



# Green skills and Sustainable Economic Development Challenges to introduce Green skills in the Technical and Vocational Education and Training sector in tourism

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## Abbreviations

5Es	Energy, Environment, Education, Employment and Equity
BMZ	German Federal Ministry for Economic Cooperation and Development
CEDEFOP	European Centre for the Development of Vocational Training
CFE	OECD Centre for Entrepreneurship, SMEs and Local Development
ECTS	European Credit Transfer System
EETEO	Egyptian Education, Training and Employment Observatory
EM	Environmental Management
ESD	Education for Sustainable Development
ESRT	Environmentally and Socially Responsible Tourism Capacity Development Programme
ETF	Egyptian Tourism Federation
GAFI	General Authority for Investment and Free Zones
GCET	Global Code of Ethics for Tourism
GDP	Gross Domestic Product
GEI	Green Economy Initiative by the UNEP
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH
GSHI	Green Star Hotel Initiative
GSI	Green Sharm Initiative
GSTC	Global Sustainable Tourism Criteria
HCD	Human Capacity Development
HR	Human Resource
HRM	Human Resource Management
ILO	International Labour Organization
MID	Maurice Ile Durable
MoT	Ministry of Tourism in (Egypt)
OECD	Organisation for Economic Co-operation and Development
PMA	Performance Management Appraisals system
SED	Sustainable Economic Development
SME	Small and Medium Enterprise
SPV	Solar Photo Voltaic
TVET	Technical Education and Vocational Training
UNEP	United Nations Environmental Programme
UNWTO	World Tourism Organisation
VNAT	National Administration of Tourism
VTOS	Vietnam Tourism Occupational Standards
WCTE	World Committee on Tourism Ethics

## 1 Abstract

Environmental challenges are increasing and Green skills become increasingly important. The new and changing skill needs in the labour market at various macro, meso and micro levels require the introduction of Green skills in new and existing occupations. This shift towards a green economy can generate employment opportunities and changes the scope and character of occupations. Green skills development focuses on the qualification and awareness raising in order to make economic growth and development compatible with climate stabilisation and a sustainable environmental footprint. With a green economy emissions and use of resources will be reduced and contribute further to an increase in employment in related sectors, based on the sustainable management of resources.

The improvement of skill and particularly Green skills initiatives in Technical Vocational Education and Training (TVET) in the tourism sector are relatively easy to implement with profitable impacts. Especially in Egypt the tourism sector is one of the major sectors driving the Egyptian economy. As the most popular tourist destinations in the Middle-East region examples and best practice are outlined for Egypt and can set standards for the development and integration for Green skills in tourism in general. Tourism accounts for 12.6 % direct and indirect employment in Egypt and improvements in this sector have a tremendous multiplying effect over other economic sectors contributing to stable growth for the future. Tourism has one of the highest labour growth rates and thus, reviewing and analysing the potential for greening existing and new occupations as well as the needs for future skills for the sector in Egypt has a particular significance. Until today early identification of green skill needs in the tourism sector in Egypt are fairly limited and mostly concentrated in specific fields and occupations characterised by internationalisation, where the employability of people, jobs and services are high. For these challenging and trend setting developments the thesis analysis the different levels, requirements, perspective changes and their impact. The thesis further attempts to contribute to the debate for the integration of Green skills in the public and private sector by outlining concrete recommendations. In order to increase the employment effects of a transition to a Green economy the study reviews these sector specific challenges.

## 2 Introduction

For future generations environmental challenges are increasing and green skills become increasingly important. The employment that has emerged in the field of environmental technologies and renewable energies in industrialized countries support these trends.

For the tourism sector, as for many others, the transition towards greener education and training is a long and challenging process.

Tourism as a sector is interacting with many other industries and services and can contribute significantly to the shift towards a more sustainable growth.

*“Tourism has significant potential as a driver for growth of the world economy. The sheer size and reach of the sector makes it critically important from a global resource perspective. Even small changes toward greening can have important impacts. Further, the sector’s connection to numerous sectors at destination and international levels means that changes in practices can stimulate changes in many different public and private actors beyond the direct and immediate impact of tourism activity”* (UNWTO/UNEP 2012, p. 7)

Especially Technical and Vocational Education and Training (TVET) plays a central role with regards to the implementation of sustainable development and green economy, as it prepares apprenticeship to consider environmental and sustainability aspects for appropriate application in their professional practice. Until today several concepts have been developed and implemented in order to integrate environmental and resource protection or requirements of sustainable development into TVET.

Nevertheless, the various approaches of green skills development and sustainable TVET development exist parallel at international as well as national levels without being conceptually linked. The lack of available relevant skills is a bottleneck for changing to a greener economy.

The literature review presented here attempts to contribute to the debate by outlining central concepts, methods and findings for the measurement and the predictions of the employment effects with a special focus to Green skills development in the tourism sector in Egypt. The thesis commences in *section two* by outlining the question and relevance of introducing green skills in the economy and includes a literature review. Subsequently an overview is provided in *section three* of the international debate on questions related to Green skills and the associated definitions, concepts and measurement approaches.

*Section four* gives an overview of the key instruments to promote a green economy and presents two best practices examples on Green Skills initiatives in TVET in the tourism sector. On this basis in *section five*, examples from Egypt are outlined and discussed in more detail on the deployment of green skills in the tourism sector in Egypt.

*Section six* outlines the challenges and opportunities for the private sector and for international development cooperation approaches.

In *section seven*, a number of recommendations for action to promote employment, in the context of Green skills development in tourism through development cooperation, are reviewed. Finally in *section eight* conclusive remarks for green skills tourism development in Egypt are briefly summarized.

## **2.1 Question and Relevance**

The purpose of this research paper is to outline the various definitions of green skills and focus on the importance of introducing Green skills in the TVET sector in tourism. Especially in transition countries the relative importance of adaptation skills is correspondingly greater and the introduction of new training methods can contribute to reduce emissions and substantial change in behaviour and patterns. Therefore the main focus here will be reviewing the current challenges and the opportunities as an example for introducing new and advanced skills in the tourism sector in Egypt.

## **2.2 Literature review**

Until today there is no common understanding of the terms green skills or environmental professions. Most information is provided in research and strategy papers. One of the important publications is from Olga Strietska-Ilina for the ILO focusing on “Skills for green jobs”. This global research is a synthesis report based on 21 country studies. Of further importance are the publications by the Federal Government of Germany, European Union mainly by the European Centre for the Development of Vocational Training (CEDEFOP) and as outlined by the International Labour Organization (ILO).

The literature available for the introduction of green skills especially in TVET is also very limited. The main sources are the Publications Office of the European Union with the research paper on “Future skill needs for the green economy” and especially the published report by the European Centre for the Development of Vocational Training (CEDEFOP) “Green skills and environmental awareness in vocational education and training”. Further substantial discussion and research papers are provided by the German Federal Government for example by the Klaus-Dieter Mertineit in 2013 “TVET for a Green Economy”.

The core study focusing on “Tourism in the Green Economy” has been prepared in 2011 by the UNEP in close cooperation with the World Tourism Organisation (UNWTO). The background report outlines in more detail the economic case for investing in the greening of the tourism economy. Nevertheless, only limited information is gathered with regards to education and TVET. A further important study, which is however also neglecting the training aspect, is the OECD Tourism Paper from 2013 focusing on “Green Innovation in tourism Services”.



This report contributes to the OECD Green Growth strategy and describes the importance of green innovations in Tourism. These are the main literature sources used for this study. Besides, other journal and conference publication have been used.

As outlined above, generally speaking there are only a few empirical studies on the employment effects of a Green Economy in developing and emerging countries. As is the case for OECD countries, most of the studies concentrate on renewable energy and energy efficiency. There is a focus on the Middle East and North African (MENA) region. Most studies concentrate on the direct employment effects. Depending on the assumptions for the expansion of the local production capacity, the determined employment potentials vary widely. Macroeconomic models concentrate in developing and emerging countries on the employment effects of environmental policies. These studies reveal a mixed picture. In total, the overall employment effects are estimated to be relatively low. Whether the positive or negative effects predominate, particularly depends on complementary measures as well as the specific sector for the introduction of Green skills.

### 3 Definitions and Background for the integration of TVET

#### 3.1 Definitions of Green Skills

Sustainable development and the concept of greening the economy are not new. Since hundreds of years the European forests for example are growing in a sustainable way in order to maintain sufficient wood resources on the market. The attention to the “Limits of growth” nevertheless came only up at the beginning of the 70 ties as introduced by the Club of Rome. Since then it has

*“...taken a long time to reach this understanding and to accept those limits, namely that the resource-intensive and growth-oriented economic model of the industrialised West and its corresponding consumer patterns are not suitable and cannot be extended endlessly without pushing beyond the biophysical limitation of the earth”*

(Mertineit, 2013, p. 13)

Therefore concepts are demanded that meet the needs of the present but also compromising the needs of future generations. This also considering, that the current climate change and environmental degradation are additionally endangering livelihoods and the future sustainability of various sectors of the global economy.

The first multilateral organisation that advocated the concepts of greening the economy has been the UNEP in 2008. The UNEP introduced the Green Economy Initiative with the main outcome to demonstrate that the greening of economies does not need to be at the detriment of economic growth. Further that the greening of economies has the potential to be a new engine of growth and a creator of decent jobs and a vital strategy to eliminate continuing poverty. (UNEP, 2011, p. 14 and Mertineit, 2013, p. 13) Especially with regards to reviewing the opportunities for sustainable economic growth considering that environmental protection and environmental behaviour is rather an opportunity for more economic growth and increased prosperity, rather than only being a cost factor. Accordingly *“...environmental and climate change policies bring enormous employment opportunities but also the risks associated with structural changes. Countries need coherent strategies that bring together energy, environment, education and skills development objectives, policies and responsible ministries in order to adapt to climate change and shift to clean and sustainable production and consumption in ways that maximize creation of decent work and make it available to all. Countries that are succeeding in such a challenging task are placing a high premium on*

*effective social dialogue, coordination among ministries and communication between employers and training providers.”* (Strietska-Illina, 2011, p. 7) The shift to a green economy therefore is generating new jobs and also changes the scope and character of existing jobs.

The Federal Government of Germany encourages this concept of green economy, considering it as a decisive contribution to growth and an economic approach towards sustainability. In close cooperation with the EU, the Federal Government advocates for further elaborating the concept and implementing it worldwide. They especially stress the chances and potentials of a green economy. (Mertineit, 2013, p. 14)

Particular for development cooperation and for the developing countries and countries in transition like Egypt the challenges are enormous for greening their economies. These countries bear until today little responsibility for climate change and environmental degradation but are hit hardest by its consequences. This includes the alteration of natural habitats, loss of biodiversity, droughts, floods and other consequences.

For example predominantly countries that are dependent on farming, fishing and traditional crafts, such as wood carving, people deprived of these sources of income rapidly fall below the poverty line. Consequently these countries have a crucial need for the adaptation skills. Nevertheless until today skills development strategies are rarely included in their national adaptation plans.

*“...in addition, the prominence of the informal economy and the lack of social dialogue, social protection and other institutional and systemic mechanisms exclude large segments of the population in developing countries from efficient and socially responsible restructuring measures”.* (Strietska-Illina, 2011, p. 164)

Capacity building and capacity development thus are important interventions to increase the knowledge and skills for greening their economies. Therefore, especially for development cooperation the emphasis is laid on education and training. Within the context of Green skills, international organisations, such as the International Labour Organization (ILO), the European Centre for the Development of Vocational Training (CEDEFOP), OECD and the United Nations Environmental Programme (UNEP) have identified various definitions. Today Green skills lack a joint definition and the developed and developing countries lack a statistical definition of green jobs in general. (Strietska-Illina, 2011, p. 168)

For example the ILO in close cooperation with CEDEFOP defines green jobs as:

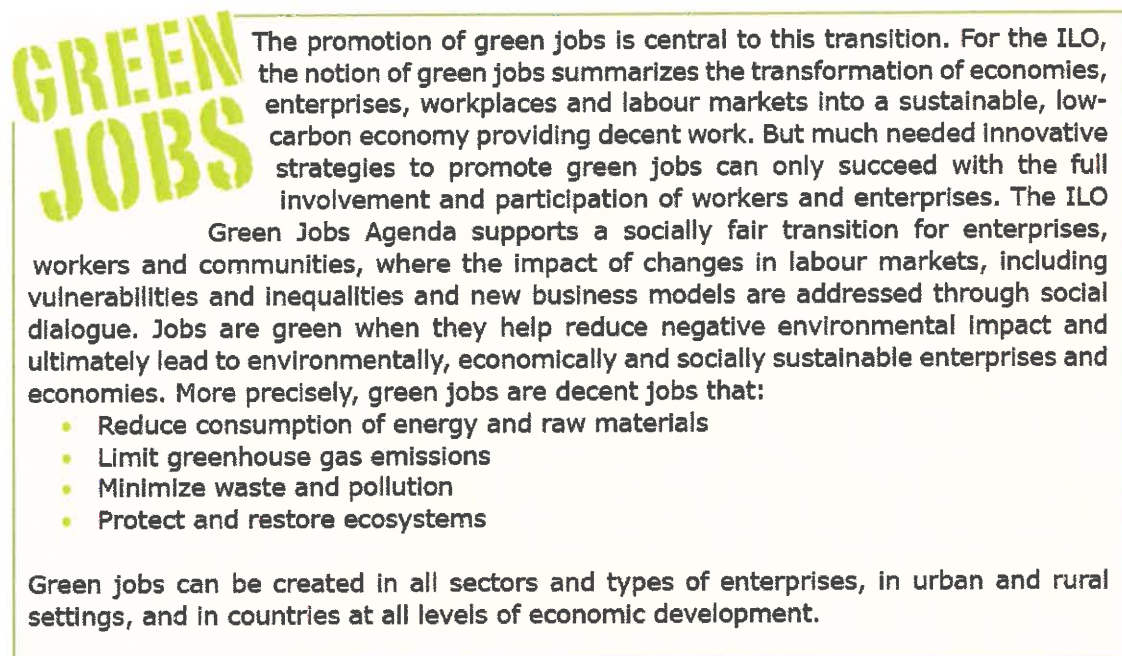
*“Green jobs are defined as jobs that reduce the environmental impact of enterprises and economic sectors, ultimately to levels that are sustainable” (ILO, 2011, p. 6,)*

This definition covers agriculture, industry, services and administration that subsidize to preserving and/or restoring the quality of the environment while also meeting the criteria for decent work adequate wages, safe conditions, workers’ rights, social dialogue and social protection. It also covers activities related to both mitigation of and adaptation to climate change. This working definition implies in its inclusivity and breadth that every job can potentially become greener.

As time goes by and the transition to a green economy intensifies, what is considered a green job today might not continue to be so in the future. (Mertineit, 2013, p. 22)

As the ILO definition is focusing on sustainable economic development, the CEDEFOP definition follows the same pattern and is also concentrating on developing priorities for the low-carbon economy including the improvement of skills.

**Figure 1: ILO notion on green jobs<sup>1</sup>**



**GREEN JOBS**

The promotion of green jobs is central to this transition. For the ILO, the notion of green jobs summarizes the transformation of economies, enterprises, workplaces and labour markets into a sustainable, low-carbon economy providing decent work. But much needed innovative strategies to promote green jobs can only succeed with the full involvement and participation of workers and enterprises. The ILO Green Jobs Agenda supports a socially fair transition for enterprises, workers and communities, where the impact of changes in labour markets, including vulnerabilities and inequalities and new business models are addressed through social dialogue. Jobs are green when they help reduce negative environmental impact and ultimately lead 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 can be created in all sectors and types of enterprises, in urban and rural settings, and in countries at all levels of economic development.

CEDEFOP states that Green skills are specifications of environmental expertise. Generally speaking, green skills refer to the knowledge, abilities and skills that are needed to meet environmentally relevant requirements of a particular enterprise and in the workplace. A uniform catalogue for related competences does not exist. Individual countries, such as the

<sup>1</sup> Source: <http://earthconsciousmagazine.com/?p=2029>

United Kingdom or Australia, have in fact attempted to create a list of specific green skills. However, they are categorised by fields (e.g. waste, energy, construction) and do not contain skills across occupational fields (core skills). (Mertineit, 2013, p. 95)

Both organisations launched the global research project to investigate skills needs for structural shifts caused by greening the economy, new and changing occupational profiles, and major skills constraints. CEDEFOP activities are closely linked to the European Union's (EU) new strategy for sustainable prosperity and jobs, Europe 2020, puts innovation and green growth at the heart of its blueprint for competitiveness. (EU, 2010, p. 7) The global research project of the ILO and CEDEFOP is embedded in the UNEP Green Economy Initiative. (EU, 2010, p. 1) The ILO-CEDEFOP research papers present a list of core skills that are relevant for green jobs.

However in comparison the UNEP is focusing more on the terminology of the green economy within the frame of their Green Economy Initiative. The developed definition is outlined as a working definition for greening the economy as a result

*“...in improved human well-being and social equity, while significantly reducing environmental risks and ecological scarcities”.* (UNEP, 2011, p. 16)

Practically speaking, for UNEP a green economy is one in which growth in income and employment is driven by public and private investments that reduce carbon emissions and pollution, to enhance energy and resource efficiency, and prevent the loss of biodiversity and ecosystem services. These funding's and/or investment need to be catalysed and supported by targeted public expenditures, policy advocacy and reforms as well as regulation changes. According to the UNEP this development path should maintain, enhance and, where necessary, rebuild natural capital as a critical economic asset and source of public benefits, especially as outlined above for poorer people whose livelihoods and security depend strongly on their environment. (UNEP, 2011, p. 17) The understanding of green jobs also varies from one country to another. Countries are composing their own national definitions and set thresholds for practices considered green or non-green. For example according to the Australian Government and their national Green Skills Agreement for sustainability define Green skills as

*“Skills for sustainability, also known as green skills, are the technical skills, knowledge, values and attitudes needed in the workforce to develop and support sustainable social, economic and environmental outcomes in business, industry and the community.”* (NCVER, 2008, p. 3)

In the last decade various organisations focused on this improving the Green economy and their corresponding area of intervention and outlined inventions concepts for Green skills, these are summarized in the table below.

**Figure 2: Overview of concepts for Green skills**

Summarized Overall Green skills concepts	
UNEP	"[Green Economy] results in improved human well-being and social equity, while significantly reducing environmental risks and ecological scarcities. In its simplest expression, a green economy is low carbon, resource efficient, and socially inclusive. [...] In a green economy, growth in income and employment should be driven by public and private investments that reduce carbon emissions and pollution, enhance energy and resource efficiency, and prevent the loss of biodiversity and ecosystem services." (UNEP, 2011, S. 16).
OECD	"Green growth means fostering economic growth and development while ensuring that natural assets continue to provide the resources and environmental services on which our well-being relies. To do this it must catalyse investment and innovation which will underpin sustained growth and give rise to new economic opportunities." (OECD, 2011)
Worldbank	„Green Growth – that is, growth that is efficient in its use of natural resources, clean in that it minimizes pollution and environmental impacts, and resilient in that it accounts for natural hazards and the role of environmental management and natural capital in preventing physical disasters." (World Bank, 2012, S. 30)
Sectoral Concept	
OECD	"The environmental goods and services industry consists of activities which produce goods and services to measure, prevent, limit, minimise or correct environmental damage to water, air and soil, as well as problems related to waste, noise and eco-systems. This includes cleaner technologies, products and services that reduce environmental risk and minimise pollution and resource use." (OECD, 1999, S. 9)

Conclusively and as outlined no joint definition of green skills is available. Important to mention here is that the distinction between new environmentally-driven occupations and greening existing occupations is often difficult to sustain and requires a significant element of judgement. Systems for defining and responding to environmentally-driven skills needs are already well established in some states nevertheless lacking implementation in developing countries and countries in transition.

### 3.2 Green skills and Technical Education and Vocational Training

The transformation to greener economies provides an opportunity to reduce social inequalities. (Strietska-Illina, 2011, p. 7) In the revision of current situations and the policy frameworks and skills needs Technical Education and Vocational Training (TVET) play a central role as implementation concept for sustainable development and green economy. Apprenticeships are prepared to consider environmental aspects for appropriate applications in their professional work. In principle TVET occupations can therefore become greener.

Skill needs are related to knowledge about policies and regulations as well as the ability to adopt, adapt, implement and maintain skills. Innovation and new markets require management, design, planning and leadership skills.



Accordingly Green skills in TVET are the competences, training or experience that are related to one's own responsible behaviour as well as to technologies or materials that minimize environmental impact.

*“Despite including some individual skills training responses in environmental strategies and programmes, and progressive development of diverse environment-related programmes in vocational and higher education systems, there are no explicit national strategies targeting skills needs for greening the economy”.* (EU, 2010, p. 21)

Skills diversification is therefore crucial and Green skills add a variety of specific and generic skills to it. With a focus on more diversification of existing skills relating to the green economy among existing trades and professions the green economy continues to progress and constant change. (Strietska-Illina, 2011, p. 21)

Green skills will on the long-run become generic skills and therefore are becoming critically important for many occupations. Generally generic skills include for example *“...sales and customer service skills for some occupations engaged in delivering energy efficient technologies to consumers; management and leadership skills for workers in intermediate trades seeking promotion and entrepreneurial skills for nanotechnologists seeking to commercialise a new invention.”*(CEDEFOP, 2012, p. 106)

Conclusively General Education and the integration of new requirements into already existing occupations are also crucial for a concept of the sustainable integration of environmental behaviour. While reviewing the TVET sector in developing countries and countries in transition it is proven that the wide spread view on TVET is rather critical. Lacking lifelong education concepts and the cost intensivity of specific Green skills in the TVET system make TVET Green skills development very challenging. The significant and necessary process of greening the TVET sector is a core step towards more sustainable behaviour and practices.

The difficulties of defining and collecting green skills clearly delineates from one to other sectors. In addition, green skills in should be identified as part of a process perspective. Further challenges arise from the linkage with policies to ensure or improve the quality of employment.

### **3.3 Changing qualifications needs in general**

Measurements in the field of green skills development were carried out since the middle of the 1990's. Especially for the German development cooperation, Green Skills in the area of

TVET and labour market have been considered in project and programmes. The main reasons for this have been the challenges and aim to improve people's employability, to increase the production, competition and innovation capacities of the economies in the developing countries as well as to foster sustainable and ecological economic growth in the developing countries and at the same time work against climate change. This included the revision and extension of existing training concepts and programmes for teacher training programmes and technology transfer. (Mertineit, 2013, p. 61) These activities required a strong governmental leadership that can see the economic advantages by introducing further training requirements in their TVET systems. Many developing countries see the integration of the Green Economy aspect more as a hindrance to enter the global economy. From their point of view these are additional obstacles adding to the product requirements, certification like bio/ fair trade labels, which impede to compete with existing structures. Following a green economy approach is difficult and requires a long-term view and planning.

To outline and view economic advantages requires therefore also sufficient competences, skill and continues training. As outlined developing countries have the least responsibility for climate change and environmental degradation but suffer their economic and social consequences excessively and disproportionately. Special measures that could change employment-centred green transformations require the inclusion of:

- Capacity building for employers
- Entrepreneurship training and business coaching for young people and adults
- Environmental awareness training for decision-makers,
- Strengthen social dialogue mechanisms and a
- Increased capacity of formal education and training systems and institutions

These activities can only be undertaken if resources are available. It is therefore recommended that not only national governments but also international partnerships in developing countries take these recommendations into account both in environment programmes and in skills development programmes. (Strietska-Illina, 2012, p. 23)

Especially for the TVET sector it is recognized that these changing qualification needs require concepts of sustainable development and the development of sustainable TVET strategies. Greening TVET is an essential and cross-cutting theme for sustainable development. *"Greening TVET basically involves including new green knowledge, to provide a basis and new methods for developing new competences in TVET"* (Gleissner, 2012, p. 12)



### **3.4 Policy frameworks and Initiatives on the development of green economy and skills**

So far many existing projects, concepts and examples in the field of greening TVET introduce certain aspect of greening skills. Nevertheless until today these are just punctual activities and do not follow a comprehensive approach. Concepts have been developed by different actors, on what constitutes a Green Economy and skills development. With different emphasis it combines economic development and environmental sustainability. These are mainly macroeconomic concepts to collect and improve the environmental performance of the whole economy. Further concepts focus on the development of a specific sector for environmental goods or environmentally friendly products. (UNEP 2011, p. 22)

Based on the international debates on Green Economy and Green Growth also different ideas about how the employment effects of a green economy or the number can be measured on green jobs. In this context, developing Green Skills initiative and appropriate studies can help illustrate the employment potential of individual green industries, thereby legitimizing a sector-specific promotion.

In addition to the demarcation and registration of employment in the field of TVET and services, the overall employment effects can be considered to be caused by environmental policies to promote a green economy and the associated structural changes. (Jacob/Quitow/Bär, 2014, p. 10) Here the effects are considered to all sectors and thus take also distributional effects into account. In the international debate these employment effects are called 'development of green skills'. Reflections on the number of green jobs created or the employment effects will eventually be supplemented by a consideration of the quality of employment in a green economy. Here, two essential dimensions of qualitative employment effects can be distinguished. Firstly, it involves the change of employment profiles and the associated skill levels and requirements as outlines in Section 2 "green skills". The qualitative changes in labour demand as well as the necessary qualification – measures are put in the foreground as part of a transition to a Green Economy.

A second initiative is based on the quality of the workplace. Here the main interest is to address the impact of a green economy on working conditions, particularly in emerging and developing countries (decent work).

Policy instruments for the transition to a green economy cannot simply be transferred from one country to another, but must be adapted to the specific economic, institutional and social context. When evaluating different options for promoting the demand for labour in the context of Green Economy strategies an important step is the analysis of the respective value chains and the associated potential for the development of local supply chains. (Jacob/Quitow/Bär, 2014, p. 45)

Even with the introduction of environmental taxes or other control instruments with effects on energy or resource prices, the existing economic structures should be considered. As part of the integrated approach to employment promotion it is emphasized that the field of TVET does not only imply vocational training.

It also includes basic education and approaches to lifelong learning and professional development. In the context of a green economy comes as political control task monitoring the qualification requirements – growing green industries as well as the integration of these findings into demand-driven training and continuing education programs and courses added. Since the necessary qualifications can be covered by existing professions, often the improvement of existing vocational skills is of greater importance than the development of new green jobs. The specification of country-specific VET – requirements should therefore be an important part of Green Economy strategies.

The central importance of these aspects for the promotion of structural change and maximizing positive effects on employment is also emphasized in a variety of articles on the topic of Green Skills with a focus on OECD countries. (UNEP 2011, p. 20) The promotion of green skills in TVET, both from an economic as well as from a social policy perspective, plays an important role in the context of Green Economy strategies. Firstly, an active labour market policy and the promotion of green skills are important in order to support the development of growing environmental industries.

At the same time labour market and social policy instruments are needed to mitigate social job losses in declining sectors and thus to ensure the political legitimacy of Green Economy strategies. Finally, an appropriate employment policy should be adapted to the dynamic developments in the context of the integration of green skills in TVET. To make these possible capacities for integration and coordination of stakeholders from the private sector, civil society and academia are required.

In summary, strategies for greening growth focus on a broader concept of progress than just

GDP growth and aim to provide clear and stable policy signals to investors and consumers so as to:

- Achieve economic gains from eliminating sources of inefficiency in the use of natural capital;
- Encourage innovation which can deliver high rates of balanced growth;
- Foster new economic opportunities from the emergence of new green markets and activities; and
- Ensure that eliminating inefficiencies, fostering innovation and seizing new growth opportunities avoid the risk of bottlenecks and systemic crises.

Especially in the tourism sector human capital development has particular significance for innovation because skilled people create and use knowledge.

It spurs innovation through channels such as the generation of new knowledge, the adoption and adaption of existing technologies and ideas, and the ability to adapt to change and to learn new things. (Pratt, 2012, p. 15)

## 4 Green Skills initiative in TVET and tourism

### 4.1 Background and importance of including Green Skills in tourism

The tourism industry is a very demand driven and important global driven sector. With five per cent of the world's Gross Domestic Product (GDP) the sector provides around 6-7 per cent of total employment. After fuels, chemicals and automotive products the tourism sector ranks the 4th strongest sector in global exports. In over 150 countries, tourism is one of five top export earners, and in 60 it is the number one export. (Prokosch, 2011, p. 414) Therefore the tourism sector is a considerable and important economic sector for growth worldwide. The interrelation with other sectors makes Tourism, as transversal sector, an important global driver for innovation and environmental protection. *“Entrepreneurs and policy-makers are increasingly looking at innovation as key to improving environmental performance and achieving sustainable targets. Innovation is also essential to improve existing products and to develop more sustainable tourism products and experiences”.* (OECD 2013, p. 13)<sup>2</sup>

Tourism as human-resource intensive sector creates employment directly and leads to additional indirect employment creation. According to the UNWTO (World Tourism Organisation) *“...it is estimated that one job in the core tourism industry, creates about one and a half additional (indirect) jobs in the tourism-related industries...”* (Pratt, 2012, p. 40) This impact can be for example in developing countries much higher.<sup>3</sup>

Consequently developing tourism sustainably is a challenge for planners and policy makers. The current framework for developing green skills in tourism is outlined by the global trend to develop “sustainable tourism.” The sustainable tourism approach takes full account of the present and future economic, social and environmental impacts. This especially reviewing the needs of all participants involved, like visitors, private sector, the environment and touristic regions. (UNWTO/UNEP 2012, p. 7)

As outlines in figure 2 for sustainable tourism it is important to balance between different dimensions. The traditional mass tourism, like sun-and-sand resorts have still reached a constant growth stage. Nevertheless ecotourism, nature, heritage, cultural, and soft

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<sup>2</sup> „The OECD has a long-standing expertise on tourism. Tourism is located in the OECD Centre for Entrepreneurship, SMEs and Local Development (CFE). The Tourism Committee, created in 1948, acts as the OECD forum for exchange, and for monitoring policies and structural changes affecting the development of domestic and international tourism. It actively promotes the sustainable economic growth of tourism“ Source: (OECD 2012, p. 3)

<sup>3</sup> Compare with the best practice example from Mauritius, p. 27.

adventure tourism, as well as sub-sectors such as rural and community tourism are taking the lead in tourism markets and are predicted to grow most rapidly over the coming decades (Pratt, 2012, p. 29) The sustainability approach therefore describes policies, practices and programmes that considers the demand of tourists and visitors with fully involving the need of communities and regions that are affected. (Jurowski/Liburd, 2013, p. 5) The involvement of traditional values and the understanding of intercultural differences are core elements for a stronger involvement and benefit for local communities. This leads to more environmental responsible awareness, can contribute to poverty reduction and the sustainable use of natural resources. (Gatti/Mereu/Tagliaferro, 2001, p. 9)

**Figure 3: Definition of Sustainable Tourism<sup>4</sup>**

Sustainable tourism development guidelines and management practices are applicable to all forms of tourism in all types of destinations, including mass tourism and the various niche tourism segments. Sustainability principles refer to the **environmental, economic and socio-cultural aspects of tourism development**, and a suitable balance must be established between these three dimensions to guarantee its long-term sustainability. Thus, sustainable tourism should:

1. Make **optimal use of environmental resources** that constitute a key element in tourism development, maintaining essential ecological processes and helping to conserve natural resources and biodiversity;
2. **Respect the socio-cultural authenticity** of host communities, conserve their built and living cultural heritage and traditional values, and contribute to inter-cultural understanding and tolerance;
3. Ensure viable, **long-term economic operations**, providing socio-economic benefits to all stakeholders that are fairly distributed, including stable employment and income-earning opportunities and social services to host communities, and contributing to poverty alleviation.

Sustainable tourism development requires the informed participation of all relevant stakeholders, as well as strong political leadership to ensure wide participation and consensus building. Achieving sustainable tourism is a continuous process and it requires constant monitoring of impacts, introducing the necessary preventive and/or corrective measures whenever necessary. Sustainable tourism should also maintain a high level of tourist satisfaction and ensure a meaningful experience to the tourists, raising their awareness about sustainability issues and promoting sustainable tourism practices amongst them.

The current framework for the sustainability approach has been set at the 1972 UN Stockholm Conference on Human Environment, the 1980 World conversation Strategy and by three independent UN commissions, namely the Brandt<sup>5</sup>, Palme<sup>6</sup> and Brundtland Commissions established between 1977 and 1984. (Jurowski/Liburd, 2013, p. 4) The

<sup>4</sup> Source: (UNWTO/UNEP 2012, p. 2)

<sup>5</sup> "Program for Survival and Common Crisis"; The Brandt Report has been outlined by the Independent Commission, first chaired by Willy Brandt (the former German Chancellor) in 1980. The purpose was to review international development issues and to provide an understanding of drastic differences in the economic development for both the North and South hemispheres of the world. The report provided for the international community a forward-looking plan with concrete recommendation for balancing the wealth with the provision of public goods and the preservation of the environment. Compare with <http://www.brandt21forum.info/>

<sup>6</sup> "Program for Common Security"; Independent Commission on Disarmament and Security headed by Olof Palme, the former Prime Minister of Sweden. The Commission has recommended the establishment of a nuclear-weapon-free zone in Central Europe.

Commissions were independent UN Commissions to follow up on long-term sustainable goals, which were summarized as: *“the interlocking crisis of the global Common”* by the World Commission on Environment and Development (WCED, 1987, p. 4)

Especially the Brundtland Report, entitled *“Our Common Future”*, (WCED, 1987, p. 1) formulated the focus on growing awareness for sustainability. The aim of the commission was to create a united international community by identifying sustainability differences worldwide and to develop shared sustainability goals and recommending concrete solutions. The Brundtland Commission started looking for environmental issues with many interrelated issues comparing employment, health, ecological productivity, education, international trade. As a result, the Brundtland Commission came up with the first definition of sustainable development: *“...development that meets the needs of the present without compromising the ability of future generations to meet their own needs”* (WCED, 1987, p. 43). The Brundtland Report did not look at tourism as an independent development sector. This was only initiated in 1992 after the UN Conference on Environment and Development in Rio de Janeiro. The “Earth Summit” was the first occasion that leaders of states and institutions discussed policies related to tourism and to sustainable tourism. After the summit the UNWTO followed up the approach and formulated the Global Code of Ethics for Tourism (GCET).

The 10 guiding principles are a summarized and a comprehensive set of principles was designed to guide key-players in tourism development. The guideless were adopted in 1999 by the General Assembly of the World Tourism Organization; its acknowledgement by the United Nations two years later expressly encouraged UNWTO to promote the effective follow-up of its provisions. Although not legally binding, the code features a voluntary implementation mechanism through its recognition of the role of the World Committee on Tourism Ethics (WCTE)<sup>7</sup>. (Jurowski/Liburud, 2013, p. 8)

Consequently Initiating green skills in tourism respectively sustainable tourism is significantly more than just about achieving sustainability, it requires from tourists to managers and staff in restaurants, hotels, tour and travel companies, as well as tourism governing authorities, to be active participants in the creation of positive change by making decisions and implementing actions on a daily basis that will maximise economic, social and environmental

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<sup>7</sup> „As a subsidiary organ of the UNWTO General Assembly, the Committee reports directly to the Assembly. Members are elected in their personal capacities and not as officials of governments or representatives of their countries“ compare with <http://ethics.unwto.org/en/content/world-committee-tourism-ethics>

benefits and minimise associated negative impacts. (Strietska-Illina/Tessaring, 2005, p. 7) *“Governments have a key role to play in providing the enabling environment for green tourism. This includes creating a stable political and economic climate, secure land tenure, safety for visitors, favourable conditions for investors, and ensuring a good reputation and ‘brand’ for their tourism destinations. These conditions are created through government-led policies, plans and laws that guide and regulate the sector.” (UNWTO/UNEP 2012, p. 125)* Therefore further important is to managing tourism and not a destination; with the outcome of sustainable tourism being better places for people to live in, and for people to visit, and the measure of success being higher incomes, more satisfying jobs, and improved social, cultural and natural facilities. The key to the success of initiating green skills in tourism respectively sustainable tourism therefore, is an acceptance of responsibility by all involved parties. (Pratt, 2012, p. 37)

## **4.2 Initiatives on the development of green skills needs in TVET tourism occupations and best practice examples**

Until today only limited approaches are summarized to systematically develop green skills in tourism occupations. Examples demonstrate an innovative approach to certification in tourism, which requires tourism enterprises to work closely with their municipalities. This trend can be observed in many countries and in the following this will be outlined as an example for Egypt (Chapter 5).

Best practice examples involving the specific needs to TVET and tourism are limited. One best practice example can be seen in Vietnam. Here the EU is supporting the integration of skills into the overall TVET approach. Another example briefly sketched is the integration of sustainable development in polices and TVET in Mauritius.

### **4.2.1 Development of occupational standards for TVET in Vietnam**

The Vietnam Tourism Occupational Standards (VTOS) are defined as the standards of performance that people are expected to achieve in their work, and the knowledge and skills they need to perform effectively. With this purpose in mind, the VTOS were developed in partnership between the Vietnam National Administration of Tourism (VNAT) and the EU-funded Environmentally and Socially Responsible Tourism Capacity Development Programme



(ESRT) on the basis of the Global Sustainable Tourism Criteria (GSTC)<sup>8</sup>. The aim was to prepare national standards for the fast growing tourism industry in Vietnam and to set internationally recognisable standards for tourism jobs as the ASEAN economic community came into being in 2015. (Bodewig, 2014, p. 41)

Vietnam tourism green occupational standards have been developed for six key tourism areas – front office, housekeeping, food and beverage service, food preparation, travel operations and tour guiding. In addition, four specialist standards have been prepared for high demand occupations – onsite tour guides, tourist boat service crew, hotel managers and small accommodation operators. VTOS will provide more than 65 unique tourism qualifications from trainee level 1 to senior management level 5. These qualifications will cover all major occupations in hospitality, travel and tourism. (Bodewig, 2014, p. 49) VTOS qualifications can provide tourism organisations with a benchmark for recruitment, promotion and career development. The new standards will enable human resource directors and general managers to plan the workforce, ensure staff progression, and recruit qualified staff with the required competencies and also ensure a more profitable business through a more satisfying customer experience, referrals and repeat business. (Bodewig, 2014, p. 12) VTOS consists of a range of units of competence that specify particular skills, knowledge and behaviours/attitudes necessary to fulfil the job requirements satisfactorily. Each job (e.g. Front Office Clerk) will consist of a blend of functional, core and generic units (and at Levels 3-5 will include management units).

- Functional (technical) competencies are specific to roles or jobs within the tourism industry, and include the specific skills and knowledge (know-how) to perform effectively in their job (e.g. food service, tour guiding; etc).
- Core (common) competencies include the basic skills that most employees should possess (e.g., working with others, language and IT skills). These competencies are essential for anyone to do their job competently.
- Generic (job related) competencies are those competencies that are common to a group of jobs. They often include general job competencies that are required in a number of occupations (e.g., health and safety), as well as job specific competencies that apply to certain occupations more than others (e.g., close the shift).
- Management competencies are the generic competencies for roles in an organization that involve managing, supervising or influencing the work of others in some way. They

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<sup>8</sup> The Global Sustainable Tourism Criteria are the guiding principles and minimum requirements that any tourism business or destination should aspire to reach in order to protect and sustain the world's natural and cultural resources, while ensuring tourism meets its potential as a tool for conservation and poverty alleviation. Sustainability is imperative for all tourism stakeholders and must translate from words to actions. Compare with the homepage of the Global Sustainable Tourism Council initiated by the Rainforest Alliance, the UNEP, and UNWTO in an effort to come to a common understanding of sustainable tourism. Compare with <http://www.gstccouncil.org/>



may be specific to a job role (supervise housekeeping operations) or general to any supervisory/management role (arrange purchase of goods and services).

In summary, the VTOS responsible tourism standards have been prepared to give hospitality and tourism professionals' clear guidelines and standards on implementing responsible tourism practices in their work and in their businesses. The standards are aimed at managers and owners of hotels, restaurants, travel and tour companies as well as tourism governing authorities who wish to demonstrate their commitment to responsible tourism practices and gain recognition through certification. Units can be achieved individually as time permits, and accumulated as credit for a full diploma in responsible tourism. Colleges can also introduce the VTOS responsible tourism standards into their curriculum. (Bodewig, 2014, p. 22)

Responsible tourism is an approach to tourism activities that seeks to minimise the negatives impacts of tourism and enhance its positive impacts. At the core of responsible tourism are the principles of sustainable tourism, which according to the

UNEP and UNWTO aims to make optimal use of environmental resources for tourism development, maintaining essential ecological processes and helping to conserve natural heritage and bio-diversity. Further to respect the socio-cultural authenticity of host communities, conserve their built and living cultural heritage and traditional values, and contribute to inter-cultural understanding and tolerance. And most important to ensure viable, long term economic benefits to all stakeholders that are fairly distributed, including stable employment and income earning opportunities and social services to host communities, and contributing to poverty alleviation<sup>9</sup>

#### **4.2.2 Integrating Green skills in TVET for the tourism in Mauritius**

As outlined for Vietnam also Mauritius has developed in the last 5 years a profound approach for integrating education for sustainable development in TVET for the tourism industry. Tourism is becoming the first economic pillar of Mauritius<sup>10</sup> since the government is targeting to welcome 2 million tourists annually by the year 2015, representing in the last decade a regular yearly increase of 10%. (Dubois, 2010, p. 72)

*“The unique characteristics of small islands, both geographical and economic, limit their ability for a sound management of wastes. Mauritius is more vulnerable to this issue than*

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<sup>9</sup> Source: Unpublished information received by interviewing the HRM component leader of the project.

<sup>10</sup> Especially in Mauritius the indirect job creation in relation to the tourism sector is very high. One job created in the core tourism sector creates 3.76 jobs and therefore the country is worldwide one of the highest tourism employment multipliers. (Pratt, 2012, p. 40)

*other developing countries, as it has an excess amount of wastes produced by tourism, earmarked to be its first economic pillar.” (Dubois, 2012, p. 3)*

Therefore the government of Mauritius developed in 2008 the concept to “Building a Green Mauritius” with special focus of TVET for tourism. This so called “Maurice Ile Durable” MID policy, strategy and action plan with the vision aimed at promoting sustainable development follows the main emphasis to make Mauritius a world model of sustainable development, particularly in the context of small island states.

While the initial thrust was to minimize the dependency on fossil fuels through increased utilization of renewable energy and a more efficient use of energy in general, the MID strategy soon broadened to include all aspects of development, i.e. economic, social and the environmental aspects as these are considered crucial in the quest for a sustainable Mauritius. The MID strategy therefore rest on five selected core areas, namely Energy, Environment, Education, Employment and Equity (5Es). It now embraces the concept of becoming self-sustaining and promoting sustainable development in the 5Es. The government developed a clear ten-year MID Strategy and a detailed MID Action Plan to pave the way for the sustainable development of Mauritius. This approach was followed by the establishment of subsequently action groups based on the 5Es.

For Example one action group was formed with the focus on Education involving all Stakeholders and aiming *“to transform the current education system into an education for sustainable development (ESD) in order to achieve the MID vision. A two-day working session on the theme of education was carried out with representatives from the governmental and private institutions in Rodrigues. The objectives behind the national consultation process were to transform the education sector into an ESD as this will be the key driver towards transforming Mauritius into an intelligent nation state in the vanguard of global progress and innovation through the development of a culture of achievement and excellence.” (Dubois, 2012, p. 16)*

The two outlined examples, the comprehensive TVET driven approach in Vietnam and the governmental consensus driven approach in Mauritius clearly indicate that still many issues are driven by policy related and until today not fully implemented. The complexity in the categorisation of green occupations, the affiliate skills and activities is a key challenge and requires a long-plan harmonisation and implementation process.

## 5 Green skill initiatives and tourism in Egypt

### 5.1 Analysis of current status of Green skills initiative in Egypt in general

Egypt is facing a number of key environmental challenges due to limited access to resources including air and water quality, waste management, coastal pollution, nature protection and desertification. Especially these limited natural resources and rapid population growth in Egypt lead to unsustainable economic activities. These challenges have contributed to ecological problems and climate change threats.

Therefore the mandate for green skills development through education and training in Egypt is shared among many stakeholders, nevertheless the country lacks a comprehensive skills development strategy, the current situation *“...could be attributed to the lack of coordination between the multiple ministries and agencies working in education and training, and businessmen, on the one hand, and those working on environmental issues, on the other hand, which hinders the ability to identify and supply the labour market with the green skills and specializations needed. This notion stems from the review of available strategies, policies and programs in relation to skill development, and it has been further confirmed by the statements of relevant stakeholders....”* (ILO Egypt, 2010, p. 12)

There is a lack of a coherent and agreed national framework for coordination among various organizations. Despite the fact that there is a good understanding of green skills requirements among organizations concerned and a considerable amount of practical knowledge and experiences, many theories are and reforms are formulated but not implemented and have not reached the population nor decision makers. Further important is to point out that *“...the linkage between environmental policymaking and education and training policymaking is non-existent”* (ILO Egypt, 2010, p. 36)

An example of a development cooperation project<sup>11</sup> that tackles the indicated difficulties, is a pilot initiative implemented in cooperation with the German government to foster Human Capacity Development (HCD) in TVET for the integration of Green skills in selected occupational fields. (Bader-Labarre, 2013, p. 8)

The project's aim was the integration of vocational skills relevant to environmental protection in curriculum development and teaching practices. The project assisted in designing curricula and successively formulating recommendations for the practical

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<sup>11</sup> The project “Capacity Building for Sustainability in VET in Middle and Near East Countries” was implemented by the GIZ with financial support of the BMZ.

curriculum development in selected occupational fields. The target groups are skilled workers from TVET institutions who have responsibilities in curriculum development and teaching plan design as well as other skilled workers of several vocational areas from environmentally relevant organisations and technical ministries. The overall goal is the development of specific materials and a teaching plan to implement green skills into the selected areas.

Generally speaking the project leads to concrete results that focus on the initiation of networks of participating institutions and the elaboration of recommendations for taking environmental protection issues into consideration in curricula development. Further examples for teaching and learning aids for specific occupations have been compiled and organisational structures for curriculum development and implementation have been initiated and supported. (Mertineit, 2013, p. 66)

Conclusively the project example outlined above and other initiatives for introducing Green skills in Egypt are successfully implemented but lack sustainability, because of an inefficient enforcement of environmental regulations. As outlined especially the *“...response to green skills needs is mainly limited to the initiatives implemented, delivered in the form of short term courses, and no attempt has been made to integrate them into the formal education and training systems.”* (ILO Egypt, 2010, p. 36)

The lack of awareness and comprehension in Egypt show that basic skills as well as technical skills are clearly needed at different levels.

For Egypt to implement the right skills for green jobs is a prerequisite for making the transition to a greener economy. The identified gaps have been recognised as a major bottleneck in a number of sectors and activities, such as renewable energy, energy and energy efficiency and environmental services. They are also providing opportunities for the establishment of a new profile and for a coherent cooperation among active institutions.

## 5.2 Background and current status of Green skills initiative in Egypt

### 5.2.1 Background and general tourism trends in Egypt

Egypt tourism industry is one of the major sectors of the Egyptian economy. Egypt is the most popular tourist destinations in the Middle-East region. Despite the political changes the tourism industry remains an important and crucial sector; in 2010 around 14.7 Million international tourists visited Egypt. This represents an increase of around 17.6% over the previous years. This trend had a strong backlash in 2011 with 9.4 million tourists which represented a decrease of around 32.4%.

The arrival since then are steady rising again and Egypt could already register in 2012 around 11.1 million tourists. (UNWTO, 2013, p. 12) According to the General Authority for Investment and Free Zones (GAFI) the tourism sector contributed 48.8 billion Egyptian Pounds to the economy directly or 3.2 % of GDP and employed one in every seven Egyptians or 12.6 % of the labour force such that it offers 4 million direct and indirect jobs in 2013. (GAFI, 2014, p. 3)

The current political instability has a significant impact on the country's inbound tourism, nevertheless the industry is expected to bounce back again in future and regain its lost momentum. The Egypt Government has also adopted various initiatives, such as tourism promotion, branding and positioning of Egypt as a tourism hub, cultural promotion, golden weeks and other to boost the tourism industry.

It is likely that Egypt maintains these growth rates. For example the General Manager and owner of the Orascom Development Holding AG (Orascom Development) stated in an interview on the 16th of April 2014 that: *"We see light at the end of the tunnel and it's a great light."*<sup>12</sup>

The group operates a total of 29 hotels with 6,654 rooms and controls a land bank of approximately 105.8 million square metres. (GAFI, 2014, p. 7) The company is the leading developer of fully integrated towns that offer hotels, private villas and apartments, leisure facilities and supporting infrastructure.

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<sup>12</sup> Compare with: <http://www.handelszeitung.ch/unternehmen/samih-sawiris-bald-kommt-der-aegypten-boom-598090>

### **5.2.2 Current status and responsibilities for green skills initiative**

For Egypt the regulating body for the development of tourism profiles is the Ministry of Tourism (MoT) in close cooperation with the Egyptian tourism industry. Currently they are jointly establishing the necessary structure with the core policy areas include the establishment of a green unit within the Ministry to focus on implementing a number of projects for “Green Transformation” in the sector, and the establishment of a dedicated secretariat for the “Supreme Council for Tourism”.

The Council is headed by the Prime Minister and includes a number of relevant Ministers on its board, and this high level support will help to spur and co-ordinate future efforts in the green transformation of tourism. (ILO Egypt, 2010, p. 34)

### **5.2.3 The Green Sharm Initiative**

As a further example the MoT has also launched the Green Sharm Initiative (GSI). The main rationale of which is to effectively become environmentally sustainable and capitalise on ecotourism trends by adopting an holistic approach based on the four pillars of emissions mitigation, biodiversity, waste management best practices, and water conservation. These four pillars translate into 33 quantifiable projects to deliver a low carbon, environmental friendly city by the year 2020. (Pratt, 2012, p. 39) Sustainability advocates are confident that this initiative is embraced to foster substantive change in Egyptian green tourism policy. (Zaazou, 2013, p. 11)

Sharm al-Sheikh aimed to be the first initiative in a MENA country to transform a leading touristic city into a world class green destination, while providing thriving socio-economic development opportunities to its community. The lesson learned so far from the Green Sharm Initiative is that projects require a solid bases and transparent funding mechanisms. Funding has to be sponsored and supported by the highest levels of government leadership, and involves all relevant government stakeholders. Significantly Green programs must be designed along realistically achievable targets, that balance green impact, ease of implementation and initial capital investment, with acceptable trade-offs to each funding requirements on the project level. A comprehensive fund sourcing approach should be further elaborated, providing an appropriate buffer from internally generated revenues.

Donors with interest in green efforts should be selected and approached based on a structured filtering of donor and project attractiveness, starting with projects requiring large upfront investments.

#### **5.2.4 The Green Star Hotel Initiative**

Within the frame of the GSI the Green Star Hotel Initiative was launched in 2007. The Approach of the Green Star Hotel Initiative (GSHI) was initiated by the key players of the tourism industry and international donor organisations. They joined forces within the framework of the develoPPP<sup>13</sup> Programme of the German Federal Ministry for Economic Cooperation and Development (BMZ) with technical support of the GIZ.

The Green Star Hotel Initiative is a national eco-certification and capacity building programme, tailor-made for the Egyptian hotel sector to encourage Egyptian hotels and resorts to move towards more sustainability. (Zaazou, 2013, p. 2)

The aim of the GSHI is to have a profound impact on the further development of the main tourism destinations in Egypt. GSHI is doing this by encouraging and motivating the hotel sector to become active and commonly move towards the conservation and protection of natural resources by implementing the GSHI System into their hotel operations, training their staff and involving their guests accordingly.

By starting with the key sector in the Egyptian tourism industry, the hotel sector a first step is taken to move the whole tourism sector towards more sustainability. On the long run, other sectors such as cruise ships and diving should follow. The Green Star Hotel Initiative aims to have a profound impact on the further development of the main tourism destinations in Egypt and conserve the natural resources such as clean beaches and healthy marine sea life.

Green Star Hotel is doing this by encouraging and motivating the hotel sector to become active and commonly move towards the conservation and protection of natural resources, implementing the Green Star Hotel System into their hotel operations, training their staff and involve their guests accordingly.<sup>14</sup>

The Green Star Hotel Criteria are based upon the Global Sustainable Tourism Criteria (GSTC). Taking into account the local climatic characteristics and infrastructure of Egypt, the GSTC

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<sup>13</sup> DeveloPPP was set up by the German Federal Ministry for Economic Cooperation and Development (BMZ) to foster the involvement of the private sector at the point where business opportunities and development policy initiatives intersect. More information on: <http://developp.de/en>

<sup>14</sup> Source: <http://www.greenstarhotel.org>



criteria are completed and supplemented with measurable indicators and benchmarks. With regards to skills development the hotel has to prove within their training programmes that green skills are considered. Nevertheless the literature actually provided very little information on the requirement for staff development for receiving the Green star certificate. (Zaazou, 2013, p. 7)

Conclusively these initiatives focus more on the development of a legal and policy frameworks rather on improving the skills of employees. Both initiatives involve certain skills requirements; nevertheless do not explicit outline the needs for Green skills development.



## 6 Challenges for the integration of Green Skills into the economy

### 6.1 Overall challenges to integrate Green skills into the economy

As a conclusion it can be stated that re-structuring the economy towards a sustainable economy is not possible without the correspondingly qualified employees and employers namely the private sector.

The promotion of green skills need be improved and *“...businesses and consumers require more convincing evidence of the financial benefits before they invest, and it is up to governments to provide it. Furthermore, some forms of insulation and SPV systems may involve a substantial initial investment and lengthy payback periods. Support could therefore be targeted at those least likely to be able to afford the investment, such as SMEs and low-income groups, to ensure that the benefits of energy efficiency are distributed evenly”* (CEDEFOP, 2012, p. 9)

Additionally, further research into the education and training requirements for green skills is necessary. It is important to be aware of the existence of and to understand reasons for any mismatch between the supply of and demand for skills, to understand the attitudes of employers and training providers towards the expansion potential of the low-carbon economy and to provide advice to policy-makers on how policies and initiatives could be used to promote the development of a greener economy. The potential benefits are threefold: economic growth and more employment.

Here especially TVET plays an important role as it is contributing to the education system by offering training of skills for example in the field of environmental protection, energy and resource efficiency and renewable energies. However, this requires besides a suitable legislative framework, the development of demand driven competency-based curricula and comprehensive teachers' training programmes to improve expert skills, didactic-methodological know-how and knowledge of the respective sustainability policy context.

Including this in development cooperation project is an opportunity and a challenge for policy-and decision makers to use Green skills to improve and enhance their economies and education system.

In Egypt also scoping studies need to be conducted to determine the skills gaps and shortages; for instance, in the areas of renewable energy, cleaner production, and environmental management and services.

Another important aspect to consider is to carry out a life cycle analysis of green jobs in developing cooperation focusing as an example on certain occupations, looking at all aspects and impacts of the job and supply chain.

Conclusively and finally most important is a common and agreed global approach for the definition and introduction of green skills for all occupations. Developing Green economies and focusing on sustainability require a global key driving organisation with the full responsibilities and political power to coordinate, communicate and act as a policy advocate for Green skills.

Development of Best practice examples and success stories as well as the development of models are important to improve the perspective and to raise awareness.

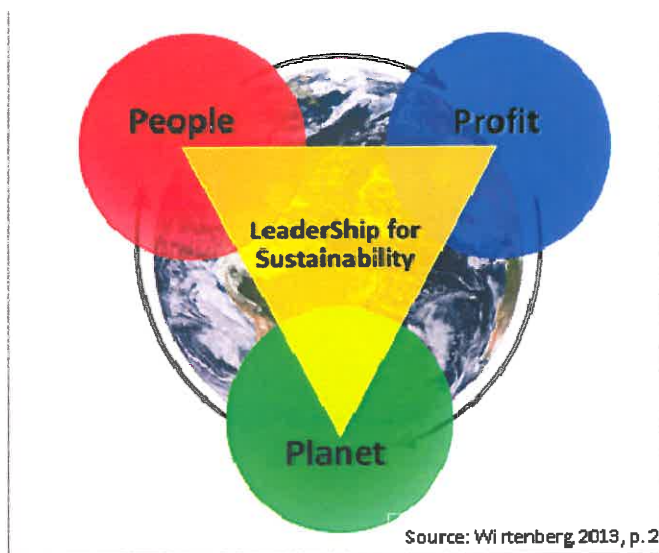
## **6.2 Analysis of challenges for the private sector and HRM development**

The globalization of national economies and the evolution of multinational enterprises and organisations have resulted in increased awareness and documentation of the differences in how skills development is managed with regards to environmental issues as well as a sustainable use of resources.

Especially because we are moving from an industrial-based financial system to a talent based economy, consumer and employee expectations and future environmental change require organisations to address environmental awareness.

The environmental sphere is influencing all areas of the private sector and can be illustrated as outlined in the following graphic. Clearly there is a growing need for the integration of environmental management and Green skills into training and skills development in the private sector.

**Figure 4: The environmental sphere influencing HRM**



For services-oriented business in particular, employee focused green initiatives can be extremely impactful since the workforce is often the largest single contributor to waste and pollution. Although green initiatives are often supported by an operations' division, HR can also play a role in reviewing how the business works and identify how people can act

differently in order to reduce their use of energy. Green management initiatives become an important factor in forward-thinking businesses around the world. Generally, researchers argue that employees must be inspired, empowered and environmentally aware of greening in order to carry out green management initiatives. Corporate green management requires a high level of technical and management skills in employees. (Aparna, 2012, p. 80) Therefore the competences of planners and management are crucial for a suitable tourism approach. Strategic planners, leaders and managers play an irreplaceable role in building the necessary organizational capabilities to guide the changes to a sustainable future. Leaders and managers of organizations require the requisite awareness, knowledge, skills, competencies and motivation to lead the way. Sustainable leadership skills are absolutely essential.

As outlined in the graphic the interrelation between the management, the employees and the environment is a crucial aspect to connect HRM to the profit oriented environmental behaviour.

Fostering Innovation through innovative on-the-job training and coaching can support employees to proactively plan and prioritize green product supply chains. In the process they practice negotiating ethical strategic alliances and build long-term win-win partnerships. For an embedded sustainable approach with operational impact employees require knowledge to succeed in a turbulent, global economy by developing the emotional and ecological intelligence, resilience, and agility, as they expand their organization's capacity for change. (Wirtenberg, 2013, p. 4)

The driving force behind the interrelation of Green skills in HRM is besides environmental

awareness the need to act profitably and for employees to work effectively in a multi-stakeholder environment that includes management to create shared value.

Therefore a sustainable and strategic private management is essential for participants to adopt a comprehensive (360°) view of private entities from a long-term, strategic and sustainable perspective. The transition towards a new holistic view of sustainable development is required to be followed and accordingly *“...the concept of improving efficiency by using a Human Resource Management Services not new to HR professionals. What’s evolving is the increased corporate focus on sustainability and green initiatives. Recent studies suggest this issue will be a persistent component of future business plans. As companies respond to the demands of their customers, investors, employees, and other stakeholders, green practices will become a regular way of doing business. For the HR department, using their technology to go paperless is a great way to support company objectives and set a positive example for the rest of the organization. The benefits are clear: lower costs, a better corporate image, and improved productivity in the HR department. Equally clear is the feasibility of implementing an HRMS—going green is definitely within the organizations reach.”* (Aparna, 2012, p. 83)

The long-term life cycle can only be maintained when management adopts a comprehensive view of businesses with sustainable perspective that includes addressing short-term needs and improves the profitability by quantifying strategically priorities for sustainability actions that bring the highest overall returns.

Further, the private sector requires interrelating and developing a sustainability culture that incorporates innovation and resilience in the face of continuous challenging changes. They further need to even more precisely operationalize, continually assess, and regenerate strategies for staff development and profit sustainability.

Concepts of HRM and the *“green-collar workforce”* (Park, 2010, p. 18) lead to the identification of two major types of occupational needs:

- 1) A few but selective specialists in sustainable technologies and other sustainability-specific skills and
- 2) Employees in “conventional” occupations as tourism who will need to bring new sustainable perspectives and skills to the work they already do.

Sustainability is on its way to be integrated into HRM as well as into roles all the way along the organisations hierarchy. Green skills will be an essential aspect employees will have to bring to practically any position.

*“This implies a need for continuous HRM with respect to sustainability in order to keep the workforce current with the changing business environment and shifting talent needs.” (Park, 2010, p. 16)*

Summarising it is clear that Green skills become a key of competitive advantage in the private sector. Being greener needs integration of environmental management into human resource management practices.

The HR strategy must reflect and inspire the ambitions of the HR team and other employees, aligning with the company’s strategy, values and culture, deliver sustainable returns to investors, address customer needs, identify and respond to emerging societal trends, respond to governmental and regulatory expectations, and influence the public policy agenda. The practice of green HR should be translated into the HR processes.

Finally the main reason introducing Green skills into HRM policies for the private sector would be not only the cost factor, but rather compliance with certain international quality standards and because these standards are imposed by the customers e.g. when the customer is a multinational European company that imposes rules for reputational or quality reasons.

## **6.3 Challenges and recommendation for tourism development in Egypt**

As outlined, the world is facing through occurrences like the global economic crisis and natural disasters like earthquakes, floods etc. a shift in thinking and behaviour of individuals, businesses and governmental entities. The tourism industry is heavily affected by these incidences.

To address such challenges the Mediterranean tourist destinations ought to avoid the intense competition, which can be deadly at the short and medium term, and should look for ways to cooperate.

The Mediterranean region is one of the most popular tourist destinations of the world and it has potential to increase its share in the tourist market. Improving green skills of employees is an improvement for the performance and reputation of tourist facilities and a forward looking investment in line with the global trends of the sector.

### **6.3.1 Challenges at the macro level**

As outlined in the given examples from Vietnam and Mauritius a strong governmental framework has been leading the formalised and policy orientation of their tourism green skills and green economy developments. The crucial issue to a successful implementation have been the joined commitment of civil organisations, public and private sector. The development of strategies and policy documents lead to the establishment of a consistent and transparent framework for TVET in tourism and sustainable tourism development.

The changing environmental conditions, national environmental policies and corresponding legalisation therefore are the crucial factors for driving the demand for the Green skills development.

As shown by the example of Mauritius the Government clearly set the framework for the development of Green skills in a national action plan outlining and describing an operational approach to follow the developed MID strategy on the five selected core areas, namely Energy, Environment, Education, Employment and Equity. Here policies are combined with clear activities and operations as well as concessive monitoring system.

The Governmental driven environmental policies in Egypt are dealt with in isolation and not really connected to a comprehensive skills development plan. (Mertineit, 2013, p. 31) The Examples from the Sharm Initiative and the Green Star Initiative neglect the policy level for



skills development and until today TVET in Egypt is not included in any sustainability or environmental strategies, *“...namely the lack of an official, structured, skills response strategy for greening Egypt.”* (ILO Egypt, 2010, p. 35)

The corresponding vocational policies are crucial, due to this a close coordination of environmental and vocational training policies is a key factor in achieving a successful transition to a more long-term green approach.

### **6.3.2 Challenges at the meso level**

Due to the challenges on the policy and legislative level the important challenges on the meso level are the strengthening of businesses as well as the institutional capacity development of public and private training institutions. On these institutional levels TVET training facilities, public and private training providers' etc. need to be further strengthened through for example sophisticated curricula development.

As shown in the example for Vietnam the government set a clear precondition for skills that are crucial to improve the environmental awareness for an environment friendly and sustainable tourism. The developed responsible tourism standards have been prepared to give clear guidelines and standards on implementing responsible tourism practices. This can even lead to an accumulated full diploma in responsible tourism.

Therefore in Egypt it is more important to develop a comprehensive approach/strategy. Especially in tourism, the improvement of existing vocational skills is more important than the development of new specialised green jobs or green TVET.

Until today too many actors in Egypt create parallel TVET structures and green initiatives that are organised by various donors as well as governmental entities are also not inter-linked sufficiently. The example from Vietnam shows that the improvement of generic skills and topping-up job-related skills are more important than developing specified green skills approaches.

*“These additional skills for specific sectors or technologies can be acquired relatively easily and quickly through upskilling with training, seminars or on the job.”* (Mertineit, 2013, p. 314)

This also refers to continuing training for skilled workers, managers and disseminators on the micro level (i.e. lifelong learning).

### 6.3.3 Challenges at the micro level

On the micro level (implementation and training level) the most important challenge is to improve the content of vocational education and training.

The necessity of skills training for sustainable development is explicitly important and in order to create new employment opportunities within the context of an ecologically oriented transformation of the economy, occupational profiles and curricula need to be expanded and renewed with respect to the protection of the environment and resources (Compare with chapter 5.1).

In order to accomplish this, qualified teaching personnel, close collaboration with the private sector as well as adjusting the vocational training infrastructure is necessary. Reviewing these challenges a comprehensive process is required for the integration of green skills into training and especially HRM of private entities have a leading role in creating best practices.

As outlined (compare with 6.2) the challenges are to enable the decision-makers and the management as well as the employees to translate HRM Green skills strategies into practice.

The training on environmental awareness for public decision maker and for the management of private companies is a crucial element to assure that they are gaining full staff cooperation towards implementing environmental policies. Human Resource Management is obliged to link HRM and Green skills development in an integrative and interactive way.

*“The sustainability of the hospitality and tourism industry is dependent upon managers who adopt sustainable development principles as part of their management philosophy. Achieving this aim requires the integration of the principles of sustainable development into the curriculum of hospitality and tourism management course.”* (Jurowski/ Liburd, 2013, p. 2)

Besides a clear and strong policy framework the support of management is the most essential ingredient for institutionalisation and for embedding single not related measures into a national framework. This especially refers to the tourism sector in Egypt. Some private companies' like the mentioned Orascom Development (5.2.1) are including these specific green skills for tourism requirements in their TVET training and curricula introduced in a privately managed hospitality and tourism school.<sup>15</sup>

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<sup>15</sup> *“The aim of the school is the implementation of the Dual Training System for the hotel industry on the Red Sea. Egyptian and international trainees are given the chance to acquire professional education in the hotel sector. At the end of the training period, the Chamber of Industry and Commerce conducts the examination of the trainees. If the trainees are successful, they are granted the German diploma of the Chamber of Industry and Commerce”* Compare with: <http://www.orascom-education.com/index.html>



## 7 Recommendation for Green skills tourism development in Egypt

### 7.1 Recommendation on the policy (macro) level

Egypt is facing a number of key environmental challenges due to limited access to resources (chapter 5.1). Therefore it is crucial that the governmental decisions-makers are closely cooperating with the private sector and other civil society organisation in the development of policies and frameworks, such as the development of **an official and structured skills response strategy** to greening the Egyptian tourism sector by the Egyptian Tourism Federation. Especially the existing and profound environmental regulations in Egypt are excellent bases to develop an **effective, efficient and transparent law enforcement mechanism**.

There is a need for further environmental harmonisation of these laws and their implementation in practice. Until today these are only implemented on a relatively small scale and focus, as outlined, largely on donor-supported programmes. For the enforcement of laws and regulations it is further necessary to **identify and establish one single entity** for collecting systematically data on green skills and knowledge of the workforce necessary to sustain the shift to a greening the economy e.g. **establish an presidential committee on Green Growth**. As summarized by the ILO: *“Ensuring a representation of environmental issues in the existing coordination’s platforms at different levels (ministerial and operational) is crucial to ensure a higher level of awareness and knowledge of the skills needs in relation to environmental sustainability, and thus the inclusion and consideration of these needs.”* (ILO Egypt, 2010, p. 37)

As the Egyptian Government is currently undertaking a number of reform activities in education and training, such as the implementation of the Strategic Plan of Higher Education, the implementation of the National Strategic Plan for Education, and the development of a strategic plan for technical, vocational education and training it is recommended to **integrate green skills and sustainable development within the formal education and training system**.

## **7.2 Recommendation for institutional support and businesses (meso level)**

For developing the skills requirements for greening the Egyptian tourism sector it is important to **identifying and promoting best practice examples in Egypt.**

As developed for the Green Sharm and Green Star Initiative **public and private<sup>16</sup> trainings institution require to be more closely linked** to the needs of environmental protection and profitability. Therefore the specifications of country-specific TVET requirements have to be formulated as part of a structured skills response strategy including the **development of jointly (private/public) driven incentive systems.**

The legislative framework is the basis to provide a clear strategy for the implementation level. Therefore on the meso level it is crucial to develop **clear main intervention areas on how to integrate green skills and how to make them profitable for the private sector.**

This for example in; recruitment, performance management and appraisal, training and development, employment relations, salaries and rewards as well as exit strategies.

It could also include **green performance indicators into performance management system and develop employment rewards systems.**

Furthermore Figure 4 recommends activities for each intervention area to increase profitable environmental awareness. (Renwick, 2008, p. 40)

Besides the government incentives systems the private tourism sector and civil society organisations **needs to harmonize coordination mechanism** to promote the needs of Green skills.

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<sup>16</sup> Excuse: "First private-public initiatives in Egypt lead to the foundation of the Heliopolis University for Sustainable Development. The Faculty of Business and Economics for Sustainable Development awards the B.A. Business and Economics, accredited by the Egyptian Ministry of Higher Education and based on the European Credit Transfer System (ECTS). Within the studies the academic staff follows a dynamic curriculum that addresses all topics related to sustainable business and economics. Additionally, the curriculum includes hands-on training, accredited internships, and a final thesis aiming at providing students with practical orientation and added value in the field." Compare with <http://hu.edu.eg/>

**Figure 5: Recommendation to increase environmental “profitable” awareness on the meso level<sup>17</sup>**

<p><b>Recruitment</b></p> <ul style="list-style-type: none"> <li>- Green job descriptions for employees (and green goals included into managerial job descriptions)</li> <li>- Graduate perceptions of Green practices (applicants use green criteria) Green job candidates</li> <li>- Recruitment of employees who are ‘Green aware’ becomes part of the interview schedule</li> <li>- Green employer branding (green employer of choice)</li> <li>- Green aspects introduced to the induction process (familiarization)</li> <li>- Becoming a green employer may produce other HR benefits, like increased staff motivation and/or engagement, reductions in labour turnover, and increasing workforce health</li> </ul>
<p><b>Performance management and appraisal</b></p> <ul style="list-style-type: none"> <li>- Green performance indicators into performance management system, and appraisals (PMA)</li> <li>- Communication of Green schemes to all levels of staff through PMA scheme, establishing firm-wide dialogue on green matters</li> <li>- Managers are set green targets, goals and responsibilities</li> <li>- Roles of managers in achieving Green outcomes included in appraisals</li> <li>- Writing and integrating green criteria in appraisals</li> <li>- Appraisals assess number of green incidents, use of environment responsibly, and successful communication of environmental policy</li> <li>- Penalties for noncompliance on targets in environmental management (EM)</li> </ul>
<p><b>Training and Development</b></p> <ul style="list-style-type: none"> <li>- Green pay/ reward system</li> <li>- Tailor packages to reward Green skills acquisition</li> <li>- Use of monetary-based EM reward (bonuses, cash, premiums)</li> <li>- Use of non-monetary based EM rewards (sabbaticals, leave, gifts)</li> <li>- Use of recognition-based EM rewards (awards, dinners, publicity, external roles, daily praise)</li> <li>- Develop negative reinforcements in EM criticism, warnings, suspensions for lapses)</li> <li>- Develop positive rewards in EM (feedback)</li> <li>- Link suggestion scheme to rewards system</li> <li>- Link participation in Green initiatives to promotion/career gains (managers advance through supporting staff in EM)</li> </ul>
<p><b>Employment relations</b></p> <ul style="list-style-type: none"> <li>- Employee involvement participation in Green suggestion schemes and problem-solving circles</li> <li>- Staff independence to form and experiment with green ideas Integrate staff into maintenance (cleaning)</li> <li>- Employee help-line for guidance in green matters</li> <li>- Tailor Green scheme to industry/company standards</li> <li>- Increase line/supervisory support behaviours in EM</li> <li>- Unions negotiating Green workplace agreements</li> <li>- Training of union representatives in EM</li> <li>- Green elements into the health and safety process</li> <li>- Encouraging employees to use green forms of transport</li> <li>- Set-up low carbon chiefs (including CEO and Board) to increase action in EM</li> </ul>
<p><b>Pay and reward</b></p> <ul style="list-style-type: none"> <li>- Green pay/ reward system</li> <li>- Tailor packages to reward Green skills acquisition</li> <li>- Use of monetary-based EM reward (bonuses, cash, premiums)</li> <li>- Use of non-monetary based EM rewards (sabbaticals, leave, gifts)</li> <li>- Use of recognition-based EM rewards (awards, dinners, publicity, external roles, daily praise)</li> <li>- Develop negative reinforcements in EM (criticism, warnings, suspensions for lapses)</li> <li>- Develop positive rewards in EM (feedback)</li> <li>- Establish PRP for all to gain green stewardship /citizenship (esp. seniors)</li> <li>- Link suggestion scheme to rewards system</li> <li>- Link participation in Green initiatives to promotion/career gains (managers advance through supporting staff in EM)</li> <li>- Use green tax breaks</li> <li>- Line have rewards to motivate employees in EM</li> </ul>
<p><b>Exit Strategies</b></p> <ul style="list-style-type: none"> <li>- Staff de-briefings in EM in cases of dismissal</li> <li>- Managers to ask if Green issues are reasons for resignations (moving to a Greener employer?)</li> <li>- Role of exit interviews to gauge perceptions of firm Greenness</li> </ul>

<sup>17</sup> Source: Renwick, 2008, p. 41

### **7.3 Recommendation for TVET training and modelling of business best practices (micro)**

At this stage it is fundamental to re-orient TVET curricula to **better prepare trainees for the conservation and sustainable use of resources**, social equity and appropriate development in order to mitigate negative effects on the climate as well as to develop competencies to practise green jobs at the workplace.

To do this, all national certificates and diplomas offered should be reviewed to ensure the integration of components of sustainable development into all TVET tourism programmes.

It is important to **initiate certified and continuous training programmes for skilled workers from TVET institutions** who have responsibilities in curriculum development and teaching plan design as well as other skilled workers of several vocational areas from environmentally relevant businesses, organisations and technical ministries as outlined in the regional project to build-up capacity for sustainability in TVET in Middle and Near East Countries (Chapter 5.1). Teacher education programme can change beliefs, norms and attitudes among students. In **this matter further research is required** to better understand how and under what circumstances education for sustainable development can affect students.

To compile the findings on different challenges (compare with 6) immediate action is needed. *“Utilise existing infrastructures and capabilities, such as the Egyptian Education, Training and Employment Observatory (EETEO) to ensure that a systematic approach to collecting data on green jobs and skills implications is operational.”*

Furthermore, it is well worth investigating if and how changes in norms and values affect teacher students’ willingness to take action for sustainable education as professional teachers. (Anderson, 2013, p. 48)

**Develop joint teacher initiatives with regular monitoring and evaluation systems based upon clearly defined goals and indicators**

**Businesses can improve immediately Green skills practices by on-the-job training.** This will raise awareness with easy interventions. Table five summarizes recommendations for on the job training in the hotel sector.

**Figure 6: Initial recommendations for the hotels in tourism sector to improve on-the-job Green skills<sup>18</sup>**

<p><b>Staff Training</b></p> <ul style="list-style-type: none"> <li>- Create a 'green team' at your business with the goal of continual improvement and scheduled re-evaluation and reporting.</li> <li>- Apply for a green certification (as the Green xxx).</li> <li>- Connect with other businesses and organizations to share best practices. See resources for ideas. (Trainee exchange program)</li> <li>- Create an incentive program to encourage your staff to participate in and improve upon environmentally-friendly practices.</li> <li>- Educate your staff to Turn off lights and turn down heating/air conditioning in unoccupied rooms or employee-only areas</li> <li>- Close/open drapes to reduce the need for heating/air conditioning</li> <li>- Continually check for and respond to leaking faucets and toilets</li> <li>- Continually check for and power down unused hotel equipment (i.e., kitchen exhaust fans) that have been left running</li> <li>- Report and reward opportunities to reduce resource consumption</li> </ul>
<p><b>Water and energy</b></p> <ul style="list-style-type: none"> <li>- Conduct or schedule a water audit</li> <li>- Start a linen (both towels and sheets) reuse program in all guest rooms</li> <li>- To reduce water use, consider rainwater harvesting and/or a grey water system</li> <li>- To reduce operational costs, water and energy consider installing an ozone laundry system</li> <li>- evaluate the total system when replacing major mechanical</li> <li>- Use an energy management system (EMS)</li> <li>- Replace or modify heating and air conditioning</li> <li>- Conduct an audit of equipment that uses standby power</li> <li>- Use daylight exclusively in your lobby, bar, and restaurant for as much of the day as possible</li> <li>- For roofs, use recommended levels of insulation, radiant barriers, and reflective roof coverings</li> </ul>
<p><b>Recycling</b></p> <ul style="list-style-type: none"> <li>- Provide guestroom recycler baskets for newspaper, white paper, glass, aluminium, cardboard, and plastic</li> <li>- Provide recycling bins both in public areas, in the kitchen, and in the back office to make recycling as easy as possible</li> </ul>
<p><b>Building maintenance</b></p> <ul style="list-style-type: none"> <li>- Include filter changes, refrigerator coil cleaning, thermostat calibration, water leak checks, and damper adjustments in your on-going maintenance plan</li> <li>- Monitor, record and post rates of energy and water use</li> <li>- Make repairs or replace equipment when usage changes indicate problems</li> </ul>
<p><b>Food service</b></p> <ul style="list-style-type: none"> <li>- If your hotel has a restaurant, consider transitioning it into a Certified Green Restaurant or Certified Green Commercial Kitchen</li> <li>- Buy organic, locally-grown food and/or plant an organic garden to provide fresh produce for your guests. Quick water and/or energy savers</li> <li>- Train kitchen employees to turn off ventilation hoods when the cooking appliances are off</li> <li>- Learn about other water and energy saving</li> <li>- Donate leftover food to a local non-profit organization and/or compost.</li> <li>- Provide reusable items such as cloth napkins, glass cups, ceramic dishes, etc. with all food and beverage services</li> </ul>
<p><b>Gift shops and merchandise</b></p> <ul style="list-style-type: none"> <li>- Sell sustainable, fair trade local preferred products</li> <li>- Integrate local communities to sell their products</li> </ul>
<p><b>Purchases of good and services</b></p> <ul style="list-style-type: none"> <li>- Create a green purchasing policy for cleaners, sanitizers, paints, pesticides and office supplies throughout the hotel</li> <li>- Buy environmentally-friendly paper</li> <li>- Use the Paper Calculator to compare the benefits of different recycled office paper products.</li> <li>- Minimize the amount of paper used for each guest and in the office for example reduce paper size of invoices, etc.</li> <li>- Buy office and guest amenity products that contain recycled material</li> <li>- Buy organic, fair trade</li> </ul>
<p><b>Guests and guest rooms</b></p> <ul style="list-style-type: none"> <li>- Come up with creative ways to reward hotel guests for being green (for example the Crowne Plaza offers a free meal vouchers to guests who generate electricity on the gym bicycle)</li> <li>- Provide your guests with bicycles, walking maps, and information on public transportation</li> <li>- Offer discounted rates to sustainable living/environmental organizations who would like stay at and/or hold meetings at your hotel</li> <li>- Donate leftover guest amenities, old furniture and appliances to charities</li> <li>- Provide glass cups and ceramic mugs for in-room beverage</li> </ul>

<sup>18</sup> Source: Go Green Hotels; Green Ideas for Hotels and Resorts <http://www.globalstewards.org/hotel.htm>

## **8 Conclusive remarks for green skills tourism development in Egypt**

In the current situation Egypt is facing a number of challenges to introduce Green skills. Overcoming the shortages in skills and the development of new skills' schemes would require the development of a shared broad understanding of the types of skills needed, and the likely demand for these over the coming decades. This would assist the task of developing appropriate training pathways, accreditation systems, and coordination with key stakeholders. The Egyptian Education sector has the required bases for forming and creating best practice examples. Education management and academic staff can drive initiatives, research and trends. Initialisations' to categorize and integrate Green skills in the formal education system would open public discussion. Accredited Green skills certificates for example would provide more confidence to people considering whether they should acquire one or more different types of Green skills.

The Egyptian tourism sector has high potentials to act complementary as the benchmarking and demand driven sector for the integration of Green skills. Already existing initiatives have to be supported and extended by solid governmental policies. Adopting green economy solutions in the tourism sector of Egypt is expected to result in better environmental management, biodiversity conservation together with economic and social development. To incorporate Green economy within the framework of tourism management is essential and truly a must. In this thesis a menu of Green economy solutions are presented combined with national and international case studies. Further steps should be taken to mainstream and deepen these approaches for concrete interventions.

Knowledge is the key and the creation of high level awareness to achieve sustainable behavioural changes remains the challenge.

The formation of institutions public-private-sector-interfaces with a focus on environmental and resource-efficient economic activities is an important basis for the successful promotion of the private sector as part of a Green Economy policy.

*"Tell me, and I will forget. Show me, and I will remember. Involve me, and I will understand!"*

(Lao Tse)



## 9 Bibliography

- Anderson, Klas; Jagers, C. Sverker; Lindskog, Annika and Martinsson, Johan (2013): Learning for the Future? Effects of Education for Sustainable Development (ESD) on Teacher Education Students. Edited by 5. 5135-5152 Sustainability 2013, Available online at [www.mdpi.com/journal/sustainability](http://www.mdpi.com/journal/sustainability).
- Aparna, Dr. K. Rao (2012): New Avenue to Human Resource Management: Go Green. Principal and Professor, The Oxford College of Business Management, Bangalore. In International Monthly Refereed Journal of Research In Management and Technology Volume I, pp. 80–84.
- Bader-Labarre, Dr. Klaus, Fath, Sabrina, and authors of the transfer projects (2013): Impact and Good Practices of Human Capacity Development (HCD) in the Organisational Context. Experiences from two regional projects in the MENA region. Mannheim. Available online at [http://www.giz.de/akademie/de/downloads/Impact and Good Practices of HCD in TVET.pdf](http://www.giz.de/akademie/de/downloads/Impact_and_Good_Practices_of_HCD_in_TVET.pdf)
- Bodewig, Christian (2014): Skilling up Vietnam: Preparing Vietnam’s workforce for a modern market economy. Vietnam Development Report, financed by World Bank.
- CEDEFOP (2009). Future skill needs for the green economy. Luxembourg: Publications Office. Available online at [http://www.cedefop.europa.eu/EN/Files/5501\\_en.pdf](http://www.cedefop.europa.eu/EN/Files/5501_en.pdf)
- CEDEFOP (2010). Skills for green jobs: European synthesis report. Luxembourg: Publications Office. Available online at [http://www.cedefop.europa.eu/EN/Files/3057\\_en.pdf](http://www.cedefop.europa.eu/EN/Files/3057_en.pdf)
- CEDEFOP-European Centre for the Development of Vocational Training (2012): Green skills and environmental awareness in vocational education and training. Synthesis report. Edited by Publications Office of the European Union.
- Council of the European Union (2010). Towards a greener labour market: the employment dimension of tackling environmental challenges: EMCO final report. EMCO reports. Brussels, 18 November 2010, Issue 4.
- Dubois Roland (2011). Situation analysis on education for sustainable development in TVET in Mauritius, UNESCO/UNEVOC.
- Dubois Roland (2012). Green skills in Mauritius, ILO.
- Dubois Roland; Koontee Balgobin (2010). A case study of practices for integrating education for sustainable development in TVET for the tourism industry in Mauritius, Integrating Sustainable Development in TVET, UNESCO/UNEVOC.
- Gatti, M.; Mereu, M.G.; Tagliaferro, C. :( 2001) Changing occupational profiles in the hotel industry: case studies in France, Italy and Spain: synthesis report / ISFOL. Luxembourg.



- General Authority for Investment and Free Zones (2014): Tourism, Invest in Egypt. Sector overview. Available online at <http://www.gafi.gov.eg/content/invsectorsdocs/TourismValueProposition.pdf>.
- Gleissner, Kai (2012): Greening TVET for Sustainable development. Report on the UNESCO –UNEVOC online conference.
- Guerra, D.; Peroni, G. (1994) Occupations in the tourist sector. A comparative analysis in nine Community States / CEDEFOP. Luxembourg: EUR-OP, 1994.
- Jacob, Klaus; Quitzow, Rainer; and Bär, Rainer (2014): Green Jobs: Beschäftigungswirkungen einer Green Economy.
- Jurowski, Claudia and Liburd, Janne (2013): A multi-cultural and multi-disciplinary approach to integrating the principles of sustainable development into human resource management curriculums in hospitality and tourism. Northern Arizona University. Available online at: <http://www.tandfonline.com/doi/abs/>
- Mertineit, Klaus-Dieter (2013): TVET for a Green Economy. GIZ Sector Programme Technical and Vocational Education and Training. Bonn und Eschborn.
- National Centre for Vocational Education Research (2008): Australian vocational education and training statistics. <http://www.ncver.edu.au/aboutncver/who.html>
- OECD Tourism Papers (2012): Green Innovation in Tourism Services. Available online at <http://www.oecd.org/cfe/tourism/> (OECD 2012)
- OECD: Green Innovation in Tourism Services. OECD Tourism Papers, (2013), In: OECD Publishing 2013. Available online at <http://dx.doi.org/10.1787/5k4bxkt1cjd2-en>.
- Park, Chris (2010): Sustainability in business today: A cross-industry view. Available online at <http://www.deloitte.com/assets>
- Pratt, Lawrence (2012): Tourism in the green economy. Background report. Madrid, Spain, Nairobi, Kenya: World Tourism Organization; UNEP.
- Prokosch, Peter (2011): Tourism. Investing in energy and resource efficiency. UNEP with assistance of World Tourism Organization. Nairobi.
- Publications Office of the European Union (2009): Future skill needs for the green economy. Research Paper. Luxembourg.
- Renwick, Dr. Douglas (2008): DISCUSSION PAPER SERIES, Green HRM: A review, process model, and research agenda. Discussion Paper No 2008.01.
- Skills for green jobs in Egypt. Unedited background country study (2010). Geneva: ILO.
- Comparative analysis of methods of identification of skill needs on the labour market in transition to the low carbon economy (2011). Geneva: ILO.

Skills for green jobs. European synthesis report (2010). Luxembourg: Publications Office of the European Union.

Strietska-Ilina, Olga (2011): Skills for green jobs. A global view: synthesis report based on 21 country studies. Geneva: International Labour Office.

Strietska-Ilina, Olga; Tessaring, Manfred (2005): Trends and skill needs in tourism. Luxembourg: Office for Official Publications of the European Communities (CEDEFOP panorama, 115).

Terminology of European education and training policy. A selection of 100 key terms (2008). Luxembourg: Office for Official Publications of the European Communities.

Tourism in the green economy. Background report (2012). 1st ed. Madrid, Nairobi: World Tourism Organization (UNWTO); United Nations Environment Programme.

United Nations Environment Program (2011): Green Economy. Pathways to Sustainable Development and Poverty Eradication.  
<http://www.unep.org/greeneconomy/greeneconomyreport/tabid/29846/default.aspx>

United Nations (1987): Our Common Future. With assistance of Gro Harlem Brundtland. Edited by World Commission on Environment and Development. New York. Available online at [http://conspect.nl/pdf/Our\\_Common\\_Future-Brundtland\\_Report\\_1987.pdf](http://conspect.nl/pdf/Our_Common_Future-Brundtland_Report_1987.pdf)

UNWTO Tourism Highlights. 2013 Edition (2013): The World Tourism Organization.

Wirtenberg, Jeana (2013): Leadership for Sustainability. People, Planet, and Profits in a New Green Economy. Transitioning to Green.

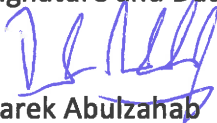
World Bank (2012). Inclusive Green Growth. Washington D.C. World Bank.  
[http://siteresources.worldbank.org/EXTSDNET/Resources/Inclusive\\_Growth\\_May\\_2012.pdf](http://siteresources.worldbank.org/EXTSDNET/Resources/Inclusive_Green_Growth_May_2012.pdf) (08.11.2013)

Zaazou, Hisham (2013): Green Growth in the Egyptian Tourism Sector. Berlin, updated on March 2013.

## Declaration of Authenticity

I, the undersigned, **Tarek Abulzahab**, declare that this thesis is my original work, gathered and utilized especially to fulfil the purposes and objectives of this study, and has not been previously submitted to any other university for a higher degree. I also declare that the publications cited in this work have been personally consulted.

Signature and Date:



Tarek Abulzahab

30.04.2014