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# Prospect and Potential of Green Jobs towards Green Economy in Bangladesh: A Situation Analysis

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*Strictly as per the compliance and regulations of:*



# Prospect and Potential of Green Jobs towards Green Economy in Bangladesh: A Situation Analysis

Khalid Md. Bahauddin<sup>α</sup> & Nayma Iftakhar<sup>σ</sup>

**Abstract** - The prospects and potential of green jobs in Bangladesh are huge. There are many potential sectors such as renewable energy, buildings and construction, transportation, basic industries, agriculture and forestry etc are the priority areas for the future green job market. In 2009, numbers of approximate green jobs were 748,701 while it increased in 2010 which was about 811,268. It is true the green jobs sector is growing in Bangladesh, but there are also challenges that need to be overcome to accelerate growth. This paper tried to investigate the outlook and potential of green jobs in Bangladesh as well as also make recommendation some ideologies, basic principles as well as reform of policy mechanism to promote and develop of green jobs in Bangladesh.

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## I. INTRODUCTION

Bangladesh is a low energy-consuming though energy starved country. About 60% of the population is not connected to the national grid. A large majority of the 40% that do have access to the national grid live in urban areas. Although Bangladesh has made impressive gains in key human development indicators, more than 63 million people remain below the poverty line. Under employment is pervasive, unemployment levels high amongst the youth, and the informal economy estimated to account for 88% of the overall employment. The Gender Empowerment Measure ranking of 76 shows continued low levels of female ownership of economic assets. To overcome this situation, green jobs can play an additional vital role to achieve green economy as there are many potential sectors in Bangladesh which can generate green jobs. In Bangladesh, green jobs create opportunities for employment for the poor in the renewable energy sector such as solar home systems and bio-gas. Other green jobs could be created in organic, plastic waste and lead acid battery recycling, or by construction projects – such as digging rivers and canals, constructing water reservoirs and building roads. It is true the green jobs sector is growing in Bangladesh, but there are also challenges that need to be overcome to accelerate

growth. So to conquer the challenges, some ideologies and basic principles as well as reform of policy must be taken to develop and promote the green jobs in Bangladesh.

## II. CONCEPT OF GREEN JOBS

The concept of green job is a new one. “Green jobs” does not lend itself to a tight definition but certainly includes direct employment that contributes to the reduction of environmental impact to levels that are ultimately sustainable. This includes jobs that help to reduce the consumption of energy and raw materials, decarbonizes the economy, protect and restore ecosystem and biodiversity and minimize the production of waste and pollution. Thus green job aims to preserve the environment for both present and future generations and to be more equitable and inclusive of all people and all countries.

### a) Environmental Dimension of Green Jobs

For a modern economy, even in the least developed countries, a complete mapping of links between the environment and economy is a major challenge given the many positive and negative feedback loops that would need to be examined.

The range of green job profiles thus defined is broad. It stretches from highly skilled research and development or management functions through technical and skilled levels to relatively low-skilled roles. In developed economies, environment related jobs tend to be concentrated in sectors/activities directly linked to decarbonizing energy supply and improving energy efficiency, pollution control and eco-friendly services. Examples of those sectors that hold the promise of the green jobs of the future include:

- Delivering improvements in energy and resource efficiency, particularly in the building sector (new and existing built stock), but also industry and transport;
- Renewable energy (including bio-fuels and renewable technologies);
- Sustainable mobility (i.e. mass transportation);
- Waste management and recycling of raw materials;
- Eco-industries related to pollution control (air, water, waste, site decontamination, noise); and “eco-friendly” services (conservation, ecotourism, etc.).

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In developing economies other sectors may be at least as important, in particular:

- Those involving the sustainable use of natural resources, including agriculture, forestry and fisheries; and
- Activities relating to adaptation to climate change.

b) *Social Dimension of Green Jobs (the “Decent Work” Criterion)*

The green job definition used here encompasses more than just the extent to which a particular job contributes to a more environmentally sustainable economy. It also captures a measure of job quality. Effectively, a job may be associated with an economic activity that is more environmentally sustainable than the norm or which contributes to such improvement in other sectors, but it cannot be considered a “green job” if it does not meet conditions of decent work.

The decent work definition is built upon a set of social and labor rights and obligations. The eight basic

conventions of the ILO, which are recognized as defining the various aspects of socially responsible production, also apply to green jobs.<sup>11</sup> Indicators and criteria have been developed and endorsed at the international level through adoption of the ILO labor standards which are relevant to the further characterization of the social and labor dimension of green jobs (see box 1). Many jobs would not be considered decent. This is due to a number of factors. The so-called “green sectors” in developing countries include sectors where achieving decent work conditions remain a challenge. Examples of “green but not decent jobs” include low-wage jobs installing solar panels, and jobs in ship breaking or electronic waste recycling where occupational safety is inadequate or child labor is used. In many instances, these sectors are defined by their informal nature, hardship and occupational and health hazards.

### Box 1: the ILO definition of Decent Work

Decent work has been defined by ILO representatives of governments and employers’ and workers’ organizations in over 180 countries as: “opportunities for women and men to obtain decent and productive work in conditions of freedom, equity, security and human dignity, in which women and men have access on equal terms”. Decent work combines adequate income from productive work with social security, respect for worker and social rights and the opportunity to voice and defend interests collectively.

*Decent work is relative and country-specific because countries differ socially and economically. None can aim for the same absolute conditions of work. Each country must set its own targets for decent work.*

The following integrated agenda of policies and measures across four mutually reinforcing areas is required to achieve decent work goals:

1. Respect for and protection of basic human rights at work
2. Promotion and creation of opportunities for full productive and remunerative employment
3. Broad social protection
4. Sustained social dialogue among social partners: workers, employers and private business, and government.

A universal social “floor” applies to all countries, and includes respect for the following basic human rights:

- Freedom of association and the effective recognition of collective bargaining rights
- Elimination of all forms of forced or compulsory labour
- Effective abolition of child labour and the right of children to learn and develop rather than work
- Elimination of discrimination in respect of employment and occupation.

Gaps between people’s decent work aspirations and reality exist everywhere. The challenge is to reduce these gaps. Progress towards decent work should be the central goal of all economic and social policies and strategies.

### III. THE ENVIRONMENTAL AGENDA AND GREEN JOBS IN DEVELOPING COUNTRIES

International debate on global environmental issues has evolved over the last two decades since the adoption of the 1992 Rio Conventions on desertification, climate change and biodiversity. 36 more favorable conditions are being created for the development of an enlarged "environmental economy", and the emergence of new economic sectors and services. In response, demand for jobs with new qualifications and skills has increased and other jobs have evolved. The green jobs concept highlights labour market shifts that are directly dependent on various aspects of environmental management and low carbon development, as well as climate change adaptation in accordance with the definition given by the United Nations Framework Convention on Climate Change (UNFCCC).

A growing literature suggests that millions of green jobs already exist. The economic restructuring due to green growth will lead to changes in prices, in international trade and in the output of countries, and therefore in employment. These effects have been the subject of a number of studies seeking to quantify the net employment effects. Results show that net effects on jobs are modest but the economic structural shift can be quite substantial. Essentially, the number and nature of jobs will change as the relative importance of sectors changes, with some expanding, others contracting, and

others remaining stable but with changes in processes and products. But this transition has been documented mostly in industrialized countries.

Research on developing countries is comparatively scarce. Alongside the growing need to assess the contribution of these sectors and activities to national economies, methodologies and analytical tools that integrate the complex interactions between the socio-economic and environmental fields are also required. Indeed, there is demand for a comprehensive analytical framework that can better assist policy-making in this fast-evolving field, including in developing countries.

Green growth can create new and additional employment demand. This is the case, for example, when jobs in renewable energy replace those depending on fossil fuels, or when new jobs are created by expenditure on adaptation activities.

In developing countries, which tend to have unutilized or underutilized labour, this provides opportunities to raise total employment.

### IV. COUNTRY LEVEL SUPPORT OF THE GREEN JOBS PROGRAMME

The number of countries the Green Jobs Programme is actively collaborating with increased over the past years and the areas of work cover a great variety of issues. The map below displays the current and expected country level support of the Green Jobs Programme.

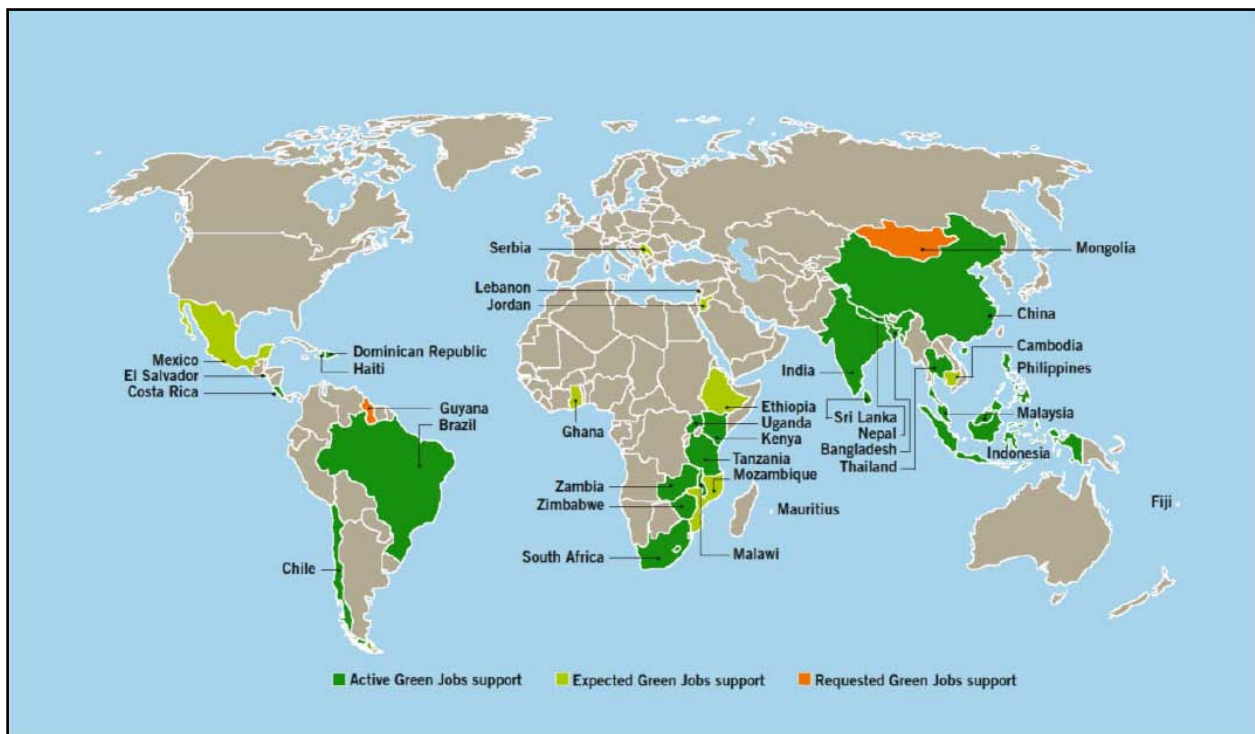


Figure 1 : Current and expected country level support of the Green Jobs Programme



The Programme contributes to the establishment of green jobs and greener economies, among others, in the following sectors: construction and green buildings, tourism, renewable energy and energy efficiency, forestry, natural resource management, recycling and waste management and sustainable agriculture. It supports national initiatives through advocacy workshop and capacity building, assessments on green jobs potential, policy advice and strategic planning. It also supports local initiatives by promoting green entrepreneurship, the greening of enterprises and local development for adaptation to climate change.

The regional activities in Africa focus mainly on strengthening green entrepreneurship. In South Africa several studies and projects focus on the building and construction sector. The Asia and the Pacific Green Jobs Programme encourages ILO constituents to participate in social dialogue on green jobs through capacity building, promotes inclusive jobs centred and environmentally sustainable growth models and advocates for green jobs creation through demonstration projects. In 2010, two projects were initiated by the regional Programme, the Green Jobs in Asia project funded by the Australian government and the Green Business Asia funded by the Japanese government. Green Jobs Programme activities in the Arab States are at the initial stages. In Lebanon, an assessment on the green jobs potential was conducted and a Green Jobs Kick-Off Workshop was held in Beirut from 28 to 29 July. In Latin America and the Caribbean, the main focus is on waste management, renewable energy, tourism, forestry, sustainable agriculture and green social housing. Haiti receives support in the area of adaptation to climate change.

## V. GREEN JOBS INITIATIVES AND IMPLEMENTATION IN BANGLADESH

Bangladesh is a low energy-consuming though energy starved country. About 60% of the population is not connected to the national grid. A large majority of the 40% that do have access to the national grid live in urban areas. Although Bangladesh has made impressive gains in key human development indicators, more than 63 million people remain below the poverty line. Under employment is pervasive, unemployment levels high amongst the youth, and the informal economy estimated to account for 88% of the overall employment. The Gender Empowerment Measure ranking of 76 shows continued low levels of female ownership of economic assets.

In July 2008, a national workshop on Green Jobs Initiatives (jointly organized by Ministry of Labour and Employment, Bangladesh and ILO) was held in Dhaka to raise awareness of the concept of Green Jobs and recommend steps forward. Participants at the workshop expressed support for Bangladesh as a participating country on ILO Green Jobs initiatives,

noting that as a first step, there was a need to undertake an inventory of existing green jobs. A formal launching of the green jobs initiative was held on 04 December 2008, in which it was agreed, among others, that:

- A draft action plan on green jobs would be formulated following a series of regional level consultations;
- An inventory on green jobs on “who is doing what” needs to be carried out which would support the draft action plan, and other policy interventions.

As a follow up to the initiatives mentioned above, the ILO, in consultation with the Ministry of Labour and Employment has launched two assessment studies in selected sectors: one assessment would focus on three sectors viz. waste management, renewable energy and construction; the other study would focus on agriculture sector including forestry. The agriculture sector assessment on green jobs would include both an inventory and assessment of the intensive green technologies which are currently on going or are being planned in the future and those have an impact on poverty reduction, employment creation, sustainable environment and decent work.

Since 2008, the Green Jobs Programme has implemented activities in Bangladesh (first phase: 2008 to 2010). Various awareness raising activities on green jobs took place at national and regional levels. They helped to improve the effective implementation and enforcement of green jobs in the country. Baseline knowledge on green jobs was generated through a national assessment and complemented by sector based analysis and by a separate study on skills needs for green jobs.

Training in renewable energy (i.e. solar home systems) and soft skills (i.e. entrepreneurship capacity development) were provided to equip the project target groups (mostly women in rural areas) with adequate techniques and skills for employment opportunities. The training was provided through a Public Private Partnership (PPP) with Grameen Shakti (a non-profit company) and the Bureau for Manpower Employment and Training (BMET). The promotion of green jobs in Bangladesh provides employment opportunities through training on solar techniques and facilitates a low-carbon development by promoting renewable energy.

The lessons learned from the first phase have been successfully integrated into the Green Jobs in Asia project, under the ILO – Australian Partnership (2010 – 2015). The Private-Public Partnership will be expanded to cover a larger market scope, not only including Grameen Shakti, BMET but also the Infrastructure Development Company Limited (IDCOL).

## VI. POTENTIAL SECTORS FOR GREEN JOBS IN BANGLADESH

Table 1 showing the potential sectors for green jobs in Bangladesh.

*Table 1 :* Potential sectors for green jobs in Bangladesh  
Sector Scope/Field of Green Jobs

| Sector           | Scope/Field of Green Jobs   |
|------------------|---|
| Agriculture      | <ul style="list-style-type: none"> <li>• Soil conservation</li> <li>• Water efficiency in Irrigation</li> <li>• Organic farming ( tea cultivation already started in Bangladesh)</li> <li>• Reducing distance between farm and market</li> </ul>  |
| Forestry         | <ul style="list-style-type: none"> <li>• Reforestation and afforestation</li> <li>• Sustainable forestry management by community</li> <li>• Halting of deforestation</li> </ul>   |
| Energy           | <ul style="list-style-type: none"> <li>• Renewable Energy ( solar, biogas, improved stove, biomass)</li> <li>• Manufacturing of energy efficient appliances such as CFL, efficient air conditions etc.</li> </ul>   |
| Transport        | <ul style="list-style-type: none"> <li>• Fuel switching in vehicles ( petrol, diesel to CNG)</li> <li>• Use of hybrid or fuel efficient vehicles</li> <li>• Mass transit</li> <li>• Bus rapid transit (BRT)- modal shift,</li> <li>• Car Pooling</li> </ul>   |
| Construction     | <ul style="list-style-type: none"> <li>• Cement factory ( energy efficiency)</li> <li>• Brick Manufacturing ( energy efficiency)</li> <li>• Concrete Blocks</li> <li>• Green Building/Energy efficient Buildings</li> </ul>   |
| Manufacturing    | <ul style="list-style-type: none"> <li>• Pollution control technologies such as ETP</li> <li>• Energy and materials efficiency</li> </ul>   |
| Waste Management | <ul style="list-style-type: none"> <li>• Recycling of municipal organic and inorganic waste (composting, biogas, biogas to energy, RDF etc, plastic waste recycling)</li> <li>• Recycling of lead acid battery</li> <li>• Extended producer responsibility (product take back and remanufacturing)</li> </ul> |

## VII. SECTOR WISE DISTRIBUTION OF GREEN JOBS IN BANGLADESH

There were two study conducted on number of green employments held in different sectors of Bangladesh which showing in Table 2 and Table 3.

*Table 2 :* Sector wise distribution of green jobs estimated by  
Waste Concern, 2009

| Sector   | Green Jobs (Numbers) |
|--|----------------------|
| Agriculture and Forestry                                       | 8725                 |
| Transportation   | 147987               |
| Manufacturing ( energy Efficiency, Brick Kilns)                | 11,081               |
| Renewable Energy   | 14966                |
| Waste Recycling ( compost, production, sales and distribution) | 29942                |
| Building Construction  | 536,000              |
| <b>Total</b>   | <b>748,701</b>       |

*Table 3 :* Sector wise distribution of green jobs estimated by GHK Consultants  
for ILO, 2010

| Sector                                 | Core Environment Related Jobs | Green Jobs               |
|--|-------------------------------|--------------------------|
| Sustainable agriculture                | 41,548                        | Not possible to estimate |
| Sustainable and participatory forestry | 28,813                        | Not possible to estimate |

|   |                  |                          |
|---|------------------|--------------------------|
| Sustainable energy                                | 18,823           | 18,823                   |
| Waste management and recycling                    | 189,180          | Not possible to estimate |
| Collection purification and distribution of water | 8,441            | Not possible to estimate |
| Climate adaptation activities                     | 1,726,755        | Not possible to estimate |
| Manufacturing and energy efficiency               | 10,934           | 10,934                   |
| Sustainable transportation                        | 178,510          | 178,510                  |
| Sustainable construction                          | 1,340,000        | 536,000 – 670,000        |
| <b>Total</b>                                      | <b>3,543,004</b> | <b>811,268</b>           |

## VIII. CONSTRAINTS AND CHALLENGES OF GREEN JOBS IN BANGLADESH

It is true the green jobs sector is growing in Bangladesh, but there are also challenges that need to be overcome to accelerate growth. The burning constraints and challenges of green jobs in Bangladesh perspectives are following

- Lack of awareness and capacity building to understand the concept of Green Jobs
- Insufficient incentives & promotional measures.
- Inadequate research and development initiatives; and
- Insufficient Public Private Partnerships.

## IX. SUGGESTION TOWARDS PROMOTING GREEN JOBS IN BANGLADESH

### a) *Basic Principles for the Promotion of Green Employment*

Green employment directly leads to increases in productivity and efficiency, helps to promote faster income growth for workers and increases the amounts of income distributed across workers. The promotion of various environmental protection measures lead to an ever-expanding green industry chain with numerous direct and indirect employment opportunities which have the potential to offset the numbers of jobs lost in conventional industries. The newly created jobs would be safer, more economical and stable. Policies in human resources, therefore, have no option but to follow the trend of green development and effectively promote green employment.

#### i. *Promotion of Green Employment through Classification*

Different kinds of ideas and principles must be used to promote different types of green jobs, as they cannot be generalized nor standardized. For green jobs born out of demand, the government should follow market mechanisms, eliminating factors which might obstruct the proper functioning of the market and try to provide more and better employment services. For the government directed type of green jobs, policy interference needs to occur to design specific employment promotion policies.

#### ii. *Industrial/ Sectoral, Environmental and Employment Policies are Equally Important and should be Considered Concurrently*

Economic development, environmental protection and employment promotion are all bring about improvements to people's lives, all three equally important. The economy cannot be developed by ignoring the environment or employment, nor could the environment be well protected by limiting economic growth and job creation or a development model be created without employment growth be adopted.

Policy should provide leverage for integrated support, coordinating the promotion of industrial/ sectoral structure optimization, the environment's continuous improvement, job increases and improvement to job quality. All these mean that, under the premise that employment goals are given full consideration, we should encourage industries/sectors in the environmental sector to promote the transformation of traditional industries towards more sustainable production and gradually improve environmental standards.

The key to realizing the coordinated development of the three dimensions outlined above is to have synchronized policy making, i.e. when deciding on industrial/sectoral policy and planning, there should be simultaneous drafting of employment policies and plans; when drafting employment policies and plans, the effects on economic development and the environment must be taken into account.

#### iii. *Policies that Promote Green Employment Require Further Scrutiny of the Concept of Green Employment*

Further scrutiny of the green job concept is required before green policy is promoted because: some green jobs do not offer decent employment; some green jobs are good for the environment but do not promote low carbon employment, some low carbon jobs are work against environmental protection, such as the growing of biomass energy crops using of fertilizer that generates pollution; some green jobs do not meet the need for industrial development, such as photovoltaic power plants and PV power generation equipment manufacturing where over capacity is pervasive; some green jobs do not meet the characteristics of resource endowments.

Therefore, green job development should not solely involve promotion without policy constraint and control. When the government is drafting green employment promotion policies, it must take into account Bangladesh's unique position and identify the areas and levels of intervention for green employment.

#### iv. *Industry-Specific Green Job Promotion Policies*

Green jobs exist in all different industries, sectors and levels and impact all kinds of workers, varying widely across different industries. Therefore, under the general guiding ideology and principles, industry/sector-specific survey and research must be conducted, and industry/sector specific green employment promotion policies must be devised.

#### v. *Policy Suggestions for the Promotion of Green Employment*

Setting green employment promotion policies is the greening of a more active employment policy system. On the one hand the "green" concept must be implanted into the policy system. Accelerating economic growth and expanding employment are still the government's most urgent tasks. In this scenario, the green employment promotion must give proper consideration to the following issues: firstly, green employment promotion should not cause great employment fluctuation, with respective employment plans well designed. Secondly, when it is difficult to fully transfer surplus agricultural labour to meet job demand, the government should support the greening of labour intensive employment in the agricultural. Thirdly, like other policies, green job promotion should focus on non-public sectors, including individual, privately-owned, and village and township enterprises etc. On one hand, these enterprises generate the majority of jobs, and on the other hand, the greening potential is quite considerable. Fourthly, flexible employment is still the key channel for job creation and green employment promotion must not strangle this employment channel.

In accordance with the research findings, the following policy suggestions are made:

#### vi. *Ensure Green Employment is Developed through Legal Channels*

##### *Conduct an Employment Evaluation of Industrial/ Sectoral and Environmental Policies*

First of all, employment must be the centre of a social evaluation index system set up for environmental protection.

In industrial and environmental planning, employment evaluation indexes must use scientific methods, including the number of new jobs a project could possibly create, the number of lost jobs brought about by the project's existence, the impact on the local human resource supply-demand position, the impact on local income levels and the identification of potential human resources for the project, etc.

Secondly, designing of employment evaluation indexes should be followed by employment planning. This means the design of policies and measures to address the project's impacts on employment. If job losses are likely, plans must be made to counteract unemployment; if there are additional human resource needs, a supply plan must be devised. At the crux of such planning is the provision of adequate financial resources to address the project impacts.

Thirdly, employment evaluation indexes and plans should be accompanied by employment budgeting, i.e. the cost benefit of the project on employment including accounting for the cost of employment and funding.

Lastly, project evaluation should be conducted. The impacts on employment of evaluation of the industrial and environmental policies should be a precondition for project approval.

##### *Modify and Improve Relevant Laws and Industrial and Environmental Policy*

Firstly, clear goals for green employment must be raised during the process of drafting any plan or policy. Ultimately, targets for employment and environmental protection must be clearly stated so to ensure the development of green employment in Bangladesh for future. Secondly respective laws and regulations should be modified.

#### vii. *Policy Measures for Promoting Green Employment*

##### *Green HR Market Mechanisms to Promote Green Employment*

A green employment certification system should be set up to promote green employment. Companies or organizations in green industries and green companies in non-green industries could be acknowledged with the title of 'Green Employer', a reference for receiving related policy support. For example, Green Employers could qualify to join suppliers on the government's green procurement list.

A professional green job certification system could be set up to promote workers' transformation towards "green collar" jobs. Improvements to the professional certification system, setting up standards for green jobs and encouraging workers to take part in certification will help to get more people to join the ranks of green employment.

The third point concerns the public employment service system. A green job service zone should be set up in public employment service agencies, in order to collect and advertise green job information and promote matching between demand and supply for green jobs. The labour and social security community platform should be used so that green job information can reach every worker.



viii. *The Greening of Existing Employment Policy to Promote Green Employment*

Jobs in those industries which were affected for institutional reasons and due to the State's industrial policies and as such they should be provided with support on employment policies, including those that promote job stabilization and employment.

The first is to encourage companies to expand employment. Policy leverages such as tax benefits, social insurance subsidies, guaranteed loans and interest subsidies should be used to encourage employment of those affected in the transformation towards green economy. Policy supports such as tax benefits should be provided to those companies that use multiple channels to relocate their own affected workers by the use of their existing facilities, sites and technology for diversification.

The second is to help companies overcome difficulties to create as many jobs as possible. Preferential treatments such as delaying payment of social insurances, reducing social insurance rates, and providing social insurance subsidies, job subsidies, and worker training subsidies, should be given to those companies who are in the transformation towards green production and have the potential to absorb surplus workers, so that they could maintain stable employment, and eliminate or minimize redundancy.

The third is to encourage self-employed entrepreneurs. Entrepreneurship should be encouraged by providing free training, set tax relief and loan credit. Administrative fees and taxes could be reduced or waived for those starting their own businesses such as in small industry and privately owned businesses.

The fourth is to promote reemployment through public employment services and reemployment training. The government's public employment agencies should provide free employment services to people looking to be reemployed. Employees from the sunset industries should be retrained with a focus on the industries that are transforming their resource use, making it easier for those out of work to be reemployed in industries where there is growing demand.

The fifth is to provide employment support for those in financial difficulties. The government could create volunteer or charitable positions which have social security subsidies and job subsidies, which are open to those who are experiencing difficulty in finding reemployment. The government could provide social security subsidies to those who are expected to find reemployment relatively easily and coordinate placements for those that are finding it difficult to become reemployed.

ix. *Develop Green Job through Policy Support*

Some green jobs very competitive and will develop strongly without additional policy support. Environmental equipment, cleansing products and orga-

nic food are examples of such industries. However, generally speaking, green employment is an emerging phenomenon which still needs to rely on the quick set up of supportive policy. This does not necessarily refer to big investment but offers enormous potential for employment.

For example, some cities piloted waste collection and recycling stations which could not compete with private recycling operators. To build their size, jobs in waste recycling were created in communities to build up a network, using subsidies or social welfare subsidies in the early phases of growth. When green employment develops into a formal industry, it will be able to operate free from government intervention.

x. *Develop Green Employment in the Process of Rural Development and Building the West*

There is broad potential for green employment in rural areas. Agriculture is the foundation of the Bangladesh economy. Building the ecological environment is the basis of Bangladesh national policy and the rural economy is a miniature national economy.

The first is in developing employment in eco-agriculture. Eco-agriculture combines labour with green knowledge to produce energy saving green food.

The second is in developing employment in specialized agriculture. Specialized agriculture based on market and regional advantages will be the development direction for modern agriculture. This would lead to the creation of groups of specialized households and villages, also helping to increase farmers' incomes. The third is developing employment in processing the products of specialized agriculture. This processing combines agriculture, industry and commerce, lead by an enterprise or farmer's cooperative linking farmers and the processing industry in an operational chain. The fourth is developing rural eco-tourism, which could achieve significant growth in production, revenue and employment. The fifth is developing new energy industries. Energy consumption in rural areas is undergoing a fast increase. The development of biomass energy, straw manure biogas etc, not only helps to meet countryside energy demand, but also are important areas for green employment. The sixth is to drive up demand for rural public services and create green public service positions on the basis of developing the rural economy.

xi. *Drive Employment Growth by Supporting the Development of Green Jobs in Small Business*

Small business has always played a key role in creating and absorbing employment and this is also true for green employment. Green Employer Certificates should be given out to small enterprises classified as green-jobs employers so that businesses can enjoy preferential policies. Founders of new small green businesses should be provided with micro loans; have their industrial and commercial registrations simplified. A

policy to support the promotion of green technology should be made to drive the implementation and popularization of green scientific research results, and to promote green collar entrepreneurship.

xii. *Develop A Green Skills Development Plan for the Promotion of Green Employment*

Skills development is the key in the transformation towards green employment. All existing training should be greened, such as practical skills training in agriculture and skills training for transforming rural employment. Green skills should be incorporated into all these training programs. A new skills development plan should also be drawn up.

xiii. *Plan for Technical and Technological Enhancement for Green Industry*

This refers to drawing up and implementing a plan for the technical and technological enhancement of China's green industry, improving workers' overall green skills levels and supplying the necessary human resources for green development.

To achieve this, industry-specific outlines for green technology and skills and human resource planning must be drawn up. For new technologies and skills, industries and universities can work together to establish the most suitable training methods.

✚ *Greening Existing Corporate Training*

Greening of existing corporate training includes topics such as green entrepreneurial philosophies, green industrial skills and green entrepreneurship etc.

✚ *Developing Green Job Qualifications and Skills Appraisals*

Green-collar assessment and evaluation should be developed according to green job standards so to gradually develop green job practitioner qualifications and green skills appraisals.

✚ *Setting up A Green Skill Development System for all Workers*

As green jobs exist in every industry and involve all kinds of workers, green skills development should extend to all workers. All kinds of channels such as vocational schools, community training centers, public sector employment agencies and companies should be used to spread the concept of green employment and green skills so that the next generation of workers are aware of green jobs; to provide green return-to-work training for the unemployed; offer up-skilling and re-training for workers in struggling companies; provide green vocational skills training for migrant workers; provide free green vocational training for demobilized soldiers; provide green entrepreneurial training for university graduates and those wanting to start their own businesses; and hold green vocational training as part of skills development for existing workers. Policies offering subsidized training could be used to encourage the scope of training. Extensions to the duration of training courses as well as improvements to training focus and effectiveness could also be made.

xiv. *Working with Social Partners to Promote Green Employment*

Mutual understanding must be reached between the government, employers and workers. Employers must take on the social responsibility for green development, aligning green employment with economic benefits.

xv. *Improving Publicity and Creating an Atmosphere for the Development of Green Employment*

Different methods can be employed to promote an atmosphere where green employment is well understood, respected and developed. Awareness raising can be achieved through increasing publicity for green employment and important green projects and events, as well as road shows, activities to collect suggestions from workers, releasing news of innovative or energy efficient practices, hosting environmental knowledge contests and issuing awards to selected groups and individuals in recognition of their contribution to green employment.

xvi. *Improving the Environment for Promoting Green Development*

✚ *Improving Environmental Standards*

Development of the environmental standards system (industries either lacking standards or with standards partially complete) must be sped up and able to be met by the majority of businesses. The government should give thorough consideration to the position of the country when setting up the standards: firstly allowing companies to comply step by step and secondly, using funding or policy support to make it feasible for companies to implement the standards. Full consideration must be giving to the impact on society and in particular, the impact on employment when implementing environmental standards.

✚ *Incentives and Punitive Measures to Encourage the Sustainable Development of Enterprise*

Refusing to fulfill environmental responsibilities equates to externalizing responsibilities for the environmental and social costs of doing business. Firstly, promoting a company's transformation towards green development requires incentives, putting green technology and its users in an advantageous market position such as increasing government subsidies on environmental products and services that will not or do not yet generate financial returns. Secondly, law enforcement must be improved. Some enterprises are generally able to follow national environmental policies, while some small private enterprises aren't able to strictly follow the national standards. Rectification of environmental practices and environmental law enforcement should be strengthened for those enterprises.

### ✚ Improving the Finance Mechanisms for Green Development

The development, utilization and popularization of environmental technologies are critical in promoting transformation toward a green economy, and the key for the adapting environmental technology is funding. Financing facilities must be continuously improved, including the imposition of resource, environment and carbon taxes etc, to generate funding for green economic development and green job creation. International support in terms of technology and funding should also be sought.

## X. CONCLUSION

The prospects and potential of green jobs in the country are huge. There are many potential sectors such as renewable energy, buildings and construction, transportation, basic industries, agriculture and forestry will be the priority areas for the future green job market. According to an ILO study, around 2.8 million people are currently involved in green or environmental jobs. The global environmental job market is projected to be doubled every year from \$1,370 billion at present to \$2,740 billion by 2020. More than two million people have, in recent years, found new jobs in the renewable energy sector, and the potential for job growth is huge. Being a new concept in Bangladesh, green jobs need not only be defined in our country's context but it also needs to identify the areas and sectors where green jobs can be promoted and the specific measures to be adopted. In this perspective, it is high time for Bangladesh to explore the alternative areas of cooperation in creating job opportunities.

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