

**7th Global Labour University Conference on Trade Union Politics, University of  
Witwatersrand, Johannesburg, 28-30 September 2011**

**Organizing the Unorganized Women Workers for Green Livelihood: A  
Case Study of Self Employed Women's Association, Ahmedabad,  
Gujarat, India**

**Sarbeswara Sahoo  
Assistant Professor of Economics  
Mahatma Gandhi Labour Institute  
Ahmedabad**

**(The findings, interpretation, and conclusions expressed here are those of the  
author's and do not necessarily reflect the view of the Mahatma Gandhi Labour  
Institute he represents)**

# **Organizing the Unorganized Women Workers for Green Livelihood: A Case Study of Self Employed Women's Association, Gujarat, India**

**Sarbeswara Sahoo<sup>1</sup>**

## ***Abstract***

*Global Warming and Climate Change are two pressing problem the globe face right now. Around the world enormous debate is going on how to fight climate change and adapt it. Tackling climate change requires a collective effort from the Government of members' country, Corporate Sectors, Citizens, Civil Society and Trade Unions both in the formal and informal sector. There is little discussion on how the informal workers and specifically women informal workers can contribute positively to mitigate climate change and eke a livelihood by way of doing that. Present paper tries to examine the role of informal women workers in a developing economy like India in fighting climate change with the help of a case study of Self Employed Women's Association, Ahmedabad.*

Climate change refers to a statistically significant variation in either the mean state of the climate or in its variability, persisting for an extended period (typically decades or longer). Climate change may be due to natural internal processes or external forcings, or to persistent anthropogenic changes in the composition of the atmosphere or in land use.<sup>2</sup>

Until now it has not been found life in any other planet than Earth .Life has been possible on the earth only because of the atmosphere maintaining a balanced in the temperature that is not too extreme. But this balance can be disturbed through human action that will have serious implication on the biodiversity and humans.Unbridled industrialization during last few centuries has resulted in the much discussed global warming and climate change. How this happened? The physics of the "greenhouse effect" has been a matter of scientific fact for a century. CO2 is a greenhouse gas that traps the Sun's radiation within the troposphere, the

---

<sup>1</sup> Asst. Professor (Economics), Mahatma Gandhi Labour Institute, Drive-in Road, Memnagar, Ahmedabad, Gujarat, India, Pin - 380052, Email - mgliahmedabad@gmail.com

<sup>2</sup> <http://envfor.nic.in/cc/what.htm>

lower atmosphere. It has accumulated along with other man-made greenhouse gases, such as methane and chlorofluorocarbons (CFCs).

If current trends continue, we will raise atmospheric CO<sub>2</sub> concentrations to double pre-industrial levels during this century. That will probably be enough to raise global temperatures by around 2°C to 5°C. Some warming is certain, but the degree will be determined by feedbacks involving melting ice, oceans, water, clouds and changes to vegetation. Researchers blame it to the greenhouse gas (carbon dioxide, methane, nitrous oxide, water vapour, ozone) are being added in excess to the atmosphere. The atmospheric concentrations of carbon dioxide, methane, and nitrous oxide have grown by about 31%, 151% and 17%, respectively; between 1750 and 2000 (Intergovernmental Panel on Climate Change 2001). It has been reported that over a period of 140 years the temperature of the earth has been increased by 0.6°C.

An increase in the levels of GHGs could lead to greater warming, which, in turn, could have an impact on the world's climate, leading to the phenomenon known as climate change. Indeed, scientists have observed that over the 20th century, the mean global surface temperature has increased by 0.6°C (ibid.). They also observed that since 1860 (the year temperature began to be recorded systematically using a thermometer), the 1990's have been the warmest decade. (IPCC).

Changes in Global temperature had severe implications. Warming leads to melting glaciers and precipitation are causing some rivers to overflow, while evaporation is emptying others. Diseases spread, some crops grow faster while others are affected by diseases and drought. Strong hurricanes are becoming more frequent and destructive. Arctic sea ice is melting faster every year, and there are growing fears of a shutdown of the ocean currents that keep Europe warm for its latitude. Clashes over dwindling water resources may cause conflicts in many regions. As natural ecosystems such as coral reefs are disrupted, biodiversity is reduced. Most species cannot migrate fast enough to keep up, though others are already evolving in response to warming. Thermal expansion of the oceans, combined with melting ice on land, is also raising sea levels. In this century, human activity could trigger an irreversible melting of the Greenland ice sheet and Antarctic glaciers. This would condemn the world to a rise in sea level of six

metres - enough to flood land occupied by billions of people. There is a longstanding view that the impacts of Global Warming are being felt by those least responsible for it. It is the poor of the poorest nations of the world are affected by the negative impact of climate change.<sup>3</sup>

Although there was a beginning of discussion on the nitty-gritty of science of climate change way back to 1970s when series of studies by the US Department of Energy increases concerns about future global warming.<sup>4</sup> In the year 1988 UN sets up the Intergovernmental Panel on Climate Change (IPCC) to study the causes and consequences of global warming and climate change. Since then the issue of climate change has been taken seriously throughout the globe and policy discussions are held regularly to tackle climate change. In order garner support and increase awareness about global warming, climate change and sustainable development popularly known as Earth summit was held at Rio-de-Janeiro from 3rd June to 14<sup>th</sup> June 1992. Subsequent earth summits were held at Johannesburg, Copenhagen and Cancun. Further we are observing World Environment Day, and Earth Hour to spread awareness about the vagaries of climate change. Now there is a talk about green economy, green living, green jobs and green livelihood to propagate the idea of sustainable development. Series of seminars, discussion and formation of institutions to combat climate change has generated enormous interest among Central and Regional Government, NGOs and Community based organization, Trade Unions to combat challenges posed by Climate Change and Global Warming.

India is one of the leading countries in the world to spearhead the climate change movement despite being a developing country. It has contributed significantly in policy making, institutions building and spreading awareness on the issue of climate change. The Intergovernmental Panel on Climate Change headed by an Indian Dr, Rajendra K. Pachauri along with former Vice President of United States of America Al Gore has been awarded the “Nobel Peace Prize” for the year 2007 for their contribution to climate change mitigation. Government of India has appointed the Ministry of Environment and

---

<sup>3</sup> Where have all the seasons gone? Current impact of climate change in Gujarat, Delhi Platform, Gujarat Agricultural Labour Union (GALU), International Union of Food workers (IUF), May 2011

<sup>4</sup> <http://www.newscientist.com/article/dn9912-timeline-climate-change.html?full=true&print=true>

Forest as the Nodal Agency for climate change cooperation and global negotiations. It is also the nodal unit for coordinating the National Action Plan on Climate Change.<sup>5</sup> The Government of India hosted the 8th Conference of the Parties to the United Nations Framework Convention on Climate Change (UNFCCC) from 23rd October to 1<sup>st</sup> November 2002 at New Delhi. There as a National Consultation Workshop on State Action Plans on Climate Change.<sup>6</sup>

India is emerging both as an economic powerhouse and a global environmental leader. As India's economy charges ahead, the country needs to produce more energy to provide a better life for its people, many of whom live in rural areas and are very poor. At the same time, India has recognized that tackling climate change is in its own national interests. The nation is taking concrete measures to constrain it's own emissions and to protect its people from climatic disruptions. The Natural Resources Defense Council (NRDC) India Initiative on Climate Change and Clean Energy, launched in 2009, works with partners in India to help build a low-carbon, sustainable economy.<sup>7</sup> Further industrial association like Confederation of Indian Industries, Federation of Indian Chambers of Commerce and Industries, Assocaham has initiated several measures to combat climate change. Besides this national level NGOs, Research Institutes and Trade Unions are making their level best to fight against climate change. The Indian Trade Union Movement, in particular the Indian National Metalworkers Federation (INMF) and the Steel Metal & Engineering Workers' Federation India (SMEFI) are proving to be a positive force in tackling the development and climate change challenges facing India.<sup>8</sup>

Not only the central government but also several state governments in India are also thinking seriously on the issue of negative impact of global warming and how to handle it.

---

<sup>5</sup> [moef.nic.in](http://moef.nic.in)

<sup>6</sup> National Consultation Workshop on Preparation of State Level Strategy and Action Plan on Climate Change, New Delhi, August 19, 2010

<sup>7</sup> <http://www.nrdc.org/international/india/>

<sup>8</sup> <http://www.imfmetal.org/index.cfm?c=26885&l=2>

Gujarat one of the fastest Growing economies in India in terms of Industries and agriculture .Gujarat is in one of the pioneering state in formulating policies to tackle climate change. This is because the state is vulnerable to climate change as it has a 1600 kms of coastline and if glacier melts then many area of the state will submerge into the sea and further sea water may also enter to may low lying area of the state. As the economy is largely port based Katrina kind of cyclone may bring irreparable damage to the state. The economy is further prone to drought, cyclone and earthquake and their frequency may increase as a result of to climate change. There are few observations regarding evidences of climate changes in some part of the Gujarat Economy. Impact of climate change has been felt in some sectors of Gujarat economy. A recent report prepared jointly by Delhi Platform, International Union of Foodworkers (IUF), along with the Gujarat Agricultural Labour Union (GALU) states that Global Warming has a considerable impact on the small and marginal farmers of north and eastern Gujarat. The respondents shared their observation about changes in climate and seasons over the last 20 years. They include a rise in winter temperature and a consequent loss of dew (atmospheric moisture) for the winter crops; irregularity in rainfall; delays in the main southwest monsoon and a decline in rains in June; more intense rainfall events, a lot of rain in fewer days; patchiness in rainfall over a region; and a rise in summer temperatures and heat. Such changes has several implications for the small and marginal farmers and the agricultural labour. For instances crop failure due to climate change can be a disaster for the small and marginal farmers and can plunge them into a cycle of debt, or into forced migration to factories or construction work in Western and South Gujarat. For sharecroppers (*bataidars*) and agricultural workers in Gujarat (and elsewhere in India), the impacts of climate change means a serious loss of work and wages. In North Gujarat for instance, the damage to the cotton crop meant a loss of about 30-40 days' work per agricultural worker, or about Rs 4,000 per worker, a big setback to households in which more than one member engages in agricultural labour. <sup>9</sup> It has also been observed by some administrators that there is a changing pattern of rainfall in Gujarat since 1987. The British collectors, it was clear that Saurashtra and Kutch regions of Gujarat have always

---

<sup>9</sup> 'Where Have All the Seasons Gone? Current Impacts of Climate Change in Gujarat'

[http://climatechangewater.org/page3/files/2011\\_v\\_9h.php](http://climatechangewater.org/page3/files/2011_v_9h.php)

been rain deficient. The average rainfall was around 20 inches per annum. Even that failed many times as the entire region was subjected to harsh conditions caused by scarcity. There was report of frequent drought and water scarcity in most of part of saurashtra and kutch. This may be one reason why people from this region migrated to Africa, Australia, and other regions. Similarly *Maldharis* too made regular seasonal migrations to greener pastures of Gujarat along with their livestock. But since 2001 rainfall in these regions are sufficient and there was no scarcity of reported from this region. Agriculture has done better and there is increase in green vegetation. The changing rain patterns in Gujarat may be syndromes of climate change faced locally.<sup>10</sup> In another study by Rajib Shaw et.al (2005) reported that in past forty years, Gujarat has experienced 12 years of drought, and four major scarcity situations. However, the intensity and return period of major drought events have increased substantially in last couple of decades, and it is often correlated to the climate change impacts.<sup>11</sup>

Another report to be released by Gujarat State Disaster Management Authority (GSDMA) says that the temperature will rise by 2-4° celsius in Ahmedabad, Vadodara and Valsad while in other districts; it will shoot up by 2-3 °degrees Celsius. The report says Ahmedabad will face exceptional rise in energy consumption due to increased temperature and will be hit by floods and vector-borne diseases. Coastal districts like Surat, Bharuch, Bhavnagar, Jamnagar, Kheda, Anand, Rajkot and Valsad will face sea coast erosion, ecological damage; loss of saltpans, frequent crop failures etc. Kutch will face more frequent cyclones and floods while Mehsana and Patan will face serious changes in crop pattern. It says the number of days when temperature will cross 45° celsius will increase in the coming decades.<sup>12</sup>

---

<sup>10</sup> Guru Prasad Mahapatra (2011): *Saurashtra*: Face of changing climes, Daily News Analysis, Ahmedabad, 24<sup>th</sup> July 30, 2011

<sup>11</sup> Rajib Shaw ,SVRK Prabhakar, Ayako Fujieda (2005) ; Community-level Climate Change Adaptation and Policy Issues Inter-linkages of Environment, Poverty and Livelihood A Case Study from Gujarat, India United Nations University, Kyoto ,Japan

<sup>12</sup> Rising sea, killing heat... study gives a scary picture,  
[http://www.expressindia.com/story\\_print.php?storyId=824586](http://www.expressindia.com/story_print.php?storyId=824586)

The Gujarat province of Indian sovereign has already has large number of innovating government projects and policies related to economic development to their credits. Has established a separate department known as the Climate Change department for the first time by any regional government in the Country. To quote the state portal “Managing Climate Change is a major challenge to humanity. To tackle it, Gujarat has established a separate Department for Climate Change. This Initiative by Gujarat Government is a trendsetter not only for India but for the whole of Asia as it is the “First in Asia” with a Department for Climate Change. It is the only 4th State in the World to have a Department for Climate Change.” Recently Chief Minister of Gujarat, Shri Narendrabhai Modi has meticulously written a book showing Gujarat government’s seriousness about the issue of climate change and the initiatives that were being taken and the future action plans with reference to climate change mitigations.<sup>13</sup> The concern for climate change in Gujarat is indeed important for the reason that Gujarat’s industrial growth is quite high and most of the industries are using coal based energy although there is a larger interest towards solar and wind energy. Recently Government of Gujarat has inaugurated a 10 MW solar photovoltaic power plant at *Khadoda* village, of *Sabarkantha* district in the month of June 2011.<sup>14</sup> Apart from this government also has worked significantly to promote wind energy in the State. Gujarat has an estimated coast line of 1600 KMs and having a strong winds. Gujarat has been at the forefront of development of wind energy in the country, with over 1,000 MW of wind turbine capacity installed across the state.<sup>15</sup>

In Gujarat State, besides the government, there are many Community Based Organization, Non-Government Organization, Civil Society Organization, University, and Research Institutions and of course Trade Unions working on the issues of climate change and how to combat climate change without compromise the economic need of the citizens. To name few the Self Employed Women’s Association Ahmedabad, The Centre for Environment Technology and Planning (CEPT) University, Centre for Environment Education (CEE),Gujarat Ecology Commission, Gujarat State Disaster Management

---

<sup>13</sup> Narendra Modi(2011) , ‘Convenient Action’, Gujarat’s Response to challenges of Climate Change, Macmillan

<sup>14</sup> <http://deshgujarat.com/2011/06/10/24130/>

<sup>15</sup> [http://www.suzlonfoundation.org/pdf/suzlon\\_gujarat\\_partnerships.pdf](http://www.suzlonfoundation.org/pdf/suzlon_gujarat_partnerships.pdf)



Authority (GSDMA), Sadguru Foundation Dahod, Gujarat Agricultural Labour Union etc. The initiatives of SEWA however is unique. Because unlike a typical Non Governmental Organization (NGO) it is a membership based organization and work only for the poor women. This is the largest organization working for the poor informal women workers in India as well as the world. Women are self employed and attached to different trades for employment and livelihood. It has been found that most of these trades are eco-friendly. During last few years SEWA has taken few initiatives specific to Green Livelihoods both in rural area as well as urban area. The broad objective of the present paper is to documents the Green Livelihood initiatives of SEWA with the help of few case study in the stat of Gujarat .The objective of the papers are to study and understand the following;

1. Meaning and Importance of Green Livelihood in the context of Climate Change
2. To understand the structure and profile of Self Employed Women's Association and it's contribution toward the informal economy and informal women workers.
3. Study the background of Green Livelihood Initiatives of SEWA. In this context the study tries to understand the initiatives under the following head;
  - a) Urban Area: Waste Pickers and Green Livelihood
  - b) Rural Area: i) Smokeless Green Cook Stoves ii) Solar Lantern iii) Nursery, Tree Plantation, Forestry, Ecotourism, Watershed Management, Organic Farming and Ecotourism
- 4) Challenges in organizing the informal women workers and the ways out

### **Green Economy and Green Livelihood**

It has been agreed that it is due to emission of smokes out of energy uses by Industries in the form of Fossil Fuels, by Public and Individual Trasport, Electricity etc. there is a rise in temperature creating and instability in the environment. This can be best fought by adopting eco friendly life or thriving towards a green economy. According to United Nation. "Greening the economy refers to the process of reconfiguring businesses and infrastructure to deliver better returns on natural, human and economic capital investments, while at the same time reducing greenhouse gas emissions, extracting and using less natural resources, creating less waste and reducing social disparities". Green

Livelihood refers to a process where the individual earn a livelihood while contributing positively toward the environment. According to UNEP green jobs reduce the environmental impact of enterprises and economic sectors, ultimately to levels that are sustainable. The report defines “green jobs” as work in agriculture, industry, services and administration that contributes to preserving or restoring the quality of the environment. Sources of green jobs will be found out from the following table;

**Table: 1:**  
**Sources of Green Livelihood**

<b>Energy Supply</b>	Integrated gasification/ carbon sequestration
	Co-generation (combined heat and power)
	Renewables (wind, solar, biofuels, geothermal, small-scale hydro); fuel cells
<b>Transport</b>	More fuel-efficient vehicles
	Hybrid-electric, electric, and fuel-cell vehicles
	Car-sharing
	Public transport
	Non-motorized transport (biking, walking), and changes in land-use policies and settlement patterns (reducing distance and dependence on motorized transport)
<b>Manufacturing</b>	Pollution control (scrubbers and other tailpipe technologies)
	Energy and materials efficiency
	Clean production techniques (toxics avoidance)
	Cradle-to-cradle (closed-loop systems)
<b>Buildings</b>	Lighting, energy-efficient appliances and office equipment
	Solar heating and cooling, solar panels
	Green buildings (energy-efficient windows, insulation, building materials, heating, ventilation and air-conditioning)
	Passive-solar houses, zero-emissions buildings
<b>Materials Management</b>	Recycling
	Extended producer responsibility, product take-back and remanufacturing
	Durability and reparability of products
<b>Retail</b>	Promotion of efficient products and use of eco-labels
	Store locations closer to residential areas

	Minimization of shipping distances (from origin of products to store location)
	New service economy (selling services, not products)
<b>Agriculture</b>	Soil conservation
	Water efficiency
	Organic growing methods
	Reducing farm-to-market distance
<b>Forestry</b>	Reforestation and afforestation projects
	Agro forestry
	Sustainable forestry management and certification schemes
	Halting deforestation

Adapted From: Green Jobs - Towards Decent Work in a Sustainable, Low-Carbon World, UNEP/ILO/IOE/ITUC, September 2008

Green jobs generated on the said sectors described above can be formal as well as informal nature. For example the job of recycling in the material management sector, as well as the agriculture would be more of informal nature. Informal employment is defined as a situation where the workers do not have employment, social and health security and they do not receive any kind of social security benefits. The labour laws protecting the right of the organized workers are not applicable to them. Now there is a serious emphasize on creation of green jobs to achieve the dual objectives of sustainable economic development without harming the interest of future generation. Sewa's Green Livelihoods initiative aims to focus on developing eco-friendly skills, technologies and tools, renewable energy and green rural infrastructure involving Women from the informal sector across India.<sup>16</sup>

### **Self Employed Women's Association (SEWA) and Informal Workers**

SEWA is a membership based organization comprised of informal women workers .Its head office is located at Ahmedabad district of Gujarat. Gujarat is located at the western part of India having 26 districts. It is one of the fast growing States of India. According 2011 census Gujarat has a population of more than 6 crore and Ahmedabad

<sup>16</sup> SEWA unveils Green Livelihoods initiative, DNA Ahmedabad, January 16, 2011

has a population of more than 60 lakhs. As shown in the map it is located on the western part of India. In terms of economic and industrial growth it is placed at 2<sup>nd</sup> position next to Maharashtra.

**Map: 1 Location Map of Gujarat**

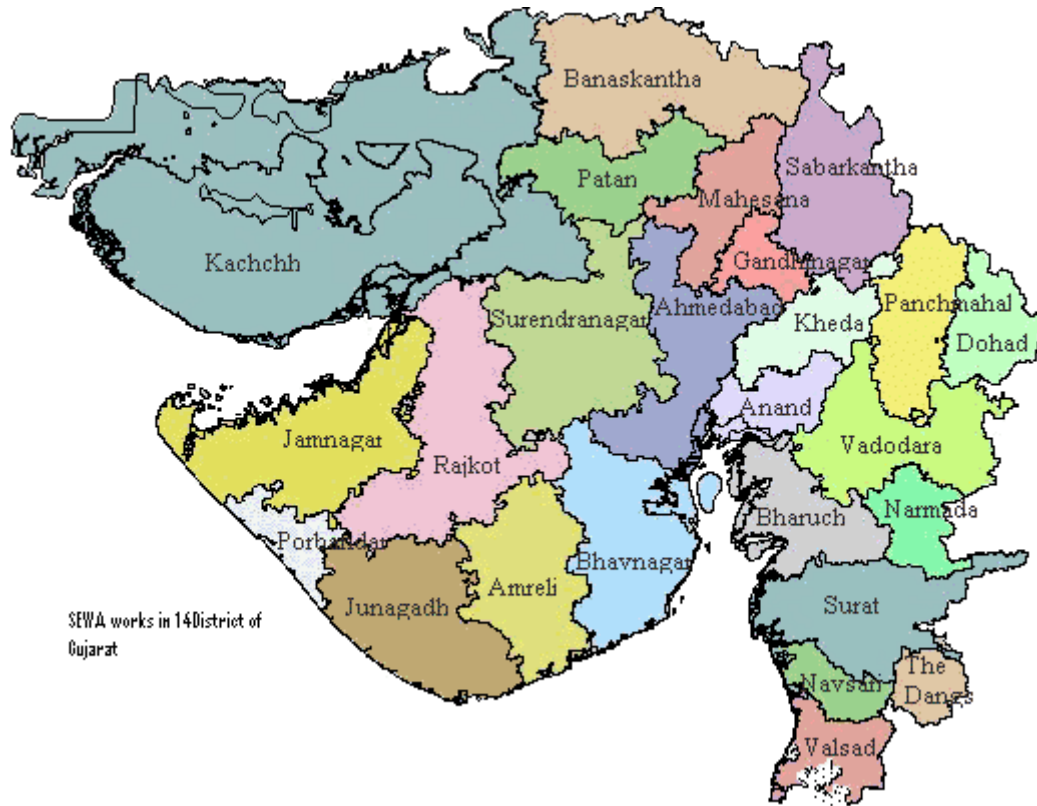


SEWA is the largest trade union in India in the informal sector with having a membership of more than 12 Lakhs. Right now It is working in 14 district of Gujarat, covering 50% of the state 7 states of India and in countries around the world like South Africa, Yemen and Turkey. It is planning to add another 13 lakhs women workers to it's fold soon.

**Work Area of SEWA in Gujarat**

In Gujarat right now there are 26 Districts and 226 Talukas (Blocks) as said earlier SEWA works in 14 districts of Gujarat that is more than 50% of the total area. The districts where SEWA has a presence are Ahmedabad, urendranagar, Kutch, Patan, Mehsana, Kheda, Anand, Vadodra, Surat etc.

**Map:2 Location Maps of Districts of Gujarat**



**SEWA’s Membership Profile**

Rudiben was the first member to be enrolled with of the SEWA that started in the year 1972 and without her contribution the ever increasing SEWA would not have reached to the present stage. In the year 1972 SEWA’s membership was just 1070 and that has increased to 12 lakhs<sup>17</sup> (1.2 million) in 2009. The detail profile of it’s membership will be clear from the following table.

**Table: 2**  
**SEWA – All India Membership year 2009**

State	Membership
Gujarat	6,31,345
Madhya Pradesh	5,02,040
Uttar Pradesh	56,130
Delhi	28,024

<sup>17</sup> 10 Lakhs = 1 million

Bihar	19,000
Rajasthan	15,258
West Bengal (Murshidabad Only)	2,359
Kerala	2,000
Uttarakhand	788
Total	1256944

Source: [http://www.sewa.org/Twenty\\_Fith\\_Issue.asp](http://www.sewa.org/Twenty_Fith_Issue.asp)

In terms of membership enrolment Gujarat is the leading one having a total membership of 6, 31,345 in India.

### **Table: 3**

#### **Gujarat Membership- Rural-Urban 2009**

Main Categories of Workers	No. of Women	Percentage of total Membership
Urban	230184	34.46
Rural	401161	63.54
Total	631345	100.0

Source: [http://www.sewa.org/Twenty\\_Fith\\_Issue.asp](http://www.sewa.org/Twenty_Fith_Issue.asp)

From the above table it is clear that SEWA have a membership more in rural area than the urban area. Members represent more than 125 different kinds of trades. There are about 3500 local producers groups and 9 Economic Federation.

The members are broadly divided into four categories like;

- Home based workers
- Vendors or Hawkers
- Manual laborers
- service providers and Producers

### **Goals of SEWA**

SEWA's main goal is to organize women workers for full employment and self reliance. Full employment means employment whereby workers obtain work security, income security, food security and social security ( at least health care, child care and shelter).By self-reliance we mean that women should be autonomous and self reliant,

individually and collectively, both economically and in terms of their decision making ability.<sup>18</sup> To promote its goals SEWA pursues a mix of what it calls ‘struggle’ and ‘development’: that is, unionizing activities to address constraints and demand change and development interventions to promote alternative economic opportunities.<sup>19</sup>

SEWA in order to pursue and achieve its goals have devised 11 questions or the eleven point strategy as follows;

- ❖ Employment: Have the members obtained more employment?
- ❖ Income: Have the members income has increased?
- ❖ Ownership: Do they have more assets in their name?
- ❖ Nutrition: Are they and their families are better nourished?
- ❖ Health Care: Do they and their families have access to better health care?
- ❖ Housing: Do they have improved or more secure housing?
- ❖ Child Care: Do they have access to child care, if needed?
- ❖ Organized Strength: Has the organizational strength of the organizations members has increased?
- ❖ Leadership: Have more and stronger leaders emerged from our membership?
- ❖ Self-Reliance: Have they become more self-reliant both individually and collectively?
- ❖ Education: Has the education of our members (and their children) improved?

### **Approach of SEWA**

SEWA’s approach is demand driven .They discuss with the members and try to assess their problem and find out the need. And given the budget constraint, skill appropriate livelihood improvement and social security programmes are started. Because experience shows that supply driven schemes or approach are taken for granted by the beneficiaries and are marred by failure. To quote Reema Nanavati “SEWA’s approach to organizing is a need based and demand driven approach. It identifies the needs and issues of the

---

<sup>18</sup> [www.sewa.org](http://www.sewa.org)

<sup>19</sup> Martha Alter Chen, Ruchi Khurana, Nidhi Mirani (2004), ‘ Towards Economic Freedom: The impact of SEWA, Published by SEWA, Ahmedabad

communities and links them up with government programmes & schemes rather than creating parallel programmes. This helps in leveraging government resources and also policy action. In addition to this, provision of need based and demand driven services like banking, insurance and health care led to expansion and growth of the organization and new membership.”<sup>20</sup>

### **Structure of SEWA**

In order to materialize the goals and answer the 11 questions SEWA has devised a two tier structure represented by it’s grass root members as follows;

- **The trade council:** It is elected by the members of each of the trades such as salt workers, handicraft workers, dairy groups and so on in the ratio of 1 representative per 100 members. In addition, and in parallel to the general trade council, each trade had it’s own trade committee with 15 to 50 members, that met monthly to discuss specific trade-related problems and solutions. All trade council members were also members of their respective Trade Committees.
- **The Executive Committee:** The Executive Committee consists of 25 members was elected every 3 years by the Trade council. Representation on the Executive Committee reflected the promotion of the membership. The office bearers of the trade council were elected from among the Executive Committee members.<sup>21</sup>

### **Sister Organizations of SEWA**

SEWA over a time period of 39 years since 1972 has created a large number of institutions within and outside Gujarat to work for the improvement of life of the scores of informal women workers. It has grown like a banyan tree where in so many roots emerged from the branches of the original tree so that it become difficult to find out which is the original root. SEWA has created the following institutions over a period of 4 decades;

---

<sup>20</sup> Reema Nanavaty, “ Empowerment through Mobilization of Poor Women on a Large Scale; A Case Study on Self Employed Women’s Association (SEWA), India

<sup>21</sup> Verhagen Joep (2004) ‘ SEWA’s Water Campaign’ ,IESE and the World Bank



- SEWA Union (Swashree Mahila SEWA Sangh): Recruits and Organises SEWA's urban and rural membership and organizes campaigns around issues of concern to its membership.
- SEWA Bank (Shri Mahila SEWA Sahakari Bank Ltd.): Provides financial services.
- SEWA Cooperative Federation (Gujarat Mahila SEWA Cooperative Federation): Responsible for organizing and supporting women's cooperatives.
- SEWA District Associations: Provides services to SEWA- organized village groups and link members to SEWA for other services.
- SEWA Social Security: Provides health care, child care and insurance services.
- SEWA Academy: Provides research, training and communication services.
- SEWA Marketing (Gram Haat and Trade Facilitation Centre) :Helps women producers ,through their cooperatives, associations and groups to directly reach either local,domestic,or international markets.
- SEWA Housing (Gujarat Mahila Housing SEWA Trust): Provides housing and infrastructure services. ( Chen M. et.al. 2004)
- SEWA Video: Prepare documentary by it's own member for education and training purposes.
- SEWA Bharat: It is the national body of SEWA looking after SEWAs activities outside Gujarat.
- SEWA ICT: Aim of SEWA-ICT is how to use ICT by the informal workers to improve their livelihood.SEWA has been using Technology for its grass roots producers to enhance their livelihoods and trade.<sup>22</sup>
- Sewa Sanskarkendra: It's aim is to build the capacity of rural women workers through awareness programme.There is one sanskara Kendra for a cluster of 15 village.<sup>23</sup>
- SEWA Nirman is initiated to improve the social security and livelihood of women construction workers in the informal sector.

---

<sup>22</sup> [www.sewaict.org](http://www.sewaict.org)

<sup>23</sup> [www.sewasanskarkendra.org](http://www.sewasanskarkendra.org)

- Shri Mahila SEWA Anasooya Trust: It was started in 1982. The aim of Anasooya is to share the view point; idea and experience that emerged from the work of SEWA. This information is useful for the policy makers, researchers.
- Sewa Eco Tourism : Under this project SEWA has started an Eco-tourism project by converting a 10 acres waste land at Ganeshpura. This is one of the case study on Green Livelihood initiatives of SEWA for this paper
- Hansiba : Is brand name of SEWA trade facilitation centre involved in promoting production related to traditional embroidery .It is launched by more than 15000 women and rural artisan producing pure handicraft.
- Sewa Kalakruti: It is a cooperative involves in marketing product of artisans and save their hard earned money from the middlemen.
- *Saundrya Safai Mandali*: It is a cooperative of women *safai karmcharis* (women involved in house keeping and cleaning). This cooperative organizes the women *safai karmcharis* and provide them livelihood by taking up government contract for cleaning office premises.
- Home net South Asia: It is a network of organization present in several countries including India. The aim of the organization is to empower the homeworkers realize their economic, political, and social rights through the strengthening of own organizations and networks, the improvement of their working and living conditions, the enjoyment of income and employment security, including social protection, and participation in governance related to homeworkers' concerns.<sup>24</sup>

To summarize over a period of four decades SEWA has grown significantly and is still thriving constantly bring new members to its fold. As a result of globalization all over the world the formal or the organized sector employment has gone down considerably and as result more and more people are likely to join the informal sector. Getting a sustainable livelihood and minimum social security will be a big challenge for the workers and their family members in the informal sectors. Women members traditionally were worked for house hold cores; but now from the initiatives of SEWA

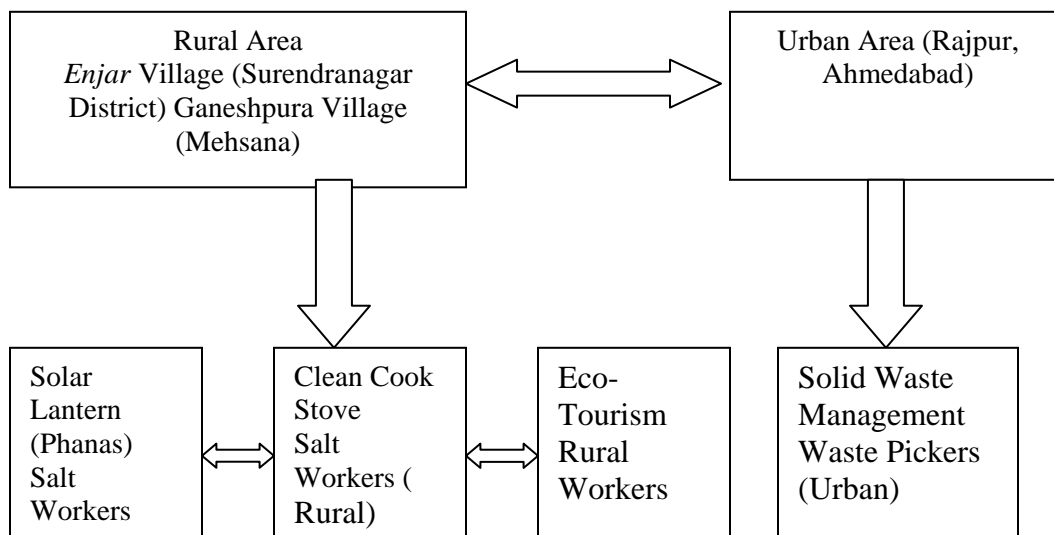
---

<sup>24</sup> <http://www.homenetseasia.org/intro.html>

has realized that women can contribute significantly towards improving the quality of life of its own family members as well as contribute positively towards the National GDP. They if mobilized properly also can help in mitigating the challenge posed by Global warming through their work and employment. strong leadership with a vision, inclusive character ,hard work ,dedication and team work are some of the factors that has helped SEWA to build trust among the government both state and central, funding agencies ,other trade unions and civil society. It has successfully achieved the goals it has put forth. In the next section we shall SEWA’s recent initiatives on Green Livelihood with help of a few no of case studies.

### Methodology of the Study

In order to understand the initiatives of Green Livelihood by SEWA the study has primarily follow the existing secondary literature available on the websites as well as printed literature. The study also has drawn lot of inputs on green livelihood from the documentary produced by SEWA. In order to understand more about the initiatives on Green Livelihood and the existing status of the strategy and the outcome I have done few group discussion along with the informal women workers associate with the project. In order to get a scientific insight I have followed the following method to make the study. I have chosen both urban as well as rural informal workers for group discussion as follows.



One of the green livelihood initiatives is the use of solar lantern and clean cook stove among the rural workers. I have specifically chosen the salt workers because they need the solar lantern the most as well as the clean cook stove. However these two items are decided to be distributed among all the members of SEWA living in rural areas. The clean cook stove project is now under experimentation. In order to understand the other green livelihood initiatives like tree plantation, organic farming, vermicomposting water conservation and eco-tourism I have made a group discussion at Ganeshpura Village of Mehshana District. In the Urban area study shows that the municipal waste contribute significantly to green house gases and the informal waste pickers through the three Rs (Reduce, Reuse and Recycle).SEWA also organizes the informal women waste pickers for their livelihood improvement.Inorder to understand their contribution to climate change, I have made a focused group discussion with informal women waste pickers of Ahmedabad.Besides that I have also had a one to one discussion with few of the executives of SEWA and incorporated the inputs in the study.

### **Group Discussion: 1**

This discussion was done with few executives of SEWA, at SEWA Gram Haat, Navarangpura, Ahmedabad.They shared how the concept of green livelihood evolved.

To reiterate the green livelihood movement of SEWA is a culmination of SEWA's livelihood initiatives spread across number of trades that are basically eco-friendly. They contribute positively towards the environment. They contribute towards a reeducation in green house gas emission.SEWA started campaigning on then issue of women water, forest.It is believed that gender has a larger role to play towards sustainable development. It is the women who are victim of climate change. They have to walk a long distance in rural area to collect water if there is drought. The water shortage not only denied a major part of SEWA's members ,and their families,the basic right to safe drinking water ,but also hampered women in achieving full employment and economic self reliance the *leitmotiv* of all of SEWA's activities.( ibid. Verhagen Joep 2004).They also have to walk a long distance to collect fuel wood if there is deforestation.2/3<sup>rd</sup> of SEWA member's lives in the rural area and sizeable chunks work as small farmer as well as agricultural labourer, forest worker. One of the major focuses

of SEWA is to provide an identity and hence self respect and dignity to the workers. In order to do that SEWA provide Education and Training on Technical, Managerial and Financial issues .SEWA try to create an owner and manager in the worker. On technical issue SEWA tie up with technical and management institute like Indian Institute of Management, National Institute of Design, Anand Agricultural University etc.They train the workers and help improving their skill.

### **Four Pillars of SEWA**

- a) Organise
- b) Capacity Building
- c) Credit Linkage
- d) Market Linkage

There are around 1.5 lakhs members working in the field of water, forest, agriculture, and energy and in the year 2005 SEWA started a campaign on Green Livelihood. Employment generation in the one hand and protecting the environment on the other hand. The issue of Green Livelihood became more important in the year 2007-08 because of Global Economic Melt Down or Economic Recession. On the one hand we are producing excess by damaging the environment for which there is no market. Poor informal workers get a livelihood in the process of managing the environment and SEWA in all their Trade Committee focus on the issue of Green Livelihood. They sensitize the informal women workers known as *behenes*<sup>25</sup> on the issues of Global Warming, Climate change and how they are going to affect the life of poor in general and women in particular. Around 300 women members from 9 districts of Gujarat sat together after the Copenhagen Summit to discuss about the effect of Climate change and their experience with climate change and how to tackle them. What are the alternatives available so that income can be generated as well as environment can be protected.

### **Initiatives of SEWA**

SEWA found that house hold spends 30% of their income on fuel wood and Kerosene in rural area. Even in urban area poor people use kerosene for cooking purposes.In order to supply fuel wood forests are being cut. Collecting fuel wood as well

---

<sup>25</sup> Widely used by sewa executives for the poor informal workers *behenes* a Gujarati word means Sister.

as cooking food is done by the female members in our society. In order to collect they have to walk a long distance and cut them and carry them back on their head. They lose employment in this process as well as all these activities have negative impact on their health as well as environment. Fuel woods are used in traditional stoves known as *chula's* that emits smokes. The female members assigned the task of cooking pump air through an iron or bamboo pipe for inflammation. In rainy season when wood are wet they have to put a lot of pressure on their lungs to cook food. It has therefore enormous impact on health of the women workers while collecting the wood and loading on head as well as burning it while cooking. They have to bear all the health related problems. Studies shows that Indoor biomass cooking smoke is associated with a number of diseases, including acute Respiratory illnesses and even cancer, with women and young children affected disproportionately. It is estimated that smoke from cooking fuels accounts for nearly 2 million deaths annually (WHO and UNDP 2009).<sup>26</sup> Using traditional biomass stoves for household cooking in developing countries requires extensive local fuel collection and is linked to local environmental problems. Open fires and primitive stoves are inefficient at converting energy into heat for cooking; the amount of biomass cooking fuel required each year can reach up to 2 tons per family. (ibid. World Bank 2011 p.p.ix). There is mounting evidence that biomass burned inefficiently contributes to climate change at regional and global levels, suggesting that the climate change debate needs to take household energy issues into consideration. In developing countries, about 730 million tons of biomass are burned each year, amounting to more than 1 billion tons of carbon dioxide (CO<sub>2</sub>) emitted into the atmosphere. Other products of incomplete combustion and climate forcers further exacerbate the problem. (ibid).SEWA's experiment with clean cookstoves known as *nirdhum chulas* (smokeless cookstove) goes back to the year 1986. Realizing the danger of traditional cookstoves SEWA has taken up the task of finding clean cooking stove for its member that will help them to earn a livelihood. The members will work as marketing executive and sell the cook stove among the members. By way of this they can help to have clean environment and better health for their own members as well as earn few rupees in this process. 2 lakh Chula and 2 lakh

---

<sup>26</sup> Household Cookstoves, Environment, Health, and Climate Change, a new look at an old problem (2011), The World Bank, [www.worldbank.org/climatechange](http://www.worldbank.org/climatechange)

lantern are targeted to be sold among SEWA members. They will be assembled by the members, installed by the members as well repaired by the members. By way of this it will generate significant amount of livelihood.

From the group discussion it was understood that there is a change in climate and its impact were felt by the members and understood that the burden will fall upon poor informal and rural worker. Climate change is a big challenge for them on the one hand and on the other hand in order to adapt the climate change creates employment opportunities also. By clubbing the campaigns related to Water, Forest, Agriculture and Energy since 2005, SEWA started the Green Livelihood or *Hariyali Rojgar* in the local parlance in the year 2005. Since then in all the trade committee meeting and other meetings of SEWA effort was made to spread the message of Green Livelihood among the members. If alternative source of green livelihood is provided then time will be saved as well as health can be improved. In 2010 to explore new ideas regarding green livelihood, SEWA had organized a national seminar on Green Livelihood at Ahmedabad Management Association.

While in discussion with SEWA executives reported that SEWA has taken up several initiatives under Green Movement and Green Livelihoods. The green livelihoods at SEWA comprise of forestry, vermiculture, water harvesting, operations and maintenance of water resources and rural infrastructure. This green energy and green livelihood campaign led to an annual income of Rs. 1175 million for 1,39,685 members. In the coming 5 years SEWA wishes to have 25,000 young green entrepreneurs which would help create 2 lakh green livelihoods.<sup>27</sup>

Another area where SEWA has worked is promoting vermicompost and use of Organic farming which has a positive impact on environment. The member can earn a good income from supplying Vermicompost for organic farming to the 2,65,000 small and marginal farmers associated with SEWA.

SEWA by inviting expert from among these fields trained the women workers on issues like water testing technology, forestry and growing nursery and grafting of plants,

---

<sup>27</sup> Green Rural Livelihood strategy of SEWA: [www.sewa.org/Twenty\\_Fifth\\_Issue.asp](http://www.sewa.org/Twenty_Fifth_Issue.asp)

seed production. This helps the members to contribute towards forestation as well as generating employment form selling the plants.

Water conservation through watershed development contributes positively toward the environment and ecology. SEWA has constructed 4000 small water harvesting structure in Gujarat. This helps the members to save time in collection of potable water. SEWA has started the bio-gas plant to prevent lung diseases from its members because of burning of cow dungs cakes. To address this issue SEWA has constructed 145 Bio gas plants in Kutch district of Gujarat. This has control smoke and the total amount of carbon emission reduction caused by these bio gas plants is 2994.1 tons CO<sub>2</sub>e per year.

In the Urban area there is a great scope of green employment in waste picking sector. SEWA has a long association of organizing the informal waste collectors and has organized around 45,000 women waste pickers in Gujarat alone. World Bank has estimated that 1% of urban population in developing economies engaged in waste collection. In India waste collectors earn their livelihood from collection of paper, plastic, metal and glass scrap for sale to recycling industries. Waste pickers supply the raw material to recycling industries while keeping the city clean, thus protecting the environment and reducing municipal costs. SEWA has started training the workers to reuse reduce and recycle the collected materials and produce stationery and other products that generate livelihood. Detail analysis is followed later on.

### **Group Discussion-2 with Waste Pickers Cooperative, Rajpur, Gomtipur, Ahmedabad**

In order to understand the green livelihood initiatives of SEWA *Geetanjali Mahila SEWA Audyogik Stationery Sahakari Mandali*, Rajapur, Gomtipur. Minalben, Puspaben Parmar, Parulben, Pusapaben, Hansaben, Parbatiben Nainaben, Hansaben, Jassiben, Kokialben took part in the group discussion on the issues waste pickers and green livelihood.

While discussing with the members it has been reported that even in cities like Ahmedabad there is evidences of climate change and the intensity of rain fall has increased and there are situation like flood due to water logging in the year 2009 and 2010. Further there is a rise in temperature and summer are becoming too hot and is unbearable. This has happened due to emission of excess of Green House Gases to the



Environment. There are around 50,000 waste pickers depending upon waste picking as a source of livelihood and live mostly in the eastern belt of the City like Gomtipur, Amraiwadi, Dariapur, Memco, Naroda, Odhav, Maninagar, Bapunagar. Alone in Gomtipur there are around 2000 waste pickers lives in. Most of the waste pickers are poor and they walk a long distance carrying the waste bag behind at least for 5 to 6 hours daily. They woke up early in the morning and travel a long distance to collect different type of waste and come back home and sort those our according to their usability and value and then take those scrap dealer known as (*Pitha*) and sell them. On an average they earn around 60 to 80 rupees per day.

Member agreed that if waste are not collected regularly from the different part of the city then it will lead to pollution and stinking and that will lead to environmental and health hazards. Piling of waste inside the city would lead to gas formation especially solid wastes are responsible for green house gas emission. This may result in an increase in temperature within the city are realized by the workers. The participants revealed that if there is mechanization of waste collection then it will not be able to reduce green house gas emission. First the trucks that are used for collecting waste will generate smokes and consume energy and second it will not segregate the dry and wet one and there is possibility of recycle. They will be thrown to the dumping ground that in the long run creates trouble. How ever the waste pickers segregate the dry waste from the wet waste and use the three R (recycle, reuse, reduce) method that help in reducing green house gas emission from the wastes. But the biggest challenge is to enumerate the amount of carbon dioxide emission is controlled by the manual waste collection.

With this cooperative *member* are associated with directly as well as indirectly. The owner of *Jivraj Bidi* (local cigarette manufacturer) has provided a big hall at Rajpur, Gomtipur to undertake the green livelihood activities of SEWA. Members collects waste as ABCD category (Mill broke, Woodfree unprinted waste, Woodfree printed waste Mechanical and unsorted waste)<sup>28</sup> from different offices, then they clean them and sort them. Out of the waste they right now are producing notepad, notebook, office stationery, pen and pencil. Now out of waste they are also producing Jewellery. They are also

---

<sup>28</sup> ABCD analysis of waste : <http://rps.gn.apc.org/info3.htm#abcd>

producing recyclable paper bags. In order to produce these articles from that waste they have taken training from designers. SEWA now had an agreement with companies like Staple and Weconnect, Gift Link, Exchanger to avail better training to recycle the waste. The *Gitanjali Waste Collectors Cooperative* was started in the year 1995 at present it has 150 active members involved in green livelihood strategy. It aims at training the offspring's of waste pickers to recycle the waste and produce eco-friendly products. The Challenges are many and the cooperative has to undertake lot of activities to bring more members to this fold of green livelihood.

- There is a need of change in attitude of the workers
- There is competition in the market in the field of supplying finished product. There is need to improve the product in order to compete with them
- There is a need of linkages with finance and market.

### **Case Study –3**

#### **Result of the Group discussion on Eco-Tourism Project at Ganeshpura Village, Mehsana district**

*Niruben, Gitaben, Sabitaben, Jassiben, Laxmiben, Niruben karobari sabhya* (executive members) of *Shree Vanalaxmi Ganeshpura Mahila Sewa Vruksh Utpadak Sahakari Mandali* Ltd., took part in this discussion.

Ecotourism is defined as "Responsible travel to natural areas that conserves the environment and improves the well-being of local people."<sup>29</sup> In this case study I have tried to understand another initiative on green livelihood undertaken by SEWA at Ganeshpura village. Ganeshpura village is located 51 KM away from Ahmedabad while going towards Mehsana belong to the Kadi *Taluka* (small town). There are around 150 family belongs to *Patel, Thakore, Rabari, Prajapati, Raval, Bajnia, Valand, Vankar, Senema* caste. SEWA has strong base of organizing rural workers in the Mehsana District of Gujarat and this is one reason SEWA had tried to organize the poor women of Ganeshpura who earlier were agricultural labour working in the field of upper caste

---

29

[http://www.ecotourism.org/site/c.orLQKXPCLmF/b.4835303/k.BEB9/What\\_is\\_Ecotourism\\_\\_The\\_International\\_Ecotourism\\_Society.htm](http://www.ecotourism.org/site/c.orLQKXPCLmF/b.4835303/k.BEB9/What_is_Ecotourism__The_International_Ecotourism_Society.htm)

landlords. The socio economic conditions of the sizeable women workers in the village were very weak. Realizing their plight SEWA in the year 1981 approached the women to associate themselves with SEWA. The idea was to introduce smoke less cooking stove and the village panchayat allowed the SEWA leaders to introduce their idea of smokeless stove among the women. Around 25 poor women agreed to adopt the smokeless cooking stove. This inspired the SEWA leaders to explore more on improving the livelihood of these poor women. They found out that there are 10 acres of Waste Land at the end of the village. The land was barren and was used by the shepherd community known as *Maldharis* ((cattle grower). There was no trees except the Israeli *Ganda Babool* (*acacia totilis*) that precisely not a tree but used for fuel wood for most of the house hold.

Ganeshpura village is adjacent to Kadi and Kalol *taluka* of Mehsana district. There are has a large number of small and medium industries including IFFCO, and Torrent Pharmaceutical. Participants said that due to industrialization there is a change in the temperature. Twenty years back they have never used bottled water but now they are being used even by poor for drinking water. This may have been due to climate change.

The participants were in a position to recall Purbiben, Vishakhaben and Nilaben who came to the village to organize the poor landless women agricultural labour. When they came to the village the major problem faced by all the women including the poor men in the village are ;

1. Lack of sufficient and regular employment and for employment for these poor women. For living they were depending the big landlords of their own as well as nearby villages. There was migration from the village in search of livelihood.
2. Walking long distance to collect fuel wood and fodder for the family and cattle. Due to lack of fodder little number of milch animals was grown. All these have negative impact on their health. Further they have to loose employment as result of this.
4. Collection of drinking water was another important and essential and indispensable activity for every household o. Here also the burdens of collecting potable drinking water for the family fall upon the female members.

There was 10 acres of or waste land (Gauchar land) lying without any use in the village .In 1986 they have requested the panchayat and they taken the land on lese for 30 years and tried to address the above problems of the poor women . The idea was to

convert the waste land that will conserve nature on the one hand by way of tree plantation, growing nursery plants, water conservation, horticulture and floriculture, vermicompost and organic farming. This will enable the poor women workers to save time from collecting drinking water, collection of fuel wood and fodder. Further they got employment in the process of reclamation of land and plantation, horticulture. During last two years as there is a growing interest among the urbanite towards ecotourism this ten acres land has been reshaped so that tourist can visit the place and hence some income and employment can be generated from this. Following section is a sharing of experience of the members how they have addressed the problems they have faced and what is the impact of this project on their social and economic condition.

When SEWA proposed this model Sarpanch (village head) as well as the Official of forest department were skeptic about the fact that how these illiterate women will take up of such a daunting task. In the year 1987, 55 *members* become the members of the cooperative and it was registered as Shree Vanalaxmi Tree Growers Cooperative under the cooperative act at the office of the Registrar of the Cooperative, Ahmedabad. All the women members engaged in the land reclamation of the waste land received Rs.13.00 per day as allowance from SEWA's own fund. to the members as wage for this purpose. Now the same members are getting Rs.4500.00 per month. In the beginning it was decided that non fruit bearing trees beneficial to the environment will be grown at a ratio of 70:30 with fruit bearing tree.

To solve the water problem ponds were created inside the Vanalaxmi Tree Grower Cooperative premise to conserve water for drinking and irrigation purposes, but due to sandy soil water could not be stored for longer period. To prevent this water loss member went to Indian Petrochemical Limited, Baroda to take training on construction of plastic pond to prevent water leakage and they have constructed them at the Vanalaxmi cooperative complex that can store up 202000 Liters of water. Besides they have also learned to preserve water trough rain harvesting structure and utilized the water for plantation and domestic use.

In the year 1989-90 the co-operative introduced the first bore well inside the campus and since then the water requirement of the co-operative has solved and member's need not have to travel a long distances for collecting water. Members also

took a training on *tapak sinchai* (sprinkler irrigation) and saved precious water. After land scaling and water the members started plotting the land and make a decision regarding what kind of plants will be planted on the .Seasonable vegetable were grown inside the Vanlaxmi Women Tree Grower's Cooperative. The entire area is also fenced with the help of barbed wire by the women members themselves. Most of the members of the cooperatives are either illiterate or having education below primary level.<sup>30</sup>

As work progressed the cooperative got support from various agencies and institutions for further development. Hindustan Petrochemicals Ltd. has donated agricultural equipment including a power tiller. Earlier they were purchasing seeds from outside and for that they had to pay money. Members decided to grow seeds on their own and they have taken the certification from the department of agriculture. Now they are supplying the required seed their own and in the first year they have produced seed worth 20 kg. The members also developed a color cotton seed and they have experimented it and got a success.

Another eco-friendly project is vermicompost and to undertake this they have taken training and producing organic manures from Anand Agricultural University. Inside the co-operative as well is in their own private land the members are using the organic vermicompost instead of chemical fertilizer. It is expected that this can be a good source of livelihood for the members.

Every year there is a system of sharing of the fruit plots comprised of *amla* (*phyllanthus emblica*), mango, lemon, *chikoo* (*achrus sapodilla*), guava and vegetable among the member through a lucky draw and the owners have to own that plot and take care of the fruits and then sell them at the market. Member will keep 1/3<sup>rd</sup> of the total income and rest goes to the account of the Cooperative. If there is surplus production then they would be processed and packed and sell through the SEWA's on band of marketing known as Rudi.

Besides the above the members are using solar light, solar lantern and clean cook stove inside the cooperative as well as in their own home contributing positively to their livelihood and environment.

---

<sup>30</sup>For detail please visit <http://www.sewaecotourism.org/index.htm>

From the discussion it has been revealed that all these green activities the members were doing since long without knowing that this is what green livelihood. But during the last three years due to large number of campaign on green livelihood (*Hariyali Rojgar*) they have understood their contribution to the environment as well as employment generation from that. SEWA though how to promote more livelihood opportunities from this cooperative which is now covered with a thick green cover from the grown up trees. It is now homes to many forms of birds that we usually don't see in the noisy town. The environment here is peaceful. Realising this SEWA initiated the eco-tourism project since last 3 years. Facilities are created inside the cooperatives so that tourist from urban area can visit and relax for a day with a minimum charge of Rs.150.00 that included breakfast, lunch and tea. During the last three year many visitors come to Vanalaxmi Cooperative for tourism purposes. They include Bank Officer, Advocates, School Children, Senior Citizens, Forest Officers and Foreign Tourists etc.

### **Impact of the project on Environment and Livelihood**

It has been reported that most of the member's earlier due to social stigma and customs were living under the veil and they were not allowed to talk with the males. Further there was casteism in the villages and there was discrimination and exclusion. But now as all came together for a common purpose such social evil has been removed. Migration has also been reduced and hence there is a reduction in dropout and there is an increase in an enrolment in the school. Increase in income has empowered the women. With growth in the number plants now the area has thick forest cover the ten acres of land. This place now home to a number of birds and reptile and their chirping creates an eco-habitat conducive for getting near to the nature. Right now 30 families survive with the help of this cooperative. While being associated with this project some the Member's had the opportunity to visit abroad to explain their projects and received wide acclamation. Gitaben one of the founder member visited China, Leelaben visited New York, Jashiben visited Italy, Thailand and Srilanka. They have learned a lot and without this project they would not have got such an important exposure.

## **Future Plan of the Vanalaxmi Tree Growers Cooperative**

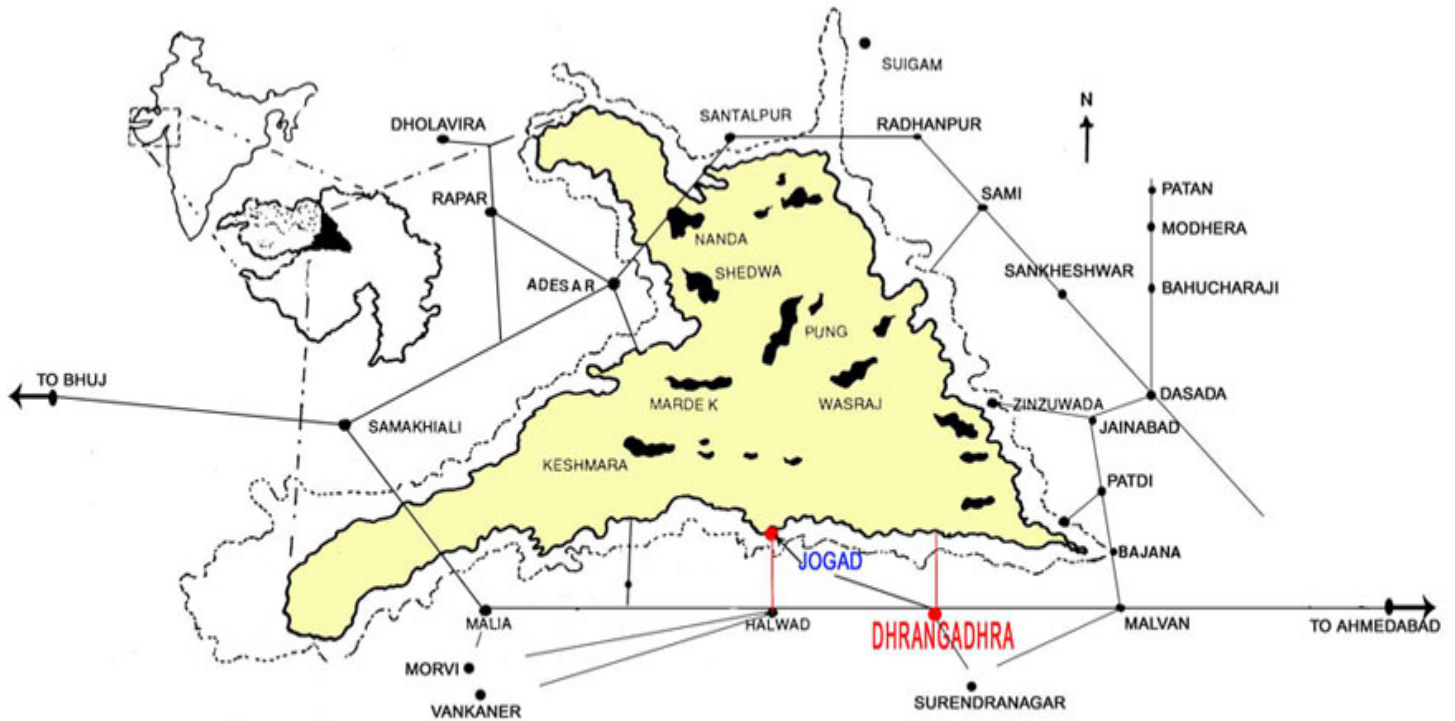
The cooperative has following plants nimbu (lemons), jamfal (guava) .chicku, amla, mango, neem (*azadirachta indica*), teak, etc. There is 300 lemon trees and they process the lemon as pickles and sell them in the market. Besides horticulture now they are also trying to intervene in floriculture. They wish to grow gerbera flower which has a good demand at the market Recently SEWA member's undergone a training programme with help of the faculty of Anand Agricultural University on seed technology, green house, vermicompost etc. This they can use to improve their livelihood.

Right now there are 3000 trees exists inside the cooperative. Most of the babool trees have been replaced by Amla plants. Now they are planning to adopt a *suraksha chakra* like cultivating cereals, vegetable, and lentil in cycles. They are also planning to start herbal medicine. In order to increase it's visibility they want to install a bill board on the Mehsana-Ahmedabad high way

**Case study -4: Green livelihood through the use of Solar Lantern and Clean Cook Stove.** Group Discussion held at *Enjar* Village of Halvad Taluka of Surendranagar District. Following members participated in the discussion were Savjibhai Garuiben, Raghubhai, Godiben, Chandubhai, Nainaben.

Enjar village belongs to Halvad Taluka of Surendranagar district 23 km from Dhrngadhra. This belt is famous for the habitats of the traditional salt pan workers of Gujarat. There are 181 cooperatives of salt workers working inside the little rann of Kutch. Discussed with the members of Mahadev Mitha Mandali at Enjara Village near Kuda of Dhrangadhra Taluka. Group Discussion was done at the home of Godiben.

**Map-III: Map of location of little Rann of Kutch (LRK) of Gujarat**



## LITTLE RANN OF KUTCH - WILD ASS SANCTUARY DHRANGADHRA

Source: <http://www.littlerann.com/map.html>

Little Rann of Kutch is a muddy desert located in the state of Gujarat. The villages along with Enjar are the border to Little Rann of Kutch. The LRK is spread over an area of 5000 square kilometers and touch the border of six districts of the state. This can be easily made out from the above said map. LRK is famous for producing 70% of the total salt to the Indian economy. Salt workers found the most in Halvad, Dhrngadhra and Patdi taluka of Surendranagar district. SEWA works along with the salt as well as other rural workers in the said taluka of Surendrangar and their numbers are estimated to be 30000.

The salt workers o draws water from the ground with the help of diesel pumps that contains a chemical known as bromine useful for salt production. These pumps run incessantly to get good quality of water. Sizeable chunk of money is being spent on



procuring diesel for the pumps. The diesel burn contributes positively towards green house gases. The method of the salt production is still traditional and manual and the salt workers have to spend 8 months in the desert along with his family. In recent years the workers reported that there is erratic rainfall in recent years. There was heavy rain last year due to which large amount of salt had been washed away. It is reported that salt pan workers are more vulnerable to climate change and they are likely to be affected if there is excess rain or shortage of rain. The impact of climate change is reported to be felt in recent years.

Besides other necessities kerosene oil is a necessary requirement for the salt workers to light the lamps or lantern. This is because they work inside the *rann* that is far away from their original home where it is devoid of any facilities including electricity. Further the well where the pump is attached to draw the water from the ground is far away from the hut they live. The salt farm is also away from their home. Salt farming is a continuous process that requires 24 hours bright light in their work area. Further they work in isolation there is threat from wild animal as well as storm and in order to protect themselves from this they need light. Another requirement is fuel wood for cooking food. They still use the traditional cook stove known as *Chulas* which emits smoke and as cooking is done by women members in our country they are likely to have health problem associated with smoke. SEWA has realized this problem of the salt workers and calculated that significant amount of hard earned money of the salt workers are spent on Kerosene as well as fuel wood. They need 10 to 60 kg of fuel wood everyday for cooking food. If they have electricity connection then they have to pay Rs.700.00 as electricity charges for two months. Further they also spend time in collecting these items result in work loss. For kerosene the consumption is about 8 liters and the price per liter of kerosene is Rs.14.00.

In order to mitigate these problem SEWA on experiment basis discuss the matter with the salt workers working in the said blocks and thought to introduce to alternative to the traditional lantern dependant on Kerosene and traditional cook stove. They tied up with 17 companies including Philips and Environfits to manufacture clean smokeless (*Nirdhum Chulas*) stove that will consume less fuel wood and emit little smoke. SEWA is planning to distribute 2,00,000 clean cookstoves among its members if it become a

success. The solar lantern already has been distributed among 6000 members has a price tag of 1800.00 and 3000.00. SEWA has tied up with Gautam Polymer. Godiben of Enjar village is using the lamp since last six years and it is running successfully without any problem. Regarding the solar lantern and clean cook stoves the members shared the followings.

### **Regarding the Solar Lantern**

- The lamp has a beautiful look and low weight and easily can be carried and hanged anywhere.
- No fuel is required and has no smoke. There is no threat of fire from this. Since it use a led bulb the light are good for the eye.
- It is multitasking in nature it has multi mobile charging port so that the worker without electricity inside the LRK can charge it .This is an important contribution without which the worker has to comeback to the village that may be 20 to 30 km away from the salt farm.
- It can be easily assembled and repaired the illiterate women with a little training. Therefore helping the member to earn a livelihood out of this lamp.

### **Regarding the Clean cookstoves (Nirdhum Chula)**

- The clean cookstove is under experimentation and once it is a success they will be distributed among the members.
- It emits comparatively less amount of smoke compared to the traditional chulas. Further the colour of the smoke is grey compared to the black smoke produced from the traditional cookstoves having contained more amount of CO<sub>2</sub>.
- The size of the stove is small and easily portable. It is appropriate for a small family of four. This may not be useful to a family more than four.
- There is a problem of preparing *bajra no rotlo* (bread made out of made from pearl millet), an important food item of people of Gujarat in rural area.

### **Conclusion and Recommendation**

In an under developed country like India more than 93% of the total workforce comprised of the informal workers and as the economic reforms goes on their numbers

are likely to increase. Unlike the organized sector in the informal sector the female participation rate in employment would likely to be more because more hand needed to support the household. Climate change as said likely to affect the poor to which most of the informal workers belong more and the burden are likely to shift to the women. Under such circumstances green livelihood strategy definitely prove a boon to the informal workers and such strategy should be adopted as well as compensated for their contribution. We have examined some of the initiatives of SEWA with regards to green livelihood. From this exercise following recommendations are emerging;

1. **Use of Solar Pumps:** Pumps as discussed are extensively use by the slat workers as well as the farmers. It is indispensable for salt farming. It is estimated that on an average 1500 litres of diesel are burnt per pumps and it emits more carbon dioxide compared to traditional lantern. The little Rann of Kutch receives a very bright sun rays and in summer the temperature exceeds 50° C and this can be good for producing solar energy. If solar pump can be incorporated to the green livelihood model then the informal workers livelihood improve considerably.
2. **Use of Small Cooling System:** Not only heat but cooling system also can provide livelihood as well as contribute positively to environment and food security. Small and affordable refrigerator can help to the workers to preserve food for longer time and reduce the frequency of heating food that requires combustion of fuel wood.
3. **Replication of Eco-tourism projects on the border of little Rann of Kutch:** Gujarat Government is encouraging tourism including eco-tourism in the State. Since SEWA has a experience of eco-tourism at the Ganeshpura village they can replicate this near Dhangadhra, Halvad and Patdi. Already there are some ecotourism project adjacent to LRK by some entrepreneurs. This are of LRK has wide scope for eco-tourism and many of the informal workers can get a livelihood out of that.
4. **Estimating the Carbon Credit:** Proper methodology should be developed by the policy makers to estimate the contribution of the

informal workers either by use of solar light, clean stove, planting a tree and recycling waste and compensate them equally either through financial means or recognition.

As the global population is rising very fast there should be a serious thinking on how to provide them employment and livelihood. To accommodate such a huge workforce in the organized sector including industries seems difficult and even if it is done it may not be sustainable. Hence now we have to ensure that the mass of informal workers an employment that simultaneously protect the environment. Hence more and innovative form green livelihood must be explored to tackle the challenge of climate change.

#### **Annexure:- Pics from the field**

**Pic:-1: Different models of solar lantern and clean cookstoves at SEWA**



**Pics-2 Shri Gitanjali Mahila Sewa Industrial Stationery Producers Cooperatives, Gontipur, Ahmedabad**



**Pics-2: Group Discussion with the member of the Gitanjali Cooperatives**



**Pic:-3. Women workers engaged in the recycling of waste at**



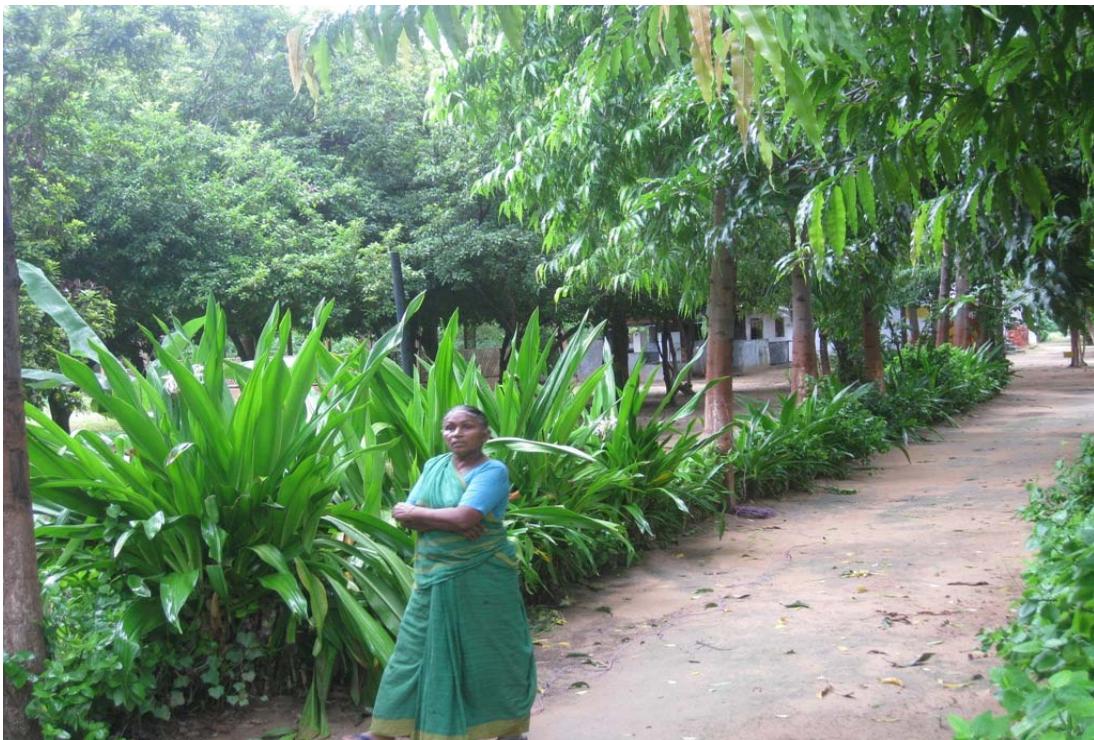
**Pic:-4. Shri Vanalaxmi Tree Growers Cooperatives, Ganeshpura**



**Pic:-5. Discussion with members of Shri Vanalaxmi Tree Growers Cooperatives, Ganeshpura**



**Pic:-6: Plantation at Vanalaxmi Tree Growers Cooperatives, Ganeshpura**



**Pic:-7: Solar Lantern used by informal women workers**



**Pic:-7: One model of clean cookstoves used by rural workers**





**Pic:-7: Philips model of clean cookstoves under experimentation by rural workers**



**Recommended Reading:**

Action Aid.2006. “Climate change, urban flooding and the rights of the urban poor in Africa: Key findings from six African cities,

Aldy Joseph E. Orszag Peter R. Stiglitz Joseph E. 2001. “An Agenda for Global Collective Action “. Paper prepared for the conference on “The Timing of Climate Change Policies” Pew Center on Global Climate Change October 2001

Bali, Namrata.2005. “Organizing Women, Improving Lives: Achievements and Challenges”, Novartis Symposium on TEARS will get you Sympathy: Sweat will get you Change, Self Employed Women’s Association (SEWA), Web: [www.sewa.org](http://www.sewa.org)

Bergquist Petra. 2009. “Breaking the Vicious Circle of Poverty: A Minor Field Study of Self Employed Women’s Association” Gender Studies

Blaxall, Mr. John. 2004. "India's Self-Employed Women's Association (SEWA). Empowerment through Mobilization of Poor Women on a Large Scale" paper presented at conference on Scaling up Poverty Reduction: A Global Learning Process Shanghai, May 25-27, 2004

Chen, Martha Alter, Khurana Ruchi, Mirani Nidhi .2004. "Towards Economic Freedom: The impact of SEWA", Published by SEWA, Ahmedabad

Chikarmane Poornima & Narayan Lakshmi.2009. "Rising from the Waste – Organizing Waste pickers in India, Thailand and the Philippines", Committee for Asian Women (CAW), Thailand 2009

Cooling Agents. 2009. "An Analysis of Greenhouse Gas Mitigation by the Informal Recycling Sector in India" Chintan Environmental Research and Action Group, New Delhi

Daniel, Joshua. Dhar Sucharita. Desai, Jyoti. 2005. "Improving livelihoods through Vermicomposting" Leisa Magazine.

Datta, Rekha 2003. "From Development to Empowerment: The Self-Employed Women's Association in India" International Journal of Politics, Culture and Society, Vol. 16, No. 3, Spring 2003.

Department Of Climate Change, Government of Gujarat 2009. "Climate change action & climate change adaptation". Web: [moef.nic.in/downloads/others/States-SAPCC-gujarat.pdf](http://moef.nic.in/downloads/others/States-SAPCC-gujarat.pdf)

Health Protection Agency.2009. The Impact on Health of Emissions to Air from Municipal Waste Incinerators.

Home-Net South Asia.2010. "Policy brief on Climate Change, Gender and Informal Work". Website: [www.homenetseasia.org/climatechange.pdf](http://www.homenetseasia.org/climatechange.pdf)

International Trade Union Confederation (ITUC).2009. "Trade unions and climate change: equity, justice & solidarity against the fight against climate change" paper presented at International Trade Union Confederation Bonn, Germany 1-12 June 2009

ITF 42nd Congress.2010. "Climate Change Conference Mexico City: Discussion Document Transport Workers and Climate Change: Towards Sustainable, Low-Carbon Mobility.

Joep Verhagen.2004. "SEWA's Water Campaign", ESE and the World Bank

Johannesburg Declaration. 2006. "Trade union African conference on labour and the environment". Johannesburg, South Africa, 28th and 29th July, 2006

Mahapatra Guru Prasad 2011: *Saurashtra*: Face of changing climates, Daily News Analysis, Ahmedabad, 24th July 30, 2011

May Orly T. 2010. "The path to women's empowerment: understanding the rise of the Self Employed Women's Association", posted at <http://repository.upenn.edu/curej/116>

Ministry of Environment & Forests, Government of India. 2010. "Taking on Climate Change", 24 Recent Initiatives Related to Climate Change 6th January,

Mishra Panda Smita. 2007. Women's Collective Action and Sustainable Water Management: Case of SEWA's Water Campaign in Gujarat, India Institute of Rural Management (IRMA, CAPRI Working Paper No. 61).

Modi Narendra.2011. "Convenient Action', Gujarat's Response to challenges of Climate Change", Macmillan

Nanavaty Reema, 2008. " Empowerment through Mobilization of Poor Women on a Large Scale; A Case Study on Self Employed Women's Association (SEWA), India

Nanavaty, Reema. 2009. "Supporting poor rural women to improve livelihoods: the SEWA experience, Self Employed Women's Association (SEWA), India",

Narain, Sunita.Ghosh Pradipto.Saxena N.C., Parikh Jyoti., Soni Preeti.2009. "Climate Change: Perspective from India", UNDP India

National Consultation Workshop on Preparation of State Level Strategy and Action Plan on Climate Change, New Delhi, August 19, 2010

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 Rome, 31 March - 2 April 2009

[planningcommission.nic.in/aboutus/taskforce/tk\\_green.pdf](http://planningcommission.nic.in/aboutus/taskforce/tk_green.pdf)

Prasad H.A.C. Kochher, J.S. 2009. "Climate Change and India- Some Major Issues and Policy Implications". Working Paper No.2/2009-DEA, March Department of Economic Affairs Ministry of Finance Government of India

Reddy B. Sudhakara. Assenza Gaudenz B. 2009. "Climate change – a developing country Perspective". Current Science, VOL. 97, NO. 1, 10 JULY 2009

Reducing Poverty, Sustaining Growth. What Works, What Doesn't, and Why

Report of the Task Force on Greening India for Livelihood Security and Sustainable Development. 2001. Planning Commission Government of India.

Ryder Guy.2007. "Trade Unions and Climate Change" message delivered at 13th UN Climate Change Conference (COP13), Indonesia, 3 -14 December 2007  
[http://unfccc.int/meetings/cop\\_13/items/4049.php](http://unfccc.int/meetings/cop_13/items/4049.php)

SEWA unveils Green Livelihoods initiative, DNA Ahmedabad, January 16, 2011

Shaw Rajib, Prabhakar SVRK, Fujieda Ayako .2005. "Community-level Climate Change Adaptation and Policy Issues Inter-linkages of Environment, Poverty and Livelihood: A Case Study from Gujarat, India", United Nations University, Kyoto, Japan

Stevens Candice's et.al.2009. "Green Jobs and Women Workers Employment, Equity, Equality," September, International Labour Foundation for Sustainable Development (Sustainlabour)

The Blue Ridge Environmental Defense League .2009. "Waste Gasification Impacts on the Environment and Public Health, a Technical Report."

UNDP, India. 2009. "Trash has crashed: Impact of Financial Crisis on Waste Pickers of Ahmedabad City" – in Global Financial Crisis and India's Informal Economy: Review of Key Sectors

United Nations Environment Programme. 2010. "Waste and Climate Change Global Trends and Strategy Framework."

United Nations Environment Programme.2008. "Climate change, its consequences on employment and trade union action. A Training Manual for workers and Trade Unions".

United Nations Environment Programme.2008. "Green Jobs: Towards decent work in a sustainable, low-carbon world Policy messages and main findings for decision makers".

United Nations Environmental Programme .2007. "Climate Change: Labour and the Environment: A Natural Synergy".

Vaux, Tony. Lund, Lund Francine.2003. Working Women and Security: Self Employed Women's Association's response to crisis Journal of Human Development Vol. 4, No. 2, July 2003

Weitzman Martin I.2007. "A Review of the Stern Review on the Economics of Climate Change" Journal of Economic Literature Vol. XLV, pp. 703–724

World Bank .2008. “Climate Change Impacts in Drought and Flood Affected Areas: Case Studies in India”, Report No. 43946-IN

World Bank. 2008. “Climate Change Impacts in Drought and Flood Affected Areas: Case Studies in India.” Report No. 4394 Muller, Adrian .2009. “Benefits of Organic

Agriculture as a Climate Change Adaptation and Mitigation Strategy for Developing Countries,” Environment for Development, Discussion Paper Series

### **Suggested Websites**

A Cost and Reliability Comparison between Solar and Diesel Powered Pumps  
[www.self.org/SolarvsDiesel.pdf](http://www.self.org/SolarvsDiesel.pdf)

ABCD analysis of waste: <http://rps.gn.apc.org/info3.htm#abcd>

Fighting climate change through the informal economy, Trade Union Congress (TUC) briefing document, Mar 2011 <http://www.tuc.org.uk/international/tuc-19289-f0.cfm>

Global Alliance for Incinerator Alternatives Global Anti-incinerator Alliance:  
<http://www.no-burn.org/article.php?list=type&type=65>

Green Rural Livelihood strategy of SEWA: [www.sewa.org/Twenty\\_Fifth\\_Issue.asp](http://www.sewa.org/Twenty_Fifth_Issue.asp)

Gujarat’s Response to Climate Change <http://www.gujaratcmfellowship.org/>

Household Cookstoves, Environment, Health, and Climate Change, a new look at an old problem (2011), The World Bank, [www.worldbank.org/climatechange](http://www.worldbank.org/climatechange)  
<http://envfor.nic.in/cc/what.htm>

[http://www.ecotourism.org/site/c.orLQKXPCLmF/b.4835303/k.BEB9/What\\_is\\_Ecotourism\\_The\\_International\\_Ecotourism\\_Society.htm](http://www.ecotourism.org/site/c.orLQKXPCLmF/b.4835303/k.BEB9/What_is_Ecotourism_The_International_Ecotourism_Society.htm)

<http://www.homenetseasia.org/intro.html>

<http://www.imfmetal.org/index.cfm?c=26885&l=2>

<http://www.littlerann.com/map.html>

<http://www.nrdc.org/international/india/>

<http://www.sewaecotourism.org/index.htm>

[http://www.suzlonfoundation.org/pdf/suzlon\\_gujarat\\_partnerships.pdf](http://www.suzlonfoundation.org/pdf/suzlon_gujarat_partnerships.pdf)

International Institute for Environment and Development (IIED).2008. “Climate Change and the Urban Poor”. [pubs.iied.org/pubs/pdfs/G02597.pdf](http://pubs.iied.org/pubs/pdfs/G02597.pdf)

[moef.nic.in](http://moef.nic.in)

Organic Farming and Climate Change, Monograph published by Research Institute of Organic Agriculture FiBL, <https://www.fibl-shop.org/shop/pdf/mb-1500-climate-change.pdf>

Power of power, Urja project, SEWA Bank, [www.sewa.org](http://www.sewa.org)

Respect for Waste Pickers: Protecting the Climate through Recycling:

[www.inclusivecities.org/climatechange.html](http://www.inclusivecities.org/climatechange.html)

Rising sea, killing heat... study gives a scary picture,

[http://www.expressindia.com/story\\_print.php?storyId=824586](http://www.expressindia.com/story_print.php?storyId=824586)

Salt Lantern Campaign: Green Economies for the Working Poor, Global Fairness Initiatives; [www.globalfairness.org/SaltLantern/](http://www.globalfairness.org/SaltLantern/)

Self Employed Women's Association (SEWA): [www.sewa.org](http://www.sewa.org)

Solar Electric Light Fund (SELF) July 2008, The Solar Electric Light Fund (SELF)

<http://www.self.org/SolarvsDiesel.pdf>

Staton M. Donna, Harding Marcus H. "Health and Environmental Effects of Cooking Stove Use in Developing Countries"

Website: [bioenergylists.org/stovesdoc/Environment/staton.pdf](http://bioenergylists.org/stovesdoc/Environment/staton.pdf)

Status report on use of fuel wood in India, M.S. Swaminathan Research foundation, Chennai, [www.mssrf.org](http://www.mssrf.org)

Strengthening Green Jobs and Entrepreneurship Development, [www.sewa.org](http://www.sewa.org)

Tangri. Neil. 2010. "Respect for Recyclers: Protecting the Climate through Zero Waste",

Global Alliance for Incinerator Alternatives, [owww.no-burn.org](http://owww.no-burn.org)

The Global Alliance for clean cookstoves: <http://cleancookstoves.org/>

United States Environmental Protection Agency 2002. Turning Garbage into Gold

Website: - [www.epa.gov](http://www.epa.gov)

'Where Have All the Seasons Gone? Current Impacts of Climate Change in Gujarat'

[http://climatechangewater.org/page3/files/2011\\_v\\_9h.php](http://climatechangewater.org/page3/files/2011_v_9h.php)

Working in the Waste and Recycling Sector: Opportunities and Challenges for Green Jobs, Presentation by SEWA, [www.sewa.org](http://www.sewa.org)

World Bank (2011) "Household Cookstoves, Environment, Health, and Climate Change"

A new look at an old problem. Website: [climatechange.worldbank.org/content/cookstoves-report](http://climatechange.worldbank.org/content/cookstoves-report)

[www.sewaict.org](http://www.sewaict.org)

[www.sewasanskarkendra.org](http://www.sewasanskarkendra.org)

### **Suggested Videos**

Building Sustainable Green Rural Livelihood: 2

<http://www.youtube.com/watch?v=orw3jdAJNgU>

Building Sustainable Green Rural Livelihood

[http://www.youtube.com/watch?v=xFR4cU\\_zxSQ](http://www.youtube.com/watch?v=xFR4cU_zxSQ)

Clinton Global Initiatives 2010 Commitment - Global Alliance for Clean Cookstoves:

<http://www.youtube.com/watch?v=f1NriXPUzL4>

Shri Narendra Modi, CM, Gujarat on climate change at the launch of the book.

<http://www.youtube.com/watch?v=DAhtnfgdLDc>

SEWA's Waste picker Members and Climate Change

<http://www.youtube.com/watch?v=icXIZFRb6iI&feature=related>