FROM GREEN TO GREENER: GOOD PRACTICES AND TRAINING NEEDS FOR GREEN JOBS IN SRI LANKA

2012

Employers’ Federation of Ceylon
From Green to Greener: Good Practices and Training Needs for Green Jobs in Sri Lanka

ISBN : 978-9559316-16-9

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Published by : Employers’ Federation of Ceylon
No. 385 J3, Old Kotte Road
Rajagiriya, Sri Lanka.

Printed by : New Karunadhara Press
97, Maligakanda Road,
Colombo 10.
Message from the Director General, Employers’ Federation of Ceylon

The Employers’ Federation of Ceylon (EFC) is extremely proud and happy to release the Report on the findings of the survey titled “From Green to Greener: Good Practices and Training Needs for Green Jobs in Sri Lanka”.

Today, enterprises clearly have a major role to play in saving the planet. As an Employers’ Organization, which has been socially responsible, we are happy to collaborate with the International Labour Organization (ILO) to promote the concept of ‘green jobs’ amongst employers in Sri Lanka. We believe that we owe it to the future generation of employers and workers in this country to make every effort towards preserving the environment so that it would avert dangerous and potentially unmanageable climate change and protect the natural environment which supports life on earth.

We are happy that the EFC is one of the first employer organizations to embark on an initiative such as this which has been well received by our members. We take this opportunity to thank all the companies which responded to our survey. These companies need to be recognized and encouraged. We need to accept the diversity and different capacities of employers across countries and industries, and appreciate whatever initiatives they take on in building environmentally friendly, socially acceptable and economically sustainable enterprises.

The findings of this report clearly show that the private sector of Sri Lanka is the engine of sustainable growth.

I wish to thank the ILO for all the assistance and encouragement given to us in conducting this survey, especially for the valuable input made to this document by Ms. Shyama Salgado, ILO National Programme Coordinator, Green Jobs in Asia (Sri Lanka Chapter). I also wish to thank the Consultants Dr. Mahesh Jayaweera, Dr. Jagath Manatunge, Ms. Ayomi Witharana and of course the EFC Green Team headed by Ms. Thamali Senanayake, Ms. Tanya Warnakulasuriya, Mr. Prasad de Silva, Mr. Dasun Kodithuwakku, Ms. Gaya Kariyawasam, and Ms. Vidy Kamalasabayson for all their efforts in bringing about a successful completion of a survey on “Green Jobs Practices” amongst employers in Sri Lanka.

Ravi Peiris
Director General
Employers’ Federation of Ceylon
List of Organizations Involved in the Study

1. A. Baur & Co. (Pvt) Ltd
2. Aitken Spence PLC
3. Aqua Packaging (Pvt) Ltd
4. Asia Securities (Pvt) Ltd
5. Associated Motorways (Pvt) Ltd
6. Astron (Pvt) Limited
7. AT & T Global Information Solutions (Lanka) Ltd.
8. Avery Dennison Lanka (Pvt) Ltd
9. Balangoda Plantation PLC
10. Bank of Ceylon
11. BASF Lanka (Pvt) Ltd
12. Bogawantalawa Tea Estates PLC
13. Bolgoda Graphite Lanka PLC
14. Brandix Lanka Limited
15. British High Commission
16. Brown & Company PLC
17. Cargills Ceylon (Pvt) Ltd
18. CKT Apparel (Pvt) Ltd.
19. Coats Thread Exports (Pvt) Ltd
20. Elpitiya Plantations PLC
21. Finlays Tea Estates Sri Lanka
22. Glaxo Smithkline PLC
23. Hatton National Bank PLC
24. Hirdaramani Industries (Pvt) Ltd
25. Holcim (Lanka) Limited
26. Horana Plantations PLC
27. HSBC Electronic Data Processing Lanka (Pvt) Ltd
28. Institute of Chartered Accountants of Sri Lanka
29. John Keells Holdings PLC
30. Kahawatta Plantations PLC
31. Kelani Valley Plantations PLC
32. Lanka Naigai (Pvt) Ltd
33. Lanka ORIX Finance Company PLC
34. Lanka Clear (Pvt) Ltd
35. Lion Brewery (Ceylon) PLC
36. Litro Gas Lanka Limited
37. Loadstar (Pvt) Ltd
38. Logiwiz Limited
39. Madulsima Plantations PLC
40. Malwatte Valley Plantations PLC
41. MAS Active (Pvt) Ltd
42. Pussellawa Plantation Limited
43. Seylan Bank PLC
44. Sri Lanka Telecom PLC
45. Sri Lankan Airlines Ltd
46. Standard Chartered Bank
47. Talawakelle Tea Estates PLC
48. Textured Jersey Lanka Limited
49. The Hong Kong and Shanghai Banking Corporation Limited
50. Virtusa (Pvt) Ltd
# Abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Full Form</th>
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<tbody>
<tr>
<td>CARP</td>
<td>Council for Agricultural Research Policy</td>
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<td>CBAs</td>
<td>Collective Bargaining Agreements</td>
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<td>CEA</td>
<td>Central Environment Authority</td>
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<td>CEB</td>
<td>Ceylon Electricity Board</td>
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<td>CEOs</td>
<td>Chief Executive Officers</td>
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<td>EFC</td>
<td>Employers’ Federation of Ceylon</td>
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<td>EMS</td>
<td>Environmental Management Systems</td>
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<td>EPF</td>
<td>Employees Provident Fund</td>
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<td>EPL</td>
<td>Environmental Protection License</td>
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<td>ETF</td>
<td>Employees’ Trust Fund</td>
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<td>ETI</td>
<td>Ethical Trading Initiative</td>
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<td>ETP</td>
<td>Ethical Tea Partnership</td>
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<td>GBCSL</td>
<td>Green Building Council of Sri Lanka</td>
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<td>GMs</td>
<td>General Managers</td>
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<tr>
<td>HACCP</td>
<td>Hazard Analysis and Critical Control Points</td>
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<td>IDB</td>
<td>Industrial Development Board</td>
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<td>ILO</td>
<td>International Labour Organization</td>
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<td>ITI</td>
<td>Industrial Technology Institute</td>
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<td>ITUC</td>
<td>International Trade Union Confederation</td>
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<td>IUCN</td>
<td>International Union for Conservation of Natural Resources</td>
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<td>IWMI</td>
<td>International Water Management Institute</td>
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<td>LECO</td>
<td>Lanka Electricity Company Private Limited</td>
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<td>LEED</td>
<td>Leadership in Energy and Environmental Design</td>
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<td>MSW</td>
<td>Municipal Solid Waste</td>
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<td>NARA</td>
<td>National Aquatic Resources Research and Development Agency</td>
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<td>NBRO</td>
<td>National Building Research Organization</td>
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<td>NCPC</td>
<td>National Cleaner Production Centre</td>
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<td>NGOs</td>
<td>Non Government Organizations</td>
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<td>NREL</td>
<td>National Renewable Energy Laboratory</td>
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<td>OHSAS</td>
<td>Occupation Health and Safety Assessment Series</td>
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<td>RWH</td>
<td>Rain water harvesting</td>
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<td>SA</td>
<td>Social Accountability</td>
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<td>SAN</td>
<td>Sustainable Agriculture Network</td>
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<td>SEA</td>
<td>Sustainable Energy Authority</td>
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<tr>
<td>SLSI</td>
<td>Sri Lanka Standards Institution</td>
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<tr>
<td>TVEC</td>
<td>Tertiary and Vocational Education Commission</td>
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<tr>
<td>UNEP</td>
<td>United Nations Environment Programme</td>
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<tr>
<td>USA</td>
<td>United States of America</td>
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<td>WEEE</td>
<td>Waste Electrical and Electronic Equipment</td>
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*From Green to Greener*
Executive Summary

Green jobs in general, stand on the three components: namely, decent work for social justice, economic viability and environmental sustainability. In other words green jobs can be defined as decent work that contributes to environmental sustainability.

In the broader sense, decent work needs to address the core of international labour standards such as freedom of association and the effective recognition of the right to collective bargaining, elimination of all forms of forced or compulsory labour, effective abolition of child labour, elimination of discrimination in respect of employment and occupation, occupational health and safety etc. whilst aligning to laws applicable to Sri Lanka. Environmental sustainability addresses issues such as climate change, pollution prevention control, eco-systems, biodiversity etc.

In this context, Sri Lanka being a country belonging to the ILO’s Green Jobs in Asia Project has initiated an assessment on the subject of green jobs. However, there is no comprehensive study undertaken up to now in order to find out the status of green jobs in practice in Sri Lankan Organizations. The main objective of this study is therefore, to explore the role of organizations in each sector (Agriculture, Industry and Services) in contributing towards green jobs opportunities and emphasizing on the importance of decent work which will ultimately lead to a low-carbon economy.

It has been done by formulating a questionnaire and sending it to the membership of the EFC. Fifty organizations responded to this questionnaire from which information and data were gathered to prepare this publication.

Among the responses received, 46 from the private sector and 3 organizations from the government sector and others constituted 1 organization only. The general information with regard to each organization was collected first and data on employees were given priority in the entire survey as it has been the core of this study.

Environmental sustainability issues were then looked at, concentrating on green technology and devices together with green initiatives taken by each organization. Renewable energy becomes one of the key areas in which – 26 percent have made a positive change. Energy generation through hydro, in terms of mini and micro systems is one which is on the rise and there exist numerous commercial banks of Sri Lanka who are willing to lend financial assistance in the form of either debt or equity components for such developments. Though biomass is a feasible option to produce energy still more efforts are needed to convince organizations to switch into biomass operated systems for their steam or electricity requirements. However, switching to solar energy may take some time and formal campaigns are of paramount importance in order to encourage organizations to use such options in the long run.

It was also noted that organizations have had direct benefits by saving energy costs by improvement of energy efficiencies. However, deriving long term benefits continuously by optimizing energy efficiency may be questionable as there are no Energy Managers always within organizations. However their involvement on energy calculations for improvement of efficiencies would be very worthy to mention and most of the technical staff seem to have gathered good knowledge on improvement of efficiencies of certain machinery.

There has been a marked trend for Industrial sector organizations to go for green buildings and/or retrofitting as it helps secure more business opportunities from overseas investors and attracting more
Foreign Direct Investment (FDI) by developing green attributes. Further it was found that there has been a group of people who are involved in green building maintenance with the registration of the Green Building Council of Sri Lanka indicating greener job opportunities particularly in the Industrial sector. It is clear that the Manufacturing sector is mainly involved in indoor climate control interventions as they directly benefit from such interventions particularly with the creation of a healthy environment to work comfortably within the factory premises. It is inferred that these scenarios undoubtedly increase productivity lead to gaining higher profit margins.

About Twenty Six per cent of organizations that took part in the survey have stated that rainwater harvesting is a good gesture to start off in conserving water (Sri Lanka already has the Kandy Declaration targeting rainwater harvesting). In particular, the Industrial sector is very keen on the 3R principle as it yields direct benefits to them.

In forestry related activities it is apparent that organizations that are in the Agriculture sector have directly contributed to reforestation, afforestation, conservation of biodiversity, as it is part of their business.

In an attempt of abating the generation of pollution, the amounts of pollutants generated were not quantified by most organizations. There are considerable numbers of organizations producing industrial wastewaters and they employ different wastewater treatment methods prior to discharge to the environment. However sustainability of such technologies is questionable as no 3R principles are applied. Therefore, it is imperative to note that pollution prevention needs to be paid more attention for environmentally friendly and sustainable practices.

About sixty per cent of organizations are generally in support of environmental goals, while expecting safe and healthy environment for them to work in. There are numerous policies in existence in order to support employees. There was no child labour being utilised; however, teenagers from 15 to 17 are employed in some organizations. The age for retirement is usually 55 years, but in some cases few of them are at work in accordance with their capability and willingness to work.

Some essential components of decent work such as freedom of association, forced or compulsory labour, elimination of discrimination in respect of employment and occupation etc. could not be grasped only through the questionnaire. In other words decent work seems to be not yet a theme for many to work on. However, statutory components (EPF/ETF, maternity leave, overtime etc.) declared for labour are fulfilled by almost all organizations. It could be inferred that many have ratified at least one convention or standard and a few have voluntarily gone beyond borders of Sri Lanka in adopting many international conventions or standards.

The gap analysis manifested that most require ‘on the job training’ to enhance ‘soft skills’ and basic skills but do not necessarily require advanced green knowledge. The soft skills essentially uplift dependability and reliability, initiative, and interpersonal skills of employees. Green knowledge is more important for managers and small business owners who establish ‘green’ procedures and provide ‘on the job training’ for their employees. Hence the component of training particularly on decent work at different levels is of utmost importance for the establishment of green jobs in Sri Lanka. An apex body perhaps jointly with EFC and the TVEC would be ideal to be appointed in order to encourage more green jobs in Sri Lankan organizations both in the public and private sectors.

Many organizations surveyed have adopted and invested in green technology. However, all four pillars\(^1\) of decent work are not evenly implemented across all companies surveyed though elements of
Decent work have been mainstreamed in every company surveyed. Therefore, the gap analysis undertaken through this survey, points to the necessity to take measures to improve the workplace, and meet the totality of decent work standards. What has been achieved so far in companies is commendable. Yet it should be reiterated that more needs to be done. These lacunae have been identified and it is expected that these survey results will guide the participating organizations and others within and outside the EFC membership to strive towards creating, converting, generating and promoting green/greener jobs for a just transition to a green economy.

Training on various topics of green jobs therefore becomes essential. The post monitoring of the status of the green jobs in Sri Lanka should also be carried out on a continual basis so that more improvements could be made through different instruments. Policies with relevant ministries on green jobs must then be worked out so that enforcement would become easy. In addition, a database on the types of green jobs in Sri Lanka could be prepared by the EFC to be distributed among enterprises and industries thereby facilitating faster adoption of the concept of green jobs.

In conclusion, however, in order to see a positive growth in green jobs, organizations must foresee the benefits of green jobs and the possibility of inclining towards becoming greener businesses by catering to green needs and opportunities and the green market. For this endeavor to succeed, employers should play a leading role by providing proper training to their employees so that “from Green to Greener” becomes a reality.

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1 International Labour Standards, Productive and freely chosen work, Social Protection and Social Dialogue
Chapter 1: Background

1.1 Preamble
It is imperative that Sri Lanka grasps the concepts of Green Jobs to meet the most vital but intricate challenge of the 21st Century, which is the transformation to a sustainable, low-carbon economy. Such a transformation or a shift, which can be gradual or rapid depending on the circumstances, will undoubtedly have a considerable positive effect on the way we produce, consume and earn in almost all sectors. Such a transformation will significantly affect economies as well as labour markets along with the promotion of Green Jobs, which will accelerate the transition of the country towards a greener economy.

1.2 What are green jobs?
The recent report by UNEP/ILO/IOE/ITUC on “Green Jobs: Towards Decent Work in a Sustainable, Low-Carbon World” is a notable publication which produced a framework for transformation together with evidence (both quantitative and conceptual) collected through existing green jobs. In this report, the International Labour Organization (ILO) has defined green jobs as follows:

“Jobs are green when they help in reducing the negative environmental impact ultimately leading to environmentally, economically and socially sustainable enterprises and economies. More precisely green jobs are decent jobs that:

- Reduce consumption of energy and raw materials
- Limit greenhouse gas emissions
- Minimize waste and pollution
- Protect and restore ecosystems”

Green jobs entail and focus mainly on seven sectors: energy supply, transport, manufacturing, buildings, materials management, retail industry and agriculture. The ILO Green Jobs Project currently concentrates on six priorities:

- Analysis of the employment and labour market dimensions;
- Practical approaches to greening enterprises;
- Green jobs in waste management and recycling;
- Renewable energy and energy efficiency;
- A just transition towards a green economy and a sustainable society;
- Adaptation to climate change.

Green jobs are integrally decent jobs in agricultural, manufacturing, research and development, administrative, and service activities that contribute substantially to preserving or restoring environmental quality. Specifically, but not exclusively, this includes jobs that help to protect ecosystems and biodiversity; reduce energy, materials, and water consumption.
through high-efficiency strategies; de-carbonize the economy; and minimize or altogether avoid generation of all forms of waste and pollution. However, many jobs which are found in environment-related economic sectors are not necessarily green jobs in practice for they do not automatically constitute decent work. Some of the jobs related to protecting and sustaining the environment can also be dirty, un-safe and difficult occupations. Therefore, we need to identify mechanisms to convert these jobs into less dirty, safer and technologically and environmentally more sustainable jobs. Thus polices and strategies to convert these jobs into green jobs which are quality jobs that contribute to impact positively on the environment are a priority if businesses are to support green development. If green jobs are a bridge to a truly sustainable future, green jobs need to address twin issues of social justice at the workplace, whilst also reducing the impact on the environment as a long term strategy for business to remain competitive in a globalized economy.

1.3 Why Green Jobs?

The speed at which transformation would occur is likely to accelerate in the near future as there is a trend of global transition from a traditional to a low-carbon economy and to attain sustainable economies. Such trends will help create an array of different forms of green jobs across many sectors, and most probably can become a catalyst for further development.

The advantages of adopting the concept of green jobs are obvious: it helps reduce the negative environmental impact, ultimately leading to environmentally friendly, socially acceptable and economically sustainable enterprises and what is called a green economy. It is pertinent that global emissions of greenhouse gases need to be reduced drastically, for which the contribution of enterprises and workers are crucial. Curtailing unsustainable use of natural resources, reducing waste, preventing pollution and safeguarding sustainable food production are notable positive impacts that can be expected by placing emphasis on green jobs.

1.4 What benefits can we expect in Sri Lanka?

The transformation and the pace at which green jobs are created are very likely to accelerate in the years ahead, in many countries including Sri Lanka. Sri Lanka being a country which is part of the ILO’s Green Jobs in Asia Project is committed to promoting the green jobs initiative which is linked to the country’s national programmes on climate change, the environment and recovery from the global economic and job crisis. More specific advantages that Sri Lanka will gain other than the above-mentioned general benefits are:

- Vulnerable sectors, particularly the micro-enterprises, small businesses, poor workers and communities, will preferentially be benefited by this initiative.
- Moreover, this socially inclusive development will introduce decent work which provide adequate income, social protection and respect for the rights of workers, and give workers a say in decisions which will affect their lives.
- It is important to realize that benefits of green jobs would be crucial in overcoming economic crisis situations during high inflationary conditions. The concept of green jobs is a practicable and effective option for reviving economies and can contribute to creating large numbers of jobs in a shorter period of time.

If invested wisely, the resources to overcome the economic crisis could lead to energy-efficient infrastructure, rehabilitated ecosystems, renewable energy sources, and enterprises and workplaces that are more resilient to change. It also can lay the foundation for an environmentally sound, economically productive and socially sustainable economy.
1.5 How to accomplish Green Jobs initiatives

Green jobs initiatives are working to leverage its knowledge base to support and expand the economy. It may shape economic recovery and job creation; economic competitiveness; energy independence, efficiency, and security; environmental protection; and financial growth. Green job initiatives are positioned to provide labour market intelligence and work with core-constituencies of labour, industry, and education to identify relevant Green Jobs skills and develop competency models leading to meaningful career ladders.

The potential for green jobs exists in the country at all levels, both urban and rural. Indeed, it is often higher in the industrial sector. Investments and programmes to promote green jobs can be targeted at those who tend to need them most: vulnerable communities (employees), small and medium-scale enterprises (employers). Investments in skills development for green jobs are a vital condition for the successful greening of enterprises and economies.

1.6 The objectives of this study

The main objective of the proposed study is to explore the role of the industrial sector (in Sri Lanka) in contributing towards green job opportunities and to assess the willingness in creating new green jobs in individual industries, leading to low-carbon emissions whilst emphasizing on the need for decent work. The following are secondary objectives:

1. To build capacities of the EFC professional staff in popularizing green jobs within the EFC membership
2. To highlight industry specific sustainable production initiatives and employment linkages
3. To identify opportunities and challenges for the promotion of new green jobs and the greening of existing jobs, and identify gaps with a special focus on skills needed, from an enterprises as well as industry approach

1.7 Brief Methodology

It was imperative that a clearly identified methodology be developed in order to study the potential for green jobs in organizations in Sri Lanka. At present more than 525 organizations are members of the Employers’ Federation of Ceylon (EFC) and hence it prompted to begin the data base search with the EFC. First and foremost the entire organizations list had to be screened in order to find out the different sectors that are in the forefront of economic development in Sri Lanka. Sectors such as manufacturing, hotel, garment and textile, agriculture, mineral, rubber, ceramic, food and its processing, pharmaceutical and services etc are some of the important sectors that need proper scrutiny in order to indentify the potential for green jobs. However it was presumed that this study did not to cover other main areas such as power, transportation, and waste management etc.

A list of organizations that are registered with the EFC were collected for the survey. A sample of at least 100 organizations from every sector mentioned above was expected to respond to the survey but only 50 numbers of questionnaires were left for the analysis. Sample of the questionnaire is attached in the Annexure. The questionnaire specifically includes the following:

- Power utilization and related data
- Application of 3R principle (Reduce, recycle and reuse potentials)
- Use of technologies that need less energy, raw material and other resources
• Proper house keeping with cleaner production opportunities
• Potential for energy saving
• Reduction of greenhouse gases
• Reduction potential for fossil fuel usage
• Waste management and pollution reduction
• Ecosystem conservation etc
• Sustainable policies
• National and international conventions, standards ratified
• Social benefits for employees

After formulating, the questionnaire was reviewed and updated with the comments and information given by relevant authorities before finalising. Questionnaires were then distributed through the EFC who were instrumental in getting the questionnaires completed with necessary data and information. It was vital to train the personnel who collected such data so that a consistent, reliable set of data could be expected.

Once the data were received they were analyzed carefully and the important data and information were collated into a report. Once all the data sheets were completed they were summarized in different ways and presented for proper understanding.

Gaps in each aspect of creating green jobs were identified and discussed in detail. Based on such gaps, recommendations that could generate green jobs were made. In addition training needs that are required for better green jobs were also discussed.
Chapter 2: General Data Analysis

2.1 Industrial sectors in Sri Lanka

Sri Lanka continues to experience strong economic growth, driven by large scale construction and development projects while pursuing a combination of government directed policies, private investments (both foreign and domestic) and increased agricultural productivity particularly after ending the civil war. The private sector has been a long standing partner of Sri Lankas development even during tough times of economic crisis and plays a vital role in engaging with the government to uplift the living conditions of the general public through contributing to achieve a higher GDP. In the present survey, the private sector represents 92 per cent (28 private limited companies and 15 public limited companies) out of 50 organizations surveyed. Government sector contribution is about 6 per cent representing only three entities. Figure 1 shows the broad sectors that have been surveyed during the entire study. Figure 2 shows the exact number of organizations surveyed under each category.

Figure 1: Categorization of organizations

All of the above-mentioned organizations can be included in to key sectors so as to contribute to the country’s economy viz. Agriculture, Industry and Service sector respectively. As indicated by Economic and Social Statistics of Sri Lanka, 2011 published by the Central Bank of Sri Lanka, contribution to the GDP by each sector was reckoned to be as follows; Agriculture 11.9 per cent, Industry 28.9 per cent and Services 57.3 per cent. In the agriculture sector, there are two sub sectors i.e. Agriculture, Livestock and Forestry and Fishing respectively.
The Agriculture sector, which contributed around 11.9 per cent of the GDP in 2010, grew by 7.0 per cent, compared to that of 3.2 per cent in 2009, mainly driven by the increased production of paddy, tea, rubber and minor export crops along with significant improvements in the fisheries sector output (Central Bank of Sri Lanka Annual Report, 2010). Both export and domestic agriculture contributed to the improved performance in the Agriculture sector. Benefiting from favourable weather conditions, the tea sub sector registered the highest ever annual production of 329 million kg compared to the distressed output in 2009, while rubber production also continued to increase. However, climate change can also impact adversely on this very industry. The impact will not confine its effects to productivity but will have a cascading impact on the workers and their conditions of work including their wages, prospective wages and living standards.

In this present survey, there were about 10 organizations which operate under the agriculture sector, with planting tea and rubber as major agricultural crops in their business. In addition, these organizations engage in exporting of agricultural crops (cinnamon, cardamom etc.), production of black tea, green tea, organic tea and diversified in to crude oil palm production. Moreover, renewable energy, wood working and forestry are also among their business strategies. However, there was no single organization that deal with fishing related activities in this survey. Figure 3 gives an idea as to how the selected organizations fall into different categories of economic sectors.
The share of the industrial sector in total GDP increased marginally to 28.7 per cent in 2010. This sector mainly operates under sub sectors such as Mining and Quarrying, Manufacturing, Infrastructure development in Electricity, Gas and Water and Construction etc.

The output of the industrial sector recorded a commendable growth of 8.4 per cent in 2010 compared to that of 4.2 per cent in the previous year. Factory industry, which contributed approximately 54.6 per cent to the total industry output, recorded a 7.5 per cent growth during 2010 (Central Bank of Sri Lanka Annual Report, 2010). The apparel industry remained competitive through increased productivity and improved quality. In this present survey also there are about 7 industries (out of 24 manufacturing industries) that engage in the apparel industry. In addition, there are industries of manufacturing and distributing of tires, wheels, pharmaceutical and packing of nutritionals etc. There are a few organizations engaged in mining and quarrying activities. There is only one organization which solely deals in electricity gas and water sector. Non-metallic mineral products category also performed well during the year (Central Bank of Sri Lanka Annual Report, 2010) with high demand for cement and building materials. However, there was no response from organizations related to the construction sector. According to the available statistics, the construction sector expanded by 9.3 per cent with the continuation of major infrastructure development projects as well as increased construction activity in the private sector. The question arises whether these sectors of economic growth and productivity with potential to promote green growth conform to irreducible minimum standards in terms of working conditions resulting in social justice in the world of work. The survey analyses these triple bottom line aspects of the industrial sector organisations participating in this exercise.

The Services sector grew by 8.0 per cent in 2010. The output of the Industrial sector recorded a commendable growth of 8.4 per cent in 2010 compared to that of 4.2 per cent in the previous year. This sector includes Wholesale and Retail Trade, Hotels and Restaurants, Transport and Communication, Banking, Insurance and Real Estate etc., Ownership of Dwellings, Government Services, Private Services respectively.

The wholesale and retail sub sector, which accounts for the largest share in the Services sector, grew by 7.5 per cent with enhanced performance in both domestic and external trading activity. The hotels and restaurants sub sector grew sharply by about 39.8 per cent underpinned by the strong performance in tourism. Other major sub sectors such as transport and communications, and banking, insurance and real estate also recorded significantly higher growth rates compared to 2009 (Central Bank of Sri Lanka Annual Report, 2010). Through this survey, an attempt was made to better understand the social impact of such growth within the service sector, particularly in terms of its influence on the working population serving the sector.

2.2 Structure of employment in organizations

Reflecting the increased availability of employment opportunities along with enhanced economic activities, the unemployment rate was 4.9 per cent in 2010. However, the labour force participation rate declined marginally from 48.7 per cent in 2009 to 48.1 per cent in 2010, while the number of secured employment increased by 1.4 per cent to 7.71 million in 2010. The share of the Services sector in total employment increased from 42.3 per cent in 2009 to 43.1 per cent in 2010, and that of the Industrial sector declined from 25.1 per cent to 24.2 per cent in 2010.
In this present survey, there were no organizations whose workforce is less than 5 in number. There was a single organization whose workforce is in between 5 - 49 in Services sector. The rest operates with greater numbers spanning in between 50 - 150 and above 150 (Figures 4 & 5). It is apparent that in the Agriculture sector, the number of workers was always high (>150) as the nature of the work is labour intensive. Hence, there was no single entity in the agricultural sector which represents an employment category of 50 - 150 (Figure 4).

![Figure 4](image1.png)

**Figure 4: Total number of employees in organizations surveyed (between 50 – 150)**

There was no organization operating less than 5 numbers of permanent workers. Nevertheless there existed one organization operating with few permanent workers 33 (5 - 49) in Services sector. Figures 6 and 7 show the number of employees in the permanent cadre in different sectors of organizations included in the survey.

![Figure 5](image2.png)

**Figure 5: Total number of employees in organizations surveyed (more than 150)**
2.3 Technical attributes of Green Jobs in sectors of the economy

Green jobs are mainly direct employment, related to producing green products and green services or those that help reduce adverse impacts to the environment, and/or enhance energy efficiency in production and consumption. Green jobs thus can be found in all sectors of the economy but are primarily created with the following criteria:

1. Renewable energy
2. Energy efficiency
3. Green buildings and construction
4. Conservation of natural resources including water, fisheries etc.
5. Forestry, afforestation/reforestation
6. Environmentally friendly agriculture (pesticides free, water efficient, etc.)
7. Clean transportation and fuels, mass transit
8. Pollution prevention and control in manufacturing including cleaner production and good house-keeping and clean-up operations
The survey is therefore aimed at above-mentioned criteria in evaluating how good the organizations are in adopting such criteria in the creation of green jobs.

Overall judgment across the entire population of the survey would be that all organizations are very keen to perform in every area mentioned above but the technical know-how, financial commitment and benefits from such interventions seem to be some of the bottlenecks that would prevent them from implementing such criteria implemented effectively. However, some of the organizations have adopted them with fruitful results aiming at creating a greener environment with more green jobs.

The following sub sectors elaborate such technical areas in which organizations have put an extra effort in order to make the environment green.

2.3.1 Renewable energy

Renewable energy is the energy which comes from natural resources such as sunlight, wind, rain, biomass and biofuels, tidal activities, and geothermal heat, which are known to be naturally replenished without diminishing such sources. Due to the geo-climatic conditions, Sri Lanka is blessed with several forms of renewable energy resources such as hydro, biomass, solar and wind though the potential is limited only to some geographical locations. Some of them are widely used and developed to supply the energy requirements of the country while others have the potential for development when technologies become mature and economically feasible for use. The Sustainable Energy Authority of Sri Lanka has enacted regulations to buy back energy produced, utilizing renewable sources at a very high rate depending on the sources mainly to encourage people to engage in producing renewable energy. Renewable resources that have the highest potential to be exploited in Sri Lanka for energy generation are listed below.

- Hydro Power
- Biomass
- Solar
- Wind

In addition to the above renewable resources, the availability of petroleum within the country territory is being investigated. More recently, new energy supply technologies such as biofuels and hydrogen have emerged as alternatives to the above mentioned conventional technologies. However, use of these technologies for energy supply purposes is still limited in Sri Lanka. (Sri Lanka Energy Balance, An Analysis of Energy Sector Performance, Sustainable Energy Authority, 2007).

2.3.1.1 Hydro power energy

Hydro power is a key energy source used for electricity generation in Sri Lanka. The major hydro potential has already been developed and this source delivers comparatively low-cost electricity to the country. Apart from the grid connected hydro power stations, many small-scale hydro power applications (mini and micro) are in operation serving off-grid loads. Figure 8 depicts generation of hydro power driven electricity by different sectors.
In this survey, off-grid electricity generation by using hydropower is dominated by the agriculture sector which is about 10 out of 13 organizations of hydropower generation. This is mainly because of the fact that most of the organizations operating in the agriculture sector are involved in tea production. The geo-climatic settings of the tea plantations are particularly conducive to harnessing hydro resources due to high rainfall in such hilly areas throughout the year. In addition, there are two other manufacturing entities that are involved in hydropower generation and one entity which operates a diversified conglomerate.

Similarly, direct use of hydropower is also associated with the agriculture sector organizations as they produce electricity either by micro or mini hydropower plants. In addition, one organization from the manufacturing sector and two organizations from the services sector are using hydropower directly. Though most of the interested organizations (14 numbers) in the private sector in producing hydro power energy in terms of micro or mini systems, the cumbersome procedure set out by respective authorities or the non-availability of a one-stop-shop for all approvals to be granted for such developments impede the generation efforts of hydro power. Nevertheless, most of the organizations in the Agriculture sector (12 organizations) have succeeded in producing hydro power...
energy and some efforts from the industrial sector (about 3 organizations) are in the pipelines. Further, some organizations are of the view that under the cleaner development mechanism, carbon credits could be obtained as such endeavors would cut off the generation of atmospheric carbon dioxide equivalents thereby reducing greenhouse gases in the atmosphere. In summary, it could be seen that the potential for hydropower generation in terms of mini and micro systems is on the rise and there exists numerous commercial banks in Sri Lanka who are willing to lend financial assistance in the form of debt or equity capital for such developments.

2.3.1.2 Biomass energy

Biomass (plant material) is reckoned to be a renewable energy source which contains energy derived from the sun. Through the process of photosynthesis, plants capture the sun's energy. When plants are combusted in a reactor under certain conditions, they release the energy depending on the calorific value which in turn could be harnessed for effective use.

Large quantities of firewood and other biomass resources such as agriculture residues are used for cooking in rural households, despite the fact that they have access to grid electricity. A majority of energy needs of the rural population are fulfilled by the use of firewood. However among the responses, in the industry sector biomass energy production is somewhat lacking when compared with that of hydro power as shown in Figures 10 and 11.

![Figure 10: Number of organizations producing biomass energy](image)

Though there is a huge potential for biomass energy particularly for the generation of electricity, supply provision of substrate material especially in the form of dendro-wood would be the main bottleneck as huge quantities (For example 1000 acres for 1 MW power production) are required. Sri Lanka does not have land set aside exclusively for growing such plants (For example Gliricidia) but there are lands on which intercropping is possible. Hence organizations though they are reluctant, have to depend on ‘out growers’ for the continuous supply of wood material and thus very few are at present in this business. (The Biomass Energy Sector in Sri Lanka Successes and Constraints, Bio Energy Association of Sri Lanka, 2006).
Therefore, it is felt by many that the government should grant subsidies for organizations to switch from fossil fuel to biomass so that the importation of fossil fuel could be reduced.

In summary, it could be inferred that efforts are still needed to convince organizations to switch into biomass operated systems for their steam or electricity requirements hence setting up of a platform perhaps with the Sustainable Energy Authority would be considered important in the long run.

2.3.1.3 Solar energy

Solar energy is the energy derived from the sun through the form of solar radiation. Solar applications include space heating and cooling through solar architecture, day lighting, solar hot water, solar cooking, and high temperature processed heat for industrial purposes.

Being located close to the equator, Sri Lanka does not experience a marked seasonal variation in solar radiation over the island, though significant spatial differentiation could be observed between the lowlands and mountainous regions. Solar radiation levels remain as low as 2.0-3.5 kWh/m$^2$.day over high plains of upcountry due to significant cloud cover over most parts of the day. Thus, substantial potential exists in the dry zone of Sri Lanka for harnessing solar energy. This is apparently true in industry context as well. The contribution from the agriculture sector for the production of solar energy is relatively low when compared with hydro power. As estimated in the solar resource map developed by the National Renewable Energy Laboratory (NREL) of the USA, over most parts of the flat dry zone in Sri Lanka, which accounts for two-thirds of the land area, solar radiation varies from 4.0 – 4.5 kWh/m$^2$.day.

Figures 12 and 13 shows the number of organizations producing and utilizing solar energy for their internal activities respectively.
The production of solar energy in the form of electricity seems to be lacking as this technology is reckoned to be comparatively expensive and also there is no clearly defined tariff structure introduced by the Public Utility Commission of Sri Lanka in consultation with the Sustainable Energy Authority of Sri Lanka and the Ceylon Electricity Board. Further the large area requirement (For example 40 acres for 1 MW) and non-availability of grid connection or restriction in grid connection are some of the grievances aired by organizations. Hence production of electricity by solar panels would be considered pragmatic at this moment of time as Figure 11 depicts only 3 organizations are engaged in the production of electricity by solar panels.

In contrast, there are nine organizations that are already engaged in utilizing solar energy in the form of electricity and more frequently hot water from solar panels. This trend seems to be on the rise as they may have understood the importance of reducing the use of fossil fuel for different activities. Surprisingly, three organizations were found from the industrial sector that have thought of the ‘net metering’ concept where during day time electricity generated by solar panels will be utilized by the
organization itself but during night time it will be connected to the grid so that what is stored in excess will be supplied to someone else. However, realization of such schemes may take some time and formal campaigns are of paramount importance in order to encourage organizations in the long run.

2.3.1.4 Wind energy

Wind power airflows can be used to run wind turbines thereby generating electricity. The power output of a turbine is a function of the cube of the wind speed, so as wind speed increases, power output increases dramatically. Areas where winds are stronger and more constant, such as offshore and high altitude sites are preferred locations for wind farms. According to the Wind Energy Resource Atlas of Sri Lanka developed by National Renewable Energy Laboratory (NREL) of the United States, there are nearly 5,000 km² of windy areas with good-to-excellent wind resource potential in Sri Lanka. About 4,100 km² of the total windy area is terrestrial land and about 700 km² is lagoon. The windy land represents about 6 per cent of the total land area of Sri Lanka. Using a conservative assumption of 5 MW per km², this windy land could support almost 20,000 MW of potential installed capacity.

However, among the surveyed industries, there are only 3 organizations (2 manufacturing) who have invested in production of energy by means of wind (Figure 14). Use of wind energy is also at a very poor level. This is probably due to the fact that the capital investment associated with wind energy is rather high and it requires substantial square kilometers of land.

![Figure 14: Number of organizations utilizing wind energy](image)

Further it is noted that there is a huge potential for the development of wind energy as the Sustainable Energy Authority has proclaimed a high tariff and there exists some barriers such as non-availability of grid connection, restrictions with grid connection etc so that organizations are reluctant to invest in wind power. Another aspect to the same issue is that the Ceylon Electricity Board who is responsible for the grid connection facility is aware of the fact that the grid line is most of the time idling with wind energy (during non-wind period) as power factor is reckoned to be about 35 per cent. Or in other words, only 35 per cent of the year the grid is full and the rest of the year the grid does not serve the purpose. It is therefore imperative that relevant authorities should take a collective healthy decision in order to boost wind energy harnessing in Sri Lanka.
The Figure 15 summarizes the direct and indirect uses of renewable energy. Though their interest on direct production or use of renewable energy is relatively at a low level, the indirect involvement is at a rewarding level. Hence, concrete efforts are of importance in order to popularize renewable energy in Sri Lanka in terms of subsidies, friendly policies and other fringe benefits to all sectors.

Intervention by the Services sector is too small in the renewable energy sector as it yields huge capital investments. Nevertheless, the private sector seems to be rather interested but the government sector backing, incentives and initiatives are not attractive for such endeavors. However, according to the Sustainable Energy Authority, there have been numerous applications received by them for renewable energy development by the private sector investors. Therefore, productive dialogue between the private sector and government authorities is of utmost importance in order to enhance the renewable energy production and utilization in Sri Lanka.

With the present survey it was clear that organizations are prepared to switch to renewable energy options because fifteen organizations are already involved in education and training on renewable energy and ten organization have already stepped into research and development on renewable energy (see Figure 15).

2.3.2 Energy Efficiency

The Sustainable Energy Authority of Sri Lanka has been established under the purview of the Ministry of Power & Energy with a vision to making Sri Lankan energy secure with more renewable and reducing the loss of energy. The authority recognizes the importance of successful implementation of innovative, cost effective and transferable energy efficiency measures. Sri Lanka National Energy Efficiency Award competition is the annual national event conducted by this authority to honour the efforts and contribution put in by companies in promoting energy conservation in the country.

It is remarkable to note that 60 percent of the companies participating in this survey have paid great attention to practicing energy efficiency measures (Figure 16). This improvement in the energy sector is partially attributable to the support provided by the Sustainable Energy Authority as they conduct training and education on energy conservation & management, coordinating energy management activities through energy managers, introducing energy efficiency guidelines for building, construction etc.

It was also noted that organizations have had direct benefits by saving energy costs through improvement of efficiencies. However long term benefits by getting optimized output throughout may be questionable as energy managers are not always with the same organizations. However, their involvement on energy calculations for improvement of efficiencies would be very worthy to mention and most of the technical staff seem to have gathered good knowledge on improvement of efficiencies of certain machinery.
Figure 15: Summary of number of organizations engaged in direct and indirect use of renewable energy.
It was further observed that the technology available in the market had been embraced by about 30 organizations rather than developing their own through research and development work (Figure 16). Government intervening on some of these issues seems to be indisputable and badly needed by the private sector organizations and more comprehensive training must be made compulsory for those who use energy comprehensively. The energy footprint that has been utilized for the entire organization is another area where such entities are very much vigilant to explore.

There are about 30 organizations found to be using state-of-the-art new technologies instead of old conventional type, so as to enhance efficiencies. There are 22 entities from the industrial sector that have invested in improvement of certain machinery, training manpower, new equipment of measurement of various parameters etc. merely to enhance efficiencies of machinery.

In summary, it is worthy to note that more than 50 per cent have engaged in increasing energy efficiency either directly or indirectly and have thereby reduced the use of fossil fuel, and have contributed to making the environment greener.

### 2.3.2.1 Energy auditing

The term energy audit is commonly used to describe a broad spectrum of energy studies ranging from a quick walk-through of a facility to identify major problem areas to a comprehensive analysis of the implications of alternative energy efficiency measures sufficient to satisfy the financial criteria of sophisticated interventions. It provides energy solutions for saving the energy bill, improving energy efficiency by capturing energy wastage and to meet the demands of the green economy. Manufacturing firms are found to be very keen on energy audits as it could guarantee 10-20 per cent of energy savings (Figure 17).
There were 17 institutions that had performed energy audits for private sector organizations but this has not been identified to be a compulsory effort hence the rest are yet to get this audit done. Those who already got this audit done (about 21 organisations) have been enjoying reduced electricity bills and are always conscious of the energy consumption by machinery at work. This concept has even crept into the minds of top management in organizations and it seems to be very well dealt with.

In summary, it could be inferred that the industrial sector is well aware of the need for energy audits but other sectors such as Services and Agriculture are yet to embark on this area. Hence awareness campaigns are of utmost importance to be organized especially for agriculture and service sectors.

### 2.3.2.2 Using smart grid technology

The electricity industry is poised to make the transformation from a centralized, producer-controlled network to a decentralized and more consumer-interactive one to meet future challenges. The Ministry of Power and Energy has initiated with CEB (Ceylon Electricity Board) and LECO (Lanka Electricity Company (Private) Limited) to explore the possibilities of up scaling the existing electricity grid to a Smarter Grid and of introducing electronic meters (Ministry of Power Energy News). Introducing Smart metering which will encourage the private and state sector institutions to generate their own power and even sell the additional power generated back to the grid using solar, wind, dendro and bio mass. This type of project will be beneficial to keep energy bills low as well as earn an income through the generation of power. Pre-paid meters will help consumers to control their energy bills. Other concepts like net metering and Feed in Tariffs will also be introduced. (Ministry of Power and Energy News). Since this is a relatively new concept to Sri Lankan industries, there are only two manufacturing industries and one services industry from the telecommunications sector that have adopted a smart grid system. The CEB and LECO expect that there will be many organizations joining this scheme in the future so that the peak demand that falls during night time could be met.
2.3.2.3 *House-keeping measures*

Housekeeping is one of the low cost/no cost for energy conservation opportunities which can be defined as an excellent starting point for improving the operations or day to day work. It is interesting to observe that most of the organizations (about 30) engaged in this survey have paid their attention to saving energy and/or increasing energy efficiency by means of good housekeeping measures. These measures can help to save energy, reduce the cost of production and at the same time minimize losses of raw materials, minimize waste, conserve water and mitigate environmental impacts indicating a set of benefits. The National Cleaner Production Centre performs a pivotal role in conducting housekeeping exercises.

Figure 18 shows the number of organizations engaged in proper housekeeping. It is clear that the manufacturing sector had the highest number of organizations involved in housekeeping practices as they directly benefit from it. Others seem to be less interested as perhaps, benefits may not be as high for them, as those in the manufacturing sector.

![Figure 18: Organizations engaged in housekeeping measures for saving energy](image)

2.3.2.4 *Use of green devices, green technologies to improve the production process*

A product which has minimal or no adverse environmental impacts throughout its entire manufacturing process is considered to be a green product. The strategies are based on eco-design for high energy-efficiency, a reduction in raw/subsidiary materials, and the improvement of living environments.

Figure 19 depicts the organizations in different sectors involved in green products and green technologies. Agriculture, livestock and forestry with manufacturing sectors have invested on green products and technologies, which are very novel to Sri Lanka. Foot print calculations such as carbon, water energy etc. have been done in order to minimize them making the products more greener.
National Cleaner Production Centre has been in the forefront in advising and helping such endeavours with much emphasis on saving resource utilization thereby making a conducive platform for industries to compete with others in the region.

There are about 15 organizations that has already begun to explore the possibilities of making green products through eco designs with research and development work indicating more job opportunities in the process of greening the business.

![Figure 19: Organizations involved in green devices, green technologies to improve the production process](image)

2.3.3 Green buildings and construction

2.3.3.1 Green Buildings

Green building design and construction is the opportunity to use natural resources more efficiently, while creating a healthier environment, balancing energy-efficient, cost-effective, low-maintenance products for construction needs. In other words, green building design involves finding the delicate balance between construction and destruction of materials and resources in a sustainable environment.

The Green Building Council of Sri Lanka (GBCSL) launched in November 2009 commits to developing a sustainable building industry for Sri Lanka. It will provide the necessary advice and know-how in the efforts of making buildings green. However, there were some organizations that have already received LEED certification from the U.S. Green Building Council. There were about 7 manufacturing industries and two entities from the services sector that are already involved in green building construction practices. One of the organizations had the first LEED certified building outside the USA but had been slow over the years in developing this opportunity.

There has been a marked trend for Industrial sector organizations to go for the LEED certification as it helps secure more business opportunities from overseas. Further it was found that there is an
involvement in green building maintenance indicating greener job opportunities particularly in the Manufacturing sector such as ones with value addition and some banks from the services sector.

2.3.3.2 Building retrofitting

The basic definition of building retrofit is the improvement of the infrastructure of the building to increase its energy efficiency, comfort, safety, health and durability. This could include improving building components, building operating systems and equipment, and installing energy efficient appliances. There were about six manufacturing industries and a single entity from the Services sector that had demonstrated building retrofitting the green way.

As inferred from the questionnaire the Labour Department of Sri Lanka helps in numerous ways to make the industrial environment safe with a lot of occupational controls therefore accident free, a comfortable-to- work-in environment could be expected in industries.

2.3.3.3 Indoor climate control

Maintaining proper temperature and humidity levels in a building requires proper insulation, ventilation and exposure, as well as efficient functioning of heating, cooling and humidifying systems. There are various measures and devices that assist in the creation of an artificial indoor climate. Climate control, which is sometimes maintained only in work areas, is achieved through air-conditioning and heating systems, radiation and convective cooling, and ventilation. The effect of climate control is determined by the temperature, humidity, and movement of the air, as well as by the temperature of the floor, walls, ceiling, and contents of the room.

It is clear that the Manufacturing sector is mainly involved in indoor climate control interventions as they directly benefit from them particularly with the creation of a healthy environment to work comfortably within the factory premises. It can be inferred that these scenarios undoubtedly increase the productivity thereby yielding higher profit margins.

![Figure 20: organizations involved in indoor climate control](image-url)
2.3.4 Conservation of natural resources

2.3.4.1 Water conservation

Water conservation is relatively high in the Industrial sector as they consume a considerable amount of water for their industrial processes and also for cleaning up operations. In the Agriculture sector, though watering is an essential component, many are now relying on rain water. However, they also pay attention to water conservation techniques. Unfortunately, the service sector does not pay enough attention to water conservation as it does not impact on its day to day operations. The following are some of the conservation techniques that have been deployed by the different organizations in creating a greener environment.

Water conservation is also inhibited by the lower prices that Water Board has on offer and they do not reflect real costs. This is in contrast to the interest in energy conservation.

2.3.4.1.1 Rainwater harvesting

Rain Water Harvesting (RWH) is a technique of arresting rain water when it falls on to a shelter and storing it for subsequent use during the non-rainy season. Harvested rain water can be utilized for several purposes including drinking, washing, gardening, etc. The National Policy on Rain Water Harvesting in Sri Lanka was officially launched on September 27, 2005. The main objective of the National RWH Policy is to ensure that the potential ‘Cities of Tomorrow’ apply Rain Water Harvesting broadly by the control of water near its source, in its pursuance of becoming ‘Green Cities’ in the future. Thus the demand on the water sources will be minimal if part or whole of the rain water is utilized in an effective manner. Though RWH is a good gesture to start off in conserving water there were only 12 organizations that have taken an active part in such initiatives.

2.3.4.1.2 Groundwater replenishment

Groundwater plays a vital role in supplying drinking water needs. As rainfall levels continue to decline groundwater resources are depleted to a great extent. Hence, sustainable groundwater utilization becomes more challenging but rewarding. Groundwater replenishment involves further treating secondary treated wastewater to a better quality and recharging it to the ground. It could play an essential part in securing ground water in future. This effort will improve the water table and subsequent adverse impacts from settlements of structures to minimizing of crop damage etc. could be achieved.

However, this concept seems to be rather new to Sri Lanka hence very few have adopted it so far. This concept could be promoted as CSR projects in order to benefit the communities in the areas in which it is implemented.

2.3.4.1.3 Wastewater reclamation/recycling

Recycling of wastewater has become an important aspect of water resources and environmental management policies. It ensures reliable alternative water resources, reduces pollution and achieves a more sustainable form of development.
Seventeen organizations engaged in new constructions are willing to employ recycling of treated wastewater for different purposes thus reducing water demand from precious water resources. In addition, it will also yield direct benefits by saving water bills hence this is a good practice that needs to be taken up by organizations.

2.3.4.2 Soil/Minerals/Raw Material and Other Resources

In terms of conservation of natural resources, the principle of recycling seems to be more popular because each sector has given a considerable contribution to reusing/recycling of raw materials such as paper, plastics etc. The techniques that have been adhered to by different organizations are given below. Figure 21 depicts that there are about 15 organizations already engaged in natural resource management efforts in different aspects.

2.3.4.2.1 Land reclamation

Reclamation is returning the land to the way it was or better than before. This has been tried by very few (6 organizations) especially by those who are in the Agriculture sector. Reforestation or afforestation has been identified to be the means of such achievements by those in the agriculture sector.

2.3.4.2.2 Land use management

Land use management is the process of managing the use and development of land resources. Land resources are used for a variety of purposes which may include organic agriculture, reforestation, water resource management etc. Eleven organizations have thought of engaging in these management efforts but needs comprehensive plans to be worked out with experts prior to commencement.

2.3.4.2.3 Reuse/recycling of raw materials

‘Reduce’, ‘Reuse’, and ‘Recycle’ of materials are commonly known as the 3R principle. The ‘Reduce’ in 3R means the reduction of the amount of waste and rubbish produced by the organization. Recycling is processing by which used materials (waste) are converted to new products to prevent waste of potentially useful materials, reduce the consumption of fresh raw materials, reduce energy usage, and lower greenhouse gas emissions as compared to virgin production. There are ISO standards relating to recycling such as ISO 15270:2008 for plastic waste and ISO 14001:2004 for environmental management control of recycling practice.

In particular, the Industrial sector is found to appreciate the 3R principle as it directly yields benefits from them. The National Cleaner Production Centre offers advice to those who need support in 3R principle implementation activities.
2.3.5 Forestry, Afforestation/Reforestation

In forestry related activities it is apparent that organizations that belong to the Agriculture sector have given their direct contribution as it is part of their business. However, Industrial and Services sectors did not pay much attention as it is far from their day to day involvement of business. Figure 22 indicates that 16 organizations are involved in forestry activities.

2.3.5.1 Afforestation

Afforestation is the establishment of a forest or stand of trees in an area where there was no forest. The conversion of croplands or marginal lands into forests results in the sequestration of carbon. As a result, afforestation is considered one of the key climate-change mitigation strategies. A few of the Agriculture sector organizations have been involved in afforestation activities sacrificing some of their productive land for this purpose.

2.3.5.2 Reforestation

Reforestation is the natural or intentional restocking of existing forests and or woodlands that have been depleted, usually through deforestation. Reforestation can be used to improve the quality of human life by soaking up pollution and dust from the air, rebuild natural habitats and ecosystems thereby minimizing global warming. A very few are involved in the reforestation activities as it does not come directly under their purview.

2.3.5.3 Wetlands restoration

Restoration is the return of a degraded wetland or former wetland to its pre-existing naturally functioning condition, or a condition as close to that as possible.
Though wetland restoration is an important step in restoring our land, only one company has understood the inherent benefits that one can get from wetland restoration. More awareness programmes are therefore necessary to convince organizations. International Union for Conservation of Natural Resources (IUCN) is one of the pioneering bodies in Sri Lanka who advocates wetland restoration and has played a leading role to prepare a wetland atlas for Sri Lanka. IUCN is a potential and important partner to support knowledge sharing and awareness creation programmes amongst stakeholders.

2.3.6 Clean transportation and Fuels, Mass transit

Improving efficiency of a vehicle reduces its fuel consumption, and emissions to the atmosphere. A range of technologies and approaches would help create cleaner, more efficient vehicles, including lightweight materials, advanced transmissions, battery-direct etc. Figure 23 shows the organizations adopting different methods of clean transportation and fuel use.
2.3.6.1 **Fuel cells/Advanced batteries**

Batteries and fuel cells, and their inherent components are being developed and refined with high intensity at many locations around the globe to meet demands for lower fossil fuel consumption and reduced emissions, while meeting needs for consumer-acceptable range and delivered vehicle horse power. However, this area of development is rather novel to Sri Lanka hence there were only three organizations engaged in such endeavors at present.

2.3.6.2 **Alternative fuel vehicles/Hybrid vehicles.**

Hybrid electric vehicles are powered by an internal combustion engine or other propulsion sources that can be run on conventional or alternative fuel and an electric motor that uses energy stored in a battery.

This area too seems to be new to Sri Lankan organizations hence only two organizations have activities in this area which helps in cleaner transport initiatives.

2.3.6.3 **Biofuel**

Biofuel is a type of fuel whose energy is derived from biological carbon fixation. Biofuels include fuels derived from biomass conversion, as well as solid biomass, liquid fuels and various biogases. The biofuels are therefore considered to be "CO₂ neutral", not adding to the carbon dioxide level in the atmosphere. The type of biofuel used will depend on a number of factors, chief amongst them being the available feedstock and the energy that can be used locally.

This is yet another area in which organizations need technical support and at present only three organizations have taken the initiative even to try and see the possibilities of using biofuel.

2.3.6.4 **Green transport**

This refers to any means of transport with low adverse impacts on the environment, and includes walking and cycling, group transportation, mass transportation, pooling of vehicles, scheduled supply chain etc. while protecting urban transport systems that are fuel-efficient, space-saving and promote healthy lifestyles.

There were twenty organisations involved in some of these schemes helping to reduce adverse impacts, particularly in relation to air pollution.

In summary it can be inferred that most established techniques in Sri Lanka are practiced but the ones that are rather new to Sri Lanka need more awareness among organizations so that they may adopt such schemes without any perceived risks and inhibitions.

2.3.7 **Pollution prevention and control in manufacturing including cleaner production and good house-keeping and clean-up operations**

Environmental degradation refers to the depletion of potentially renewable resources such as air, water, soil, forest or wild life by using them at a faster rate than they can be naturally renewed. The impact of pollution and environmental degradation on our health seems to be complex but on the rise.
day by day. The Central Environment Authority (CEA) is the agency that has been in charge of ensuring overall environmental coordination in the country, under the National Environmental Act. The National Environmental Act defines the environment as the physical factors of the surroundings of the human beings including land, soil water, atmosphere, climate, sound, odours, tastes and biological factors of animals and plants of every description. In addition, there are some other laws enacted to protect eco systems viz. Coast Conservation Act, Fauna and Flora Protection Ordinance, Forest Ordinance, Marine pollution Prevention Act etc. Following are the key areas which are identified as imperative to be discussed in detail.

2.3.7.1 Air quality

Air pollution is a change in the physical, chemical and biological characteristics of air that causes adverse effects on humans and other organisms. The ultimate result is a significant alteration in the natural environment and/or ecosystem. The standards or and guidelines have been set for air pollution prevention (Emission standards for industries are practiced only as an interim standard as it is yet to be gazetted) and they address;

- Ambient Air Quality
- Vehicle emissions
- Fuel standards
- Industrial emissions
- Ozone depleting substances

In this present survey, the amount of pollutants generated was not quantified. However the types of air pollutants emanated by organizations and their mitigation techniques were recorded (Figure 24).

A very few organizations stated that they have an idea of what their business sites emit into the atmosphere. Awareness campaigns are therefore of utmost importance. The levels of air pollution could be measured with the Industrial Technology Institute (ITI) or the National Building and Research Organization (NBRO) or universities so that the emission levels could be assessed quantitatively rather than qualitatively.

![Figure 24: Organizations emanating different types of air pollutants and their prevention techniques](image)
2.3.7.2 Waste water

Pollution of water has become a very serious problem in Sri Lanka. The main sources of water pollution are domestic, urban and municipal wastes (including both grey and black waters), agro-chemicals (such as pesticides, fertilizers and herbicides etc.), industrial effluents (including chemicals, detergents, heavy metals and oils etc.) and marine and shipping waste (including oil spills, chemicals and ballast water etc.) respectively. There are separate standards that have been set for potable water (drinking water) and effluents (wastewaters that are discharged from industries and sewerage treatment plants). The standards for effluent discharge into water sources have been defined in relation to the specific places of discharge (irrigation land, marine and coastal areas, surface waters), types of effluents (domestic or industrial), and type of industry (rubber, textiles, tanning, palm oil and coconut kernel etc.) respectively. Any standard for a specific industry overrides the general standards.

In this survey, it is seen that a considerable number of organizations (about 16 organizations) produce industrial wastewater and they employ different wastewater treatment methods prior to discharge to the environment (Figure 25).

![Figure 25: Organizations generating wastewater and their treatment methods](image)

With the collection of data it was apparent that most organizations were unaware of the quantities they generate because the quantification methods were apparently not known to them. Hence this seems to be an area warranting more technical inputs for organizations in order to help them perform better in abating water pollution.

2.3.7.3 Municipal solid waste

Municipal Solid Waste (MSW) more commonly known as trash or garbage which consists of everyday leftovers, such as product packaging, grass clippings, furniture, clothing, bottles, food scraps, newspapers etc. Different types of waste are identified according to their source viz. household, industrial waste, sewage sludge etc. There are certain strategies proposed to reduce, recycle and reuse municipal solid waste.
Twenty organizations are found to generate sizable quantities of MSW but a few have complete management knowledge of MSW. Fourteen organizations have indicated that their MSW is transferred to a local authority so that the local authority is responsible for the disposal of MSW in an environmentally safe manner. Some have initiated composting, biogas generation with biodegradable materials whereas another group has initiated programmes of recycling. Nevertheless, training on proper management of MSW is necessary for many organizations.

2.3.7.4 Hazardous waste

Hazardous waste is waste material that is reactive, toxic, corrosive or/and otherwise poses a hazard to human health and environment. Hazardous waste needs special collection and disposal. Toxic and hazardous waste is generated mainly in the industrial and medical sectors and is being generated in increased quantities. Hazardous waste includes heavy metals, oil, agrochemicals, paints, varnish and asbestos waste etc.

E-waste has also increased with the increased use of electronic equipment. It is commonly referred to as E-waste or Waste Electrical and Electronic Equipment (WEEE). It usually includes surplus, obsolete, broken, or discarded electrical or electronic devices which include computers and other electronic appliances.
Thirteen organizations are found to generate hazardous materials and employ different methods of management. Some hand them over to a competent authority capable of handling and processing the hazardous waste at a price, however, there are others who are unaware of safe disposal methods. Hence it is apparent that handling hazardous waste is also an appropriate topic on which training must be organized.

In summary, it can be concluded that pollution prevention needs to be paid more attention and environmentally friendly management techniques need to be introduced and popularized.
Chapter 3: Managerial and policy measures at enterprise level

3.1 Preamble

The definition of green jobs may not focus only on the environmental aspects of a job. Green jobs also need to be decent jobs pairing concerns like efficiency and low emissions with traditional labour concerns including wages, career prospects, job security, occupational health and safety as well as other working conditions. People’s livelihoods, rights, and sense of dignity are integral to their jobs; jobs need to provide equal hope for the environment and the jobholder. A job which is exploitative or harmful, or fails to pay a living wage cannot be called green. Preferably, the future of employment will be more respectful and protective while caring for the natural environment and workers’ health, basic needs, and rights of employees. Figure 28 indicates the different policies adopted by organizations in respect of the above.

In this survey, most of the employees in each sector (agriculture, industry and services) are nominally in support of environmental goals, while expecting a healthy environment within which to work. There are numerous policies in existence in order to support employees and they are illustrated below.

3.2 Environment Policy

Environmental policy is any action deliberately taken to manage human activities with a view to preventing, reducing or mitigating harmful effects on nature and natural resources, and ensuring that human intervention to the environment does not have any harmful effects on the community. In this survey, however, the adoption of such policies in each sector (agriculture, industry and services) is relatively low. Nevertheless, some of the organizations have already ratified internationally recognized sustainability standards, which are considered essential requirements of an environment related policy.

3.3 HR Policy

Human resource policies are systems of codified decisions, established by an organization, to support administrative personnel functions, performance management, employee relations and resource planning. Each organization has a different set of circumstances, and based on them, develops an individual set of human resource policies. Almost all organizations have a written policy on Human Resource Management (Figure 28).

3.4 HRD Policy

Human Resource Development is defined as a set of systematic and planned activities designed by an organization to provide its members with the opportunities to learn necessary skills to meet current and future job demands. (W. Desimone: HRD Fundation: Framework and Application, 2009).
The Sri Lankan government is to introduce a policy on Employment and Human Resources which includes an HRD component. The policy is expected to help develop the country’s human resources, which will be achieved through addressing several key areas like education, higher education, vocational training, labour, foreign employment, sports, productivity and the public sector. The survey amongst the EFC membership indicates that the interest amongst members on having an HRD policy is subsumed by their interest in a strong HR policy.

![Figure 28: Organizations adopting different policies at the workplace](image)

### 3.5 Gender Equality Policy

The international definition of gender equality is “that all human beings are free to develop their personal abilities and make choices without the limitations set by strict gender roles; that the different behavior, aspirations and needs of women and men are equally considered, valued and favored”. Implementing gender equality requires equal representation and participation of both men and women in the economy, decision-making, as well as in social, cultural and civil life but is not confined to demographics. It implies a fair distribution of resources between men and women, the redistribution of power and caring responsibilities, and freedom from gender-based violence. The implementation of such a policy is relatively low as most of the organizations mentioned that they do care about the worker’s potential and capability to work regardless of gender alluding to a gender neutral approach in the workplace.
3.6 Worker welfare policy

Welfare includes anything that is done for the comfort and improvement of employees and is provided over and above the wages, but not as a matter of right.

Welfare helps in keeping the morale and motivation of the employees high so as to retain the employees for a longer duration. Employee welfare includes addressing challenges in working conditions, creation of industrial harmony through infrastructure for health, industrial relations and insurance against disease, accident and unemployment for the workers and their families. Labour welfare entails all those activities of employers which are directed towards providing the employees with certain facilities and services in addition to wages or salaries. However, it is noted that ‘green jobs’ necessitates provision of irreducible minimum standards in the workplace as a matter of right.

A considerable number of organizations (about 20 organizations) have come up with welfare policies for the benefit of their employees.

![Graphs showing distribution of worker welfare policies](image)

Figure 29: Organizations with worker welfare at the workplace

3.7 Other policies

In addition to the above mentioned policies, most of the organizations have displayed sensitivity to worker’s health and safety which is commendable and alludes positively to decent work. Adequate special procedures for grievance handling are also evidenced, particularly amongst organizations that have large numbers of employees. Figure 30 depicts other policies adopted by different organizations such as occupational health and safety policies.
3.8 EPF/ETF

All organizations engaged in this survey have contributed to these schemes which are statutory requirements.

3.9 Pension schemes

Only one organization surveyed from the Agriculture sector had subscribed to a pension scheme. Out of 6 organizations from the Services sector, there were 5 organizations which have subscribed to pension schemes and these organizations represent Banking, Insurance and Real Estate sub sectors. The industrial sector organizations surveyed had not subscribed to pension schemes.

3.10 Other long term benefits

Figure 32 shows some other long term benefits that have been provided for employees such as insurance (Life/Health), profit sharing schemes, bonus schemes, promotions, career development/training opportunities etc.
Figure 32: Long term benefits/Profit sharing schemes adopted by organizations
3.11 National and International Sustainability Standards

3.11.1. National standards

The Sri Lanka Standards Institution (SLSI) is the national standards body of Sri Lanka, established under the Bureau of Ceylon Standards Act No. 38 of 1964. The Product Certification Scheme is essentially voluntary. However, the SLS mark has been made compulsory for 31 items through the Directives issued under the Consumer Protection Act No. 1 of 1979 and Consumer Affairs Authority Act No. 9 of 2003.

Figure 33: Sustainability Standards adopted by organizations

Figure 33 shows the organizations adopting diverse standards depending on the appropriateness to their business.

3.11.2. International standards


The Quality Systems Certification Scheme is designed as per ISO Guide 62 to meet international requirements in certifying quality systems of organizations according to ISO 9001:2000 standards. This scheme is accredited for nineteen scope sectors by RvA, The Netherlands, which is one of the world renowned accreditation bodies. Thus the certificates issued under this scheme are recognized all over the world.

3.11.2.2. ISO 14001- Environmental Management Systems (EMS)- Certification scheme

EMS certification is a voluntary certification scheme of SLSI which supports the industry to comply with the requirements of the ISO 14001 standard and to demonstrate organization's commitment to environmental protection. This scheme is accredited for 12 scope sectors by RvA, The Netherlands.
3.11.2.3 OHSAS 18001 Certification Scheme (Occupational Health and Safety Management system)

This scheme enables an organization to control its occupational health and safety risks and improve its performance by minimizing employee related risks.

3.11.2.4. HACCP for Food Safety Assurance

The Hazard Analysis and Critical Control Points / HACCP certification entitled for commitment to food safety and customer satisfaction. HACCP is an international principle defining the requirements for effective control of food safety. SLSI provides certification services to the industry and commerce. A certificate holder develops and maintains its food safety assurance programme based on the internationally accepted principles of ISO 22000 and SLS 1266.

Having obtained HACCP certificate from the SLSI implies that chemical, physical and biological hazards encountered during production or processing of the food item, as applicable to the scope of certification are controlled to make the food safe for human consumption.

3.11.2.5 SA 8000 Certification scheme (Social Accountability)

It is based on the conventions of the International Labour Organization, the Universal Declaration of Human Rights as well as the United Nations Convention on the Rights of Children. It is applicable to all organizations regardless of scale, industry and location.

3.11.2.6 Rainforest Alliance Certification

Rainforest Alliance Certified organizations meet the comprehensive standards of the Sustainable Agriculture Network (SAN), a coalition of nonprofit conservation organizations, which address social, economic and environmental criteria.

3.11.2.7 Ethical Tea Partnership (ETP)

The fundamental principles of the ETP standard are those of the Ethical Trading Initiative (ETI) Base Code which is aligned to the International Labour Organization (ILO) Conventions. In addition, the ETP standard includes environmental provisions. Industry best practice, local law and collective bargaining agreements (CBAs) which are relevant to worker welfare are used to support, clarify and enrich the standard, and to ensure that it is appropriate to the country in which the standard is to be applied. In case of contradictions, those provisions which afford workers the greatest protection will be used.

In summary, it could be inferred that 28 per cent of organizations have subscribed to at least one set of standards.
Chapter 4: An analysis of green job deficits

4.1 Preamble

One of the prime objectives of carrying out the survey is to identify gaps in green jobs at present through a Gap Analysis, which compares the current scenario with an ideal setting. For this a variety of stakeholders connected to the plantation and agricultural sectors, professionals in the manufacturing and industry sectors and officials in the services sector were consulted through the questionnaire. This analysis highlights the existing practices of green jobs and deficits in the above sectors that included 50 organizations.

According to the definition of ILO, green jobs are needed to address two complimentary issues to productivity, namely, that of social justice at the work place, whilst also reducing the impact on the environment as a long term strategy. This way, businesses will remain competitive in a globalized economy. There are nine categories that are identified to be potential ones in this survey report as green economic categories. Nevertheless, green jobs can be found in all sectors of the economy but are primarily created in the following categories:

- Renewable energy
- Energy efficiency
- Green buildings and construction
- Conservation of natural resources including water, fisheries etc.
- Forestry, afforestation/reforestation
- Environmentally friendly agriculture (pesticides free, water efficient, etc.)
- Pollution prevention and control in manufacturing including cleaner production and good house-keeping and clean-up operations
- Clean transportation and fuels, mass transit
- Green tourism (eco-tourism)

The organizations/companies listed at the beginning of this report were contacted and provided with a questionnaire that contained sub sections directly requiring them to provide information related to Green Jobs, Industrial policy, Technical Aspects and Decent Work at the workplace (see Annexure). The following were some of such questions aimed at collecting information directly related to Green Jobs:

4.2 Green Jobs and Industrial policy

A number of issues in this context are raised and following is the list of issues raised and questions set in to gather more information.
Information to gather current information on any green jobs initiatives that the organization has already initiated, and/or planning to initiate:

**Question:** Does your business or organization currently have any green jobs initiatives?

Identification of constraints in implementing any green initiative/s:

**Question:** What do you think is preventing your organization (or in being less committed to) in implementing green initiatives?

Limitation of the growth of business activities that can be directly related to any green job-related factors:

**Question:** What factors (green jobs related) do limit the growth of your business? Please comment on what you feel can be done at the national policy level to assist growth in this sector

Identification of positive attributes of an organization for successful implementation of green job initiatives:

**Question:** What do you think is the best strength of your organization in implementing green job initiatives?

The willingness of the organization for certification and/or standardization and the external support expected/needed

**Question:** Would you consider engaging in a programme of certification under national or international sustainability scheme? If yes, what help would you consider most important to receive?

Details obtained on each of these questions together with gaps identified are given below in respect of each question.

**4.2.1 Question 1:** Does your business or organization currently have any green jobs initiatives?

Out of the 50 local organizations that participated in the survey only 14 indicated that their business have green jobs initiatives; the rest either skipped the question without answering by leaving the section blank or stated “no”. The survey results suggest that most of the organizations have misunderstood or misinterpreted the term ‘green jobs initiatives’, even after proving them with a short description defining the concept. Nevertheless, some organizations in the industrial sectors seemed to have well-understood the green concept and even have achieved international sustainable standards. It is encouraging to note that some organizations in the Agriculture sectors have already initiated and incorporated a green culture into their business strategies. At the same time, it is disappointing to note that the services sector is far behind in green jobs initiatives and implementing sustainability initiatives.

The analysis of responses also found that the services sector required some degree of on-the-job training but not necessarily advanced knowledge. Employers in the Industry sector consider that green jobs are similar to those jobs that are currently available within the sector and focus more on completing the assigned tasks in a more environmentally friendly manner. To achieve this, there is a sustainability unit located centrally, which sets targets and programmes in line with corporate objectives. The management tends to define and/or establish the mechanism to green the job and then identify the necessary tasks to
the employees. This observation demonstrates that green jobs can be promoted by making the managers aware of the potential of promoting such sustainability concepts, and thereafter suggesting them the need to train the employees on “green” skills and “green” opportunities, thus increasing the possibility of future “green” entry level jobs.

**4.2.2 Question 2:** What do you think is preventing your organization (or in being less committed to) in implementing green initiatives?

For the majority, the cost factor seemed to be the highest concern in implementing green jobs initiatives and adopting green technologies. In addition, the longer period for return on investments, lack of skilled staff and knowledge etc. were also identified. Some organizations in the Industry sector have taken the lead in making jobs greener and taken the leadership of ‘going green’. The Services sector, on the contrary, were lagging behind in adopting green practices assuming that green business is something that is not related to their day-to-day activities that they are involved in. The following are some of the reasons that were suggested by organizations which prevent them in adopting green jobs initiatives:

**Industry**

- High cost involved in switching to green technologies
- Lack of awareness and knowledge in the green arena
- Lack of government initiatives to encourage green practices
- Insufficient technical know-how and exposure to new (green) technologies
- Lack of technical skills of the employees

**Agriculture**

- Limitation of funds
- Lack of funding and incentives
- Lack of resources and awareness among employees
- Lack of experience and lack of trained personnel etc.
- Lack of technology and skilled labour

**Services**

- Lack of awareness
- Slow or long return on investment
- Public awareness in Sri Lanka is lacking and slow implementation of legislation

**4.2.3 Question 3:** What factors (green jobs related) limit the growth of your business? Please comment on what you feel can be done at the national policy level to assist growth in this sector.
The organizations who took part in the survey believe that national level policies need to be strengthened and/or implemented in order to help and assist organizations to move forward in the Environment Friendly Business Concepts and policies to compensate them and also provide incentives for organizations which have already implemented green initiatives. National level policies are also needed to concentrate more on environmentally friendly alternatives for energy generation (Electricity), by so ensuring that the organizations that opt for such greener options and the country as a whole will be benefit in the long run. Moreover, at the national policy level, Green jobs must be an integral part of the routine designations, Standardized policies and practices with objective parameters to gauge the performance and a periodic evaluation to measure the performance, and a rating system to recognize star performers.

**Industry**

Some industries involved in this survey have found that Green Initiatives have strengthened the business and their customer base. This tendency has encouraged them to promote green jobs and sustainable production modes in their supply chain because such practices provide them with a good marketing tool. However, following comments were also made:

- Initial investment is too high & subsidies are not available; financial and technical (knowledge / instruments) support from governmental institutions are not readily available
- Lack of consultation opportunities and information sharing schemes
- Lack of awareness and training opportunities
- Tax reduction, duty debits for green industrial plants from government level are needed
- Grading systems (or classification) based on a suitable green criteria is needed to encourage green technologies/jobs

**Agriculture**

The agriculture sector’s concern was mainly on enforcement of regulations such as prosecuting those who cultivate in reservation land adjoining water bodies, resort to illicit felling of trees, illicit sand and gem mining etc. In addition, prohibiting burning of solid waste, spraying agrochemicals without Personal Protective Equipment (PPE’s), exploiting/polluting water bodies/sources, irresponsible solid waste and wastewater disposal are too found to be some of the minor issues within this sector.

In analyzing above-mentioned issues the following instruments are thought vital in order to fill in the gaps in the sector.

- High investment in implementing green initiatives
- Tax benefits/ tax reliefs for green jobs related investments is lacking
- More training opportunities & exposure to green jobs initiatives are needed
- Low interest loans for green jobs related initiatives are needed
- Providing financial assistance and incentives for green initiatives.
Services

The services sector considers that their businesses knowingly refrain from facilitating ventures which are detrimental to the Environment. In fact, their focus is to mitigate the impact, if any, with appropriate eco-friendly initiatives. This is true for a few organizations in the Services sector, but it is noted that the sense of the green concept has not been grasped by many organizations in the Services sector even for very basic applications/principles of saving energy or water. However, the following comments were made:

✓ The government may help entrepreneurs to venture into eco-friendly projects by way of financing at concessionary rates of interest.
✓ Training on evaluation of renewable energy facilities from a financial evaluation view point
✓ Awareness at micro level with regard to Green Jobs and a Model Industry may be built for the purpose of both, on-the-job training, and also as a first step ahead for progressive development and public awareness in Sri Lanka

4.2.4 Question 4: What do you think is the best strength of your organization in implementing green job initiatives?

The organizations operating on a large scale, especially in the Industry and Agriculture sectors are moving onto more environmentally friendly technologies and sustainability and green initiatives because such plans may open up opportunities that are competitively advantageous for them in the market. Moreover, some tools like lean manufacturing have increased the efficiency and productivity of the manufacturing processes.

The commitment of top management is indicated as the best strength in these organizations in implementing green jobs initiatives. Some of the strengths in each of the sectors are listed below:

Industry
✓ Commitment of the Senior Management
✓ Financial Stability of large organizations
✓ Global presence and stability and scale of operations
✓ Enthusiasm of employees

Agriculture
✓ Commitment of the top management
✓ Basic knowledge and experience in relation to green jobs/practices among workers

Services
✓ Cost efficiency with regard to energy conservation
✓ Innovative solutions for greening with the hi-tech support from other companies
✓ Employees’ commitment to the cause and management support
 ✓ Availability of funds and resources and commitment towards social responsibility.
 ✓ Motivated staff members who are both technically and mentally well-oriented with optimistic/positive attitudes towards building a sustainable tomorrow

4.2.5 Question 5: Would you consider engaging in a programme of certification under a national or international sustainability scheme? If yes, what help would you consider most important to receive?

The following areas for each sector are thought to be addressed in order to fill in the gaps in sustainability schemes.

Industry
 ✓ Green procurement, Infrastructure development, Training and Development
 ✓ Capacity building, creating awareness and incentive schemes
 ✓ Funding and details of resource persons for such programmes
 ✓ Infrastructure development and partnership development

Agriculture
 ✓ Green procurement
 ✓ Infrastructure development
 ✓ Training of Employees
 ✓ Public-Private Partnerships

Services
 ✓ Green buildings, Green supply chain
 ✓ Awareness programmes
 ✓ Green procurement
 ✓ Any partnerships that reduce dependency on hydrocarbons or the national grid and empowers the sector through incentives, to adopt renewable energy

4.3 Technical Aspects

4.3.1 Renewable energy

Hydro

Off-grid electricity generation by using hydropower has been practiced by 10 out of 13 organizations in the Agriculture sector. This is due to the fact that most of the organizations out of those who participated in the agriculture sector are involved in tea production. The geo-climatic settings in Sri Lanka, are particularly conducive to harnessing hydro resources and are primarily confined to agro-ecological zones that are suitable for tea cultivation.
**Biomass**

Although there is a vast potential for energy production using biomass, the utilization and level of exploitation is apparently low for both generation of energy and direct use (Figures 10 & 11).

This is particularly discouraging when the locational advantage that Sri Lanka has, is considered. The country is located on the tropical belt where ample sunlight is available for biomass growth throughout the year. As the prices and demand for fossil fuel energy is booming, it is sensible to re-think and switch to production of renewable energy, especially Dendro power, irrespective of its initial investment cost. The direct use of biomass for energy is also not very significant.

**Solar**

The Industry sector and the Services sector are both considering solar energy as a viable alternative though the initial investment is costly. Hotels and even factories have considered using solar energy for water heating and to a certain extent for lighting.

However, the great majority have no proper plans in place yet for investing in renewable energy: they continue to rely on the national grid for their entire energy requirement (Figure 12).

### 4.3.2 Increasing energy efficiency

Direct measures have been taken to increase energy efficiency through building retrofitting, energy auditing, good house-keeping measure etc. in all the sectors. Proper training in demand side management and energy saving measures is essential for all the sectors and for employees at all levels.

### 4.3.3 Clean transportation and fuels, mass transport options

Direct adoption of clean transportation options is at a poor level in all the sectors. However, indirectly most of the organizations have the tendency of pooling of vehicles, scheduling the supply chain to minimize transportation costs etc., which seems to be quite popular among entities which operate with large numbers of workers.

### 4.3.4 Pollution prevention

The responses obtained from the questionnaire are not enough to assess the present status of pollution prevention and/or pollution control for the simple reason that most of the respondents have not provided information or the information provided is too little. With the limited information gathered, the following observations can be made:

**Air**

In the present survey, none of the respondents have provided any quantitative data related to the amount of pollutants being generated, how the organizations control air pollutants and what their targets are. However, there were a few organizations which have stated that they are responsible for the generation of such air pollutants and preventive or control measures are in place. More training on monitoring air quality, controlling air-borne pollutants, prevention techniques etc., need to be stressed where it is
necessary. This should include in-door air quality as well as out-door air quality which is affected due to the operations of a particular factory, industry or the organization.

**Wastewater**

In this survey, it has been noted that a considerable number of industries produce industrial wastewaters and treat the effluent before disposal. Most of the industries have in-house treatment plants and skilled labour is mostly available for operations and maintenance.

**Municipal Solid Waste**

Most of the organizations have no quantitative data on how much solid waste they produce. The method of disposal is mostly through the local authority. It is notable that several organizations segregate the waste and engage in re-use and recycle. Those who produce significant amounts of waste that are readily recyclable such as paper and cardboard hand them over to commercial recyclers. Those who produce significant amounts of biodegradable wastes engage in good practices such as biogas production and composting. The level of knowledge and know-how related to waste management is at a very satisfactory level.

**Hazardous waste**

Hazardous waste management is of concern because Sri Lanka has only a few options in safe disposal. Most of the questionnaires did not provide any replies to the question related to this issue. There is an urgent need to study and find options and solutions for individual industries and assist them to devise methodologies for safe disposal of hazardous waste.

**4.4 Decent work at the workplace**

Decent work is defined as opportunities for women and men to obtain productive work under conditions of freedom, equity, security and human dignity. Decent work means productive work in which rights are protected and generate an adequate income, with adequate social protection. In other words, it refers to a situation that promotes opportunities for men and women to obtain decent and productive work which guarantees equal opportunities. The concept of decent work is built upon four pillars: access to employment, promotion of rights at work, social protection, and social dialogue.

**4.4.1 HR Policy**

Thirty eight per cent of organizations have their own set of Policies related to HR, which are apparently comprehensive and accessible.
4.4.2 Gender Equity Policy
Implementation of such a policy is not widespread. Most of the industries mentioned that they do care about the workers potential and capability to work when filling a vacancy.

4.4.3 Worker’s welfare policy
Most of the organizations have enacted rules and regulations and adopted Policies related to workers’ health and safety, which is a positive sign of going green and promoting decent work. Moreover, procedures for grievances are observed closely, especially when the organizations have a large number of employees.

4.4.4 EPF/ETF
As expected, all the organizations that responded to the survey are contributing to this, in conformity statutory requirements.

4.4.5 Other long term benefits
Other long term benefits also have been provided for employees such as insurance (Life/Health), profit sharing schemes, bonus schemes, promotional prospects, career development/training opportunities in all the three sectors.

4.5 GAP Analysis
At present, organizations search for more environmentally friendly methods of operation and new ‘green’ business opportunities, and business leaders are looking for ways to merge current businesses with new green practices. In order to build a business environment which is more conducive to our green environment, green jobs need to be matched with green applications. Therefore, on-the-job training should be the preferred approach rather than extensive training received elsewhere or from an outside agency. The workers require soft skills and basic skills. The soft skills include skills such as dependability and reliability, initiative, and interpersonal skills. For managers and small business owners who are committed to establish green procedures and provide on-the-job training for their employees, green knowledge is more important.

The gap analysis revealed that the most effective growth of green jobs can be implemented by current industries that have been trained in awareness of green practices, whether recycling, sustainability, or green design. If employees have no knowledge or understanding of green practices, when they are trained within the business, they must follow organization procedures which include protocols for recycling. These results in green habits will be established by the employees who eventually implement them on a personal level. Essentially, green habits trickle down from the workplace to the home. The green thought process should be a part of the culture of the business and should be established by the management and
business owners. Although employees might not have any awareness of green thinking, they are trained to put green behaviour into practice along with other work skills.

Therefore it is suggested that a better approach to introducing and developing green practices would be to focus on the ways that green practices can reduce business costs, increase efficiency, and open new opportunities for business. The decision makers in the industries need to be influenced. As they look at ways to cut costs which also benefit the environment, they will be more likely to adopt “green” practices.

The gap analysis found that a majority of organizations indicated some outside agency training is required for the creation of future green jobs. However, in order to see a growth in green jobs, these organizations must perceive the benefits of green jobs and explore the possibility of business growth by catering to green needs and opportunities and the green market. In turn, these employers can provide the necessary hands-on training on the job to their employees so that green products and services can be delivered more effectively. The organizations indicated that future training needs should include the following:

4.5.1 Industry sector

✓ Energy management programmes, Waste Management, Environmental Management programmes, awareness programmes on sustainability, programmes on CP (cleaner production), Carbon foot print measurements and verifications, Concepts of Green buildings etc.
✓ International certifications such as ISO standards, global trends and Standards present in green jobs initiatives, short term and long term benefits of adopting green jobs initiatives.

4.5.2 Agriculture sector

✓ Environmental and Ecosystem Management, Energy Management, Cleaner production Technologies, Energy Serving and Auditors, Conservation of Biodiversity, Water quality improvement and water conservation etc.
✓ Carbon Footprint, ISO 14001 & ISO 50001, Implementing Sustainable Agricultural practices (including energy savings, Organic farming etc.)

4.5.3 Services sector

Chapter 5: Case studies of good practices in green jobs

5.1 Preamble

Sustainability is fast becoming the focus of the future for all business entities, both in the public and private sectors. The direct connection between economic growth and the safeguarding of the triple bottom line priorities (financial/economic, social and environmental) is an emerging focus because it is well-accepted that ignoring environmental responsibility will lead to the possibility of corporate extinction. With green jobs creating its own niche in the broad picture of sustainability, all stakeholders - be it investors, customers, suppliers or employees - are now increasingly aware of the importance of integrating green jobs into all aspects of operations. As a result of the sustained efforts of several corporate entities, researchers, forward-thinking individuals/groups and environmentally conscious and socially responsible individuals and groups, the environment has become one of the key policy drivers influencing decisions and/or actions initiated and implemented from the boardroom to the lowest reaches of organizations.

This chapter discusses such success stories related to seven entities who have systematically committed to environmental sustainability and carrying out business activities in a socially responsible manner, and ‘greening’ jobs as part of their corporate responsibility. An attempt has been made to include at least one organization from each sector that was focused on in this study. There was a minimum criterion adopted as shown below in selecting the number of organizations limiting the number to seven. Besides these seven case studies which are by no means an exhaustive representation of the present scenario of green jobs in Sri Lanka there were others too. These other success stories have not been highlighted in this chapter as they did not satisfy the minimum criterion regarding information requested. Therefore these seven organizations have been selected on the basis of the information furnished in response to the questionnaire and subsequent collection of data through interviews, documentation such as annual reports, corporate plans etc.

The following are the seven case studies that are reported here:

1. **Banking/Financial Sector:**
   - Hatton National Bank
   - Seylan Bank

2. **Hotel Sector:**
   - Heritance Kandalama (Aitken Spence)
   - Cinnamon Lodge (John Keells)
3. Apparel/Garment Sector:
   - CKT Apparels (Hirdaramani)
   - MAS Active (Pvt) Ltd. Asialine

4. Plantation Sector:
   - Halgolle Estate (Kelani Valley Plantations)

Each case study presented herein describes the Greening Business Initiatives of each Company or the Group. It also reflects their corporate strategy or policy for sustainability. This includes activities that have been undertaken for greening the operations and their recent records of indicators confirming their pledge to institute environmental sustainability and social responsibility within and outside their normal business operations.
General Information

HNB has centralized its administrative operations at the landmark HNB Tower, has used cutting edge technology to automate the network, equipped a team with skills befitting a futuristic bank and is working with all the stakeholders to ensure that they manage social and environmental impacts sustainably and with accountability. The Bank has reached new heights in terms of performance and by being a conduit of value creation through its involvement as “Partner in Progress” to the nation. It stood true to its values and century long heritage in propagating sustainable livelihoods, catalyzing economic gain and providing access to finance across every tier of the socio-economic scale in all four corners of the country. The Bank has further fortified its position as the second largest private bank during the recent past, growing the loan base to Rs 258 Billion and asset base to Rs 378 Billion. At the end of 2011, the branch network stood at a commendable 240 customer centres and became the largest network among private commercial banks. In addition, the ATM network of 400 stands as one of the largest networks in Sri Lanka. As at end of December 2011, the Bank accounted for approximately 9 per cent of the total banking sector assets.

Greening Business Policies

At HNB sustainability encompass and focus on six core areas - fair banking, supporting enterprise, safety and security, environmental sustainability, community and employee responsibility.

1. Sustainability Vision & Sustainable Business Objectives of HNB:

For Employees:

- To foster a diverse talent pool that delivers superior and efficient performance whilst ensuring that such efficiency is not achieved at the expense of work-life balance or corporate values.

Suppliers:

- To balance cost considerations with sustainable procurement practices.

Community:

- To engage with the community at every level.
- To act as a catalyst for positive change through action in healthcare, education and entrepreneurship.

Environment:

- To promote environmental conservation at the workplace, integrating environmentally friendly practices into daily operations whilst also giving due consideration to responsible lending.
2. Focus of sustainability

The first focus area is the national economy. By supporting and energizing commercial and entrepreneurial bases, the Bank aims to enlarge the national growth. Sustainable performance, partnering a wider segment of people and businesses, and igniting the capacities of microfinance through financial inclusion are viewed as the cornerstones for sustainable growth and sustainable wealth creation for the nation.

The second focus area is to meet and overcome conservation and environmental challenges. The Bank is focused on making a positive imprint on the environment by lessening our dependency and adverse impact. Through responsible lending, green practices and green procurement, the Bank looks to employ innovative business solutions to cascade green sustainability.

The third focus area lies in community development. The Bank firmly believes that by developing future leaders, infusing learning and innovation across the nation especially amongst youth communities, and by assisting communities to have access to basic health and education will pave the way for better livelihoods. These fundamental changes are expected to act as the medium in developing balanced communities.

Whilst the corporate vision acts as the foundation for the sustainability objectives, which evolve with respect to the Bank’s evaluation of the key areas of the sustainability focus, a top-down approach defines the sustainability stewardship of the Bank. Under the direct leadership of the Managing Director / Chief Executive Officer, sustainability is driven in parallel with sustainable business objectives as well as guided by the Bank’s Sustainability Committee. In essence, the Bank’s overall strategy for sustainability stems from the Board Level and is strategically aligned to corporate strategic priorities, and managed by the Sustainability Committee and its respective sub-committees.

In 2009, the Bank formed a Sustainability Foundation to facilitate and better manage the Bank’s Corporate Social Responsibility (CSR) efforts that fall under the third area of sustainability focus – community development. The HNB Sustainability Foundation, therefore, is endowed with the responsibility to oversee progress of initiatives falling within the purview of community development and further propels the CSR strategy of the Bank. Whilst the Foundation independently drives the CSR strategy and acts as the base for policy and strategy formulation specific to its area, it continues to be monitored under close scrutiny of the Bank’s top management with 2 Board Members, MD/CEO and 7 members of the Bank’s Management Team serving as Trustees.

The roles and functions of the Sustainable Committee, Risk Committee and the Sustainable Foundation are as follows:

- Oversee progress across economic, business, employee and environmental projects
- Act as the think tank in developing the sustainability agenda
- Ensure conformance with all sustainability guidelines
- Proactively evaluate decisions that impact on the reputation, ethics, and values of the Bank
- Identify and manage areas of noncompliance with the sustainability principles

From Green to Greener
• Set standards for policies & procedures in meeting sustainability principles
• Formulate CSR policy and strategy
• Evaluate investment viability
• Oversee implementation & progress in community projects
• Bind employee interaction with projects

Some Green Strategies in Action

1. Commitment to Sustainability: To fully integrate the consideration of ecological limits, social equity and economic justice into corporate strategies and core business areas, to put sustainability objectives on an equal footing to shareholder value creation and client satisfaction, and to actively strive to finance transactions that promote sustainability.

2. Commitment to ‘Do No Harm’: Commit to do no harm by preventing and minimizing the environmentally and/or socially detrimental impacts of the Bank’s portfolios and operations by creating policies, procedures and standards based on the Precautionary Principle to minimize environmental and social harm, improve social and environmental conditions where the Bank operates, and avoid involvement in transactions that undermine sustainability.

3. Commitment to Responsibility: The Bank bears responsibility for the environmental and social impacts of its transactions including financial risks, as well as social and environmental costs that are borne by communities.

4. Commitment to Accountability: The Bank is accountable to its stakeholders. Accountability means that stakeholders have an influential voice in financial decisions that affect the quality of their environments and their lives - both through ensuring those stakeholders’ rights are protected by law, and through practices and procedures adopted by the Bank itself.

5. Commitment to Transparency: The Bank is at all times transparent to its stakeholders, not only through robust, regular and standardized disclosure, but also by being responsive to stakeholder needs for specialized information on the Banks’ policies, procedures and transactions.

6. Commitment to Sustainable Markets and Governance: The Bank bears responsibility for the environmental and social impacts of its transactions including financial risks, as well as social and environmental impact on communities.

Key impacts on Environmental Sustainability:

• Operations have a minimum impact on the environment.
• Continues to be cognizant of environmental issues and engages for collective responses from employees, suppliers, customers and the community at large.
• Engages in a 3R policy and action and strives to Reduce, Recycle and Reuse in a bid to minimize resource utilization.

• Credit policies ensure credit approval is dependent on the project meeting the standards set by the Central Environmental Authority.

• Strives to engage suppliers to conform to the Bank’s standard environmental obligations as stated in its green procurement policy.

• Makes a significant investment towards bio-diversity conservation.

• Pioneered the concept of “Green Banking” in Sri Lanka.

• Operations are governed by a “Green Pledge” across every aspect of the business.

• Adopts a green lending stance, demonstrating a commitment to finance renewable and clean technology projects.

Greening Business Initiatives

1. Strategic Priorities for Employee Excellence

The Bank has set priorities in achieving employee excellence through support, engage, listen and develop the employees. Strategic priorities that have been set are:

• To increase the diversification of the Bank’s employee base with greater emphasis on recruitment from semi-urban and rural sectors

• To formulate training and development based on future needs

• To engage employees beyond their work role through community volunteerism

• To create more open and transparent channels of employee communication and engagement

The following are highlights of the year 2011

• 58 per cent of recruitment at entry level from semi-urban and rural sectors

• 36 Junior Executives underwent a Management Development Programme.

• Engagement in Cancer Counseling, Fire Safety awareness Championing, HIV & AIDS awareness Championing

• Appointment of a dedicated Employee Relationship Officer

The Bank strives to continue to develop the capacities of employees to meet the Bank’s and the industry’s future needs whilst furthering the sustainability concept.
2. **Green Pledge**

The Bank steers a two-pronged environmental responsibility programme called the Green Pledge. The programme is designed to educate the employees on environmental sustainability. Each employee adopts 12 actions that will facilitate the Bank’s objective for a greener workplace. The dedication of employees further cascaded to their families, customers and suppliers through a range of awareness.

3. **Green Procurement**

The Bank aims to adopt a green procurement policy in a bid to inculcate green business practices among the supplier base. The procurement policy allows for preference to suppliers who manufacture or follow principles that minimize the impact on environment.

4. **Green banking**

The Bank also invested into and completed its first green customer centre in 2011 in Nittambuwa and has plans to open a series of new green customer centres. These green buildings serve as engagement tools for employees, customers, suppliers, the community and all other stakeholders including the financial service industry, as they inspire the public to look beyond the conventional in banking operations.

5. **3R concept**

The Bank adopts a 3R policy – Recycle, Reuse, Reduce - towards all tangible resources including furniture, paper, printer cartridges and paint, amongst others.

**Environmental Responsibility Initiatives and Indicators:**

1. **Energy efficiency**

In 2011, energy consumption for air-conditioning was significantly reduced through the conversion or replacement of air conditioners to inverter technology. Efficiency measures such as the introduction of energy efficient lighting, electronic ballasts and the use of biogas for customer centre etc. have continued to yield positive efficiency improvements. All these reached annual savings of 853,356 kWh. As a direct result, the Bank’s emission of Green House Gases reduced by 426,795 kg for that year.

2. **Water efficiency**

Hatton National Bank’s pilot project on water harvesting demonstrated encouraging results in 2011. The project, initiated in the Bank’s Buttala customer centre saved approximately 20% of water, avoiding consumption from the national water supply.

As the Customer centre is located in an area where people are sensitive to the scarcity of water, and over 85 per cent of the population engages in farming activities.
Anaerobic wastewater treatment systems installed in five key customer centres and discharged approximately 60,000 litres per month of treated water which was also used for gardening purposes. On the whole, the Bank saved 2,400,000 litres of water in 2011.

3. **3R concept at work - Recycle**
The bank has dropped its usage of paper over the last five years by reusing 8 per cent of paper. Reconditioning and re-use of office furniture, prolonging lifetime and thereby reducing the waste generated through routine replacement. Reconditioning of printer cartridges helps in a 54 per cent reduction in use of new cartridges. More importantly, bank has reduced paper consumption (most relevant material used by the Bank) by adopting measures such as increase in awareness at customer centres in usage of paper, use of both sides of paper where possible, general reduction in the use of paper due to systematic automation of processes.

4. **Training and awareness programmes for efficiency management**
Employees of the bank were engaged in several awareness programmes on waste management, eco-friendly gas generators, solar power air conditioning systems, integration of solar power with the national grid to optimize the required demand and natural light systems. In addition, training in Green Rating Systems of commercial buildings conducted by Green Building Council of Sri Lanka, training in environmental friendly material usage for bank interiors conducted by Dura International.

5. **Green Pledge in practice**
The Bank invested in a large-scale tree planting activity to mark the World Environment Day and invested in planting approximately 18,300 trees throughout the country during the year. The programme engaged employees, customers and school children from diverse geographic locations. The Bank donated a sapling to each staff, selected customers and 10 saplings each to 330 schools where the Bank had existing well-established relations. Moreover, the programme mechanics ensure that each planted tree has a rightful owner, and therefore will be nourished and protected till the tree reaches maturity.

6. **Green champions**
The Bank initiated a Bank-wide poster design competition in 2011, to stimulate employees to “think outside of the box” in relation to sustainability actions. The initiative was largely to inspire people to think beyond the obvious and to create further awareness on the need for environmental responsibility at the workplace.

7. **Green buildings**
In 2011, HNB Towers was nationally recognized as one of the most energy efficient buildings in Sri Lanka and was awarded the SILVER Award in the large scale Category for Commercial Sector Buildings at the “Sri Lanka National Energy Efficiency Awards - 2011” organized by the Sri Lanka Sustainable Energy Authority.
As a result of various energy efficient features incorporated at HNB Towers it has been found to achieve the following benchmark values:

- The electrical power consumption for the Air Conditioning system at HNB Towers is less than 50 per cent of the total electrical power consumption of the building. In a conventional building this figure is normally greater than 60 per cent.
- The After Diversity Maximum Demand (ADMD) in HNB Towers is in the neighbourhood of 50 VA/m². In a conventional building this figure is in the range of 70~100 VA/m².

The Bank’s energy efficient systems and practices led to the opening of Sri Lanka’s first green bank customer centre in Nittambuwa. This building was rated GOLD under Leadership in Energy and Environmental Design (LEED) Certification by the US Green Building Council during the year. The building has a structure that is environmentally responsible and resource efficient and its sustainability stance is characterized by the fact that: 90 per cent of construction waste has been diverted to a land-fill, 40 per cent of material used for construction is from the location itself, 70 per cent of water saved from baseline, annual energy savings up to 30 per cent, rainwater harvesting systems provide 34,000 gallons of water, special meters monitor energy savings, separate, dedicated waste sorting and disposal facility on site, solar tubes, glass panels and large windows provide the building with natural light, low flush closets and urinals, non-toxic materials used for surfaces, intelligent lighting systems – motion sensors switch off lights when there is no human presence.

8. Disposal of sanitary waste

Sanitary Bins were used across 230 customer centres to dispose of sanitary waste. This initiative reduces the impact of environmental pollution as the modern hydro-clave technology that is used to dispose of the sanitary waste ensures the conversion of waste to a powder which is then utilized for land-fills.

9. Conservation of natural assets

Investments towards externally driven large scale projects have been made based on a thorough examination of the projects, negative environmental impacts and the benefit in communicating and engaging the public. As such, the Bank, over the years has invested in a few critical projects on a long-term basis. The Bank reinvested into the conservation of the Bundala National Park re-affirming its commitment towards the protection of Sri Lankas’ natural and biodiversity resources. Over the past 5 years, the Bank has invested Rs 8.3 Million into the clearing of approximately 30 hectares of which 5 hectares were cleared in 2011. The Bank is also actively engaged in a re-forestation initiative for the cleared areas working within the strategic intent of the project to re-introduce endemic flora and vegetation to the Bundala National Park.

Worker/employee relationships:

HNB aims (or follows the practice of) to support, engage, listen and develop the employees. HNB has realized that the foundation of the business lies on the employees who are the key drivers of the business.
strategy. The Bank continually involves and engages in the “Hatna family” by striving for/to:

- Diversity & inclusion
- Employee development
- Employee and community engagement through volunteerism
- Listen to employees

Engagement for Employee Responsibility:

1. Driving exceptional employee relations: The Bank’s employee relations strategy is multi-pronged and multi-tiered. With engagement activities conducted across all levels from welfare activities, annual designated engagement activities, interaction with Relationship Officers, customer centre to head office interaction, HRIS and an open door policy, the Bank follows a concerted strategy towards maintaining exceptional employee relations. HNB has been recognized at various local and international events such as the HRP awards, Best Corporate Citizen awards, Asia’s Best Employer Awards etc.

2. Creating a culture of learning: The Bank actively strives towards the creation of a culture of learning, one that is built on a firm foundation of knowledge, skills and attitude. In nurturing people, HNB effectively utilizes Training and Development as a tool towards the creation of high levels of functional as well emotional aptitude. Development and developmental activities such as training programmes, mentoring, e-learning, Toastmasters Club, inter-customer centre quiz competitions, best speaker competitions allow for greater intellectual vitality.

3. Rewarding employee volunteerism: The Bank opens up possibilities for employee volunteerism in areas that are directly aligned to the Bank’s sustainability strategy such as the “HNB Nena Pubuduwa” School Library Scheme which has now established over 180 school libraries and 15 computer centres in under privileged schools; counseling work at the Cancer Counseling Centre at the National Cancer Institute, Maharagama; water and sanitation projects; acting as HIV & AIDS awareness trainers; promoting the Bank’s Green Pledge to protect the environment and tree planting programmes to name a few.

4. Promoting work-life balance: The Bank promotes work-life balance through its Work Life Balance Policy which dictates the need for harmonious balance between employees work and personal responsibilities. Encouragement to actively pursue a variety of sports, regional level sports day, annual trips and parties, Vesak bakthi gee, Christmas carols, talent shows are some of the events organised by the bank for the staff towards achieving work-life balance.

5. Shaping behaviour: Changing behaviours is of critical importance to the long-term effectiveness of the Bank’s sustainability strategy. Towards this end the Bank conducts programmes that instill the values of social responsibility leading towards the achievement of social reform. The Bank espouses the values of its “Green Pledge” to all employees and encourages staff to abide by and live the commandments of the pledge in their day-to-day activities. In addition the Code of Conduct for all

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*From Green to Greener*
employees together with the Code of Ethics lay out the expectations of the Bank with regard to Anti-corruption practice, Compliance and Transparency.

**Employee Responsibility Initiatives and Indicators:**

1. Human resource development for industry growth: Post conflict the Bank proactively sought to develop the youth of the Jaffna peninsula.

2. HRIM/IS The Bank’s HR Information System (HRIS) enables Strategic Human Resource intelligence tools to be utilized for planning and decision making and this has proven to improve business performance.

3. Driving diversity & inclusion: Employees are recruited with the objective of maintaining the Bank’s 1 to 5 ratio (one in five employees will be from the semi-urban, rural communities outside the Western province). The Bank also strives at every opportunity to recruit from the communities within which it operates, to drive the Bank’s inclusion strategy forward. The Bank is an equal-opportunities employer and is a member of the EFC Employer Network on Disability. The Bank is also a member of the Lanka Business Coalition on HIV/AIDS and works actively to raise awareness on HIV and AIDS in the workplace. Through its awareness programmes, the Bank has propagated acceptance amongst employees allowing the shedding of biased opinions, discrimination and prejudice.

4. Employee empathy & communication: The Bank implements an employee suggestion scheme since 2007 to give a voice to employees on the activities of the Bank and on new initiatives. The scheme was automated and relaunched under the name of “SPARK” to facilitate access anywhere by the staff through the Bank’s intranet.

5. Employee development: The Bank’s Training Plan is designed in accordance with its training needs analysis based on information gathered from performance appraisals, questionnaires and recommendations from Heads of Departments.

6. Industrial relations & human rights: The Bank is committed to respecting and upholding human rights in all areas of our operations and within our sphere of influence, as expressed in the Universal Declaration of Human Rights. The Bank also adheres strictly to the International Labour Organizations (ILO) labour practices and standards as well as labour laws and regulations as stipulated by the local authorities. The Bank has an ongoing engagement process with Labour Unions and includes them, giving them ownership of business objectives and strategy.

7. Succession planning: In anticipation of future growth, the Bank implemented a series of strategic HR initiatives towards succession planning.
Case study 2: Seylan Bank PLC

Contact: Mrs. Champika Dodanwela/Assistant General Manager-Finance
Tel: 011-470 1358 Email: champikad@seylan.lk

General Information

Seylan Bank PLC is a licensed Commercial Bank in the business of Financial Intermediation together with specialized activities inclusive of leasing, stock brokering and pawnng. With 133 branches and extension offices and 133 ATMs around the country, Seylan Bank can lay claim to one of the largest distribution networks of any Sri Lankan bank. The Bank is also engaged in opening up new and innovative channels of distribution, such as online banking and telesales. The size or scale of operations: Shareholders’ Equity of LKR 17.384 Billion and output/outcome: Net Profit of LKR 1.002 Billion (as of 31/12/2011). The turnover was LKR 19.404 Billion (as of 31/12/2011).

Greening Business Policies

For Seylan Bank, ‘Sustainability’ is an approach that integrates core banking business with the interests of the diverse stakeholder groups, to create long-term values for shareholders, through responsible environmental, social and governance practices. It is an approach that also gives the Bank a strategic framework to contribute to the development of the nation as at large. The Board Sustainability Committee, set up in 2010, serves to infuse greater involvement in defining a holistic approach to greening the operations. A further step forward, a separate Sustainability Division, set up in 2011, works closely with Management Committees to focus on economic, environmental and social aspects. These Management Committees identify, plan and implement CSR projects in line with the Board-approved policy framework, while effectively engaging with key stakeholders that include investors, customers, employees, suppliers and the local communities.

The Bank’s CSR policies can be highlighted as follows;

1. Investors – deliver sustainable and superior value to all investors
2. Product Responsibility – takes great care to ensure that every product and service we offer is relevant and meets or exceeds customer expectations.
3. Employees – with personal goals aligned to the overall business goals, resulting in mutually beneficial objectives.
4. Human rights and labour relations – committed to upholding the human rights standards enshrined in relevant global and local initiatives.
5. Communities – continue to integrate all business practices with the needs of the local communities and develop a deeper relationship which goes beyond banking.
6. Suppliers – selected through a transparent procurement which is based on fair competition.
7. Environment – minimize direct and indirect negative impacts to the environment as a result of our activities, whilst at the same time doing everything to protect and replenish the natural resources around us.

It is important to note that Seylan Bank has continuously committed to uplifting the living standards of rural communities; as well as those recovering from the war-ravaged North and East, by providing them with access to financial services for sustainable livelihoods, such as supporting self-employment through micro-financing, while at the same time integrating educational needs of children and facilitating access to healthcare facilities of the local community. This is a strategic investment targeting poverty alleviation that holds promise for replication in more villages across the country in coming years thus promoting sustainable development, covering both the natural environment and socio-economic environment.

Seylan is well-known for its village based service where most of its business outlets are spread all over the Island.

The Bank offers a wide range of banking and related services to all levels of customer segments as well as community, varying from the newly born child to the oldest senior citizen. Further it expands to the social, business and economic needs of the community.

Looking ahead, ‘sustainable banking for equitable development’ will continue to be Seylan Bank’s watchword. The Bank will deliver innovative and value added products and services while having in place appropriate safeguard measures to mitigate any negative social and environmental impacts.

**Some Green Strategies in Action**

1. Protecting the environment for future generations
   The Bank specifically promotes effective and efficient use of resources within the Bank. In addition, it also monitors environmental and social safeguards on projects financed by the Bank. Creating environmental consciousness amongst general public has been a core strategy in every operational activity of the bank.

Caring for the environment is a value for Seylan and the bank makes all the best efforts to be conscious of resources and avoiding harmful impacts to the environment.
- Since the bank is engaged in the financial sector, by nature all products and services are environmentally friendly and no harmful impacts are made to the environment.

- At the time of granting a credit facility the bank always obtains the prescribed environment certificates from relevant authorities such as the Ministry of Environment, Central Environment Authority and local government authorities etc. Further, ecofriendly loans are encouraged and give consideration for same.
- The Bank has funding projects such as;
  i. Recycling projects
  ii. Water purification
  iii. Energy savings bulbs/appliances
  iv. Bio gas, hydro power plants etc.

2. Support to the local community
As a part of the Bank’s strategy, the programme on ‘connect with our communities’, in which the bank supports micro entrepreneurs, fosters the health and well-being of the community and invests in children’s education. This objective is to pilot an integrated approach to village development, which delinks the connection between poverty and negative environmental impact, thus promoting sustainable development. One such initiative is the Devamulla Village Development Project, which was aimed at supporting self-employment through micro financing; promoting and helping to fulfill the education needs of the children and facilitating access to healthcare facilities.

Furthermore, the Bank outsourced some services which give preference to locally based small and medium scale suppliers, and encourages them to grow through long-term relationships with the Bank.

| Procurement from local suppliers by branches (Rs. Million) |
|-------------|----------|
| Repair and maintenance | 23.1 | 7.1 |
| Janitorial services | 38.0 | 26.6 |
| Supply of foliage | 2.3 | 2.2 |
| Subsidized lunch for staff | 50.7 | 45.3 |
| Tea and coffee for staff | 15.1 | 16.8 |

3. Good Governance aimed at promoting Sustainability: Sustainability Precept

- **Commitment to sustainability**: To comprehensively integrate social, economic and environmental considerations into the core business and to actively strive for all our business activities to promote sustainability

- **Environmental Protection**: Prevent/minimize environmentally and/or socially detrimental impacts of the Bank’s operations and improve social and environmental conditions. Adoption of social and environmental safeguards to mitigate risks arising from the Bank’s operations is included here.

- **Implementing sound governance policies** that include transparency, responsibility and accountability
The Board Sustainable Committee is assisted by three Management Committees that are focused on economic, environmental and social aspects. TGO provide a greater thrust in implementing these, a separate Sustainability Division has been set up, headed by a Sustainability Manager and is assisted by Sustainability Wardens drawn from all the Branches.

**Greening Business Initiatives**

**(a) Environmental Initiatives:**
- Balancing customer demands and Bank’s objectives to conserve energy and reduce the use of paper in order to leverage cleaner technologies to minimize resource consumption
- Getting local suppliers to provide the required goods and services at competitive prices while adhering to environmental and social standards

**Strategies to implement above-mentioned initiatives:**
- Close monitoring of operational costs
- Training, development and awareness creation programmes
- Continuous improvement to enhance operational efficiency
- Comprehensive risk management strategies which include preventive measures such as sector exposure limits, as well as remedial measures such as loan restructuring

**Performance based on indicators:**

<table>
<thead>
<tr>
<th></th>
<th>2011</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electricity consumed, units (‘000)</td>
<td>9,187</td>
<td>9,362</td>
</tr>
<tr>
<td>Per employee</td>
<td>2,917</td>
<td>2,584</td>
</tr>
<tr>
<td>Water consumption, Liters (‘000)</td>
<td>72,907</td>
<td>90,346</td>
</tr>
<tr>
<td>Per employee (Liters)</td>
<td>23</td>
<td>25</td>
</tr>
<tr>
<td>Stationary consumed, kg (‘000)</td>
<td>222</td>
<td>256</td>
</tr>
<tr>
<td>Waste paper recycled, kg (‘000)</td>
<td>72</td>
<td>58</td>
</tr>
</tbody>
</table>

Stationery is the main raw material input, which is issued for day-to-day operations. There is a process in place to minimize the use of paper by adopting paper-less options. Use of paper is discouraged, however, recycling and reuse of paper is encouraged. The above recycling of paper has saved (in 2011) 1,230 trees, more than 2 million liters of water, nearly 300,000 kWh of electricity.

The Bank continuously seeks ways of minimizing waste and promotes energy conservation. Measures such as use of CFL light bulbs, central air conditioning, good practices in conservation etc. are worthy
to be mentioned. In addition, various initiatives are in place and are as follows:

- Air-conditioning facilities at both head office and branches are limited to office hours
- Two lifts are switched off
- Staff is educated to switch off lights when they leave the premises and shut down all electrical equipment

(b) (i) Social Initiatives: For Employees

- Employee retention
- Protection of human rights and decent work practices
- Strict confirmation with labour legislation

Strategies to implement above-mentioned initiatives:
- Need-based training and development
- Performance-based staff appraisals and linkage with key performance indicators
- Clearly understood policies and procedures

Performance based on indicators:

The Bank has set priorities for maintaining sound labour practices and a decent workplace, ensuring occupational health and safety, encouraging diversity and equal opportunity.

<table>
<thead>
<tr>
<th>Employees</th>
<th>2011</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentage of staff covered by health plan</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Work-related fatalities or lost days</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Average staff retention period ( in years )</td>
<td>11.5</td>
<td>13.5</td>
</tr>
<tr>
<td>Percentage of women employees</td>
<td>38</td>
<td>39</td>
</tr>
<tr>
<td>Percentage of women in corporate and middle management</td>
<td>25</td>
<td>27</td>
</tr>
<tr>
<td>Respect human rights and labour relations</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Union membership, %</td>
<td>89</td>
<td>89</td>
</tr>
<tr>
<td>Pending human rights cases against the Bank</td>
<td>Nil</td>
<td>Nil</td>
</tr>
<tr>
<td>Providing opportunity for professional and personal development</td>
<td></td>
<td></td>
</tr>
<tr>
<td>External training programmes participants</td>
<td>421</td>
<td>312</td>
</tr>
<tr>
<td>Equality and ethnic groups ( % )</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sinhalese</td>
<td>90.25</td>
<td>90.00</td>
</tr>
<tr>
<td>Others</td>
<td>9.75</td>
<td>10.00</td>
</tr>
</tbody>
</table>
**Staff remuneration and benefits**

Full time employees of the Bank are subject to an annual performance appraisal, which is used as a basis for remuneration. They are also entitled to the following benefits;

- Annual bonus
- Holiday allowances
- Medical and insurance benefits
- Special concessionary loans schemes for housing, vehicles and others
- Allowance to cover risk, difficult service stations etc.
- Reimbursement of membership fees for professional qualifications

**Providing an environment with decent work conditions**

No incidents were reported during the past two years related to non-compliance with regulations and voluntary codes in respect of health and safety issues. No occupation-related accidents, injuries or diseases have been reported.

**(b) (ii) Social Initiatives: For the Community**

The Bank has set priorities in supporting micro entrepreneurs, fostering health and well-being and investing in education and promoting financial inclusion by providing loans granted to university students.

<table>
<thead>
<tr>
<th>Community</th>
<th>2011</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total micro finance loans granted, Rs. Million</td>
<td>646</td>
<td>86.1</td>
</tr>
<tr>
<td>Contribution to healthcare projects, Rs. Million</td>
<td>1.5</td>
<td>0.2</td>
</tr>
<tr>
<td>Contribution to education-related pursuits, Rs. Million</td>
<td>1.91</td>
<td>1.04</td>
</tr>
<tr>
<td>New loans granted for university students, Rs. Million</td>
<td>7</td>
<td>N/A</td>
</tr>
</tbody>
</table>

The bank reviews loan applications from clients for environmental and social impacts before sanction for compliance with applicable safeguard measures. During 2011, LKR 3.0 Million and LKR 0.35 Million have been spent on in-house water and paper recycling and energy saving products, respectively.

The bank has a long history of integrating its business practices with the communities. As will be seen in the paragraph that follows, the emphasis is not merely short-lived philanthropy, but a deeper community involvement with long term commitments which go beyond the provision of a financial service.
### (Rs. Million) 2011

<table>
<thead>
<tr>
<th>Sector</th>
<th>Amount (Rs Million)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture</td>
<td>443</td>
</tr>
<tr>
<td>Transport</td>
<td>164</td>
</tr>
<tr>
<td>Education</td>
<td>22</td>
</tr>
<tr>
<td>Fisheries</td>
<td>3</td>
</tr>
<tr>
<td>Health</td>
<td>14</td>
</tr>
</tbody>
</table>

As was mentioned above, the Bank has outsourced and given preference to the locally based small and medium suppliers to supply some key services. This directly and indirectly helps to enhance employability as well as uplift their living standard.

In addition, the Bank maintains 83 students’ savings centers and organized 47 events called ‘Kids banking days’ at branch level to impart financial literacy among the students throughout the country. Apart from this, the bank also provides support for the development of infrastructure and other requirements of schools.

<table>
<thead>
<tr>
<th>(Rs. Million) 2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infrastructure development of schools</td>
</tr>
<tr>
<td>Support for activities in schools &amp; other educational institutes</td>
</tr>
<tr>
<td>Other educational-related investment for children</td>
</tr>
<tr>
<td><strong>Total</strong></td>
</tr>
</tbody>
</table>

In 2011, the bank conducted the following programmes for Children:

- World Childrens day celebrations with Derana TV. More than 10,000 kids participated in this event, which included a lucky draw with several prizes.
- Childrens Monthly Lucky Draw was aligned with the World Childrens Day. Each branch selected 10 lucky prize winners.
- Kids Carnival organized for ‘Tikiri plus’ account holders in the Kandy region.
- Sponsoring the Nanjing Acrobatic Troupe, a Chinese Circus that ran for one month. Special discounts were offered for school children.
- Sponsoring the Prince of Wales College Rugby Carnival in which more than 20 schools in the Moratuwa area participated. The main objective was to promote the game among the underprivileged schools in the area.
- Bangkok Dream World Tour for 25 ‘Tikiri plus’ customers and their parents. A fully paid 3-day trip to Bangkok.
Heritance Kandalama is an architectural intervention of the world renowned architect Mr. Geoffrey Bawa. It represents a unique Green Philosophy that makes visiting this Hotel a unique opportunity for tourism. The Heritance Kandalama, which is LEED certified, has won awards as one of the most eco-friendly hotels in the world and by far it is well conceived that this is the most environmental-friendly hotel in Sri Lanka.

**Greening Business Initiatives**

**Green Architecture**

The hotel is almost 1 km in length from one end to the other, and rises up seven floors. The entire hotel is built upon a raised platform resting on columns, allowing surface runoff and spring water to flow freely from the mountainside into the Kandalama Lake. The most distinguished feature of the hotel is its natural landscape. Native plants and the ground characteristics have not been disturbed at all. No fauna and flora have been introduced from outside. The interior design has accommodated utilization of maximum amounts of natural light and ventilation thereby enabling energy conservation to its maximum.

**Helping Local Communities**

The hotel has invested in infrastructure to facilitate provision of electricity for over 750 families, access to safe drinking water for over 600 families and has built a 6.5 km access road for public use. This has created new opportunities for the villagers to exploit, and has resulted in an array of positive impacts in boosting basic services to drive economic activities in the village.

**Economic benefits for the community**

The Hotel provides career opportunities for more than 220 employees from local communities on full-time permanent basis. The hotel makes special efforts to train and recruit unemployed youth from the surrounding villages and also gives the first preference to neighbouring communities when outsourcing operations for goods and services.
In addition, the hotel provides opportunities for local craftsmen/women to sell their crafts and other produce. Also, the Hotel regularly invites traditional artists from the local communities for cultural shows and events held at the hotel. The artists are thus encouraged to develop and promote traditional Sri Lankan art forms while earning a decent livelihood.

**Helping schools in the neighbourhood**

There is a network of 39 schools (in Dambulla Educational Division) that the Hotel supports regularly. Programmes and seminars have been conducted for teachers and students on environmental-related themes and has initiated a number of environmental projects for school children to participate in such as tree planting, bird watching and reporting instances of injuries to wildlife (injured animals are being treated by the hotel and released to the wild), preventing soil erosion and also street cleanup. One of the special areas where awareness campaigns were carried out was converting waste into resources. A large number of schools have been provided with classrooms, books, desks, chairs and other school equipment. These schools benefit each year from the hotel’s broad-based CSR activities.

**Environment conservation**

The Heritance Kandalama is committed to conserving and protecting this unique natural and cultural environment for the benefit of future generations. Protection of bio-diversity and ecosystems through well-protected sanctuaries and non-invasion of natural ecosystems and habitats, non-interference with components of the natural ecosystem is strictly observed.

The ancient lake and the forest next to the Hotel remain in their near-pristine natural state, unpolluted irrespective of the presence of this Hotel.

**Biodiversity Protection & Conservation Forest**

Heritance Kandalama has enriched the forest cover through reforestation and conservation. Land use planning is carried out to retain the original status of the environment. In order to prevent deforestation the hotel has invested in creating the conservational forest of over 200 acres. This includes parts of the 50 acres of land within the hotel premises and a dedicated forest conservation of 198 acres. The hotel itself supports the natural environment with least disturbance and even has allowed primates to use green spaces of the hotel. No plants have been introduced by the hotel even for landscaping; only plants that are native to the area have been introduced, which is essential in retaining the natural habitats of the wildlife. There is no disturbance to the wildlife caused by day-to-day operations of the Hotel, which by itself has organically transformed to become a part of the natural ecosystem paying host to a number of species.

Conservation forest acts as a carbon sink and has recorded impressive biodiversity indicators:

- 128 species of native flora
- 183 species of birds
- 19 species of reptiles and amphibians
• 17 species of mammals
• 64 species of butterflies
• Dragonflies and a large number of land snails

Environment education
The hotel has a large number of visitors that consists of students from schools and universities, researchers, environmental NGOs, community-based organizations, policy makers, journalists and the general public including the villagers and all other interested parties visiting the Eco Park for environment and conservation education programmes.

Eco Park
Eco Park demonstrates best practices in waste management and resource conservation while educating the general public and guests. It includes, a waste separation centre, a sewage treatment plant, a plant nursery and herbal garden, an eco museum, a library and recycled waste paper making with elephant dung. A total of over 1.75 million visitors have visited over the years.

Energy, Water and Waste Management

Saving Energy
The hotel keeps checklists; monitoring records are maintained and audited through internal audits as per Environmental Management Systems which have been certified for ISO 14001 and Earth Check Silver certification. Targets are been set and revised and monitoring is done for continuous improvement. Monitoring of performance is done through comprehensive forms filled on a monthly basis. The Hotel has joined the Responsible Tourism Partnership and Sri Lanka Sustainable Energy Authority Greening Sri Lanka Hotel programme and the methodology was also adopted to improve the data collection and analysis.

Heritance Kandalama received a special certificate from the Ministry of Environment, Tourism and Energy for ‘Exceptional Contribution to Environment Conservation demonstrating continued efforts in Optimizing Energy Efficiency and Natural Resources Sustainability in Sri Lanka hotels industry in 2010’.

Renewable Energy
The dendro power plant is one of the notable initiatives that the Hotel has embarked on recently. Dendro power is the generation of energy from sustainably grown fuel wood. This source of energy derived using sustainably grown fuel wood can be effectively used to replace the use of fossil fuels for electricity and/or steam generation and can also deliver many environmental and socioeconomic benefits. The amount of
carbon dioxide emitted is drastically reduced due to less use of fossil fuel. Valuable foreign exchange spent to import fuel is saved. Further, the community can derive financial benefits by supplying wood, *Gliricidia*, to be used as the raw material. Apart from this benefit, abandoned and fallow lands are fertilized naturally when *Gliricidia* is grown as a mixed crop as the nodules in the roots of this tree nitrogenize the soil. The leaves provide fodder for livestock which will again raise the income for the villagers and increase the milk supply in the area thus contributing to better public health. The leaves if not used for livestock can be used as mulch to fertilize the soil, prevent erosion and prevent drying up especially in the dry zone.

**Water saving**

The Hotel is surrounded by the 1700-year old reservoir, which supplies water to cultivate over 12,000 acres of rice paddy farms. The lake water has never been used for the Hotel even during construction period, thus avoiding any conflicts with lake water users. Water for hotel operations is obtained from deep tube wells, and safe and sustainable rates of extraction has been established. In addition, rain water is harvested from a maze of gutters. Notably, 100% of wastewater is conscientiously recycled and reused resulting in the prevention of water pollution and at the same time reducing the fresh water use.

**Waste reduction, recycling and reusing**

Purification process of the wastewater recycling plant ensures that effluent discharged out of the system is clean enough to use for gardening purposes. The dried sludge, treated to ensure its safe use, is a good organic fertilizer that can be used together with compost which makes 100 per cent natural fertilizer by combining with garden waste and other natural materials. Our purification processes are regularly checked by scientists from the University of Peradeniya, to ensure compliance with the highest possible standards.

Almost all the waste is recycled and turned to a resource. No waste is dumped. Home grown concept of a 7R (7R principles for zero dumping of waste, viz., Reuse, Recycle, Reduce, Reject, Replace, Repair, Reclaim recycling & conservation) System is in operation and this creates zero waste. This is made possible with the Hotel’s policy of least packaging or appropriate packaging. Hazardous waste is handed over to CEA-certified collectors.

**Gender equality**

The hotel promotes empowerment of minorities and women, and recruitment is done only at the age of statutory employable age. Career development is purely based on performance and talent. Ratio of basic salary of men to women by employee category is equal and the company was one the first to sign the United Nations Women’s Empowerment Principles. These principles comprise actions that advance and empower women in the workplace, marketplace and community, and communicate progress. The Women’s Empowerment Principles - Equality Means Business, an initiative by The United Nations Development Fund for Women (UNIFEM) and the United Nations Global Compact were launched at the UN on 8 March 2010.
Case study 4: John Keells Holdings PLC

Cinnamon Lodge

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General Information

The Cinnamon lodge is located in Habarana on a land that extends over 27 acres of resplendent beauty, shielded by over 1700 tall trees, surrounded by three nature reserves-Ritigala, Minneriya and Kaudulla. The hotel has 137 rooms and employs a total of 185 permanent employees. This might increase up to about 300 depending on the seasonal variation. All the employees whether permanent or not are above age 18 and below 60 years.

Greening Business Initiatives

Sustainability Policy of John Keells Group

1. The Group strives to conduct its activities in accordance with the highest standards of corporate best practices and in compliance with all applicable regulatory requirements and conventions.

2. The Group monitors and assesses the quality and environmental impacts of its operations, services and products whilst striving to include its supply chain partners and customers, where relevant and to the extent possible.

3. The Group is committed to transparency and open communication about its environmental and social practices in addition to its economic performance. It seeks dialogue with its stakeholders in order to contribute to the development of global best practice, while promoting the same commitment to transparency and open communication from its partners and customers.

4. The Group strives to be an employer of choice by providing a safe, secure and non-discriminatory working environment for its employees whose rights are fully safeguarded and who can have equal opportunity to realize their full potential. All Group companies will abide by national laws and wherever possible will strive to emulate global best practice governing the respective industry groups, seeking continuous improvement of health and safety in the workplace.

5. The Group will promote good relationships with all communities of which the Group is a part and enhance their quality of life and opportunities while respecting people’s culture, ways of life and heritage.
The Environmental Policy of the John Keells Group

The John Keells Group is committed to promoting sound environmental practices within key businesses, through the establishment of policies and practices that enable businesses to conduct operations in a sustainable and environmentally sound manner. The Group strives to continuously identify all potential impacts on the environment and manage such impacts whilst using their resources in a sustainable and efficient manner.

John Keells Energy Management Policy

The strategic focus on sustainable energy usage continue to drive the Group’s energy management and conservation efforts. To this end the Business units have focused on driving continuous improvement programmes in all sustainable energy management processes across the various businesses with the objective of optimizing usage and improving efficiencies. The Group energy management policy continues to be reinforced through these efforts and they are now a step closer in the journey towards achieving their goal; Minimizing the impact of energy related environmental damage and enhancing the Groups’ competitiveness through energy costs savings by embracing lean energy management practices.

Group Biodiversity Conservation Policy

The Group Biodiversity Conservation Policy reads as follows. “The Group shall seek to conserve, and where possible, enhance biodiversity of the locality through the adherence of local and Governmental laws and the implementation of best practices relating to conservation and protection of biodiversity in areas where operations of the Group are carried out. The Group understands and acknowledges its responsibility in conserving and protecting the biodiversity of the areas it carries out operations, not only for the purpose of ensuring sustainable business, but to take care of the planet and preserve its diversity, beauty, resources and strength for future generations.”

Some Green Strategies in Action at Cinnamon Lodge

Cinnamon Lodge, Habarana, procures most of its perishable items from farmers in the vicinity of the property, ensuring both high quality produce as well as sustainable livelihood development. These farmers have given a commitment to adhere to the principals of growing high quality produce, consequent to a series of visits that involved inspections, dialogue and assurances, and is the main source for the hotel’s requirements. In addition, the Resort also has its own organic farm from which it obtains organic produce which is now included in its fine-dining restaurant menu.

Contributing to the Group’s tree-planting campaign, Cinnamon Lodge, Habarana also planted 100 trees in total within the hotel premises as well as close to the Habarana Tank. The Butterfly Garden at Cinnamon Lodge, Habarana, launched in 2008, continues to attract many visitors, including guests of Cinnamon Lodge and Chaaya Village, Habarana as well as school children of the area. The facility was also given a facelift with the introduction of over 300 plants and paved pathways which attracted positive
feedback from the visitors to the garden. The hotel garden team maintains the facility under the supervision of the Keells Hotels - Nature Odyssey focal point. This together with the increase in tourism following the end of the ethnic conflict have resulted in improved visitor numbers, with the Garden attracting approximately 100-150 visitors per month during 2010/11, while the total number of visitors since the project began has exceeded 4000. The project has helped visitors appreciate butterflies in a natural setting, while offering these precious insects a habitat to thrive in. The project also helps Cinnamon Lodge, Habarana, to reinforce its position as a green hotel.

The butterfly garden created by the Group’s naturalists at the Cinnamon Lodge continues to serve as an ideal habitat for local butterflies. The main objective of this project is to conserve and protect such species whilst simultaneously creating awareness about the significance of butterflies in protecting biodiversity amongst guests, employees and villagers, which in turn would help to protect such species. This 5 acre butterfly garden was setup under the expert guidance of consultant lepidopterist, the renowned Dr. Michael van der Poorten and butterflies numbering over 30 varieties of species have been observed in the facility.

The Cinnamon Lodge, Habarana also continues with its Compost Project selling packs of compost to its visitors and guests, as well as those of the neighbouring Chaaya Village, Habarana whilst retailing packs through some of the Keells Super outlets. Whilst the hotel itself uses the compost to produce organic herbs and vegetables, it is also engaged in providing compost by tractor loads to certain buyers, thereby reducing the usage of inorganic fertilizers in gardens and farms. Sold in attractive packaging and at a relatively affordable cost, the compost is made up of the garden waste collected from the two Resorts, along with farmyard manure, crop residue, dolomite and top soil.

In its community development projects, a village adoption programme concluded its five-year plan for integrated development in the village at Halmillawe, a hamlet located in the North Central Province about 20 km from Habarana. The Puttalam-based NGO, Wilpotha Kantha Ithurum Parishramaya, which has acted as the animator of the women’s empowerment initiatives at Halmillawe, partnered the John Keells Foundation in this initiative. Cinnamon Lodge, with active participation of Chaaya Village, continued to support the village as part of the community development initiatives. The HIV/AIDS Committee of Cinnamon Lodge collaborated with the Foundation’s HIV/AIDS Awareness Campaign by holding several community outreach programmes. A highlight during the reporting year was the recording by the HIV and AIDS Workplace Committee at Cinnamon Lodge, Habarana, of its 50th and 51st awareness programmes on 4th August 2011 at Army Training School in Pompemadu, Mannar. The event also marked the double milestone of a total of 10,000 persons educated by the committee since the establishment of the Workplace Committee at Cinnamon Lodge in 2009.

Cinnamon Lodge also organized a programme to celebrate World Children’s Day for the benefit of 50 students of Palugaswewa; repaired the air-conditioners of the Palugaswewa School Computer Centre; donated 100 exercise books to students of Hiriwadunna school; facilitated a visit by teachers and students of Ibbagamuwa Education Zone benefiting 35 persons; organized a geographical quiz contest for students to commemorate World Tourism Day; donated school requirements to children to commence schooling at Meegaswewa School, which was previously closed due to insufficient students.
Cinnamon Lodge also launched the “Detha Saviya” farm project; donated discarded linen items to an Elder’s Home in Dambulla and to the Jaffna Army Camp; donated used cutlery, crockery and furniture to the Habarana Police Station.

**Greening Business Initiatives**

The Cinnamon Lodge utilizes solar and Ecogen as renewable energy for lighting and water heating respectively. The staff is also regularly trained on renewable energy and energy saving methods.

Notable environmental performance indicators for Cinnamon Lodge are as follows:

- Conversion of incandescent bulbs to CFL
- All electric geysers replaced with Ecogens, using waste heat from ACs for water heaters in rooms
- Installation of solar panels
- Production of compost
- Usage of treated water sent through the effluent treatment plant for purposes of gardening

Adhering to John Keells Group’s policies, the Resort Hotel continuously aims to reduce the use of water, energy and production of materials used in operations and continuously works towards reducing operational activities that pollute water, land and air and create noise levels which have a significant impact on the biodiversity of the area of operations.

**Sustainability strategy at John Keells Group**

The sustainability process at the John Keells Group has transformed over time from a centrally driven exercise to making it a priority of each and every business unit of the Group. With the integration and embedding of sustainability within the organization, the John Keells Group has taken significant strides this year in ensuring that accountability of the sustainable performance of each Group company is now within the ambit of the business unit.

Sustainability within the Group now encompasses both a top down and bottom up approach. While sustainability policies and frameworks for measurement, monitoring and control have been established at Group level, the actual tracking of sustainability performance, improvements to business processes, introduction of innovative and sustainability driven initiatives and projects are within the purview of the business unit. The sustainability performance of Group companies are consolidated in reporting the Group’s sustainability performance.

The Group also intends to introduce specialised IT systems and processes during the next year in order to ensure the tracking, reporting and monitoring of such indicators, enabling better management information through the measurement of usage and performance metrics, which is expected to drive strategy, resulting in focused policy frameworks and directed plans of action.

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*From Green to Greener*
The Group also re-assessed its impact on the critical areas highlighted in its stakeholder engagements carried out in October 2009. A stakeholder engagement in the future is also under consideration enabling the Group to obtain a fresh assessment of its impacts on its stakeholders. The ongoing engagement of stakeholders as well as horizon scanning carried out by the Group and its subsidiary companies not only paves the way for obtaining the pulse of significant stakeholder groups, but also provides the Group with an ongoing analysis of its strengths, weaknesses, opportunities and threats.

Understanding this relationship and the synergies possible, the Group’s Enterprise Risk Management process is therefore closely linked with its sustainability strategy with both these functions coming under a single division operating at the centre. By linking the Group’s stakeholder engagement process with the Group’s well established Enterprise Risk Management process, the Group is able to assess and address potential risks and opportunities and align the management of sustainable issues with our business processes and strategies.

Skills Development at John Keells Group

The John Keells Group places paramount importance on and continuously invests in improving employees’ skill capacities, to enable them to be ready for challenging opportunities and thereby strive for superior performance. These also include programmes in sustainability, resource conservation as well as work place rights, ethics and other related issues. The Group’s employees have spent a total of 466,040 hours of training; this is a 33 per cent increase in comparison to last year’s training hours. While 42 hours on average has been spent by a male employee on learning and development activities, 36 hours on average has been spent on training by a female employee. These include business focus training, capability building, induction and development interventions carried out for employees to take up potential roles. More robust training hours capturing mechanisms will be introduced at nonexecutive levels in the coming year to ensure all training done is captured accurately. Such training makes them more and more secure in their current or future affiliations, which would in turn lead to higher levels of job satisfaction.

In addition to the above, the John Keells Group has the following policies:

- **Policy on Child Labour**

  The John Keells Group’s standard on the minimum age for admission to employment is more stringent than the applicable statutory definitions as well as the ILO conventions.

- **Policy on forced or compulsory labour**

  No employee of the John Keells Group is made to work against his/her will, or subjected to corporal punishment or coercion of any type related to work.
- **Policy on equal opportunities**

The John Keells Group is an equal opportunity employer. Accordingly, the group is committed to hiring, developing and promoting individuals who best meet the requirements of available positions, possess the required competencies, experience and qualifications to carry out assigned tasks and have the potential for growth within the organization; and has put in processes and systems that ensure the same.

- **Anti-corruption Policy**

The John Keells Group places the highest value on ethical practices and has promulgated a zero tolerance policy towards corruption and bribery in all its transactions.

- **Policy on Health and Safety**

Through practices which are on par with international standards, The John Keells Group strives to provide a feeling of safety to their employees, customers and visitors who are involved in any business or transaction with the John Keells Group.

- **Policy on Social Responsibility**

The John Keells Group believes in wider societal needs than their own and meaningfully enriching the lives of communities of which the Group is an integral part. The Group abides by the values of ‘doing the right things, always’ by ensuring that through their actions they demonstrate their commitment and respect for all their stakeholders, including the communities and the environment in which their businesses operate.
Case study 5: CKT Apparel (Pvt) Ltd

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General Information

CKT Apparel (Pvt) Ltd. Agalawatte, focuses on the production of knitted garments for the export industry. The Agalawatte Factory of the Hirdaramani Group, more famously known as “Mihila” holds the distinction of being both the First Carbon Neutral Apparel Factory in Asia and the First Newly-built LEED Gold Certified Green Apparel Factory in the World. The 135,000 square foot factory has been built on 8.5 acres with an investment of US$ 6 million. The CKT Apparel green factory is an integrated facility to handle knitted products with a capacity to produce over half a million pieces per month while generating over 1,200 employment opportunities for the community.

Altogether, the CKT cluster operates 75 lines and several leased units with a total capacity of 1 million pieces a month while boasting an in-house Textile Laboratory to ensure colour fastness and washing plants at some of the outlets. The product range is specialized in knit garments, including men's, women's and children's t-shirts, polo shirts, fleece tops, polar fleece, pants and lingerie. The technology used in the manufacturing process is Tuka Tech, Gerber Automatic Spreading System, Microsoft Dynamics ERP, and Automatic Cutters. The factory has secured several sustainability standards including GSV C-TPAT, ISO 14001:2004, OHSAS-18001: 2007, LEED Gold USGBC and Fair Trade Certification.

Greening Business Initiatives

The significance of this factory is that it is committed to reduce the carbon footprint in the production process and to conserve resources. Among the key features are conservation of energy, generation of renewable energy, conservation of water, waste management and setting up of a biodiversity refuge and community development project.

Renewable energy

CKT Apparel (Pvt) Ltd. generates solar power and is used for lighting and heating within the office premises as well as in the factory production lines. During holidays (when the factory is closed), the electricity generated using solar energy is added to the national grid through an import-export metre installed at the factory premises by the Ceylon Electricity Board. This is the first apparel factory to commence net metering with solar power. In addition, training programmes are conducted for electricians, technicians etc. in renewable energy and energy saving opportunities together with the guidance of NERD (National Engineering Research and Development).
Energy Conservation

The factory has been able to save nearly 50 per cent of the total energy demand compared to that of a conventional factory of similar capacity, through an evaporative cooling system, prismatic sky lights replacing conventional factory lighting, LED task lights, solar water heating, solar-powered street lighting and renewable energy via solar panels where the excess power generated is exported to the national grid.

Water Conservation

Water saving at the factory is also at a noteworthy level, where the water consumption is at least 60 per cent less than that compared to similar conventional facilities. There is an in-house wastewater treatment plant of which the treated water is recycled for toilet flushing and gardening purposes. There is a rainwater harvesting facility within the premises, after treating the water is used to couple with toilet flushing and for the evaporative cooling system. In addition to such installations, awareness programmes and social and educational events such as art competitions have been conducted in parallel to international occasions such as the World Water Day and Earth Day. This would keep employees, their families, and neighbouring communities exposed to activities focusing on water conservation and keep them aware of the latest developments in the greening initiatives, elsewhere in the country and the trends worldwide.

Waste Management

The generated waste is very well managed within the factory premises with reduction, reuse and recycling: thereby generating zero waste to landfills. The wastage of food is at a minimum or negligible as all employees are very conscious of wastage as they are educated on such aspects.

Clean Transportation

In order to contribute to clean transportation, the factory always encourages group transportation, mass transportation, pooling of vehicles, cycling and schedule the supply chain aiming at greening the operations.

Biodiversity Refuge

The factory is facilitating the protection and enhancement of the small forest patch located behind the factory premises and promotes the growth of biologically diverse wood species and aquatic flora and fauna-rich wetland as given below:

- 146 plant species
- 23 birds
- 18 butterfly species
- 11 reptile and
- 7 amphibian species (assessment has been done by IUCN).
Efforts of making jobs greener

Community Development

The factory has been conducting its ‘Ran Aswanu’ programme, aimed at empowering local farmers and promoting organic farming activities. Apart from providing seeds and organic fertilizer to groups of farmers from the area, the project also involves running workshops on organic farming techniques and developing an informational booklet on organic farming which is distributed free of charge. In addition, the programme provides a guarantee to buy back produce at market rates for consumption within the factory. Further, educational seminars at schools help develop awareness and engender a commitment to sustainability.

Health and safety

Employees are benefitted through a range of healthcare facilities and subsidized service provisions for medical services such as surgeries and checkups. There is an in-house medical centre where a qualified nurse is available fulltime. In addition to industrial health and safety, community awareness projects are organized including subject areas such as personal health and hygiene / family planning etc. Blood donation campaigns are organized with active participation from employees.

Career Development

The active assessment process is specifically designed to identify leadership potential amongst middle management, enabling them to move up higher in the management structure. Thereafter, identified individuals and their teams are sent to leadership and team building training through ‘outward-bound’ programmes as well as regular programmes held onsite.

Working Culture

The Hirdaramani Group is committed to creating a healthy and conducive environment for employees. The Hirdaramani Group is an equal opportunity employer with a large number of female employees in its cadre. There are education programmes and awareness programmes targeted at empowering and strengthening women. Counseling services are available and the employees are able to discuss any personal or work-related matter and can expect to redress their grievances and expect support in times of need. In addition, the employees are entitled to the following benefits:

- Employees’ welfare policy (transport/ medical/ over time / maternity etc.)
- Bonus Scheme
- Promotions
- Environment related policy and benefits arising from it
- Employee participation in decision making (There is a Employees’ Council and members are elected by employees themselves)
Case study 6: MAS Active (Pvt) Ltd. Asialine

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General Information

MAS Holdings is one of Sri Lanka’s largest apparel manufacturers, employing more than 55,000 people in more than 30 facilities. The company provides innovative design-to-delivery solutions in intimate apparel and sportswear through its focused divisions, namely MAS Intimates and MAS Active. The MAS Fabrics division comprises of integrated supply chain for lace, elastics, intimate apparel accessories, moulded bra cups and textile printing, and a portfolio of related services towards strengthening the region as a hub for intimate apparel and sportswear sourcing. MAS Holdings is renowned for its progressive management culture and people centric work environment, and is held up as an industry benchmark for championing the cause of women empowerment.

Asialine is one of the facilities of MAS Active (Pvt) Ltd., located in Embilipitiya, where being in harmony with the environment and at the same time serving the local community through provision of secure employment has been the key focus. Similar to the textile industry elsewhere in the country and the Region, the work force is dominated by women where 1389 of the total of 1648 are women.

Greening Business Initiatives

The MAS Holdings has embarked on a number of sustainable business initiatives in order to promote green practices, which are in place at Asialine, too. From its inception, the continuous focus at Asialine has been to promote cleaner production, attaining high levels of energy efficiency, and material efficiency. The safety and comfort of the employees & their empowerment are a major priority.

Energy saving
In keeping with the MAS group Policies, the factory has been made an effort to save energy by adopting energy saving measures such as prismatic sky lights replacing conventional factory lighting wherever possible within the premises and use of LED task lights, replacing clutch motors by servo motors that consume less energy etc. Use of sensor lights for places where no continuous lighting is required (e.g., stores, toilets, corridors, common rooms etc.) has been very effective in saving electricity. In addition, the facility has adopted MAS operating System (MOS), which leads to enhancing the energy efficiency measures as well.

Evaporation cooling system has enabled the factory to drastically reduce energy consumption in air conditioning, and also has been able to provide a comfortable environment for employees where their levels of comfort have not been compromised. Thereby employee satisfaction and energy saving have both been ensured.

From Green to Greener
Water conservation
The following measures have been adopted to conserve water and to ensure the efficient use of water in day-to-day operations:

- Use of fixtures that ensure higher water efficiency
- Use of sensor taps wherever appropriate (e.g., urinals, wash basins at toilets etc.)
- Reuse and recycling of wastewater for gardening
- Conducting awareness programmes on water conservation among workers, so that they can pass the message to their communities

Some Green Initiatives in action

Wastewater
- The wastewater generated at the Factory premises is treated through a wastewater treatment plant and the treated water is reused for gardening purposes only. In addition, cooling water streams are recycled from condensers and boilers. Such water conservation methods are especially important given the climate of the locality.

Solid Waste
- The bio-degradable component is being used to produce biogas and residual waste is handed over to the local authority. The kitchen waste is converted to biogas which fuels the kitchen stoves eliminating the use of LP gas requirements.

- MAS Holdings has adopted LEAN Manufacturing together with 6S (5S+Safety). Lean Manufacturing is the production control technique for eliminating the waste from manufacturing while achieving more value by applying fewer resources more effectively and efficiently through the continuous elimination of non-value added activities or waste.

Recycling of raw material
- Recycling of raw materials is practiced wherever possible in order to minimize waste being dumped to landfills. Which include reuse of fabric and cardboard, polythene, thread cones etc. Discarded fluorescent lights are handed over to Asia recycling for recycling purposes.

Conservation of Natural Resources

Tree planting campaign
The Asialine has initiated an annual tree planting campaign and so far there are about 100 trees planted in the factory premises. The important feature of this initiative is that the ownership of trees is given to respective departments of the factory. This campaign has been extended to the community level as well, by planting trees in the Middeniya city under the “Pivithuru Piyakaru Haritha Middeniya” initiative. The
Factory organizes this tree planting programme together with the participation of the Middeniya Police, Local Authority, Divisional Secretariat, and local organizations – which has created closer ties among the community. To ensure that the trees are well looked after, ownership of trees are assigned to individuals.

**Efforts of making jobs greener**

MAS Holdings has provided its workforce with satisfactory levels of decent working conditions. In addition to maintaining basic workplace standards (e.g., a limit on working hours and overtime, age limits, safe working conditions), MAS Holdings provides its employees, over 90 per cent of whom are women, benefits including free transport and a decent breakfast to start their day, insists that managers eat in the same canteen as everyone else and provides onsite health care services.

The MAS Sustainable Manufacturing Policy is focusing on the following objectives, through effective application of tools, initiatives and mechanisms;

- Respect and abide by local laws and strive to adhere to international standards on Environmental Sustainability.
- Conservation of energy and water through effective Energy and Water management practices.
- Develop and implement a Waste Management System maximizing source reduction initiatives and minimizing landfill.
- Innovate and develop Eco-Products.
- Minimizing and controlling pollution due to gaseous emissions through effective emission management practices.
- Monitor and reduce their Carbon footprint in the world and work towards a carbon neutral future.
- Promote a culture conducive to Sustainable Manufacturing among the work force through awareness programmes.
- Establish an "Eco Culture" within the organization and the communities.
- Encourage customers and suppliers towards greater environmental sustainability.

**Empowering women**

A programme called “MAS Women Go Beyond” has been in operation for more than 8 years empowering female employees and positively impacting the local communities by championing the cause of women’s empowerment in society.

In providing a dignified workplace some key programmes underway are on dealing with violence against women, HIV/ AIDS & reproductive health. The programme administers a number of awareness sessions for the male employees of the organization about gender, society and women’s special needs for a truly sustainable approach.

The programme also focuses on ensuring employees’ career advancement, strengthening their work-life balance and, enhancing their skills and recognizing and rewarding exceptional women who make good role models.
General Information

Kelani Valley Plantations PLC (KVPL) comprises of 27 estates and all 13 of its black tea factories have received the HACCP (Sri Lanka) ISO 22000:2005 (Switzerland) accreditations. In 2008 the company obtained the Global GAP (New Zealand) accreditation for all its tea plantations and in 2011, 18 tea estates were certified with the Rainforest Alliance. Halgolle Estate of KVPL can be considered as one of the plantations that is actively engaged in biodiversity conservation. The Estate is located on the southeastern edge of the Kegalle District, bordering the western boundary of the Nuwara Eliya District, with a total land extent of 1,196 ha. The land allocated for tea cultivation is about 266 ha and tea production was 800,000 kg in 2011 with a turnover of Rs. 308 million. There are about 680 permanent employees who are all between 18 to 60 years of age.

At present, Halgolle Estate has a land extent of about 750 ha that consists of natural and semi-natural habitats that support a rich biodiversity. The land has a unique topography with a collection of a number of ecosystems and habitats in a single location. The Estate starting from 300 ft above Mean Sea Level (MSL) which progressively covers up to 4000 ft above MSL with lush tea plantations, unusual rock formations, water streams, Patana grasslands and borders with a magnificent sky view.

Sustainable Initiatives for Green Jobs

Conservation of natural resources

Halgolle Estate has a Plantation Management Plan aimed at nature conservation. Higher elevations of land are retained for conservation of biodiversity. In addition, cardamom cultivation that was grown under shade has been abandoned and thereafter natural succession of natural flora has been promoted. Public awareness of biodiversity conservation is conducted through participatory approach together with the active participation of Deutsche Bank, Unilever Sri Lanka, universities, school children, national and international organizations etc.
Renewable energy options and energy saving

Total energy saving is obtained by fuel switching and efficiency improvement and changes in personnel behaviour. The Calliandra sp is grown to be used as firewood for boilers as biomass energy in addition to rubber firewood which is already being used. In addition, technical measures have been taken to optimize firewood efficiency in the driers; efficiency of the driers is monitored regularly at pre-determined periods. Periodic maintenance is carried out for better performance. Solar energy is used to make hot water available for the workers at bathing places. The heat generated from the use of tea dryers is also used for withering of green leaves. Periodic energy auditing is carried out with proper house-keeping measures in place, mainly focusing on promoting energy conservation and improving efficiency. Use of energy efficient fans in the withering process has also helped to improve the energy efficiency of the process. In addition, there are capacity building and training programmes for technical staff on energy conservation. These programmes are well scheduled and targeted for maintenance staff, dryer operators and boiler operators. Moreover, in addition to monthly management reviews, circulars and memos are been circulated regularly focusing on increasing the effectiveness of the firewood usage. e.g. stock turnover rates of firewood in sheds, increasing surface area of firewood etc. in order to ascertain proper implementation of such measures.

Water conservation

KVPL has already taken initiatives for water conservation at estate level, apart from their waste water treatment plants. Improving landscape and enrichment of catchment areas implies that they have already recognized the importance of clean water resources. For instance, planting of bamboo along streams/river banks, maintaining chemical free zones/buffer zones ten meters away from the stream etc. have been proven very effective in protecting water resources. In addition, all tea processing centres are installed with effective waste water filtering systems. Installation of water meters in every tea processing centre has enabled the Company to make certain that proper monitoring of water consumption is carried out. Moreover, annual water quality monitoring is undertaken where potable water usage is high. Establishment of flow gauging stations at a few important sites has helped to determine the water flow characteristics of “We Oya”, “Ketagal Oya” and “Olu Ella” (the 5th highest waterfall in Sri Lanka) which are flowing through the estate.

Moreover, major agricultural practices are implemented after carrying out detailed and comprehensive Environment Assessment studies in identified areas. KVPL estates have adopted adequate measures to reduce soil erosion following Good Agricultural Practices (GAP) such as construction of terraces, appropriately-designed drains and planting of live hedges, which will conserve the fertile top soil layers during heavy surface runoff resulting from heavy storms. In addition, planting of low and high shade too has helped to reduce soil erosion by intercepting the rain water.
Forestry & other ecosystems

Biodiversity Conservation & Enrichment

Halgolle Estate has formulated management plans for biodiversity conservation, enrichment and research based on the detailed study carried out for all KVPL estates. Studies on unique and environmentally sensitive areas in Halgolle Estate including flora, fauna and watersheds have been carried out together with the participation of IUCN and biodiversity experts. The following have been carried out/prepared:

- Inventory of flora and fauna in each division of the plantation
- Identification of conservation status of species
- Identification of different ecosystems and habitats in each division
- Identification of biodiversity-rich divisions
- Management plans for high priority conservation areas

The above detailed study covers the key habitats categorized into several ecological zones that are found at Halgolle Estate, viz.:

- Wet zone lowland rain forest
- Wet zone sub-montane rain forest
- Wet zone rock outcrop
- Wet marshy grassland
- Stream & waterfall habitats

Reforestation of denuded areas with native species, habitat enrichment and conservation of bio diversity has been successfully implemented with the participation of interested stakeholders.

Solid Waste Management

KVPL has focused on reducing the generation of solid waste throughout all its operations at all the plantations and offices. As an initial step, improving awareness among staff and the work force on the importance of proper waste management through various programmes across the production sites, stores and offices have been carried out on a regular basis. All waste materials are collected separately depending on the nature such as biodegradable, glass, plastic and polythene waste etc. In addition, agro-chemical cans and bottles are disposed through CCEA approved channels.
Giving back to the society and efforts of making jobs greener

Under the social policy of KVPL, four main components have been taken into account, viz.; Improvement of Living Environment, Health & Nutrition, Community Capacity Building and Empowerment of Youth. In addition to all these measures that have been incorporated successfully, Halgolle Estate has a well-established Estate Worker Housing Cooperative Society – EWHCS, and all its decisions are taken and adopted by the workers themselves, the management involvement is only providing leadership and guidance to it.

Improving the living environment

There is a vision for “A Home for Every Plantation Worker” in order to create a Contented Family Life for all the plantation workers. There is an on-going project for constructing new houses for workers in addition to improving the existing condition of houses, improvement of sanitation, electrification, other infrastructure projects, e.g., access roads, playgrounds, etc.

Caring for health & nutrition

The Health & Safety committee of the Estate includes the Estate Manager, Assistant Estate Manager, Estate Medical Assistant (EMA), Midwife, Welfare Officer and other welfare staff. This committee is responsible for day-to-day preventive and curative health measures. In addition, immunization coverage, nutritional programmes, pre and postnatal clinics and special projects such as medical camps, clinics for TB, cataract removal clinics, etc. are organized by the committee.

Community capacity building

The programme empowers each employee through Estate Worker Co-operatives and enhances the individual’s value to the community. Under this, pre-school and nursery education is given to children up to 5 years according to recommended syllabus, with a certificate issued by KVPL and it helps those children at the entrance to the government school. Recreation activity including track & field meets and cricket matches and micro-financing facilities are also given which help in enhancing the quality of the life of their people.

Empowerment of youth

In order to empower the youth, child development monitoring programmes have been devised. Also, special projects such as vocational training, bridal dressing and beauty care, sewing etc. are promoted among the teenagers and youth providing opportunities for the second and the third generations.
Occupational Health and Safety Policy

KVPL’s overall objective on Occupational Health and Safety is to provide and maintain a safe and healthy environment for their employees, associates, service providers and customers. In order to successfully implement the Health and Safety Policy of the company they have focused on the following areas;

- Providing a safe place of work/safe systems of work with effective control of the occupational health and safety risks to employees, associates, service providers and customers, in so far it is practical to do so
- Adhering to all relevant national occupational health and safety legislation and requirements
- Providing and communicating appropriate information, instructions and training, thus ensuring that all employees are aware of their health and safety obligations
- Periodically setting reviewing policy, objectives and targets for operational performance and risk assessment, with audit programmes to ensure continuous improvement.
Chapter 6: Training needs for effective green jobs

6.1 Preamble

Having analyzed the questionnaires it is evident that the Sri Lankan organizations need comprehensive training packages in order to create green jobs in their respective sectors. The green jobs concept as a business case is rather new to Sri Lanka and many organizations have not initiated necessary action to implement the same. There was a strong school of thought that green jobs are not to be made mandatory but optional if at all. This idea is encountered mainly amongst those who do not understand the tangible or intangible benefits that green jobs deliver for an organization’s sustainability. Therefore, formal education on the concept of green jobs is thought very vital particularly at tertiary education levels.

Sustainable enterprises and industries would be the key to survival with ever increasing fossil fuel prices. In this context, adoption of green jobs would be an added advantage and therefore it is of paramount importance to move towards a green jobs culture even now. To implement this effectively, employees of enterprises and industries must be trained at every level of their hierarchy, on this triple bottom line approach.

At present new frontier technology that are reckoned to be green are imperative for well performing enterprises. When interviewed it was clear that many of them showed reluctance to adopting new green technology as they were not fully informed of its positive impact on the enterprise. Hence training at technical level is of great importance.

6.2 Level of training needed for effective green jobs

Positive attitudes towards effective green jobs by top-management are of utmost importance and their initiatives are essential to initiate the creation of green jobs. However knowledge on green jobs by the top-management seem to be varied but there remain misconceptions. Hence a workshop for top management including CEOs, GMs etc would help resolve these issues and their mindset could be adjusted in a positive manner so that more and greener jobs could be created within enterprises and industries.

At the middle level, employees are found to contribute much in various ways to decision making on creating green business but their know-how seems insufficient due to a lack of formal training. There were a few middle level employees who had received foreign training and a few others who have received training locally. A formally developed well structured course on green jobs is therefore essential in order to fill the knowledge and technical skills gap.
To our knowledge there has not been a single training course developed at any level. Development of a structured course for different levels in all three languages viz. Sinhala, Tamil and English would be worthy in the long run.

The knowledge at lower levels of enterprises and industries were rather poor and were not provided by the management over the last couple of years. Most of them were unaware and showed no interest at all in the subject. This was mainly due to the fact that they were not given formal training on the subject of green jobs though it would have helped them in many ways. Therefore, it is necessary to develop very simple training modules so that lower level employees would also appreciate and positively participate in green jobs initiatives. Identified training providers may be approached to conduct training at varying levels. Even though there will be training modules developed at enterprise level, formal education at tertiary level would also be required in future. Development of curricula with modules for green jobs for university undergraduates, postgraduates and vocational educational courses are mandatory in future. Interviews with the University Grants Commission, National Vocational Training Centres and other relevant authorities are of utmost importance. On completion of the modules and endorsement by the authorities, the curricula can be used to train target beneficiaries. It is then hoped that all technical personnel will be competent enough to address issues in relation to green jobs and green technologies making a more positive contribution towards creation of sustainable enterprises or/and industries.

The Tertiary and Vocational Education Commission (TVEC) is the apex body of the TEVT sector under the provisions of the Tertiary and Vocational Education Act No 20 of 1990. This provides a forum at the highest level for the private sector to contribute towards developing policies and programmes that would help achieve the vision of the Government in maintaining a demand-driven training system. TVEC is therefore an ideal body to develop training modules for all levels on the subject of green jobs and particularly pitching at lower levels with more decent work-oriented courses.

It is timely for school (secondary) curricula to be revised with the inclusion of modules pertaining to green jobs and green technology. This initiative would undoubtedly encourage sustainable enterprise creation and entrepreneurship amongst young school leavers. Positive dialogue with the Ministry of Education, National Institute of Education and other sector heads is vital.

As the survey reviewed three major sectors namely, Agriculture, Manufacturing and Services, diverse training areas in which knowledge gaps could be bridged successfully are hereby recommended. The following sub-chapter enumerates what each sector expects in order to improve their skills, knowledge and capabilities in bringing them more in line with green jobs in their respective sector.

6.3 Specific training needs essential for different sectors

The following is the list of areas in which training courses and modules should be planned in the form of short courses, seminars or workshops etc.
6.3.1 Training needs for the Agriculture sector

The following areas were identified to be the key areas where comprehensive training is needed for the Agriculture sector.

- Environmental and ecosystem management
- Preservation of bio diversity
- Water quality improvement
- Training in horticulture
- Energy management
- Cleaner production technologies
- Energy conservation
- Water conservation
- Carbon footprint, ISO 14001 & ISO 50001
- Implementing sustainable agricultural practices
- Social Standards SA8000 etc.
- Triple Bottomline Concept
- Decent work and OSH

In the case of Agriculture sector organizations, comparatively large plots of land are managed in order to make them sustainably green resulting in maximum productivity. However, retention of qualified staff within an organization for a substantial number of years has become an issue. Therefore a training component is of great importance and training becomes a continual process. In this context environmental and ecosystem management become a priority area where comprehensive knowledge needs to be developed. Organizations involved in the Agriculture sector have been prepared to invest on such areas of studies particularly at individual level. Horticulture training too is needed as it gives rise to some insights into sustainable farming.

Preservation of bio diversity has been identified as one of the key areas where the Agriculture sector organizations could make a positive impact by identification of endemic, endangered or threatened species of fauna and flora that are found within their land. Once identified, they could be preserved or conserved depending on the necessary interventions. However such work is at present being done by experts from different institutions. Hence in-house knowledge seems inadequate to develop maximum potential. Training in this area will be of utmost importance and it will also aid certain geographical areas to be left as hot spots for bio diversity.

In many agricultural areas water courses are abundant but their water quality has begun to deteriorate due to high pollution. Such water courses need to be protected for which water quality monitoring is vital. Hence training on water quality monitoring is imperative.
Energy management, energy audits, cleaner production are the factory or building related activities that are essential in order to conserve energy utilization. However these areas are highly technical and external support is vital. Therefore training on such technical interventions is equally important.

Calculation of energy, water and carbon footprints too are considered to be important as they help to reduce the unnecessary burden on diminishing natural resources. Training therefore to achieve these objectives is essential for the agricultural sector organizations.

Conventions reflecting standards that are applicable for the Agriculture sector have been subscribed to by those in livestock, agriculture and forestry subsectors as they provide a competitive advantage or are made compulsory by buyers of different crops. Therefore training on these standards will help promote quality assurance in greening initiatives.

Substantial training needs to be done on the subject of decent work as it is a concept that requires in-depth understanding to translate into practice.

### 6.3.2 Training needs for the Industrial sector

The following is a list of areas in which training is necessary for Industrial sector organizations.

- Carbon footprint measurements and verifications
- Green buildings
- ISO standards
- Energy, water and waste management
- Clean development mechanisms
- Energy management
- Environmental Conservation
- Hydrology
- Recycling measures
- Decent work and health and safety

As mentioned in the previous sub section similar training needs are requested by the sector organizations.

### 6.3.3 Training needs for the Services sector

This sector too has different training needs as given below.

- Energy conservation
- Management of E-waste
- Carbon Footprint
- Energy saving and water harvesting
- Solid and hazardous Waste management
- Decent work and health and safety
Such training is to be prepared in the form of seminars, workshops or short courses so that this sector will be benefited immensely.

6.4 Potential institutions capable of delivering training courses

The following Table 1 indicates the institutions from which training courses could be prepared.

**Table 1: Institutions from which training could be obtained**

<table>
<thead>
<tr>
<th>Area of interest</th>
<th>Institutions from which training could be received</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental and ecosystem management</td>
<td>IUCN, Universities, ITI, NBRO NGOs, NARA, CARP</td>
</tr>
<tr>
<td>Preservation of biodiversity</td>
<td>IUCN, Universities, NARA</td>
</tr>
<tr>
<td>Water quality improvements</td>
<td>ITI, NBRO, Universities, NGOs, NARA</td>
</tr>
<tr>
<td>Training in horticulture</td>
<td>Gannoruwa Training Institute, Universities, Hector KobbeKaduwa Training Centre</td>
</tr>
<tr>
<td>Energy management</td>
<td>IDB, SEA, Universities</td>
</tr>
<tr>
<td>Cleaner production technologies</td>
<td>NCPC, ITI, IDB, Universities</td>
</tr>
<tr>
<td>Water conservation</td>
<td>IMMI, Universities</td>
</tr>
<tr>
<td>Energy, Carbon and water footprint,</td>
<td>NCPC, Universities</td>
</tr>
<tr>
<td>Implementing sustainable agricultural practices</td>
<td>Gannoruwa Training Institute, Universities, Hector KobbeKaduwa Training Centre</td>
</tr>
<tr>
<td>Conventions and standards</td>
<td>SLSI, ILO</td>
</tr>
<tr>
<td>Green buildings</td>
<td>Sri Lanka Green Building Council, Universities</td>
</tr>
<tr>
<td>Waste management</td>
<td>CEA, Western Province Solid Waste Management Authority, National Solid Waste Management Centre, Universities, Private sector organisations</td>
</tr>
<tr>
<td>Hydrology</td>
<td>IMMI, Irrigation Department, Universities</td>
</tr>
<tr>
<td>Clean development mechanisms</td>
<td>Ministry of Environment, Universities</td>
</tr>
<tr>
<td>Recycling measures</td>
<td>CEA, Private sector organisations, Universities</td>
</tr>
<tr>
<td>Management of E-waste</td>
<td>CEA, Private sector organisations, Universities</td>
</tr>
<tr>
<td>Decent work, OSH</td>
<td>Labour Department, TVEC, EFC, NIOSH, ILO</td>
</tr>
</tbody>
</table>

In addition to the above-mentioned institutions there are numerous institutions from which training modules could be adapted, translated and implemented. However one apex body should be appointed to coordinate the entire training needs so that a structured comprehensive programme could be established. Industries and service organizations should consider developing relationships with postgraduate study programmes of various universities to obtain specific inputs. This will strengthen both parties and is a possibility as all geographical regions of the country are having universities with diploma level and Post Graduate level courses.
Chapter 7: Conclusions and Recommendations

7.1 Conclusions

Though the EFC has a large number of (about 500) member organizations only 50 responded to the questionnaire (10 per cent respondents).

The questionnaire consisted of two main sections, namely; sustainable green technologies and initiatives on decent work, respectively. Sixty percent of members have done well in terms of introducing green technology adoption but decent work deficits were still to be addressed fully. Though some members offer decent work it is not captured in their written policy statements. This has been identified as a lacuna in the gap analysis. Many workers interviewed are of the view that they could be practiced without any formal or written policies as the employees expressed content in terms of what they have been given.

Nevertheless, it was apparent from this study that the present status of green jobs is not sufficiently close to the total concept of the ILO/UNEP definition of green jobs. The lacuna lies in uniform and systematic application of the triple bottom line concept amongst the participating members of the survey though there are also many replicable good practices. Environmental technology in particular which are reckoned to be green have been introduced by 60 per cent but all decent work aspects have not been incorporated and need to be worked on further. However, these take a longer time to reap results though they are indeed more sustainable and make good business sense. This could be corrected through conduct of well structured courses for all levels of employees and management, thereby creating a healthy bank of green skills programmes.

In conclusion, however, in order to see a positive growth in green jobs, organizations must foresee the benefits and the business advantage of green jobs and the possibility of transiting to a green business by catering to green needs and opportunities and the green market. For this to succeed, employers should play a leading role in consultation with employees, providing them with adequate and quality assured training, to facilitate and promote a just transition to green jobs for a greener economy.

In summary, 60 per cent of the EFC members surveyed have integrated the concept of green jobs but not without gaps that need to be addressed at different levels and varying intensity, to consolidate a coherent strategy for creating green jobs.
7.2 Recommendations

This sub-chapter discusses ‘the way forward’ so that gaps that have been identified by this study could be addressed effectively.

Initially, data that have been collected would be published for the purpose of dissemination so that there is better access to the findings of this report such as placing on key websites; presenting papers based on the contents of the report; developing short publications based on the excerpts of the report and other innovative means to share information. Publishing the contents of this survey in international and local journals, at workshops and seminars etc to popularize in particular the concepts of green job initiatives, among public in general and enterprises is thought to be imperative too.

Secondly, staff of the EFC particularly the green team should be trained to respond to questions, clarifications, or information requested by its membership.

Thirdly, to create a database within the EFC from which the membership could make referrals for advice, and services in relation to green jobs. Concerted efforts should be taken collectively by all stakeholders.

Fourthly, training the membership of the EFC on green jobs, decent work deficits and creating general awareness on green jobs should be undertaken.

It is recommended that a monitoring mechanism to facilitate and support greening jobs within the EFC membership is established through EFC’s green team with technical support from the ILO.

A green jobs policy and a set of guidelines on green jobs for the world of work are recommended to ensure sustainability for and amongst relevant stakeholders. A participatory approach to these recommendations is essential.

Finally, a database on the types of green jobs in Sri Lanka could be prepared by EFC to be distributed among enterprises and industries to facilitate this just transition through sharing of knowledge and exchange of information.
Annexure
Green Jobs Survey – 2011

Introduction

The green jobs in Asia project is intended to promote sustainable enterprises which create productive and decent jobs. The project will aim to collect information from employees in identified key economic sectors on existing practices in shifting the production process to a more environmentally friendly and socially sustainable pattern. It will also identify the priorities for action to expand and replicate such on a larger scale at national level.

Purpose

- To build capacities in Green jobs within the EFC professional staff and EFC membership
- To highlight industry specific sustainable production initiatives and employment linkages
- To identify opportunities and challengers for the promotion of new green jobs and the greening of existing jobs, and identify gaps with a special focus on skills needed, from an enterprises as well as industry approach

What is a green job?

Green jobs are integrally decent jobs in agricultural, manufacturing, research and development, administrative, and service activities that contribute substantially to preserving or restoring environmental quality. Specifically, but not exclusively, this includes jobs that help to protect ecosystems and biodiversity; reduce energy, materials, and water consumption through high-efficiency strategies; de-carbonize the economy; and minimize or altogether avoid generation of all forms of waste and pollution. However, many jobs which are found in environment-related economic sectors are not necessarily green jobs in practice for they not automatically constitute decent work. Some of the jobs related to protecting and sustaining the environment can also be dirty, un-safe and difficult occupations. Therefore, we need to identify mechanisms to covert these jobs into less dirty, safer and technologically and environmentally more sophisticated. Thus policy and strategies to convert these jobs into green jobs which are quality jobs that contribute to impact positively on the environment are a priority if businesses are to support green development. If green jobs are a bridge to a truly sustainable future, green jobs need to address twin issues of social justice at the work place, whilst also reducing the impact on the environment as a long term strategy for business to remain competitive in a globalized economy.

Green job initiatives

Green job initiatives are working to leverage its knowledge base to support and expand the economy. It may shape the economic recovery and job creation; economic competitiveness; energy independence, efficiency, and security; environmental protection; and financial growth. Green job initiatives are positioned to provide labor market intelligence and work with core-constituencies of labor, industry, and
education to identify relevant *Green Jobs* skills and develop competency models leading to meaningful career ladders.

**Decent Work**

Decent work is defined as opportunities for women and men to obtain productive work in condition of freedom, equity, security and human dignity. Decent work means productive work in which rights are protected and generate an adequate income, with adequate social protection. In other words, it refers to a situation that promotes opportunities for men and women to obtain decent and productive work in the condition of freedom, equality, security and human dignity. The concept of decent work is built upon four pillars which are access to employment, promotion of rights at work, social protection, and social dialogue.

**Green sectors**

The green jobs are direct employment, related to producing green products and green services or that help reduce the environment impact, including energy efficiency, in production and consumption. Therefore, green jobs can be found in all sectors of the economy but are primarily created in the following sectors:

- Renewable energy
- Energy efficiency
- Conservation of natural resources including water, forestry, fisheries etc.
- Pollution prevention and control in manufacturing including cleaner production and good house keeping and clean-up operations
- Clean transportation and fuels

**Instructions**

Use check marks to indicate your answers in the check boxes.
Write your answers on the blank lines.
You may obtain assistance from your technical team of employee.
If you have questions, please contact
Thamali, Gaya, Vidya or Dasun on 011 2867966-8
Attach any additional information, if needed. You may attach extra sheets if any of your responses need more space.
General

1.0 In which of the following sectors does your organization operate?

- Local Government
- State Government
- Community org./NGO
- Private Sector
- Private sector (Public Liability)
- Other, (please specify)___________

1.1 In which of the following industry/industries does your organization primarily operate?

- Agriculture
- Accommodation/café/restaurant
- Community service
- Communication services
- Construction
- Cultural and recreational services
- Ecotourism
- Education
- Energy (electricity)
- Environment
- Finance and insurance
- Fishing
- Forestry
- Government/admin/defense
- Health
- Manufacturing
- Mass transport
- Mining/Mineral processing
- Other utilities (water/gas)
- Personal and other services
- Property and business services
- Retail trade
- Transport and storage
- Wholesale trade
- Other, (please specify)___________

1.2 How would you describe what your organization does? (e.g., manufacturing footwear)

__________________________________________________________________________________
1.3 What is the size of the organization in terms of

- Size or scale of operations
- Output/output
- Turnover
- Geographical coverage
- Other, (please specify)

1.4 How many employees currently work at your organization? ______

<table>
<thead>
<tr>
<th></th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temporary</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Casual</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fixed term</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Permanent</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1.5 Do you have any employees of a labour contractor providing services to your organization?

Yes ☐ No ☐
Male_____ Female_____ Total_____

1.6 Do you have any outsourced operations?

Yes ☐ No ☐
Male_____ Female _____ Total_____

If yes, the constitution of the employees of the service provider:

________________________________________________________

1.7 What is the demographic structure of the organization, please specify the number?

<table>
<thead>
<tr>
<th>Age structure</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>15-17</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18-24</td>
<td></td>
<td></td>
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<tr>
<td>25 – 29</td>
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</tr>
<tr>
<td>30-45</td>
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</tr>
<tr>
<td>46-55</td>
<td></td>
<td></td>
</tr>
<tr>
<td>56-60</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&gt;60</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

From Green to Greener
2.0 Technical aspects

2.1 Does your business directly or indirectly produce and/or use renewable energy?

Yes (if Yes tick one or more followings)  No □

<table>
<thead>
<tr>
<th>Directly</th>
<th>Produce</th>
<th>Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydro</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Solar</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Biomass</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wind</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Geothermal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ocean waves</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other, (please specify)________________________</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Indirectly

- Education and training on renewable energy □
- Research and development on renewable energy □
- Operations and maintenance on renewable energy □
- Other, (please specify)________________________ □

2.2 Do your business activities directly or indirectly adopt the methods for increasing energy efficiency?

Yes (if Yes tick one or more followings)  No □

<table>
<thead>
<tr>
<th>Directly</th>
</tr>
</thead>
<tbody>
<tr>
<td>Green construction</td>
</tr>
<tr>
<td>Building retrofitting</td>
</tr>
<tr>
<td>Indoor climate control</td>
</tr>
<tr>
<td>Energy auditing</td>
</tr>
<tr>
<td>Adoption smart grid for electricity</td>
</tr>
<tr>
<td>House-keeping measures</td>
</tr>
<tr>
<td>Use of green devices, green technologies to improve production process</td>
</tr>
<tr>
<td>Other, (please specify)________________________</td>
</tr>
</tbody>
</table>

Indirectly

- Education and training of managers on energy efficiency □
- Education and training of workers on energy efficiency □
- Research and development on energy efficiency □
From Green to Greener

Manufacturing, marketing or assembling
Energy efficient products
Other, (please specify)_______________________

2.3 Do your business activities directly or indirectly conserve natural and other resources?

Yes (if Yes \textit{tick} one or more followings) No □

\textbf{Water conservation}
Rainwater harvesting
Groundwater replenishment
Wastewater reclamation/recycling
Other, (please specify)_______________________

\textbf{Forests/wetlands/coastal areas}
Aforestation
Reforestation
Wetlands restoration
Land reclamation
Other, (please specify)_______________________

\textbf{Soil/minerals/raw material other resources}
Organic farming
Reuse/recycling of raw materials (eg: paper/metals)
Other, (please specify)_______________________

2.4 Do your business activities directly or indirectly produce and/or use clean transportation and fuels?

Yes (if Yes \textit{tick} one or more followings) No □

\textbf{Directly}
Fuel cells/Advanced batteries
Alternative fuel vehicles/ Hybrid vehicles
Biofuels
Other, (please specify)_______________________

\textbf{Indirectly}
Group transportation
Mass transportation
Encourage pooling of vehicles
Cycling
Schedule supply chain
Other, (please specify)_______________________
2.5 Does your business generate following pollutants and take action to minimize/ prevent pollutants by any interventions?

**Air Quality**
Yes (if Yes tick one or more followings) No □

<table>
<thead>
<tr>
<th>Pollutants generation</th>
<th>Approx. quantity (specify units)</th>
<th>Pollutants minimization/prevention</th>
</tr>
</thead>
<tbody>
<tr>
<td>PM (particulate matter)</td>
<td>□</td>
<td>Filter bags □</td>
</tr>
<tr>
<td>SO₂</td>
<td>□</td>
<td>Scrubbers □</td>
</tr>
<tr>
<td>NOx</td>
<td>□ Any other, (please specify)</td>
<td></td>
</tr>
<tr>
<td>CO</td>
<td>□</td>
<td></td>
</tr>
<tr>
<td>HC(hydro carbon)</td>
<td>□</td>
<td></td>
</tr>
<tr>
<td>GHG (CO₂, CH₄, O₃)</td>
<td>□</td>
<td></td>
</tr>
<tr>
<td>NH₃</td>
<td>□</td>
<td></td>
</tr>
<tr>
<td>Any other, (please specify)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Wastewater**
Yes (if Yes tick one or more followings) No □

<table>
<thead>
<tr>
<th>Wastewater generation</th>
<th>Approx. quantity (specify units)</th>
<th>Wastewater minimization/prevention</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gray water</td>
<td>□</td>
<td>Septic tank with soakage pit □</td>
</tr>
<tr>
<td>Black water</td>
<td>□</td>
<td>Septic tank with other arrangement □</td>
</tr>
<tr>
<td>Industrial wastewater</td>
<td>□</td>
<td>Wastewater Treatment plant □</td>
</tr>
<tr>
<td>Any other, (please specify)</td>
<td></td>
<td>Common wastewater treatment plant □</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Disposal to sewer □</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Any other, (please specify)□</td>
</tr>
</tbody>
</table>

**Storm water**
Yes if Yes tick one or more followings No □

<table>
<thead>
<tr>
<th>Storm water generation</th>
<th>Approx. quantity (specify units)</th>
<th>minimization/prevention</th>
</tr>
</thead>
<tbody>
<tr>
<td>Storm water</td>
<td>□</td>
<td>Diversion to nearby waterways/roadside canals □</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Rain water harvesting □</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ground water recharge □</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Other, (please specify) □</td>
</tr>
</tbody>
</table>
### Municipal Solid Waste

Yes (if Yes tick one or more followings) ☐ No ☐

<table>
<thead>
<tr>
<th>Waste generation</th>
<th>Approx. quantity (specify units)</th>
<th>Waste minimization/prevention</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biodegradable</td>
<td>☐ ___________</td>
<td>☐ Composting</td>
</tr>
<tr>
<td>Non-biodegradable</td>
<td>☐ ___________</td>
<td>☐ Biogas generation</td>
</tr>
<tr>
<td>Recyclable</td>
<td>☐ ___________</td>
<td>☐ Landfills</td>
</tr>
<tr>
<td>Any other, (please specify)</td>
<td>___________</td>
<td>☐ Open burning</td>
</tr>
<tr>
<td></td>
<td></td>
<td>☐ Trade-off</td>
</tr>
<tr>
<td></td>
<td></td>
<td>☐ Transfer to local authority</td>
</tr>
<tr>
<td></td>
<td></td>
<td>☐ Any other, (please specify)</td>
</tr>
</tbody>
</table>

### Hazardous waste

Yes (if Yes tick one or more followings) ☐ No ☐

<table>
<thead>
<tr>
<th>Waste generation</th>
<th>Approx. quantity (specify units)</th>
<th>Waste minimization/prevention</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paints, solvents</td>
<td>☐ ___________</td>
<td>☐ Trade off</td>
</tr>
<tr>
<td>Agrochemicals</td>
<td>☐ ___________</td>
<td>☐ Storing at back yard</td>
</tr>
<tr>
<td>Batteries</td>
<td>☐ ___________</td>
<td>☐ Disposal with municipal solid waste</td>
</tr>
<tr>
<td>E-wastes</td>
<td>☐ ___________</td>
<td>☐ Handing over to authorized entity</td>
</tr>
<tr>
<td>Infection waste</td>
<td>☐ ___________</td>
<td>☐ Any other, please specify ___________</td>
</tr>
<tr>
<td>Any other, (please specify)</td>
<td>___________</td>
<td></td>
</tr>
</tbody>
</table>

#### 3.0 Managerial Aspects at the work place

#### 3.1 Does your organization have policy in following aspects?

**Environmental-related policy**

- HR Policy ☐
- HRD Policy ☐
- Gender equity ☐
- Worker’s welfare ☐
  - Transport ☐
  - Medical ☐
  - Overtime ☐
  - Maternity ☐
- Any other, (please specify) ☐
Health and safety policy □
Worker participation in decision making □
Equal opportunity employment □
Policy for
   Disabled □
   HIV/AIDS □
   Any other special category□
Procedure for grievances/and arbitration □
Other, (please specify)□

3.2 Does your organization adopt a specific communication process in relation to disputes or workplace issues?
___________________________________________________________________

3.3 Does your organization employ the following officers?

   Safety professionals □
   Occupational hygienist/PHI □
   Occupational physician □
   Environmental officer □
   Other, (please specify)□

3.4 Does your organization offer long term benefit or profit sharing scheme to the employee?

   EPF/ETF □
   Pension scheme □
   Insurance (Life/Health) □
   Profit sharing scheme □
   Bonus scheme □
   Promotions □
   Career developments/training opportunity □
   Any other benefits□

3.5 Does your business obtain any local or international sustainability standards?
Yes □ please specify:□
No □
4.0 **Green Jobs** *(Please refer page 1 for the definitions of green jobs/ green job initiatives/decent work and green sectors)*

4.1 **Have you felt the need of:**

Energy conservation/ Increase energy efficiency

Yes ☐ If yes, why: ________________________________

No ☐

Water conservation

Yes ☐ If yes, why: ________________________________

No ☐

Improve the efficiency of raw material usage/other inputs of production/consumables

Yes ☐ If yes, why: ________________________________

No ☐

Pollution control and or cleaner production technologies

Yes ☐ If yes, why: ________________________________

No ☐

4.2 **Are you considering to implement any of the above described at 4.1 in the near future?**

Yes ☐ If yes, please briefly describe: ________________________________

____________________________________________________

No ☐ If not, please list reasons

Lack of technical staff ☐

Lack of funds ☐

Lack of information ☐

Lack of industry approach ☐

Lack of technical support ☐

Lack of training ☐

Cost savings are not attractive ☐

Others, please specify___________ ☐

4.3 **Does your business or organization currently have any green job initiatives?** *(please refer page 1 for the definition of green job initiatives)*

Yes ☐

No ☐
4.4 If yes, please list the green jobs initiative in the environmental sector in your organization?

<table>
<thead>
<tr>
<th>Green job Initiatives</th>
<th>Full-time/Part-time/Fixed term</th>
<th>No. of people Increase/Decrease</th>
<th>Additional training/skills/technical assistance required</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Energy Auditor</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Solar panel installation Technician</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Auto mechanics (hybrid car maintain and repair)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. ___________________</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. ___________________</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. ___________________</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

4.5 Does your business have in-house mechanism in place for dialogue and corporation on green jobs (environmental issues) issues that involve employers and workers?

Yes ☐
No ☐
Other, (specify)___________ ☐

4.6 What do you think is the best strength of your organization in implementing green job initiatives?

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

4.7 What do you think is the most important benefit that you expect in adopting green jobs?

Workers satisfaction ☐
Cost savings ☐
Compliance with legal framework ☐
Enhanced company image ☐
Other, (please specify) _________________ ☐
4.8 For each of the following statements, please circle the number which corresponds to whether you agree or disagree with that statement.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly agreed</th>
<th>Agreed generally</th>
<th>No idea</th>
<th>Disagreed in general</th>
<th>Strongly disagreed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Our organization creates green jobs because we support sustainable environmental practices</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>The creation of green jobs in our organization helps maintain profitability</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Adherence to good environmental practices helps our organization grow</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Producing environmentally friendly products and service is a part of our business strategy</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Our organization only employs people in green jobs because we are required to conform to existing legislation</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>I believe that the green jobs will grow substantially over the next five years</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Further growth in green jobs is desirable</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

5.0 Industrial policy

5.1 What do you think is preventing your organization (or in being less committed to) in implementing green initiatives?

__________________________________________________________________________________________
5.2 Would going green strengthen social dialogue at the work place and help engage or more of the labour force?

Yes ☐
No ☐
Other, (specify)________ ☐

5.3 Is the regulatory framework clear and sufficient to encourage investments in energy efficient and environmentally friendly investments in your industry?

Yes ☐
No ☐
Other, (specify)________ ☐

5.4 Are there adequate financial mechanism and financial incentives in place in your industrial sector to facilitate access to green equipment, capacity building, access to information and training?

Yes ☐
No ☐
Other, (specify)________ ☐

5.5 Are there any voluntary national or international Sustainability Standards being used by industry in your sector (covering both labour and environmental standards, or covering either labour or environmental standards)

Yes (specify) ☐
No ☐
Other, (specify) ______ ☐

5.6 Would you consider engaging in a programme of certification under national or international sustainability scheme? If yes, what help would you consider most important to receive?

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

5.7 Is there a shortage of green skilled/qualified workers in your industry?

Yes ☐
No ☐
If yes, please list green job initiative/s for which there is a shortage of technical personnel. Indicate severity of shortage by circling the appropriate number on the scale from 1 to 4.

<table>
<thead>
<tr>
<th>Initiative</th>
<th>No</th>
<th>Slight</th>
<th>Moderate</th>
<th>Severe</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Energy Auditor</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>2 Solar panel installation</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>3 Auto mechanic (hybrid car maintain and repair)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>________________________________________________________</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>________________________________________________________</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>5.8 What training would you or your staff like to undertake in green jobs but which is difficult to obtain or currently unavailable?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>____________________________________________________________________________________________________________________________________________________</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.9 What green jobs related factors do limit the growth of your business? Please comment on what you feel can be done at the national policy level to assist growth in this sector.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>____________________________________________________________________________________________________________________________________________________</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>________________________________________________________</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.10 Are you sufficiently informed on the benefits of ‘going green’ in your sector activity</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes ☐ No ☐</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>If no, please further specify whether you would like to receive additional information on following topics</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Information on the business case for green products and services ☐</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Link between productivity and resource/energy efficiency ☐</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Link between productivity and occupational health and safety ☐</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Information on sources of information and potential support ☐</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other, please specify____________________________________ ☐</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
5.11 How important is it for you to mention about your green initiatives in the CSR (Corporate Social Responsibility) strategies and/programmes? (Please comment).

____________________________________________________________________
____________________________________________________________________
____________________________________________________________________

5.12 Would you like to be contacted by EFC (Employer’s Federation of Ceylon) to discuss your training needs for a just & green transition of the workforce?

☐ Yes what is your e-mail address or phone number? _________________
☐ No

End of the questionnaire
**General comments:** If you have any comments you would like to make concerning the green jobs or want to expand on your answers to previous questions then please do so here.

______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________

If you would like a copy of the report from this survey or information about training and support available please provide your contact details below

Company Name: ___________________________
Post Address: _______________________________________________
Contact Name: ___________________________
Position: ___________________________
Contact No.: ___________________________
Email: ___________________________ Fax _____________________

Thank you for taking the time to fill in this survey

Please return the duly completed Green Jobs Survey form to the under mentioned on or before
e-mail: