-led initiatives can make a significant difference to their environment and livelihood. SGP seeks to support initiatives which demonstrate community-based initiatives, gender-sensitive, participatory approaches and lessons learnt from other development projects that lead to reduce threats to local and global environment. In India, the programme is hosted by the National Host Institution, Centre for Environment Education (CEE) under the supervision and guidance of MOEF Government of India and executed through UNDP.

¹⁴¹ www.sgpindia.org (accessed 4 June 2012).

¹⁴² The author is a member of the National Steering Committee GEF-SGP (India) Programme. The information and statistics regarding GEF-SGP (India) Programme were provided by the national coordinator in personal correspondence, 2011.

¹⁴³ *Ibid.*

Jagriti,¹⁴⁴ a grassroots-level women-centred NGO, initiated a project to secure livelihood options for rural women and conserve high-altitude threatened species of medicinal plants in a remote village in the Lag and Gadsa valley of Himachal Pradesh situated at an altitude varying between 2000–2700 metres. Many of the villages have no road connection and are linked by narrow pathways. A deep-rooted caste system, harsh climatic conditions and inaccessibility to basic services impose even greater drudgery and livelihood pressures on poor people. The worst affected are the women whose work increased both in time and labour. The rapid depletion of resources including fuel wood is a major cause of concern and the burden of obtaining resources a challenge. Jagriti emphasised the importance of women as a homogenous group and encouraged them to form women self-care groups (WSCGs).

More than 30 WSCGs are now functioning with 1000 women members. The women members are directly involved in the project implementation through collective planning and execution of group activities. Stakes in projects are built by enlisting community contributions both in cash and kind. The outputs have been significant in terms of managing the environment, financial and enterprise activities, poverty reduction and social mobilisation. With the help of Jagriti and the forest department, women were made aware of the sustainable use of threatened medicinal plants such as aconitum, heterophyllum and picrorhiza kurroa. Women members were distributed hamam (energy efficient water-heating devices) on a cost-sharing basis. The result was a reduction in fuel wood usage in traditional stoves. Less exposure to indoor pollution and fewer trips to forests to collect fuel wood greatly reduced the time and drudgery for these hill women. Ordinarily, the local women were working 16–18 hours daily.

Financial and enterprise activities brought dramatic changes to the lives of these poor women. The WSCGs were registered with banks and linked to credit facilities and additional benefits. They established marketing outlets such as Mountain Bounties to market local fruits and forest produce. Products including amaranthus flour, apple chips, apricot oil and scrub, beeswax cream, cornflour, rosehip herbal tea, roasted barley and soya beans are some of the products marketed by Jagriti and the Himachal Pradesh Tourism Department. The cumulative sales of these products, amounting to rupees 21 lakhs (\$42,647.30), has provided income and empowerment for local women.

Social mobilisation, through education, training programmes, workshops, mahila mela forum (women fair forum) for confidence-building and effective participation in village-level bodies, has built collective pressure to involve women in the decision-making process. Thus, a new phase of development and progress has witnessed women becoming “women workers”.

Mamring Torkyoy Conservation and Development Project¹⁴⁵ is another SGP India achievement, bringing change in the Kurseong sub-division, West Bengal. Land degradation by landslides threatened biological diversity and affected agricultural production. Flash floods and heavy rainfall created deep crevices and landslides. The residents cut trees for

144 Jagriti is a community-based organisation working for the empowerment of poor, disadvantaged hill women (www.jagritikullu.org, accessed 4 June 2012). Jagriti won the Seeds Award 2008 for its potential project to improve the health and secure livelihood for herb collectors, otherwise engaged in destructive extraction of endangered species of medicinal plants

145 Mamring Torkyoy Farmers Association (MTFA) a community-based organisation is involved in protecting the environment in a sustainable manner. MTFA ensures health and well-being of the community and conservation of the local biodiversity. The organisation includes both men and women. The women play a special role in conserving biodiversity in the remote area of Sittong Panchayat under Kurseong sub-division of West Bengal.

firewood. The women suffered the most as a consequence of deforestation. To address the community issues, in particular for women, the Marming Torkyoy Farmers Association (MFTA) was formed, consisting of 23 members of whom 16 were women. Interestingly, MFTA was a community-based initiative without legal regulation regarding female representation. The project benefitted seven villages comprising 641 households with a population of 6000 people. With the help of SGP India, 34 women's SHGs were formed. These SHGs coordinated and developed links with the banks for both credit and loan facilities. The total savings of SHGs amounted to rupees 250,000 (\$5077.06). Organic farming by women was a great success. With the help of the Alphonsus Social and Agricultural Centre (SASAC), square-metre vegetable gardening (SMVG) was introduced as an improved method of gardening in a mountainous region suffering from a scarcity of fertile land. Women were made aware of the importance of cultivating varieties of vegetables that improved the soil quality and increased soil nutrients, thus, improving health.

Establishment of herbal gardens by reviving the traditional knowledge and practices of indigenous women was a success. Extracted juice from the root/flower/leaves of the herbs or dried herbs or even tonic made out of herbs was used to treat 30 per cent of 2000 patients annually with herbal medicines in Marming dispensary. Ailments like jaundice, asthma, urinary infection, high blood pressure, diabetes and piles were treated with herbal medicines. Thus, herbal gardening served the twin purpose of protecting diversity and human health.

In addition, alternative livelihoods, marketed by SHGs, through mushroom cultivation, preparation of marmalade and pickle and weaving bags, became a source of income for poor women.

Thus the project not only promoted biological diversity and improved people's health but it also provided an income-generating source to poor women to improve their lives.

Environmental stewardship is becoming a major factor in supporting rural women. In particular, the role of the NGOs and grants programmes in this development is crucial and it is anticipated that this growth will continue. In addition, policymakers have started to acknowledge and support gender equality "as the great untapped potential for sustainable development intrinsic in indigenous spirituality and cosmogony".¹⁴⁶

5 Conclusion

India is a complex set of paradoxes. Nowhere is this more evident than in an examination of the distribution of wealth. Internal economic liberalisation and globalisation changes that commenced in 1990 have resulted in the quadrupling of India's economy, positioning it as the expected third largest global economy by 2030. Foreign direct investment in India surged to £23 billion in 2009, followed by £16 billion in 2010. Economic growth is forecast to exceed 7 per cent in 2012. The rich are becoming richer and there is a burgeoning middle class, but the poor remain disturbingly poor, particularly those who live and work in rural India.

The population of India is 1.2 billion while the rural population is 833.1 million or 68.84 per cent of the total population. Despite the growth of poverty migration to the metro-cities, India remains a rural society where men account for 427.9 million (51.4 per cent) and women number 405.1 million (48.6 per cent)

Rural women make crucial contributions to environmental resource usage and its management by using their knowledge and skills, thereby supporting the rural economy of India. Their position and roles are not static. They are constantly affected by global economic changes and market-led growth and by changing family and community

¹⁴⁶ N Smith (2011) "All eyes on the prize", *The Sunday Times*, 9 October 2011, p. 3.

structures and technological developments. As a consequence, women face gender-specific constraints that promote deep inequities and the continuing feminisation of poverty.

The process of development in terms of encouraging gender equality and improving the material conditions of the rural woman's life is disappointingly slow. Many local factors contribute to the disadvantaged situation of women. Women undertaking invisible work remain unaccounted and un-reflected in the formal definition of "work". Elusive or unequal effective rights to land, limited access to productive resources and restrictions on credit services coupled with inequity within the labour market contribute to their vulnerability. Illiteracy or low levels of education act as a hindrance for poor rural women, resulting in their exclusion from community resource management roles, particularly as decision-makers. The language of gender equality and women's rights in the framing and implementing of legal provisions has not been fully appreciated or employed. Non-integration of gender into policy and law is evident in environmental protection and conservation. The constant usage of the legal term "he" in legislation means, to the average person, that women are excluded. The general public do not appreciate that in law, "he" also means "she". There are deep-rooted patriarchal and caste prejudices that work against rural women, thereby exacerbating poverty and discrimination.

The Indian bureaucratic federal and state systems are often inefficient, confused and even corrupt. As a consequence, top-down effectiveness for social change has been limited. Other engines for change have emerged, in particular at the grassroots level. As a consequence of successful grassroots participatory processes, the government has been encouraged to review its policies and schemes for the "resourceless" regarding sustainable development and an equitable livelihood. The organisational approach and support of NGOs, SHGs and international funding agencies are positive developments providing a platform and impetus to female empowerment by helping women to organise and improve their conditions of work. Rural women are being acknowledged as stewards of natural resources. Employment opportunities, economic independence, participation and governance in local institutions, securing and asserting their rights and deriving strength and confidence as a homogenised group, all have the potential to draw out rural women from their poverty.

A holistic perspective to empowering women and gender mainstreaming by legal and institutional mandates reflects a three-D approach – determined, dynamic and democratic change for a sustainable future. A synthesis of macro-economic growth, environmental regeneration and poverty alleviation is the key to the strengthening of resources for the poor rural woman's identity.

