

REVIEW OF RBSA INTERVENTIONS ON GREEN JOBS
BANGLADESH
RAS/08/01/RBS

FINAL REPORT

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"probably all jobs and enterprises will change in some way"

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ABBREVIATIONS

BEF	: Bangladesh Employers Federation
BMET	: Bureau of Manpower, Employment and Training
FGD	: Focus Group Discussion
GJ	: Green Jobs
GJ-RBSA	: Green Jobs- Regular Budget Supplementary Account
GOB	: Government of Bangladesh
GS	: Grameen Shakti
GTCs	: Grameen Technology Centers
ILO	: International Labour Organisation
ITUC	: International Trade Union Confederation
MOLE	: Ministry of Labour and Employment
OHS	: Operation, health and safety
OSHE	: Occupational Safety, Health and Environment Foundation
PPP	: Public Private Partnership
SHS	: Solar Home System
STs	: Solar Technicians
TARANGA	: Training, Assistance and Rural Advancement Non-Government Organisation
TC	: Technology Center
TOT	: Training of Trainers
UNEP	: United Nations Environment Programme
VCD	: Value Change Development
WE	: Woman Entrepreneurs
WEDP	: Women Entrepreneur Development Programme

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ABSTRACT

The GJ-RBSA in Bangladesh was initiated on July 2008 and ended in June 2010. This review of GJ-RBSA takes stock of what has happened as a result of the implementation of the project, the lessons learned from GJ-RBSA interventions and finally makes some recommendations. Green jobs are defined as work in agriculture, industry, services and administration that contribute to preserving or restoring the quality of the environment. The project has produced four types of outputs: workshops, commissioned studies, training programmes and knowledge products.

A total of 12 workshops were organised by the project. Besides playing a key role in introducing and popularising the concept of GJ to the stakeholders, these workshops have also helped developing their awareness and sensitised them on the key issues involved in the promotion of GJ.

Altogether GJ-RBSA has commissioned 7 studies on several sectors of Bangladesh. They include, among others, renewable energy, construction, waste management and agriculture. Since information on GJ is not readily and adequately available, these studies aimed at collecting as much baseline data as possible for guiding future course of GJ-RBSA in Bangladesh. The studies, however, limited their analysis to the sectoral level. While this is helpful for sector level programme interventions, it may not be very helpful for product level intervention.

GJ-RBSA organised training of 816 participants mainly in the renewable energy sector in collaboration with several partners that include the GS (a sister organisation of the Grameen Bank), BMET (Bureau of Manpower, Employment and Training, a public sector training provider) and the NGO called TARANGA. This also included training on women entrepreneur development in the SHS (Solar Home Systems). 177 trainees have already been employed by GS which played the leading role in the training process. The results, achievements and benefits associated with the generation of new jobs in the renewable energy sector are likely to be durable.

A number of knowledge products were developed by the project. This includes translation and use of GET Ahead for Women in Enterprise Training Package and Resource Kit by TARANGA. A manual in Bengali has also been developed by GS and BMET for the training of solar technicians.

Although GJ-RBSA is a pilot project and relatively small in size, it was well received by the constituents. Stakeholders need time to understand the concept and its implications. Direct incorporation of GJ as a part of national policy may also take some time to come. ILO-GS collaboration in the renewable energy sector can help to move towards this direction. Given the limited budget and the pilot nature of the project, GJ-RBSA has definitely contributed to laying the basis for an expansion of the green jobs programme in Bangladesh.

The review makes the following recommendations: (i) advocacy, sensitisation, awareness raising activities have to be continued, (ii) support provided to the development of SHS should also be continued, (iii) ILO can extend support to other energy products such as bio gas and improved cooked stoves, (iv) new training can be provided to the solar technicians (e.g. troubleshooting SHS), (v) motivating GS to implement all the clauses of the new policy for the women entrepreneurs, (vi) provision of credit to the WE can be considered, (vii) GS should be convinced to provide a person fully employed for managing GJ related activities (viii) GJ-RBSA should try to associate with climate change issues. New partnership has to be also developed (e.g.. Ministry of Environment).

1. INTRODUCTION

Juan Somavia, the Director-General of the International Labour Office, in an address given at the 2008 G8 Labour and Employment Ministers' meeting held in Niigata, Japan on 13 May 2008 mentioned that a move towards a more sustainable development path will mean major changes in the production and consumption pattern of all countries and this is going to affect enterprises and employment. The transition has already started. New jobs are already being created. Some jobs will be phased out or adapted. And probably all jobs and enterprises will change in some way. This has serious implication for the world governments, particularly those of the poor countries.

Bangladesh cannot stay aloof from the changes already in place in many parts of the world. It should also try to adjust to the needs of the time. It is in this context the GJ-RBSA has been initiated in Bangladesh with active support from the ILO.

Green jobs can be generically defined as the direct employment created in different sectors of the economy and through related activities, which reduce the environmental impact of those sectors and activities, and ultimately brings it down to sustainable levels. This includes 'decent' jobs that help to reduce consumption of energy and raw materials, de-carbonize the economy, protect and restore ecosystems and biodiversity and minimize the production of waste and pollution

The GJ-RBSA in Bangladesh was initiated on July 2008 and ended in June 2010. Green Jobs initiative pilot project in Bangladesh is a part of an ILO regional programme covering three countries namely: Bangladesh, China and India. This review of GJ-RBSA takes stock of what has happened as a result of the implementation of the project, the lessons learned from GJ-RBSA interventions and finally makes some recommendations for any future GJ intervention in Bangladesh. The review has been carried out in August, 2010.

2. BRIEF BACKGROUND

Asia has witnessed growth in many countries. While growth has increased over the last decade, there are still more than 300 million people who have to eke out a living for less than a dollar a day. The region is also facing environmental threats to growth and sustainable development. This is compounded by climate change. Most people will agree that growth is necessary and desirable for poverty reduction. The central issue is how Asia along with the international community best responds to challenges of maintaining growth without making compromises to promoting decent work opportunities and reducing environmental impact.

As a part of the UN response to climate change, a report on "Decent work for sustainable development" was presented by the ILO's Director General to the International Labour Conference in 2007. Consequently, the ILO together with UNEP and the ITUC launched a "Green Jobs Initiative" to help promote environmentally sustainable jobs and development in a climate-challenged world. As a part of this initiative, ILO has been seeking to promote policies and measures to achieve green jobs and green workplaces while at the same time increasing awareness and dialogue on this issue.

In support of this initiative, the ILO regional Office, Bangkok, organized a regional research conference on green jobs in Niigata, Japan, from April 21-23, 2008, for the countries of Asia and the Pacific region. The conference aimed at identifying priorities for action and at building partnerships for future work. It brought together about 40 experts from national and local governments, employers and workers organisations, labour research institutes,

academia, environmental and social NGOs. From Bangladesh, the Ministry of Labour and Employment and Grameen Shakti participated in the conference.

Key conclusions from that conference included the need to provide skill training as well as examples of good practice and pilot initiatives in a number of countries demonstrating the link between employment and the environment. To build on these conclusions drawn and the actions recommended during the regional conference, ILO developed a regional proposal on “Green Jobs Initiative” covering three countries as a pilot initiative. The countries are: China, India and Bangladesh. The main objective of this initiative is to facilitate the development of a policy instrument that would put national policy and consensus on green jobs into practice.

Green jobs initiative in Bangladesh commenced as a follow up to the Nigata Conference. The Ministry of Labour and Employment took the lead for inter-ministerial consultations meeting to discuss the way forward. This resulted in holding of the first national consultation on green jobs in July, 2008 followed by a number of other events. ILO’s tripartite constituents were involved in implementation of the various project activities including training and sensitization of the members of the employers and workers organizations on basic concepts and ideas on green jobs and decent work (Nabi 2010).

The green jobs initiative pilot project in Bangladesh is linked to Decent Work Country Programme Outcome **BGD101**: *Improved skills training and entrepreneurship for enhanced employability and livelihoods*.

2.1 WHAT ARE GREEN JOBS?

‘Green jobs’ is defined as work in agriculture, industry, services and administration that contribute to preserving or restoring the quality of the environment. They help to cut the consumption of energy, raw materials and water through high-efficiency strategies to decarbonise the economy and to minimize or avoid altogether all forms of waste and pollution, to protect and restore ecosystems and biodiversity.

Green jobs reduce the environmental impact of enterprises and economic sectors, ultimately to levels that are sustainable, while also meeting the standards required of ‘decent work’

“The green job concept has social as well as environmental aspects. ... green jobs comply with the pillars of decent work and are provided by economic activities that contribute to reduced environmental impact. Green jobs are thus both environmentally sound and also ‘decent’ in social terms” (GHK 2010, p. 5).

3. PURPOSE, SCOPE AND CLIENTS OF THE REVIEW

In this section we will discuss the purpose of this review, its scope and the clients.

3.1 PURPOSE

This review assesses whether the GJ-RBSA has made progress in facilitating the development of a policy instrument in Bangladesh that would put national policy and consensus on green jobs into practice in Bangladesh. This review also assesses the extent to which GJ-RBSA has contributed to laying the basis for a major expansion of green jobs programme in Bangladesh.

This review of GJ-RBSA in Bangladesh also documents the initial situations at the start of the GJ-Initiatives and documents the achievement made and its contribution to related DWCP outcomes. The review draws specific recommendations for future direction of Green jobs interventions in Bangladesh. Lessons learnt in regard to design and implementation are also documented.

3.2 SCOPE

The review covers conceptually the Green Jobs RBSA interventions at the country level and their interaction. The review takes into consideration the indicators of achievement or milestones identified to measure the Green Jobs RBSA contributions. It takes into account relevant interventions in Bangladesh. The review will cover the whole period of the GJ-RBSA funded component and will take into consideration the ILO DWCP outcomes at the country level.

3.3 CLIENTS

The principal clients for this review are RO-BANGKOK, ILO Country Office in Bangladesh, ILO technical units, PROGRAM, EVAL, and PARDEV.

4. METHODOLOGY

This study is primarily based on a desk review of relevant documents. In addition, several interviews with stakeholders and partners of ILO have been conducted. Such stakeholders and partners include the relevant ILO staff, key partners, representatives of government agencies and of workers and employers' organizations. A half a day/one day tripartite stakeholders' workshop was also facilitated where the findings of this study were presented and preliminary findings verified. A field visit to Phulpur, Mymensingh was made to gain a hands-on experience on the role of training provided to Solar Technicians and Women Solar Entrepreneurs by the project in an effort to promoting green jobs in Bangladesh. Barring the workshop, the entire review process was spread across the month of August, 2010.

5. REVIEW OF IMPLEMENTATION

GJ-RBSA started in Bangladesh on 1 July 2008. It was supposed to end on 31 December 2009. The project was later expanded by six months and has now ended on 30 June 2010. A large number of activities have been undertaken by the project. These are not concentrated in Dhaka but spread all over Bangladesh: from District towns to Divisional Headquarters.

During this short period of time the project has produced four types of outputs:

- a. Workshops (12)
- b. Commissioned studies (8)
- c. Training programmes (816 persons trained in 4 types of training programmes)
- d. Knowledge products

5.1 WORKSHOPS

The workshops have played a key role to introduce and popularize the concept of GJ. They have also played a major role in developing awareness and sensitising the stakeholders. Besides, they brought together all the ILO constituents and other stakeholders on the same platform to discuss issues that are slowly becoming important even in a poor economy like Bangladesh.

GJ-RBSA has organised a total of 12 workshops (including a launching ceremony) from its inception to date.

1. One **advocacy workshop for the tripartite constituents** in Dhaka in collaboration with the Ministry of Labour and Employment was held on 30 July 2008. The workshop recommended the following steps:

(i) Promotion of green jobs initiatives would involve several actors and agencies. So inter-ministerial and inter-agency cooperation and coordination is of vital importance and should be ensured.

(ii) Deliberations at the workshop clearly showed that there is dearth of information and data on green jobs initiatives in Bangladesh. So, as a first step, there is need to undertake further research in the area including compilation of comprehensive inventory of green jobs initiative in Bangladesh.

(iii) There is lack of awareness and knowledge on the green jobs initiatives in Bangladesh. Such awareness raising should include all stakeholders such as employers and workers organizations on issues like Occupational Safety and Health and working environment etc.

(iv) On the issue of awareness raising, those organisations which are currently involved in green jobs promotion like Waste Concern, BCSIR, Grameen Shakti and similar other organizations should make efforts to familiarize their programmes to other interested stakeholders including arranging visits to the project sites.

(v) Networking of the organizations who are promoting green jobs should be promoted as a part of awareness and advocacy.

(vi) Since the issue of green jobs promotion is a new concept and requires cross-country learning and information sharing, the meeting welcomed ILO's offer of support on green jobs initiative to Bangladesh as a pilot country together with China and India. The meeting also requested ILO to come up with such support including mobilization of resources for the purpose as well as promoting cross-country experience.

2. The launching ceremony was held at Hotel Sonargaon on December 4, 2008. It was jointly organised by the Ministry of Labour and Employment and the ILO. The objective of the launch was primarily to promote dialogue and coordination amongst stakeholders' including the government line ministries, employers and workers organizations, and with the private sector. Secondly, it aimed to support programmes to promote green jobs in energy conservation, more efficient use of resources, cleaner production and recycling for smaller enterprises. The participants included the government ministries and departments, workers and employers' organizations, international and donor organizations, private sector agencies who are actively involved in promoting green jobs in Bangladesh, and media. The objective of the ceremony was to promote dialogue and coordination amongst stakeholders including

the government line ministries, employers and workers organizations, labour NGOs and with private sector.

3. Advocacy for the employers: Two workshops have been organized in collaboration with the Bangladesh Employers Federation (BEF). About 100 participants took part in the two courses held outside Dhaka (Chittagong and Khulna). The main purpose of these workshops was to sensitise the employers on issues related to GJ.

4. Divisional Workshop on Green Jobs: Four divisional workshops were organised by OSHE, an NGO, to sensitise and create awareness among the regional stakeholders on Green Jobs concept and initiatives in Bangladesh and to mobilize local community through regional consultations for getting feedback for developing the National Green Job Policy in Bangladesh. A group of 218 representatives from different government agencies, employers and employers' organisations, trade unions, NGOs and so on participated in these workshops.

Table 5-1: Divisional workshops under GJ-RBSA organised by OSHE

Sl	Events	Date of Implementation	No of Participants	Venue
1	Divisional Workshop on Green Jobs Initiatives in Bangladesh.	12 th April, 09	45	Sremangal
2	Divisional Workshop on Green Jobs Initiatives in Bangladesh.	7 th June, 09	67	Narsingdi
3	Divisional Workshop on Green Jobs Initiatives in Bangladesh.	10 th June, 09	52	Khulna
4	Divisional Workshop on Green Jobs Initiatives in Bangladesh.	22 nd June, 09	54	Chittagong

5. Advocacy for the workers: The National Co-ordination Committee on Workers Education, NCCWE, has also organised four workshops for sensitising the workers on GJ and raising their awareness on GJ and environment related issues. Two experts presented papers on GJ in these workshops. These workshops were organised in four divisional headquarters: Dhaka, Chittagong, Rajshahi and Khulna. About 250 participants from the various trade unions participated in each workshop.

Strong expression of support to the Green Jobs initiatives was given by the national constituents as well as by other actors.

5.2 COMMISSIONED STUDIES

Green Jobs is a new concept. Obviously it existed before the term is coined. It was noted at the early stage of the project that to carry the project forward it is necessary to locate existing GJ as well as jobs that could be greened. The following studies were commissioned for this purpose:

1. Skills for green jobs in Bangladesh, Mondal et. al. 2010.
2. Assessment of Green Jobs in Construction Sector, Waste Concern Consultants.
3. Assessment of Green Jobs in Renewable Energy Sector, Waste Concern Consultants
4. Assessment of Green Jobs in Waste Management Sector, Waste Concern Consultants
5. Assessment of Grameen Shakti's Solar Home System (SHS), Md. Yunus, 2010
6. Study on linking environment to employment and labour issues, GHK Consultants

7. Exploring the links between the environment, economy and employment in developing countries, GHK Consultants.
8. Green Job Assessment in Agriculture and Forestry Sector of Bangladesh, Matiur Rahman, 2009

The reports numbered 2,3,4,7 and 8 looked for finding out GJ intervention points and to develop a better understanding of policy requirements to enable the sectors to create more green jobs. They form the basis from which future GJ activities can be selected.

5.3 TRAINING PROGRAMMES

Many GJ requires development of skills of the workers and entrepreneurs. With the skill need in mind the GJ-RBSA has organised four types of training programmes and trained 816 persons.

1. Training for Bioslurry Utilization: A whole family training for bioslurry utilization was held in several locations in Bangladesh. A total of 440 persons were trained and motivated for using bioslurry in their crop fields as well as in their fish ponds. Training material developed by GS was used in these training programmes.

2. Training of Trainers in Solar Energy: BMET in collaboration with GS trained 16 Trainers in Solar Technology. They were absorbed by GS after the completion of the training course. They are now working as Resource Persons for the GS

3. Training of Solar Technicians: The training of solar technicians was conducted under a PPP between GS and BMET. The partnership was mediated by ILO. ILO also provided technical support towards development of curricula, training of trainers and follow up on the training. Specific ILO inputs in this training programme include:

- Participation and conclusion of negotiations between GS and BMET and signing of the MOU between the two agencies.
- Development of curricula and training of trainers manual which will be further refined based on the feedback.
- Mainstream this training programme into ILO's TVET programme under CB-TREE (planned).

A total of 90 participants completed the course and out of them 47 participants joined different GS unit offices and technology centres. Other outputs include curriculum development and development of a manual for the training of the trainers.

4. Women Entrepreneur Development Programme (WEDP): The Women Entrepreneur Development Programme involved training of women entrepreneurs on solar home system and development of capacity of GS for entrepreneurship training. The training programme planned to train 250 women in 10 courses with 25 women in each course (10*25=250). One course for training of the trainers has also been organized for the GS trainers. 20 GS trainers were trained. These trainers in turn trained 200 persons in 8 courses under supervision of TARANGA.

Altogether 816 persons have been trained under GJ-RBSA out of which 376 in solar energy. Those trained in solar energy can be classified as those who are solar technicians and 106 of solar technicians have been trained. The rest are women entrepreneurs and 270 of them have been trained. Those who have been trained in the solar energy sectors have good job

prospects. A total of 177 trainees have already been employed by GS. GET Ahead for Women in Enterprise Training Package and Resource Kit was used in training

Follow up of training

TARANGA has undertaken some follow up activities. But this is limited to those trained as trainers. TARANGA supported them in conducting training programmes independently. No systematic following up of the solar technicians or women entrepreneurs has taken place. ILO intends to follow up and obtain feedback for post-training support to the women entrepreneurs. Fieldwork experience in GTC in Phulpur suggests that few women entrepreneurs dropped out altogether. 13 women were trained as WE in Phulpur GTC. Out of them 4 members dropped out (2 of them got married while others could not pursue the trade because of poverty). The rest were able to pursue their occupation.

Table 5-2: Training undertaken under the Green Jobs Project

Sl. No.	Name of the Programme	Location	Duration	Total Number of Participants	Provider	Remarks
1	Whole Family Training for Bioslurry Utilization	Barisal, Comilla, Chittagong, Sylhet, Rangpur, Bogra, Khulna, Tangail, Mymensingh and Faridpur	March – April, 2009	440 persons in 10 batches with 1 batch having 44 trainees	GS	All of the participating farmers have been motivated for using bioslurry in their crop fields as well as their fish ponds
2	Training for Solar Energy Technician	Grameen Shakti, Mirpur, Dhaka	Training of the Trainers in Solar Energy, October 24-28, 2009	16 person in 1 batch	BMET in collaboration with GS with support from ILO	08 person from TTC and 08 person from GS who are women engineers have now become resource persons in GS
		Faridpur, Khulna and Bogra	Solar Energy Technician training held during July-September 2009	90 persons in 3 batches with 1 batch having 30 trainees	BMET in collaboration with GS with support from ILO	47 person out of 90 have been provided in GS
3	Women Entrepreneurship Development Training on Solar Home System	Grameen Shakti, Mirpur, Dhaka	28 February - 07 March'2010	20 persons in one batch	GS with technical support from TARANGA	TOT course. All trainers have become resource persons and have developed the capacity to conduct training programme independently
		Mymensingh, Khulna, Bogra, Rangpur, Tangail, Chittagong, Faridpur, Barisal, Comilla and Sylhet	February - June 2010	250 beneficiaries in 10 batches with 1 batch having 25 participants		Beneficiaries Training. 114 women out of 250 are now working with GTC as well as their own houses to assemble spare parts for GS on contact basis

5.4 KNOWLEDGE PRODUCTS

The knowledge products developed or used by GJ-RBSA are described below.

GET Ahead for Women in Enterprise Training Package and Resource Kit

The GET Ahead for Women in Enterprise Training Package and Resource Kit was used by TARANGA in training of the trainers and in women entrepreneur development course. The manual was translated to Bengali for this purpose. The following modules were used:

- 1) Module 1.2: Gender Equality Promotion: Life Cycle of People and Enterprise.
- 2) Module 3.3: Production Service and Technology
- 3) Module 4.1: Management in an individual, Family and Group business

TARANGA found these modules effective and appropriate for the trainees

CB-TREE

ILO Community-based Training (CBT) methodology manual (now renamed as CB-TREE methodology) was supposed to be used in training of solar technicians in the Technical Training Centres of BMET under the GS-BMET organised training programme of solar technicians and trainers. A manual in Bengali has been developed by GS and BMET for the training of solar technicians. However, it was not possible to follow the CB-TREE methodology since the local module was not ready for adaptation at that time. The CBT-TREE methodology is being adapted by the ILO TVET project (Component 5). It is expected that the module developed for the solar technician training will be adapted for CB-TREE in the pilot project implementation under TVET. This will promote cross-sharing of information.

Value Chain Assessment Manual

The Value Chain Assessment Manual developed by ILO was supposed to be used by Waste Concern in its assessment of three sectors. The Waste Concern Consultants used a sectoral approach and found the value chain tool inappropriate for this purpose. Given limited baseline information and the nature of the work, it was not possible to use the Value Chain Assessment Manual. Besides Waste Concern does not have sufficient inhouse capacity to undertake VCA. Such expertise is generally lacking in many similar organisations.

Other reports produced

- ii) Report of the first consultation workshop on green jobs held on 30 July 2008
- iii) Report of the launching of the green jobs initiatives in Bangladesh, 4 December 2008.

6. FINDINGS

As mentioned in Section 5, GJ-RBSA was implemented through a process of production of four outputs: workshops, commissioned studies, training programmes and knowledge products. We will present the finding of this review on the basis of these four outputs.

6.1 WORKSHOPS

As a new concept GJ demands its introduction to the stakeholders. Besides this is an initiative and hence requires awareness, sensitisation as well as advocacy. GJ-RBSA has performed well in performing these tasks.

Workshops were organised by Ministry of Labour and Employment (MOLE), Bangladesh Employers Federation (BEF), National Co-ordination Committee on Workers Education (NCCWE) and OSHE. OSHE is an umbrella organisation for different national and industrial trade unions

6.1.1 THE GOVERNMENT

Ministry of Labour and Employment or MOLE is ILO's main contact for the GJ activities in Bangladesh. MOLE officials participated in the Nigata Conference in 2008 and subsequently confirmed participation of Bangladesh in the pilot project. As a follow up to Nigata, the Ministry organized a technical task team to review and implement green jobs activities in Bangladesh. The team organized several meetings under the chairmanship of the Secretary of the Ministry to review the project activities including priority sectors. They have also organised the GJ-RBSA launching ceremony.

Since then MOLE has virtually stopped all activities. The initial spur of activities is mostly due to the Secretary who showed personal interest in GJ-RBSA. As he left MOLE, no further activities had been undertaken. For example, the launching ceremony announced formation of a task force for drafting the policy and action plan for GJ. The task force was supposed to formulate a technical committee to review the sectoral issues on green jobs. No progress has been made in this regard. GJ-RBSA also suffered from frequent staff and desk transfers. Besides the capacity of MOLE remains very weak.

6.1.2 THE EMPLOYERS

BEF or Bangladesh Employers Federation is ILO's main contact from the employers' side. In addition to representing the employers in various forums and meetings, it organised two orientation workshops for the employers to sensitize the employers on green jobs. The employers are now familiar with the concept of GJ. Majority of employers are convinced that GJs are important but many are not prepared to promote it at this moment because this may increase their costs of production. They emphasised on further sensitisation of the concept to the employers. They recommended production and distribution of communication materials such as brochures and leaflets amongst the employers. Now that they are aware of the importance of GJ, they are willing to facilitate identification of products/sectors where future GJ interventions can be made. However, the employers do not have a clear understanding of the concept of GJ.

6.1.3 THE WORKERS

National Co-ordination Committee on Workers Education or NCCWE is the apex body of 14 federations or various labour organisations. NCCWE represent the workers in the various green jobs activities, particularly in the technical force as well as in national seminars and workshops held on green jobs. NCCWE has organised four divisional workshops in four divisions to sensitize workers on the green jobs issues.

The members of the NCCWE have different views about Green Jobs. These views do not directly coincide with the accepted view on GJ (see Section 2.1). Often the focus is on jobs related to climate change. It often relates to concern over OHS or operation, health and safety. This absence of agreement on the concept of GJ is also present amongst professional people (GHK 2010).

The workers also raised their concerns over poor enforcement of existing laws related to environment. The overall consensus amongst the workers is that the government has the key role to play. Although the performance of the government in enforcing environmental rules and regulations has been poor, this is likely to slowly improve. For this to happen, awareness raising and sensitising workshops should be continued. Green jobs are not only desirable but also necessary.

6.1.4 OSHE

Bangladesh Occupational Safety, Health and Environment Foundation (OSHE) is a specialized development organization working on issues related to employment, income, economy, environment and livelihood of the working people. It is an umbrella for different national and industrial trade unions working together on workplace problems and development issues based on common understanding, beyond any individual or specific group interest.

OSHE organised four Divisional workshops to popularise the concept of GJ. The participants were able to increase their knowledge on GJ and proposed several sectors that could be included in GJ policy.

6.2 COMMISSIONED STUDIES

GJ-RBSA has commissioned 7 studies. Since information on GJ is not readily and adequately available, these studies aimed at collecting as much baseline data as possible for helping define the path of future course of GJ-RBSA in Bangladesh. Below the major findings from these commissioned studies are presented.

6.2.1 WASTE CONCERN CONSULTANTS

Waste Concern Consultants produced three sector assessment studies. The sectors are construction, renewable energy and waste management. The major findings from the three studies are presented in Table 6-1.

Table 6-1: Findings from the three studies by the Waste Concern

	Construction Sector	Renewable Energy	Waste Management
Sources of information	Information and data from secondary sources, field survey, institutional survey, FGDs	Same as the construction sector study	Same as the construction sector study
Unique characteristics	- Lack of policy incentives - Potential for environmental pollution reduction and greening of existing jobs - Green technologies available, - OHS serious problem	- Presence of a specific National Policy - Potential for new job creation - Green technologies available	- Presence of a national 3R (Reduce, Reuse, Recycle) strategy - Potential for environmental pollution reduction and greening of existing jobs - Green technologies available
Existing green job practices	Developers, institutions (Rajuk, REHAB), construction industries such as cement, brick, wood/wood materials, plastic pipe, glass, steel, aluminium, fuel consumption.	Solar Home System, Biogas, Biomass power plant, improved cook stoves, wind energy	Source Separation of Waste at Uttara Model Town (Sector 5), Community Based Urban Solid Waste Management in Bangladesh, Composting of Waste in Slums, Plastic Waste Recycling in Dhaka by Informal Sector, Lead Acid Battery Recycling, Battery Buy Back for Recycling, Agricultural Waste Used for Biogas Generation and Improved Cook Stoves , Biomass Used for Commercial Power Generation, Biomedical Waste Collection and Disposal, Environmental Management System (EMS) Practices, Use of Biomass in Boiler, Recycling Training Center, Promotion of 3Rs
Green Jobs Growth Potential	Green job will increase from 1.33 million in 2009 to 2.19 million in 2020, GDP with green job contribution will increase to Tk. 266740 million in 2014 and Tk. 329967 million in 2020	Most of it is R&D type, small project based. Thus, 998 people are needed for production of each MW of energy. Therefore, by 2014 and 2020, the employment size will be 74850 and 146706 respectively.	About 358,112 jobs

These three studies have found that GJ potential in Bangladesh is highest in transport sector and lowest in manufacturing sector.

VCD (Value Change Development) methodology was supposed to be used in these studies. However, this was not used; rather a sectoral activity wise breakdown approach was used. Given the sectoral nature of these studies, a sub-sector level was more appropriate. VCD is generally more appropriate and tractable at product level. Another problem of these studies was the absence of any baseline information. Also, these studies had to rely on many assumptions because of the lack of data. These assumptions were often not very realistic.

6.2.2 OTHER STUDIES

Mondal et. al. (2010) has found that main greening shifts in the economy and the labour market of Bangladesh have taken place strongly in renewable energy sector, but rather

weakly in materials management, telecommunication and transport because of lack of policy and institutional support.

The study by Rahman (2009) applied ILO's GJ Assessment Tool. In the agriculture sector, seven activities were identified as practicing green jobs. These are: mushroom cultivation, bioslurry, sericulture, organic farming, pesticide free vegetable cultivation, bee keeping and rain water conservation.

Yunus (2010) have estimated the financial and economic returns of SHS and has found that individual homes are not found to be financially and economically for some of the packages considered. This is not a study on environmental accounting. However, if marketing and institutional aspects of the technology are competently handled, the probability of realizing the economic benefits is very high.

GHK (2010) study has identified nearly 3.5 million core environment-related jobs in Bangladesh. Core environment-related jobs refers to "jobs which are sustained by activities that are more environmentally sustainable but which have not been 'filtered' for decency of work" (p2). The study has estimated that 1.4 million of core environment-related jobs can be considered "green jobs" as they meet decent work standards. Core environment-related jobs and green jobs account for nearly 7% and 3% respectively of total jobs (49.5 million) in the economy. Another 2.8 million jobs are indirectly supported as a result of these core environment-related and green jobs. The study observes that low cost small scale renewable technologies are creating a significant number of jobs and have great potential for the future.

6.3 A BRIEF EVALUATION OF THE COMMISSIONED STUDIES

The studies have generated information about GJ in Bangladesh. These were not available or at least not in the form they are presented and analysed in these reports before the GJ-RBSA. This is the single most important contribution made by these projects. These studies have opened up the way for learning on GJ in Bangladesh. The studies, however, limited their analysis at the sectoral level. While this is helpful for sector level programme intervention, it is not helpful for product level intervention. The only product level study has been that of Yunus (2010). At the direct intervention level, GJ in Bangladesh has intervened, broadly speaking, at the product level in the SHS. It has also intervened in skill development. The importance of skill development has been highlighted by Mondal et. al. (2010). What holds all the studies together is the general consensus on selecting the energy sector as a potential sector for ILO involvement. The main argument in favour of the energy sector is that the government has already a specific national policy in favour of renewable energy. Support for intervention in this sector is more likely to be provided by the government as compared to intervention in other sectors.

This pilot initiative provided an avenue for the development and testing of new methodologies of assessment, from the value chain tool to the employment impact assessment study. Their implementation involved partnerships with local stakeholders and building capacity. Although they have had varying degrees of successes but their development and subsequent usage is notable as already pointed out in this report.

6.4 TRAINING

Training has been the only direct employment generation level intervention of GJ-RBSA in Bangladesh. GJ-RBSA intervened in the energy sector to develop skill of those working in the sector under Grameen Shakti (GS). These interventions took place in two forms. **First**,

the skill of solar technicians (STs) was improved through training. **Second**, women were trained to become women entrepreneurs or WE and the programme is known as Women Entrepreneur Development Programme (WEDP).

6.4.1 GRAMEEN SHAKTI

Grameen Bank is one of the most influential social business institutions in Bangladesh. The Grameen Bank has created more than 20 family companies in various fields. The Grameen Shakti or Rural Power/Energy is one of them. It is a pioneering institution in the world which promotes solar energy technology to rural communities and develops a sustainable and cost-effective renewable energy program for the poor (Hiromi 2007). GS has developed very rapidly. As of July 2010, it has been operating under 911 Branch Offices, 121 Regional Offices, 13 Divisional Offices and 45 Grameen Technology Centers (Kamal 2010).

Grameen Shakti was established in 1996 with a view to innovating, developing and extending renewable energy in the country. Grameen Shakti has undertaken different programs which are being implemented to help the rural people. The programs such as solar home system (SHS), construction of biogas plants, processing, packaging and marketing of Grameen Shakti Jaibo Sar (organic fertiliser), establishment of gasifier system, tree plantation and wind turbine are worth mentioning. Grameen Shakti has made remarkable achievements in establishing solar home systems around different parts of Bangladesh. The production of SHS has increased dramatically from 228 units in 1996-7 to a total of 404,778 units in June 2010.

The Solar Home System or SHS is a 12-volt DC stand-alone system, including a PV module, battery, charge controller, fluorescent lights, wiring and outlet fixtures for installation. It is sold to users at various terms and conditions depending on the size of down payment and period of re-payment. GTCs are helping women empowerment by developing women solar technicians. GTCs train women technicians and organise them to produce the accessories in order to strengthen and expand the back-up services at the local level.

6.4.2 TRAINING OF THE SOLAR TECHNICIANS

GS also trains ST to maintain its quality of service. What distinguished the training of GTs by GJ-RBSA is the deliberate attempt to introduce concepts such as GJ to the participants. The participants were also trained on Gender issues. The use of "GET Ahead for Women in Enterprise Training Package and Resource Kit" teaching material produced by ILO made a big difference. They were also trained in personal health and occupational safety issues as well as on environment friendly waste management.

As pointed out in Section 5 a large number of those trained were later employed by GS in various GTC as STs or other Resource Persons.

6.4.3 TRAINING OF THE WOMEN ENTREPRENEUR

WEDP is different from training of WT because it wanted to develop Women Entrepreneurs. To understand the nature of the problem and further support the women for developing entrepreneurial skills, it is important to briefly describe how WT work.

6.4.4 PUTTING-OUT SYSTEM IN THE GRAMEEN ENERGY SECTOR

A WE collects the parts from GTC and assembles them to produce inputs required for the production of SHS and gets a fee for each item produced. WE produce/assemble parts such as a charge controller for which she gets Tk. 14/piece or a DC-DC converter for which she gets Tk. 7-20/piece. She works from home or in Technology Centers. Technology Centers are workshops where WE assemble parts to make items like charge-controllers or mobile chargers as already mentioned. The inputs are not priced; they are supplied by GTC free of costs. The income of these women therefore depends on how much they get for the products they produce/assemble and how many of them can they produce. The prices that are paid by GS to these women for assembling the products are frozen to values set in 1996. These are therefore constants and did not change in last 14 years. The number of orders is given by market conditions (number of SHS demanded by the local economy) and decided upon by GS who passes on the orders to individual WE. A better trained WT, particularly with a TC can earn Tk. 5,000-Tk. 7,000/month. We met a WT in Phulpur who earned Tk. 1,800 in July – a bad month. A not so skilled WE can earn Tk. 3,000-4,000/month.

In this simple system there is no way the WE can increase their income by their own decision. The number of products assembled is not decided by them but by GS. Therefore, what they get for the items they produce are basically their wages that are received in the form of fees. These are wages in piece rates not profit. This is very similar to the putting out system that developed in Europe in 19th century and was gradually replaced by the factory system.

This type of organisation of work does not resemble an entrepreneur. An entrepreneur is defined as "a person who has possession of a new enterprise, venture or idea and assumes significant accountability for the inherent risks and the outcome" (<http://en.wikipedia.org/wiki/Entrepreneur>). Under existing contract between the GS and WE, the WE have hardly any choice on making important decisions. Output prices were fixed, the amount to be produce was fixed and the inputs were supplied by the GS. This leaves no room for taking risk - a crucial dimension that distinguishes an entrepreneur from a wage labour. In contrast, a rural woman is an entrepreneur when she borrows from the credit market and invests in, say, a small business. She can decide on what to sell, how long to work, prices to charge and bears all the responsibilities of her decision.

The existing system is in some way different from a classic putting out system. Rather than the inputs being delivered to the women and the outputs collected from their premises, the women have to travel to the respective GTC for collection of the inputs and supply of the assembled outputs. The cost involved in travelling is borne by these women. The WT have to visit the GTC several times in a month. A WE whom we met in her TC housed in room in her small house informed that she has to spend about Tk. 100 per visit and makes 4-5 visits in a month.

The WE also work like a factory worker. When they deliver their outputs to the GTC, the outputs go through a QC process. The equipments required for QC are costly and hence housed in GTC. The women cannot afford to purchase them. These women fix the faulty products and are not paid for this service. They do not get the price of a faulty product until the faulty part responsible for the fault is replaced. When it cannot be replaced, they do not get paid for that faulty unit.

The WE also get some opportunities to enhance their income. They have to provide after-sale-service to the clients on an on call basis. For every visit, they can charge Tk. 50. They

can also replace parts and earn a mark-up of 10% on the price they have to pay GS for that part.

The wage labour dimension of this work organisation was well understood by TARANGA. They pointed this out to GS. At a later stage GS developed a policy for WEDP to bring in aspects that can potentially turn these women STs to WE.

6.4.5 THE NEW POLICY FOR WOMEN ENTREPRENEURS

As a result of GS's involvement in the GJ-RBSA a new policy was developed for the WEDP. The new policy provided some provisions that help the WE increase their income. For example, they can act as sales person and get a commission from GS. They can also make home visits and fix SHS for a charge and get a mark-up on the price of the replaced part. Some aspect of the policy has not yet been implemented. For example, clause 5 states that the WE can make annual service contract with buyers who have already paid up the full price of the SHS.

The crucial part of this policy is the opportunity given to the WE to buy the inputs from any source they like. While this is a big change and also in the right direction, this does not really help the WE to become true entrepreneurs. **First**, the WE have no idea where most of these parts are available. In Phulpur, we were told that most of the parts are available in the District town of Mymensingh but the WE with whom we conducted a FGD did not know that. **Second**, to run a TC one needs an initial investment of Tk. 100,000. This is beyond the means of most, if not all, the WE. GS provides some costly equipment to some selected women who own TC. We have seen a WE having a TC provided with a SHS free by GS so that she can work at night. The credit market is also imperfect. The existing micro-credit market will not risk lending such a large sum of money to the WE. Though GS agreed to help the WE to obtain credit in the new policy, such credit is difficult to get. **Thirdly**, these WE have to obtain important equipments and these are prohibitively costly.

Thus though the new policy helps the women to become entrepreneurs, existing conditions are such that this transformation is less likely to happen unless other interventions are made. These interventions include provision of credit, information on market for parts required to produce SHS and related products, further training on troubleshooting, provision of some basic equipments required for troubleshooting and so on.

6.5 IMPACT ORIENTATION AND SUSTAINABILITY OF GREEN JOBS CREATED BY GJ-RBSA

The results, achievements and benefits associated with the generation of new jobs in the renewable energy sector are very likely to be durable. As long as the demand for SHS continues to rise, this is very likely to be the case in the next decade or more, shortage of skilled labour in this sector will continue to exist. Besides, GS is the key player in the SHS sector supplying 60% of the market demand. These jobs will outlive the span of GJ-RBSA project life. GS has its own training programme. This will help the process of skill formation in renewable energy sector to continue.

7. GREEN JOBS PROGRESS IN BANGLADESH SO FAR

In this section we will address issues relating to progress made by GJ-RBSA in facilitating policy development towards promoting GJ in Bangladesh. We will also examine the extent to which GJ-RBSA has laid the basis for expansion of GJ programme in Bangladesh.

Has the GJ-RBSA made progress in facilitating the development of a policy instrument that would put national policy and consensus on green jobs into practice in Bangladesh?

Although GJ-RBSA is a pilot project and relatively small in size, it has been well received by the constituents. Though direct incorporation of GJ may take some time to come as a part of national policy, other ILO initiatives such as Decent work may help in improving policy towards promoting GJ. Understanding the concept of GJ and evaluating the implications of adopting GJ policy will certainly take time because it involves the government, the employers, the worker and various other stakeholders. All these stakeholders have to understand the concept well and they also have to predict and understand the implications of implementing GJ. The GJ-RBSA can be considered as making the first step taken in this process. The concept is introduced to the stakeholders, advocacy and sensitisation activities are done, new information is collected through commissioning of several studies and a real world intervention in GJ creation has been implemented in the renewable energy sector of Bangladesh. For example, we now know the constraints to developing WE better than the period when the training programme started.

According to the Logic model of RBSA Green Jobs, it has been postulated that ILO partnership with GS and introduction of entrepreneurship and skills training for men and women promoting the use of renewable energy in rural areas will facilitate development of a policy instrument that would put national policy and consensus on green jobs into practice. This is expected to increase the capacity of Bangladesh to promote coherent policies on sustainable productivity growth, employment and competitiveness. This process has started at a pilot level already. The outcome of this process depends on how much and how well this and similar activity are promoted by future interventions.

The Government of Bangladesh is presently working towards framing a new National Labour Policy and a National Occupational Safety and Health policy. ILO can highlight issues related to Green Jobs that can be incorporated in these policies.

To what extent the GJ-RBSA has contributed to laying the basis for an expansion of the green jobs programme in Bangladesh?

Given the limited budget and the pilot nature of the project, GJ-RBSA has definitely contributed to laying the basis for an expansion of the green jobs programme in Bangladesh. May be this is not enough, but it has added value to the whole effort already undertaken. The government, employers and the workers now know what they are talking about when they discuss about green jobs. They may have a different view about the concept, which may often be wrong, but they do know that they are about at the more general level. They know that it is related to issues relating to environment, sustainable development, green energy, rights, employment and so on. Besides, the studies commissioned under this project can help identify future course of intervention.

The limitations of existing reality cannot be overlooked. Three such limitations have been highlighted in the report prepared by GHK. **First**, there is already a large range of environmental laws, policies and strategies. These are characterised more by non-compliance than by compliance. Existing enforcement mechanisms of the government leave

a lot more to be expected. **Second**, although donors and NGOs have a firm commitment towards environmental issues, government support to these issues are not always matching. The promotion of GJ in Bangladesh has to consider these parameters. **Thirdly**, a large potential sector for GJ is left out at this moment. This is the informal sector.

8. CONCLUSIONS

This review has made an attempt to capture the experience of GJ-RBSA pilot project in Bangladesh. It has also listed the lessons that have been learned in this process and made some recommendations on the basis of this experience.

The project has produced four outputs: workshops, commissioned studies, training programmes, and knowledge products. They all deserve their merit. Workshops were necessary because the concept was new and partnership was required and partners were to be informed. Studies had to be commissioned because knowledge on GJ at the field level was very limited. Training was required because of the development of GJ based human capital. Finally, development of knowledge products was required because labour had to be trained. The implementation of GJ-RBSA has been systematic, coherent and effective, given the complex nature of the concept, funds and duration of the project.

As the saying goes, the proof of pudding is in eating. The best performance of this pilot project has been training of solar technicians and women solar entrepreneurs. New skills have been developed in the area of GJ and these skills have been commercially hired by GS. This project has generated employment. This review has therefore strongly recommended pursuing this line of interventions. Such an intervention does not have to be based only on SHS but adequate information is required before intervention is actually made on some other energy related product. Studies have to be commissioned for this purpose. New partners could be sought. The renewable energy sector provides a comfort zone for intervention not only because it is important but also because there exists a specific government policy on this sector.

9. RECOMMENDATIONS

Based on the discussions so far, the following recommendations can be considered by ILO for future implementation of GJ project in Bangladesh:

i. Green Jobs concept is still not well understood. At the same time progress of GJ-RBSA towards facilitating government policy shift towards GJ promotion has been limited. Therefore, advocacy and policy work at the national level such as developing institutional mechanisms and entities to provide policy support to the green jobs initiatives has to be continued. Awareness building and sensitizing activities should also be continued. A regional workshop can be organized for sharing experience.

ii. Support provided to the development of SHS should be continued. For this to be effective, a study to understand the markets for SHS and the parts required for producing SHS has to be commissioned. This study should look at the contract between WE and GS, identify market imperfections among others. Unless these issues are known, further intervention in SHS promotion may not generate expected benefits. The study should also find the extent to which this type of work is decent. In particular, the reward of the women technicians and their contractual obligations and its implications should also be fully understood. There is a big knowledge gap here.

iii. ILO can extend support to other energy products such as bio gas and improved cooked stoves. The assessments reports, workshops organised by the project and other studies commissioned by the project have suggested a long list of probable entry points for GJ interventions. ILO can pick up points of interventions from this list. However, similar background information as already mentioned with respect to SHS is needed for making the right type of intervention. The energy sector is not competitive. Market transactions are therefore complex and there could be unfair deals involved.

iv. New training can be provided to the solar technicians. The solar technicians met during the fieldwork highlighted the importance of troubleshooting technique. These techniques do not require much time and competence is gathered from learning-by-doing. If this training is accompanied by arranging some basic equipments (e.g. hydrometer) for the solar technicians, then their incomes can be further enhanced.

v. GS should be motivated to implement all the clauses of the new policy for the women entrepreneurs. If a clause is not implementable, that should be dropped.

vi. Provision of credit to the WE can be considered. GS can collaborate with GB to see how credit can be provided to the WE so that they can run their own business and become true entrepreneurs.

vii. GS should provide a person fully employed for managing GJ related activities. This is particularly required if support to GS is continued.

viii. Partnerships (including public-private partnerships) with well-experienced and competent organizations have proved quite successful. For example, BMET-GS and ILO-GS collaborations. In the future, this type of partnerships should be further explored and expanded including finding new partners.

ix. The documents (commissioned studies, knowledge tools and so on) produced by the projects should be shared amongst the partners.

10. LESSONS LEARNT

It is difficult to popularise an idea or base a project on an idea that is not well understood. If the idea of GJ is not well understood, it is difficult to meaningfully carry forward the idea or the GJ initiative. The stakeholders will not understand each other. This was clear in the meeting with the members of NCCWE where the members hold multiple views on the concept of GJ. Although different people have different understanding about the concept of GJ, they possibly agree on the issues GJ are concerned with at the broader level. Further awareness raising and sensitisation workshops are necessary to patch up this problem.

The studies commissioned by the GJ-RBSA has been very useful and provided new information or presented existing information in a new context. The studies provided useful information on various sectors where GJ opportunities exist. It would have been more useful to have more information at the product level.

The training component of GJ-RBSA has not only improved human capital of men and women, it has also created GJ. Here partnering with reputed players such as the GS has paid off. GS has not only hired a large number of trainees, but has also developed a policy that has the potential to develop women entrepreneurship. The constraints to developing women entrepreneurship have to be studied in more detail. For example, credit constraint or market information constraint.

11. POSSIBLE FUTURE DIRECTIONS

Green Jobs initiative is an initiative and hence requires some kind of marketing. This has so far been done amongst the direct stakeholders and in workshops. The audience is therefore limited. Only those participated in these events were informed. Future interventions in GJ can aim at widening the target group and use other marketing tools (Pamphlets? Brochure?).

SHS has been the right choice for GJ-RBSA for pilot level intervention. This should also be continued after taking into the concerns stated in this review. These concerns relate to credit and market issues. There are two more related issues. Promotion of SHS requires an environment friendly disposal system of the batteries. If this is not done, this may generate a worst outcome. New partners can also be sought. There are several other providers of SHS and some are in the private sector. ILO can look for opportunities for new partnership. The renewal energy sector provides some advantage over other sectors because it already enjoys a favourable policy already in place.

Future intervention in GJ should be at the product level and at the level where greening and labour absorption possibilities are highest. If any product is selected for intervention, that should be on this basis. A good value chain analysis is required for deciding on the point of intervention.

At a broader level GJ-RBSA should try to associate with climate change issues that are threatening development of Bangladesh. Its vulnerability is due to a disadvantageous geographic location (flat, low-lying topography, river delta and proximity to the Indian Ocean), high population density, high poverty rates and reliance on climate-sensitive sectors such as agriculture (GHK 2010). The fragile ecological situation is under continuous threats from environmental degradation taking place in the forms of soil erosion, deforestation, increased water salinity and water body pollution (Mondal et. al. 2010). These are seriously affecting the livelihoods of the poor and increasing their vulnerability. Climate change issues are dominant now and will continue to do so in Bangladesh in the future.

ILO should find a space for itself in this struggle against the adverse effects of climate change in Bangladesh. But a few issues have to be addressed. ILO is not an agency who is working on climate change. On the other hand, MOLE, is not the main actor on climate change issues in Bangladesh. MOLE has no public image as a key player in the environment front. ILO should therefore look for new partners such as the Ministry of Environment. Several donors are associated with this Ministry in its struggle against climate change issues at the moment. This trend is expected to increase. ILO can find several partners if it decided to take up this issue seriously.

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ANNEXES

ANNEX 1: LIST OF PEOPLE MET

1. Mr. Repon Chowdhury, Executive Director, Bangladesh Occupational Safety, Health and Environment Foundation (OSHE)
2. Mr. Farooq Ahmed, Secretary General, Bangladesh Employers Federation
3. Mr. Iftikhar Enayetullah, Managing Partner, Waste Concern, House-21 (Side B), Road-7, Block-G, Banani Model Town, Dhaka-1213
4. Mr. Md. Nurul Haque, Secretary, Ministry of Labour and Employment, GOB
5. M. Shahidul Islam, Consultant, Grameen Shakti
6. Mr. Humayun Kabir, Senior Assistant Secretary, Ministry of Labour and Employment, GOB
7. Mr. Abser Kamal, Managing Director, Grameen Shakti
8. Mr. U Thin Maung, TARANGA, 282/5 1st Colony, Mirpur
9. Mr. T.I.M. Nurunnabi Khan, Programme Officer, ILO-Dhaka
10. NCCWE (National Coordination Committee on Workers Education) Dr. Wajedul Islam Khan, Member Secretary, Abdul Kader Howlader ex MS, Mr. Mukit Khan, Mr. Badrul Khan, Mr. Kamrul Ahsan, Mr. Mujibur Rahman Bhuyian)
11. Dr. Abdul Hye Mondal, Senior Research Fellow, Bangladesh Institute of Development Studies, Dhaka
12. Mr. Maqsood Sinha, Executive Director, Waste Concern, House-21 (Side B), Road-7, Block-G, Banani Model Town, Dhaka-1213
13. Ms. Kohinoor Yeasmin, CEO & SME Specialist, TARANGA, 282/5 1st Colony, Mirpur
14. Dr. Md. Yunus, Senior Research Fellow, Bangladesh Institute of Development Studies, Dhaka

ANNEX 2: LIST OF PARTICIPANTS IN THE FGD IN GRAMEEN SHAKTI GTC IN PHULPUR, MYMENSINGH

1. Chandana Rani Roy, Centre-in-Charge, Phulpur GTC
2. Shameem Ara Akter, Sub-Assistant Engineer, Phulpur GTC
3. Jafreen Nahar Reema, Sub-Assistant Engineer, Phulpur GTC
4. Ambia, Women Technician,, Phulpur GTC
5. Saima Sultana, Women Technician,, Phulpur GTC
6. Shahina Yasmeen, Women Technician,, Phulpur GTC
7. Shahnaz Parveen, Women Technician,, Phulpur GTC
8. Zonal Manager, GS
9. Divisional Manager, GS

ANNEX 3: PROCEEDINGS OF THE WORKSHOP ON GREEN JOBS REVIEW HELD ON 21 SEPTEMBER, 2010 AT HOTEL SHERATON, DHAKA

Summary of proceedings of the Stakeholder Workshop on green jobs review¹ Dhaka Sheraton Hotel, 21 September 2010

I. Introduction

A stakeholder workshop on green jobs initiatives was held on 21 September 2010 at Dhaka Sheraton Hotel. The main purpose of the workshop was to present the findings of the green jobs review carried out by Dr. Kazi Ali Toufique of BIDS and obtain feedback and comments from the stakeholders as well as identify priorities for future direction with regard to green jobs (agenda is attached as Annex 1).

Participants included ILO constituents, several government departments and research institutions, national partners of the green jobs project, and NGOs (list is attached as annex 2).

Workshop proceedings started with a brief opening session chaired by the Joint Secretary of the Ministry of Labour and Employment. Speakers at the opening included the following:

- Opening statement by Mr. Gagan Rajbhandari, Director a.i., ILO Country Office for Bangladesh;
- Statement by Shah MD. Abu Zafar, Chairman NCCWE (National Coordination Committee on Workers Education);
- Statement by Mr. Absal Saeed Quoreishi, Secretary, Bangladesh Employers Federation; and
- Statement by Mr. Arun Kanti Aich, Joint Secretary, Ministry of Labour and Employment.

The speakers representing ILO constituents expressed their support to the green jobs initiatives in Bangladesh and hoped that the activities would be continued in the future.

II. Opening Statements

Ministry of Labour and Employment

Mr. Arun Kanti Aich, Joint Secretary, Ministry of Labour and Employment said that the concept of green jobs is not new. The developed countries adopted this concept long time ago. He reminded that Bangladesh is a signatory of the Montreal Protocol – 1990. The development activities exert adverse impact on environment endangering life and living of the people. Therefore, the externalities arising out of development activities should be addressed through appropriate policies and programs. He emphasised on the role of technology for making transition from non-green to green jobs. He expected that increased demand for green jobs would promote employment in the economy.

Bangladesh Employers' Federation

Mr. Absal Saeed Quoreishi, Secretary, Bangladesh Employers Federation spoke on behalf of the Bangladesh Employers Federation. He noted the green jobs activities being initiated by ILO and BEF's involvement in those activities. He informed that BEF organized awareness and advocacy workshops for its members on green jobs. There is need to continue similar advocacy work. BEF will extend its support towards the new initiatives.

National Coordination Committee on Workers Education (NCCWE)

¹ Report of the stakeholder workshop held on 21 September 2010 to review ILO green jobs initiatives in Bangladesh.

Shah MD. Abu Zafar, Chairman NCCWE, in his statement underscored the need for environment friendly policies to promote green jobs in Bangladesh. He expressed that trade unions are also interested in this new concept. He referred to the workshops organized by NCCWE on green jobs and thanked the ILO for supporting those activities. He extended his all out support for making green jobs initiatives a success.

ILO Country Office for Bangladesh

Mr. Gagan Rajbhandari, Director, ILO, Dhaka in his statement informed that green jobs started as a pilot initiative by the ILO regional office for Bangkok as a follow up to the conference held in Nigata in April 2008. Green jobs program is a joint initiative of the ILO, UNEP and ITUC. Subsequently, IOE, Geneva joined this global initiative. The first tripartite workshop in Bangladesh was held on 30 July 2008 and received strong support from the constituents and stakeholders. Formal launch of green jobs was made on 04 December 2008 and the pilot program started in full swing since then. Apart from international partners, local partners include Waste Concern, Grameen Shakti, TARANGA, BMET and OSHE. One of objectives of the program was to test and apply ILO knowledge products and manuals developed such as Value Chain Development (VCD) manual and Get Ahead manual (for women entrepreneurs). Activities of the green job initiative focus on advocacy and awareness, research and pilot activities with the partners on training and entrepreneurship development. He expressed that ILO was looking forward to hear from the participants about the future priorities and direction to promote green jobs initiative on a wider scale and sustainable manner.

III. Presentation of Green Jobs Review Report

After the opening session, Mr. T.I.M.N. Khan made a Power Point (PP) presentation highlighting the objectives and expected outcomes of the workshop. Since Dr. Kazi Ali Toufique, the national consultant on green jobs review, was not available due to unavoidable reasons, the presentation of the key findings of the green jobs review were made by Dr. Abdul Hye Mondal of BIDS. The two presentations were followed by two working sessions, one to obtain feedback and comments on the review report and the other, to seek suggestions of the stakeholders on the way forward.

The key findings of the GJ review, presented by Dr. Abdul Hye Mondal, were as follows:

- The three studies conducted by Waste Concern have found that GJ potential in Bangladesh is the highest in transport sector and lowest in manufacturing sector.
- Mondal et al. (2010) has found that main greening shifts in the economy and the labour market have taken place strongly in the renewable energy sector.
- Rahman (2009) identified seven activities in agricultural sector that are practising green jobs: mushroom cultivation, bioslurry, sericulture, organic farming, pesticide free vegetable cultivation, bee keeping and rain water conservation.
- Yunus (2010) found that individual SHS is not financially and economically viable for some of the packages offered to the customers.
- GHK study has identified 1.4 million green jobs. The study found that low cost small scale renewable technologies are creating a significant number of jobs and have great potential for the future.

After those two presentations, participants were invited to provide their comments and feedback. Lively discussion followed at the feedback session. These are presented here in summary form.

IV. Feedback – Comments and Suggestions

Several of the participants commented on the definition of Green Jobs and stressed the need for a clear, comprehensive and meaningful definition. In reply, the resource person admitted that the definition used was a working definition and it would evolve as a full-fledged definition in course of time. The participants wanted to be clear about the mandate of ILO for working in this area. The issue was clarified saying that ILO has been working in this area along with other UN agencies.

The concepts like green Job (GJ) and decent work (DW) appeared new to some of the participants. Some observed that new paradigms such as GJ and DW are entering into the literature fast and as a result it has become difficult for them to be familiar with new concepts and ideas related to the new paradigms. There is a close link between GJ and DW- the terms are complementary and hence cannot be isolated from each other. Sometimes green job does not imply decent work. By referring to certain occupations, the participants expressed that green jobs are not necessarily decent. While making policies and programs it should be borne in mind that one should not contradict the other. The participants in general expressed that, green jobs initiatives needed to be broader in scope than what had been carried out under the pilot initiatives. They were of the opinion that occupational health and safety issues should be ensured at workplaces. In this regard it was suggested that:

- Government should ensure that employers provide basic health and hygiene support services at workplaces in line with the principle of green jobs promotion.
- Tax incentives to the employers for promoting green jobs should be conditional to improvement of occupational health and safety facilities at workplaces.

While suggesting measures at sectoral level particularly at construction sector, it was suggested that:

- there must be an arrangement of certifying green materials in collaboration with real estate agencies; and
- an inventory of green materials should be prepared and be incorporated in the building code.

Beyond sectoral level, for generating green jobs, participants suggested encouragement of green procurement programme.

Only law is not enough to achieve objectives of a policy or a program. The most serious problem in this regard is non-compliance of the law in the country. Therefore, it has been suggested to constitute a common body (public and private) to ensure compliance with relevant laws related to environment and green jobs.

Technology is an important factor in addressing the problem of pollution in a cost-effective manner. The fibre glass bio-gas digester as innovated by the Bangladesh Council of Science and Industrial Research (BCSIR) is an example in this regard. This device is much cheaper than the traditional fixed dome bio-gas plant. If the production of this device is encouraged, it would create more green jobs in Bangladesh. To produce this device at a large scale, reduction of taxes on raw materials has been suggested. Reduction of reduce cost of production thus making the device cheap and accessible to the users. The technology thus developed would help making transition from non-green jobs to green jobs.

One participant pointed out the inconsistency between the findings and recommendations with regard to the solar home system. On one hand, the review mentioned that SHS was not economically and commercially viable but on the other hand, the report recommended for expansion of the SHS. So, this inconsistency should be removed.

Another participant pointed out that a total of 1.4 million jobs have been estimated as green jobs in the report presented. He wanted to know about the sectoral break-down of this estimates. In his opinion, the figure in reality should be higher than what had been mentioned in the report.

The participants suggested taking the GJ initiatives in risk free areas so that creation of green jobs becomes cost-effective.

Several participants stressed on the multi-dimensional nature of GJ initiatives. Due to resource constraint, it is not possible to launch this initiative in all sectors at a time. Therefore, to achieve desired objectives, priority sector should be identified at the outset. It should be borne in mind that any such initiative must be consistent with broad national objectives of employment creation and poverty alleviation.

Representative from BEF suggested summarising the commissioned studies and including those executive summaries in the final report as annexure. He put forward two recommendations for consideration:

- Develop fiscal and other policy regime to support green job initiatives and facilitate green job technology transfer.
- Assess and identify the investment opportunities in the green job niches in agriculture, large scale industrial sector particularly manufacturing sector, services including banking and financial services and administration including paper work reduction.

V. Future directions

The participants observed that too much emphasis has been given on renewable energy sector but there are other sectors where the potentials of green jobs are enormous. Apart from renewable energy sector, the green job initiatives should be undertaken in sectors such as: agricultural, construction, textile, tannery etc. where large number of persons are working.

Several participants stressed the need for appropriate policies to generate and sustain green jobs. They observed lack of policy integration across various government agencies and programs for which policies could not achieve desired results. Moreover, policies and programs lack long term vision. Therefore, to achieve optimum result from green job initiatives, they suggested as follows:

- Integrate green job policies to environment policies of the government.
- Ensure favourable fiscal and monetary policies to promote GJ initiatives.
- The Ministry of Labour and Employment should be the focal point of the GJ initiative.
- Develop skill and raise awareness of the people through appropriate training and advocacy programs.
- Introduce entrepreneurship development training program for the disadvantaged women
- The target group of training should be clearly identified so that they could get benefit out of training.
- Develop capacity of the trade unions and employers association to deal with GJ initiatives.
- Adopt action programs at a large scale to achieve objectives of the GJ initiatives.
- Share findings of the studies with various groups of stakeholders.

At the national level, the Ministry of Environment is the main lead agency to deal with climate change issues and addressing the impact of environment. There are also other major ministries involved. Therefore, at the policy level, the Ministry of Environment and Forest, and the Ministry of Agriculture should be included, among others, in green jobs initiatives and programmes.

It is not possible to achieve objectives of green job initiatives in isolation – both government and non-government agencies should work together to achieve desired results. The participants were of the opinion that there should be a common body including both government and non-government agencies (e.g. waste concern) to work for achieving the common goal of generating and sustaining green jobs.

The representative of the Ministry of Environment and Forest informed that the ministry has already placed Environment Conservation Act (amendment) – 2010 and Environmental Court Act – 2010 in the current *Jatiya Sangsad* (national parliament) session which he termed as a way forward to conserve environment and sustain green jobs. He hoped that if these Acts and Courts were

implemented, these should help making the country greener and creating opportunities for more green jobs. To highlight his point, he stressed on “*green men*” and “*green mind*”.

To promote green jobs, entrepreneurship should be developed at grass roots level. The disadvantaged women such as widowed, separated etc. should be brought under the purview of GJ initiatives.

In the renewable energy sector, the entrepreneurs should be provided with adequate financial assistance so that they could initiate mini technology centres and generate green jobs at local levels. Financial assistance needs to be complemented by necessary financial and banking services. Along with financial assistance, the need of appropriate training programs for developing their skills is also equally important. Training programs should be designed to address the need and develop skill of the target groups. If the interventions are made against problems, the GJ initiatives would be effective in the correct sense of the term.

VI. Concluding remarks

In the concluding session, the resource person, Mr. Mondal, highlighted the importance of greater commitment by all towards promotion of green jobs. He suggested incorporating environmental education at primary level. He was of the opinion that financial assistance from agencies such as ILO would help promoting green jobs initiatives in Bangladesh. The ILO representative, Mr. Nurunnabi Khan, clarified that (a) green jobs initiatives do not cover a few relatively small sectors but also to the larger economic sectors and (b) ILO is not alone in green jobs initiatives. The Chair of the session, Mr. Arun Kanti Aich, Joint Secretary, MOLE thanked the participants for their active and enthusiastic participation in the workshop proceedings and hoped that the suggestions put forward by them would be taken into consideration in the future green jobs initiatives programme in Bangladesh.

ANNEX 4: LIST OF PARTICIPANTS IN STAKEHOLDERS WORKSHOP ON GREEN JOBS REVIEW HELD ON 21 SEPTEMBER, 2010 AT HOTEL SHERATON, DHAKA

SI #	Name and Designation	Name of Organization
1	Mr Arun Kanti Aich, Joint Secretary	Ministry of Labour and Employment
2	Mr Md. Belal Hossain Sheikh Assistant Director	Department of Labour
3	Ms Mahbuba Moshqur Dy. Secretary	Ministry of Agriculture
4	Mr Abu Fazal Md Rafiuddin Sr. Assistant Secretary	Ministry of Fisheries and Livestock
5	Mr. Md. Billal Hossain Director (Law)	Department of Environment
6	Mr. Md Ahsan Habib Director	Bureau of Man Power Employment and Training (BMET)
7	Mr Anisur Rahman Mondol Deputy Director	- Do -
8	Mr Golam Ali Mortoza Assistant Director	- Do -
9	Mr Anwar Hossain Patwary Chief Slum Development Officer	Dhaka City Corporation
10	Dr. Rahima Khatun Director	Institute of Fuel Research & Development (IFRD)
11	Dr. Mohammad Abdur Rouf Principal Scientific Officer	- Do -
12	Dr. S M Khalilur Rahman Member Director (AERS)	Bangladesh Agricultural Research Council (BARC)
13	Mr. Zillur Rahman Deputy Director	Directorate of Livestock
14	Mr Selim Akhter Deputy Secretary	Disaster Management Bureau(DMB)
15	Mr. M Wahidur Rahman, SIO (Tech)	IDCOL
16	Dr. Abdul Hye Mondol	Bangladesh Institute of Development Studies (BIDS)
17	Mr. Absal Shaquib Quoreshi Secretary	Bangladesh Employers' Federation
18	Mr. Abdullah Al Mosaddeque Executive Director	- Do -
19	Mr. Masudar Rahman, Research Officer	- Do -
20	Mr Shah Md. Abu Zafar Chairperson	NCCWE

SI #	Name and Designation	Name of Organization
21	Mr. Abdul Kader Howladar	-Do -
22	Mr. Mojibur Rahman Bhuiyan	-Do -
23	Mr. Dewan Mohammad Ali	- Do -
24	Ms Sazia Rahman Research Officer	Waste Concern
25	Ms Farida Yesmin Research Officer	- Do -
26	Dr Golam Rabbani Agricultural Specialist	Grameen Shakti
27	Mr Md Ahsanullah Bhuiyan	- Do -
28	Dr. M I Sharif, Sr. Fellow	Bangladesh Centre for Advanced Studies
29	Mr. A.R. Chowdhury Repon General Secretary/Executive Director	Bangladesh Occupational Safety, Health and Environment Foundation (OSHE)
30	Ms. Nabilah Rezwana Research Associate	- Do-
31	Mr Shakil Akter Chowdhury BILS-OHS Coordinator	BILS
32	Ms Nazma Yesmin Programme Officer	- Do -
33	Ms. Kohinoor Yasmin	TARANGA 282/5, 1st Coloney
34	Ms Masuma Parvin	- Do -
35	Dr AKM Nazrul Islam Research Fellow	C P D
36	Mr. Rajeeb Munankami Senior Advisor (Biogas)	SNV
37	Ms Munima Sultana Sr. Reporter	Financial Express
38	Dr A T M Nurul Amin	North South University
39	Mr. Gagan Rajbhandari Director a.i.,	I L O Country Office for Bangladesh
40	Mr. TIM Nurannabi Khan Sr. Programme Officer	- Do -
41	Dr Md. Wazed Ali, Programme Officer	TVET Project , ILO

ANNEX 5: NATURE OF INVOLVEMENT OF PARTNERS OF ILO IN GREEN JOBS PROJECT IN BANGLADESH

Name of the organization	Contact persons Name & designation	Type of collaboration/GJ activities	Comments/clarifications
ILO Constituents			
Ministry of Labour and Employment	Mr. Md. Nurul Haque, Secretary	MOLE remains ILO's main contact for the GJ activities in Bangladesh. MOLE officials participated in the Nigata Conference in 2008 and subsequently confirmed BGD participation in the pilot project. As a follow up to Nigata, the Ministry organized a technical task team to review and implement green jobs activities in Bangladesh. The team organized several meetings under the chairmanship of the Secretary of the Ministry to review the project activities including priority sectors.	The main responsible officials for green jobs programme have been transferred to other Ministries and departments. The capacity of the Ministry still remains weak due to staff turnover and the fact that it is a new topic for the officials.
Bangladesh Employers Federation (BEF)	Mr. Farooq Ahmed, Secretary General	BEF remains ILO's main contact from the employers' side. In addition to representing the employers in various forums and meetings, it organized two orientation workshops for the employers, one in Chittagong and the other in Khulna, to sensitize the employers on green jobs.	BEF is the focal point for activities on labour issues at the country level. ILO works with BEF on a regular basis and implants a joint programme of activities on labour issues.
National Coordination Committee on Workers Education (NCCWE)	Mr. Shah Md. Abu Zafar, Chairperson Dr. Wajedul Islam Khan, Member Secretary	NCCWE represent the workers in the various green jobs activities, particularly in the technical force as well as in national seminars and workshops held on green jobs. Besides this, NCCWE organized four divisional workshops in four divisions to sensitize workers on the green jobs issues.	The responsible persons in the NCCWE directly involved with the GJ activities are the former Chairperson and Member Secretary of NCCWE namely Mr. Abdul Matin Master and Abdul Kader Howlader respectively.
Other partners			
Bureau of Manpower, Employment and Training	Mr. Hazrat Ali, ADG Mr. Ahsan Habib, Director; Dr. Nurul Islam, Director; Mr. Anisur Rahman Mondol, Deputy Director	BMET and Grameen Shakti signed the MOU for organizing pilot training courses for the solar home system. Training courses were organized in three Technical Training Centres (TTCs) namely Khulna, Faridpur and Bogra. ILO Community-based Training (CBT) methodology manual (now	BMET is a public sector training provider of technical and vocational training. It is under the Administrative control of the Ministry of Expatriates Welfare and Overseas Employment and

Name of the organization	Contact persons Name & designation	Type of collaboration/GJ activities	Comments/clarifications
		renamed as CB- TREE methodology) used in training of solar technicians in the Technical Training Centres of BMET.	also reports to the Ministry of Labour and Employment on skills development issues.
Waste Concern	Mr. Maqsood Sinha Mr. Iftikhar Enayetullah	Conducted the three sectoral studies. Was supposed to use ILO VCD methodology but later used a sectoral structure approach (identification of major products/sub-sectors).	The studies are completed. They are in the process of making a list of strategic interventions in these sectors.
Grameen Shakti	Mr. Abser Kamal, Acting MD Dr. M. S. Islam, Head of International Cooperation	Grameen Shakti remains one of the main partners of GJ initiatives. Two broad types of work have been carried out by GS: (1) signing of MOU between GS and BMET for solar technicians training and implementation of the training activities and (2) Women Entrepreneurship Development Programme. Focus of ILO assistance was to help GS develop capacity for women entrepreneurship through promotion of renewable energy.	Several trained participants were later hired by GS.
OSHE Foundation	Saki Rezwana, Chairperson A.R. Chowdhury (Ripon)	Conducted four divisional workshops on green jobs in four divisions.	
TARANGA	Ms. Kohinoor Yasmin Mr. U Thin Maung	Assisted Grameen Shakti with the conduct of the WEDP and used parts from the GET AHEAD Manual (in Bengali) in training. It provided TOT to Grameen Shakti Trainers and developed training and learning materials for the TOT.	As per the contract between GS and TARANGA, the latter is to follow up of the trainees after the training.