

FROM STANDARD JOBS TO 'GREEN JOBS': A STRATEGY FOR DEVELOPING MARKETS

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Abstract

Like many developing countries, Thailand is currently coping with a host of environmental challenges and a need to reduce carbon emissions. To tackle this challenge, Thailand has produced policies designed to enhance environmental conservation. However, without the development of its labour force with suitable and up to date job skills this challenge becomes difficult to achieve. This paper presents a rationale for the emergence of green occupations as a means of transitioning Thailand's tourism sector into a low carbon economy. A mechanism for achieving this goal is by training and retraining the workforce with a set of well-defined green knowledge and skill sets. These can be developed through the development and implementation of 'green competencies'. This paper presents a methodology of how to transition a standard job into a green job in the tourism sector by developing green sustainable competencies.

Keywords: Green Jobs, Green Competencies, Climate Change, Tourism, Human Capital

1. INTRODUCTION

Nations around the world are in a process of rapid change and uncertainty and as a result, our lives are being transformed at a very rapid pace. In a period of fewer than 40 years we have experienced a revolution not seen before. New technologies, increasing trade across nations and regions, changes to our institutional frameworks, and the freeing up of capital markets and labour markets, have transformed nations, regions and the world of work (Pearson and Foxson 2012; Esposito 2008; and Reich 2000). Added to these massive changes is a deeper and overwhelming understanding and realisation that climate change requires urgent attention and action throughout our increasingly fragile planet (IPCC, 2013, 2007; Garnaut, 2011, 2008; and Stern 2007, amongst others). Furthermore, there is unquestionable evidence that climate change and environmental degradation presents a serious risk to our livelihoods and to future generations (IPCC, 2013; 2007) and that the scientific evidence is persistently showing that global warming has arisen out of anthropogenic causes (IPCC, 2013).

It is extremely likely that human influence has been the dominant cause of the observed warming since the mid-20th century. The evidence for this has grown, thanks to more and better observations, an improved understanding of the climate system response and improved climate models (IPCC, 2013, p. 3).

"Climate change and environmental degradation are jeopardizing the sustainability of many kinds of economic activity" and "... moving towards a greener economy is creating opportunities for new technologies, investment and jobs" (ILO, p. 2011a v).

As the world steps up to tackle and combat climate change, a series of new mechanisms and innovative idea implementations are emerging.

These innovative solutions are now going beyond simply 'saving' the physical environment. They are looking at improving the human and social capital of nations by transforming the way we do things at work. Human capital is the set of endowments or personal attributes that men and women possess in the form abilities, knowledge and skill, which when applied as worker activities provides a value to the economy (Becker, 1993). Thus, human capital is a factor of production, which when transformed to combat climate change can add considerable value to the sustainability of the environment. Hence, through investments in training and retraining, every potentially existing job could become a 'green job', impacting positively on our physical environment and improving our welfare, not only at this point in time but for future generations. Taking this to the next level implies that potentially, every single task and worker activity that we perform in our daily lives as global citizens and workers 'is green' and can provide a positive return to the environment. Adaptation and mitigation are the two current sets of policies that have emerged to tackle climate change. Mitigation is directly concerned with the reduction of greenhouse gas emissions. Government responses include the imposition of taxes on carbon emissions, the introduction of energy trading schemes, or the imposition of regulations designed to minimise waste, pollution and carbon emissions (IPCC, 2007). Adaptation, on the other hand refers to the "...actions by households, firms, other organisations and governments to respond to the impacts of climate change that cannot be avoided through climate change mitigation efforts" (Productivity Commission, 2012, p. v). These two types of policy responses have contributed towards the emergence of the green economy, which includes the set of economic practices "... related to reducing the use of fossil fuels, decreasing pollution and greenhouse gas

emissions, increasing the efficiency of energy usage, recycling materials, and developing and adopting renewable sources of energy” (Dierdorff, et al., 2009, p. 3).

These policy initiatives have created a green revolution which has been driven by technological improvements, innovations and social and economic imperatives. As the old economy shifts towards a greener economy (through a process of creative destruction) and workers are required to adapt to new greener technologies, the nature of worker activities changes and shifts to meet the skill needs, demands and requirements of new technologies, workplace innovations and social imperatives. This has resulted in the emergence of a new type of occupation: the ‘green job’. Transforming an economy in which standard jobs are transformed into green jobs is a means of mitigating and adapting to climate change. Therefore, the aim of this paper is to propose a methodology for transforming every ‘standard jobs’ into ‘green jobs’. The paper is divided as follows: the following section provides a discussion on the complexity of defining green jobs. This is then followed by a brief analysis of the tourism industry in Thailand and its labour market challenges arising out of skill shortages and gaps. A methodology for identifying skill weaknesses and gaps is provided for standard occupations by analysing their corresponding Thai competencies. This is followed by the creation of green competencies for a Thai cook, in order to transform the standard Thai Cook occupation into a green Thai Cook occupation. The paper ends with a conclusion and recommendations for further research in this emerging field.

2. DEFINING GREEN JOBS: A COMPLEX CHALLENGE

But what are green jobs, in the context of a rapidly changing labour market, economy and society? Defining a ‘green job’ is a complex and difficult task because the concept is new and evolves rapidly, having to adapt to new and complex conditions. As a result definitions of ‘green jobs’ are many and varied. An added complication is that a commonly accepted definition does not yet exist. For example, Dierdorff et al. (2009, p. 9; 2011, p. 14-15) identify nearly twenty distinct definitions in the US alone. According to the authors some definitions tend to be broad both in terms of the span and detail of the definition, while other definitions take an environmental impact approach. One such example of the environmental approach provided by Dierdorff et al. (2009 and 2011) is the one given by the US Department of Labor Bureau of Labour Statistics

A. Jobs in businesses that produce goods or provide services that benefit the environment or conserve natural resources. [Or] B. Jobs in which workers’ duties involve making their establishment’s production processes more environmentally friendly or use fewer natural resources (Dierdorff et al., 2011, p. 15).

The European Commission (2013) for its part classifies definitions of green jobs into two categories. One being the eco-industry approach in which jobs are classified into the nature of the activity and the other being the transformation approach, arguing that all jobs can become green.

The definitional approach taken by the ILO (2011a) is a more holistic one and takes into consideration not only the industry, economic and environmental concerns, but also social outcomes.

Green jobs” are defined as jobs that reduce the environmental impact of enterprises and economic sectors, ultimately to levels that are sustainable. This definition covers work in agriculture, industry, services and administration that contributes to preserving 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 is a working definition. It implies in its inclusivity and breadth that every job can potentially become greener. As time goes on and the transition to a green economy intensifies, what is considered a green job today might not continue to be so regarded. The understanding of green jobs also varies from one country to another. Ultimately, countries will need to compose their own national definitions and set thresholds for practices considered green or non-green (p. 4).

Central to this definition are the following elements: reduce consumption of energy and raw materials; limit greenhouse gas emissions; minimize waste and pollution; protect and restore ecosystems; fair work practices; and improvements to the welfare of nations. Furthermore, the ILO’s 2008 report “Skills for Green Jobs: A Global View” identified four drivers of change in skills requirements. These include: physical changes in the environment itself; environmental policy and regulation; technology and innovation; and changes in prices, markets and consumer habits.

The interrelationship of these drivers is important to recognise because they are mutually dependent and act as strong forces of change. These forces do not act in unison in developing and developed countries. For example, in developed countries, the major drivers of change have been caused by changes in consumer behaviour and the way in which market forces have responded and interacted. For developing countries, on the other hand, changes to the environment, regulation enforcement and policy changes have become essential instruments for change (ILO, 2011a and 2011b). Thus, governance and the appropriate mix of well-informed policy responses tend to play an important role in developing countries because they generate incentives for investment, development and technology transfers.

The transformation of jobs goes hand in hand with improving the skills sets of individuals and provides an improvement in human capital which leads directly to better productivity, employment creation, upskilling of the workforce and sustainable development. For developing countries such as Thailand, the benefit of this is that it can potentially short circuit the common

“... vicious circle of low-skill, low-productivity, low-wage and poor-quality jobs (which) traps the working poor, excludes workers from productive employment and inhibits the competitiveness of enterprises. Improved quality and availability of training can stimulate a virtuous circle in which skills development fuels innovation, increased productivity

and enterprise development, technological change, investment, diversification of the economy, and competitiveness - all factors that in turn sustain and accelerate the creation of more and better jobs (ILO 2011a, p. 23)".

As such, investments in the development of human capital towards the formation of green skills and competencies play an important role in the development of nations. Like many developing countries, Thailand is currently coping with a host of environmental challenges and an urgent need to reduce carbon emissions. To take this challenge, Thailand has produced strong policies designed to enhance environmental conservation (e.g. NESDB, p. 2011). However, without the development of its labour force with suitable and up to date job skills, knowledge and abilities this challenge becomes very difficult to achieve. A significant challenge faced by the Thai economy is to understand the skills and knowledge requirements of occupations in industry resulting from the increasing demand for a green sustainable economy. In view of this, the section that follows analyses the tourism sector in Thailand with its corresponding challenges into the future.

3. THAILAND'S TOURISM INDUSTRY AT A GLANCE

Tourism is an activity that is becoming more prominent around the world and has an impact upon nations and regions socially and economically. Its worldwide incidence has increased considerably because of increasing incomes, not just in the developed world, but in particular in developing economies, including different parts of Asia and Latin America and to a lesser extent some parts of Africa (UNWTO, 2005/2007).

Trying to define tourism is difficult because it is composed of a cluster of industries and is made up of a variety of activities that at times are interrelated or disjointed and fragmented, and as a result of this, there exists a variety of definitions of tourism.

The United Nations World Tourism Organisation (UNWTO), defines tourism as

"... a social, cultural and economic phenomenon which entails the movement of people to countries or places outside their usual environment for personal or business/professional purposes. These people are

called visitors (which may be either tourists or excursionists; residents or non-residents) and tourism has to do with their activities, some of which imply tourism expenditure (UNWTO 2005/2007, p. 5)".

For its part, the ILO (2013) defines tourism as *"... the activities of persons travelling to and staying in places outside their usual environment for not more than one consecutive year for leisure, business and other purposes (p. 3)".*

It is important to note that in its definition, the ILO explicitly explains that the

"Hotels, Catering and Tourism (HCT) sector differs from the definition of the tourism industry used by most organizations. The definition of the Hotels, Catering and Tourism (HCT) sector includes not only the services provided to travellers but also those for residents. For the ILO, the HCT sector comprises: hotels, boarding houses, motels, tourist camps and holiday centres; restaurants, bars, cafeterias, snack bars, pubs, night clubs and similar establishments; institutions that provide meals and refreshments within hospitals, factory and office canteens, schools, aircraft, and ships; travel agencies, tourist guides and tourism information offices; and conference and exhibition centres (p. 3)".

Table 1, shows a set of summary statistical estimates and forecasts for the Thai economy detailing the impact of travel and tourism. The data were obtained from the World Travel and Tourism Council (WTTC). The data shows that the direct contribution to GDP and the total contribution to GDP by travel and tourism to the Thai economy are quite substantial. Its direct contribution to GDP is expected to grow by 6.8 per cent p.a. to 1,698.4 THBbn (8.7 per cent of GDP) by 2023, while its total contribution to GDP is expected to grow to 7528.0 THBbn. Of significant impact is the growth in employment. By 2023, the total contribution to employment will be just over 7.5 million jobs. This shows that the impact of employment growth will have significant implications in terms of training and retraining in the Travel and Tourism industries in Thailand. As such early intervention into upskilling and transitioning the workforce into green jobs will be of great importance not only to the Travel and Tourism industry in Thailand, but also to the ASEAN group of nations.

Table 1. Summary statistics: Impact of travel and tourism on Thailand's economy, estimates and forecasts, 2012-2023

Thailand	2012* THBbn	2012 % of total	2013^ Growth	2023 THBbn	2023 % of total	Growth#
Direct contribution to GDP 8	825.6	7.3	6.2	1,698.4	8.7	6.8
Total contribution to GDP	1,896.7	16.7	7.4	3,833.0	19.6	6.5
Direct contribution to employment	2,020.0	5.2	10.1	3,465.0	8.1	4.5
Total contribution to employment	4,819.0	12.4	9.4	7,528.0	17.5	3.6
Visitor exports 1	1,022.4	12.1	5.7	2,336.7	11.1	8.0
Domestic spending 4	480.4	4.2	6.9	823.1	4.2	4.8
Leisure spending 1	1,189.3	5.7	5.9	2,525.3	6.9	7.2
Business spending 3	313.5	1.5	6.9	634.5	1.7	6.6
Capital investment 2	227.5	6.8	15.9	572.2	9.8	8.1

Source: WTTC, 2013, p. 11. * 2012 constant prices and exchange rates; ^ real growth adjusted for inflation (%); # 2013-2023 annualised real growth adjusted for inflation (%); ** 000 jobs.

4. LABOUR MARKET CHALLENGES FOR THE TRAVEL AND TOURISM INDUSTRIES

According to the WTTC the contribution of travel and tourism will continue to be an important component of world GDP, employing one person out of eleven of the world's total jobs (2013, p. i). By 2023, it is forecast that 17.5 per cent of people working in Thailand will be working in an occupation connected either directly or indirectly to the travel and tourism industry (WTTC, 2013, p. 11). With the emergence of different forms of demand driven sustainable tourism (e.g. ecotourism, ethical and green tourism) this will place considerable demands on Thailand's workforce and will place increasing burdens on the skill requirements and knowledge of people working in this industry. Similarly, these skill challenges and demands will not be too dissimilar to those found in the construction sector. As reported in Bangkok's The Nation newspaper, "...the main problems that need to be solved concern labour shortages and a lack of skilled workers" (The Nation, 2013). This assessment is clearly recognised by the NESDB (2011) which acknowledges that the "... shortage of skilled labour is a critical concern" to Thailand's future (2011, p. vi).

Added to this is the realisation that a move towards sustainable work practices will invariably lead to more and stronger pressures related to the training and retraining of the labour force, inevitably creating further skill shortages or gaps in the Thai economy. A *skill shortage*

"occurs when the demand for workers for a particular occupation is greater than the supply of workers who are qualified, available and willing to work under existing market conditions, and if the supply is greater than demand then there is a surplus. Over time, the market might adjust in a number of ways, including price and/or quantity adjustment, and the imbalance clears. A skills gap refers to a situation where employers are hiring workers whom they consider under-skilled or that their existing workforce is under-skilled relative to some desired level (Shah and Burke, 2003, p. v)".

As the realisation that actions need to be taken to protect the future of the environment become increasingly pressing, both the implementation of adaptation and mitigation policies will imply significant economic restructures. These will bring forth substantial skill shortages and gaps to the Thai labour market. The impact of this will be an enormous burden on the various education and training sectors. A rapid response to these labour market pressures, sooner rather than later, will relieve substantial bottlenecks in the Thai labour market in the not too distant future.

Another dimension of this complexity and challenge is to understand the magnitude of these skill gaps and shortages. In order to do this, it is important to begin the creation of a database of green skills and jobs, which will allow labour market specialists to forecast what these skill gaps will be in the future. These forecasts will provide policy makers with another tool to assist them in policy responses to issues related to skill shortages and gaps. Furthermore, a solid understanding of the nature of skill shortages and gaps will assist educational practitioners in the development of

tailored training and retraining courses to meet the increasing demand of green skills required by the Thai economy. These practices will also assist in the understanding of regional green skill shortages and gaps, particularly as the Association of South East Asian Nations (ASEAN) becomes more integrated as an economic region.

5. SKILL WEAKNESSES AND GAPS OF 'GREEN JOBS' IN THE TOURISM SECTOR

This section provides a methodology for identifying and analysing the skill gaps and weaknesses of a sample of priority occupations in the tourism industry in Thailand. To simplify the process I provide as a guide, an example of how the occupation 'Thai Cook' can be transformed into a 'Green Thai Cook'.

To begin to understand the skill gaps and weaknesses of 'green jobs' the ILO definition of green jobs was utilised as the baseline or frame of reference. This was done so that by having a defined benchmark then an analysis of the skill gaps and weaknesses for the sample of occupations in tourism and construction could be performed. A rationale for this is that this method of analysis can also become the basis under which a set of 'green skills' can be identified, thus assisting in the creation of a 'green skills' database. Another advantage of having a baseline or benchmark is that the analysis conducted can then be replicated by Thai labour market specialists to analyse the skill gaps and weaknesses in occupations that belong to other industry sectors, such as manufacturing, construction and retail trade, as well as other jobs in tourism. Thus central to the methodology adopted in the analysis, is the replication of the findings and methodology employed.

The ILO definition of green jobs assumes and implies that potentially every job in the economy can become green. The definition consists of three key components, and in order for any occupations to potentially become green, it must meet the ILO criteria of a 'green job' which consists of the following characteristics:

- The occupation must preserve and restore environmental quality.
- The occupation must meet the criteria of decent work, that is, adequate wages, safe conditions of work, worker's rights, social dialogue and social protection.
- The occupation must involve direct activities of mitigation and/or adaptation to climate change.

6. DETERMINING THE SAMPLE OF OCCUPATIONS IN TOURISM

In determining the sample of priority occupations for this analysis, the following steps were conducted. Firstly, a list of occupations was selected from the International Standard Classification of Occupations, 2008 (ISCO-08). This classification of occupations was used as the starting point to select the occupations under investigation. Discussions with technical officers from the ILO and Thailand's Department of Skill Development (DSD), Ministry of Labour, revealed that this classification formed the basis for much of the occupational classifications

used in Thailand and the ASEAN region. Furthermore, it was advised and recommended as a frame of reference for obtaining the sample of occupations under investigation in the tourism and construction sectors.

ISCO-08 is the ILO's classification structure for organizing information on labour and jobs. According to the ILO, this classification structure belongs to widely known families of economic and social classifications and is recognised internationally. The ILO argues that ISCO-08 serves as a tool for classifying occupations in defined sets of groups in terms of tasks and activities performed in different jobs. Furthermore, there exist cross-classifications of occupations with other occupational structures such as Australian and New Zealand Standard Classification of Occupations (ANZSCO).

ISCO-08 has the following characteristics and provides:

- a basis for the international reporting, comparison and exchange of statistical and administrative data about occupations;
- a basis for a model for the development of national and regional classifications of occupations;
- provides job descriptions;
- provides a system that can be used directly in countries that have not developed their own national classifications (ILO, 2012a, p. 4).

ISCO-08 offers developing countries such as Thailand with a host of labour market and educational functions and applications. Examples of these include the matching of job seekers with job vacancies, a source of reference to describe occupations and the development of vocational training programs and guidance (ILO, 2012a).

Using the ISCO-08 classification and emerging green job classifications, 65 occupations were originally selected in the tourism sector. This field of occupations was further narrowed down to six priority occupations in tourism. While the sample of priority occupations appears to be small, the analysis was limited to the fact that the occupations chosen for the analysis needed to be officially gazetted occupations. In other words, the occupations had to be registered by the Skill Development Promotion Committee, National Skill Standard, as developed by Thailand's Department of Skill Development (DSD), (DSD, 2002). These conditions classified these occupations as 'priority occupations'.

The data and documentation provided by DSD was an excellent source of information because it consisted of over 300 pages of detailed descriptive information related to the skill standards for each of the occupations under examination. In tourism, the sample consisted of the following occupations: room attendant (5151-2), baker (7512-2), Thai cook (5120-2), front desk receptionist (4224-2), Thai masseur (3259-3) and bartender (5132-2). The material contained in the description of each of the skill standards for each occupation was written in the Thai language. These were expertly translated by an expert Thai interpreted into the English language.

A particular characteristic of these jobs is that they are medium to low in terms of skill level as defined by ISCO-08. A skill level 3 or medium skill level, according to ISCO-08 is "... obtained as the result of study at a higher educational institution for

a period of 1-3 years following completion of secondary education" (ISCO-08, 2012a, p. 13), or equivalent whereas at level 2 or low skill level, competence is often "... obtained through completion of the first stage of secondary education" (ISCO-08, 2012a, p. 12) or equivalent.

Advantages of analysing occupations at these levels of skill are:

- in the context of the emergence of green jobs, low and intermediate skilled occupations seem to be ignored in terms of the analysis of emerging of green jobs;
- there is evidence in the literature that the creation of high skilled jobs has a spillover effect in terms of the creation of occupations at lower skilled levels (see Esposto 2008 and OECD 1998, for a discussion on labour market spillover effects). The creation of high skilled level occupations, will therefore create 'lesser skilled jobs' that will serve as support to high level occupations;
- medium and low skilled jobs are often at the frontline of sustainability and the green skills required to perform in these jobs need to be carefully considered to understand their impact on environmental mitigation and/or adaptation and the preservation and restoration of the environment; and
- understanding the green skills of these occupations is essential for the creation of training and retraining programs of employers at these skill levels, as well as the creation of a 'green skills' database.

Table 2 below describes the skill gaps and weaknesses for a sample occupation, namely Thai Cook. The table is comprised of two columns. Column 1, describes the ILO characteristics which serves as the benchmark to describe a 'green job'. Column 2, describes the gap/weakness manifested in each of the characteristics. A skill gap/weakness manifests itself when there is no mention of the ILO definitional component in the Thai skill standard. So, when we look at the first characteristic, after having analysed the skill standards for the Thai occupation 'Thai Cook', the analysis shows that there is a gap/weakness in that particular characteristic. Hence, column two describes the gap for "preservation and restoration of environmental quality". The description of the gap/weakness is therefore described in column 2 as "The document does not explicitly state issues related to the preservation and restoration of environmental quality". For the characteristic of "mitigation and/or adaptation", the skill gap/weakness is similarly described as "The document does not explicitly state issues related to mitigation and/or adaptation", and so on.

Decent work contains four sub-characteristics, which include adequate wages, safe conditions, social dialogue and social protection. Each of these sub-categories is described below, with the corresponding analytical finding: Adequate wages implies that the wage paid is a 'living wage' which is recognised as an international human right. The living wage includes wages and benefits paid for a standard working week. Its aim is to allow employees to earn enough income for an adequate standard of living and is required to meet at least legal or industry minimum wage standards. It is important to note, however, that "... there is neither

a generally accepted definition of what a living wage is, nor is there a generally agreed methodology on how to measure it". (Anker 2011, p. v)".

Table 2. Skill gaps and weaknesses for a sample occupation, Thai Cook

Occupation: Bricklayer's ILO green job's characteristics	Skill Gap/Weakness
Preservation and restoration of environmental quality	The document does not explicitly state issues related to the preservation and restoration of environmental quality
Decent work	
Adequate wages ⁵	The document does not explicitly state adequate wage levels. It is assumed that workers are paid according to Thai minimum wage legislative standards
Safe conditions	The document contains elements of occupational, health and safety standards that need to be adhered to and are part of the training
Worker's rights	The document does not explicitly state issues related to workers' rights
Social dialogue ⁶	The document does not explicitly state issues related to social dialogue
Social protection ⁷	The document does not explicitly state issues related to social protection
Mitigation and/or adaptation	The document does not explicitly state issues related to mitigation and/or adaptation

Source: Author's arrangement

In terms of a skill gap/weakness, adequate wages are assumed to be present in the tourism sector. As such, the weakness/skill gap is described as 'The document does not explicitly state adequate wage levels. It is assumed that workers are paid according to Thai minimum wage legislative standards'. As such, in this analysis, it is assumed that the average Thai employee working as a Thai Cook in the Thai tourism⁸ industry is not experiencing working conditions that are "...exploitative, harmful, or fail to pay a living wage (or worse, condemns workers to a life of poverty)" (UNEP, ILO, IOE, ITUC, 2008, p. 39).

In terms of safe conditions for this occupation, the skill standard has descriptions of required knowledge and skills related to occupational, health and safety provisions. As such, the skill gap/weakness is assessed as "The document contains elements of occupational, health and safety standards that need to be adhered to and are part of the training". In terms of worker's rights, the

document does not specifically state that workers have safe conditions in this occupation and the skill gap/weakness is described as "The document does not explicitly state issues related to workers' rights".

Social dialogue refers to the input of the worker/union "...to help determine the design of new sustainable production systems and work practices. These committees could work to identify ways to improve energy efficiency, more efficient use of water and other natural resources and raw materials, and low-carbon work schedules" (UNEP, ILO, IOE, ITUC, 2008, p. 27). The skill standard document did not include a provision for this, and as such the skill gap/weakness was described as "The document does not explicitly state issues related to social dialogue". Finally, the component of social protection, implies the presence for "income protection as well as adequate retraining and educational opportunities and, where necessary, resources for relocation" (2008, p. 308). This component was missing in the skill standard for Thai Cook and as a result the skill gap/weakness was assessed as "The document does not explicitly state issues related to social protection".

7. SKILL NEEDS OF A GREEN THAI COOK

The previous section identified the skill gaps and weaknesses for one of the priority jobs in tourism. This section now looks at the skill needs of the occupations by matching each of the components that make up a competency to the components that make up the ILO definition of green skills. This process addresses each of the 'green' gaps and/or weaknesses in each of the priority occupations. By creating, 'green units of competency' for a job such as Thai Cook we tackle the skill gaps and weaknesses discussed in the previous section and in so doing, the job or jobs in question can be transformed into 'green jobs'. Each unit of competency has 9 components. These are detailed in Table 3 below and are adapted from Commonwealth of Australia (2014).

The methodology employed to transform the unit of competency into a green unit of competency is as follows. Key components of the competency address the three characteristics of green jobs as described in Table 2 in the previous section.

The first two components, unit title and definition, and unit descriptor are descriptive in nature. Employability skills contain 8 transferable skills which address the three components of the ILO definition. For example, the employability skill initiative and enterprise is made up of two skills. These skills "Responds positively to environmental workplace changes and challenges" and "Identifies opportunities and maximises use of resources by recycling, re-using or using appropriate disposal methods and puts sustainable workplace suggestions into action" address aspects related to the three components of the ILO definition. The other employability skills also comply with the ILO definition, either partly or as a whole.

The fourth competency components are known as the elements and performance criteria of the competency. These components describe what the worker is able to do in a particular area of work, while the performance criteria describe how well the work should be completed.

⁵ Thailand introduced a nationwide minimum wage in January 2013.

⁶ UNEP, ILO, IOE, ITUC, Green Jobs. Social dialogue is seen as an important component, especially at work. It refers to the input of the worker/union "...to help determine the design of new sustainable production systems and work practices. These committees could work to identify ways to improve energy efficiency, more efficient use of water and other natural resources and raw materials, and low-carbon work schedules" (2008, 27).

⁷ Includes "income protection as well as adequate retraining and educational opportunities and, where necessary, resources for relocation" (UNEP, ILO, IOE, ITUC, 2008, p. 308).

⁸ The conditions of migrant workers is not included in this analysis due to data limitations and scope of the analysis, although it is widely acknowledged that many of these workers experience disadvantage in Thailand.

Table 3. Components of units of competency

Unit title and definition	This is an alpha-numeric code that follows ILO guidelines, accompanied by a short title which summarises the main job function covered by the unit. The unit title is a succinct statement of the outcome of the unit of competency. Each unit of competency contains a description of the occupation.
Unit descriptor	It is a short statement giving a more detailed description of the job function covered by the unit. The unit descriptor broadly communicates the content of the unit of competency and the skill/knowledge areas it addresses.
Employability skills	These are skills which are not specific to work in a particular occupation or industry, but are important for work, education, further training and life in general. The units contain 8 employability skills: communication, teamwork, problem solving, imitative and enterprise, planning and organisation, self-management, learning and technology. Employability skills are transferable. They contain elements that can be related to the three components of the ILO 'green jobs' definition.
Elements of competency	The major elements of the job function. These describe in output terms what a person is able to do in a particular area of work. The elements of competency are the basic building blocks of the unit of competency. They describe in terms of outcomes the significant functions and tasks that make up the competency ⁹ .
Performance criteria	This relates to the performance standards or tasks that are involved in each of the relevant job functions. It describes how well the work should be performed and allows for measurable outcomes. The performance criteria specify the required performance in relevant tasks, roles, skills and in the applied knowledge that enables competent performance ¹⁰ .
Required skills and knowledge	These are statements that outline key skills and required knowledge for the job function covered by this unit. The essential skills and knowledge are either identified separately. Knowledge identifies what a person needs to know to perform the work in an informed and effective manner. Skills describe the application of knowledge to situations where understanding is converted into a workplace outcome ¹¹ .
Evidence guide	The evidence guide describes: <ul style="list-style-type: none"> - conditions under which a competency must be assessed including variables such as the assessment environment or necessary equipment; - suitable methodologies for conducting assessment including the potential for workplace simulation; - resource implications, for example access to particular equipment, infrastructure or situations; and - the required underpinning knowledge and skills. -
Method of assessment	Describes the range of assessment methods that are available to assess the unit of competency.
Range statement	These statements clarify the scope and range of performance, including clarification on contexts, operations and equipment referred to in the performance criteria. The range statement provides a context for the unit of competency, describing essential operating conditions that may be present with training and assessment.

Source: Commonwealth of Australia, 2014. Adapted from CPC08 Construction, Plumbing and Services Training Package, Release 8, 13 April 2013, 388-392; SIT12 Tourism, Travel and Hospitality Training Package, Release 13 April, 2013, pp. 233-237.

⁹ These have been written to match the three criteria components that correspond to the definition of a 'green job' (ILO, 2011, p. 4) and are summarised in Table 2. Each of the elements corresponds to one of these criteria.

¹⁰ These have been written to match the three criteria components that correspond to the definition of a 'green job' (ILO, 2011, p. 4) and are summarised in Table 2. Each of the elements corresponds to one of these criteria.

¹¹ Each of the written knowledge and skill components correspond to the definition of a 'green job' (ILO, 2011a, p. 4). The three components are summarised in Table 2.

Each of these elements addresses aspects of the ILO skill definition. While these components are the same, they are not uniform across tourism

occupations, as each consider particular aspects of the given occupation. Table 4 describes these.

Table 4. Competency element match with ILO definitional component

Competency element	ILO definitional component
Identify current workplace resource use to minimise the effects of pollution at construction site and adjoining areas	Preservation and restoration of environmental quality (1)
Comply with Thai regulations and prepare for work following green environment conventions	Decent work (2)
Seek opportunities to improve resource use, efficiency and workplace sustainability	Mitigation and/or adaptation. (3)
Clean up	(1) and (3)
Waste disposal	(1) and (3)

Source: Author's arrangement

For "Required skills and knowledge" in tourism these components are arranged under each of the ILO component definitions. These are illustrated in

Table 5. The three last elements evidence guide, method of assessment and range statement are job

specific and vary according to the work activities, tasks, skills and knowledge that need to be considered in each occupation. The full competency for 'Green Thai Cook' is detailed in the section that follows.

Table 5. Required Knowledge and skill competency components for a 'Green Thai Cook'

Required Knowledge
<p>Preservation and restoration of environmental quality</p> <ul style="list-style-type: none"> - Basic knowledge of how to best reduce consumption of energy and raw materials in the workplace. - Basic knowledge on procedures to limit greenhouse gas emissions in the workplace. - Basic knowledge on how best to minimise waste and pollution in the workplace. - Basic knowledge on procedures to protect and restore ecosystems in the workplace, if applicable.
<p>Decent work</p> <ul style="list-style-type: none"> - Knowledge of Thai laws and regulations relevant to the work context. - Site layout including location of rubbish disposal bins is clearly understood. - Application of relevant environmental protection regulations and requirements. - Knowledge of environmental and resource hazards/risks and inefficiencies associated with own workplace.
<p>Mitigation and/or adaptation</p> <ul style="list-style-type: none"> - Workplace procedures and guidelines for the care of the environment at work. - Environmental risks and protection standards are adhered to when carrying out workplace operations. - Procedures and processes for waste and effluent regulation where applicable.
Required Skill
<p>Preservation and restoration of environmental quality</p> <ul style="list-style-type: none"> - Able to adopt basic procedures that reduce consumption of energy and raw materials in the workplace. - Able to identify and implement procedures that limit greenhouse gas emissions in the workplace. - Able to identify and implement procedures that minimise waste and pollution in the workplace. - Able to identify and implement procedures that protect and restore ecosystems in the workplace, if applicable.
<p>Decent work</p> <ul style="list-style-type: none"> - Communicate effectively to recognize procedures, follow instructions and respond to changes. - Work collaboratively with others when caring for the environment.
<p>Mitigation and/or adaptation</p> <ul style="list-style-type: none"> - Promptly report and/or rectify any identified problems that may arise when caring for the environment in accordance with regulatory requirements and workplace procedures. - Implement contingency plans for unanticipated situations that may occur when caring for the environment. - Recognise potential pollution risks and ways of minimising them. - Follow routine service and maintenance procedures for equipment and vehicles.

Source: Author's arrangement

8. TITLE AND DEFINITION: GREEN THAI COOK

According to the Thai national skills standards, a Thai cook is a person who is responsible for

preparing and cooking Thai food, including savories, desserts, and snacks following agreed methods of Thai style cooking. To become a green Thai cook, the person will have cognition and ability in this sustainable green competency.

Table 6. Description

Unit descriptor	This unit of competency specifies the outcomes required to work as a 'green Thai Cook' in the tourism/hospitality industry. It specifies the outcomes required to participate in green environmental sustainable work practices and addresses environmental and resource efficiency uses. It is aimed at transitioning the Thai tourism/hospitality industry towards a green industry. This set of 'green sustainable skills' and 'knowledges' must be applied in accordance to relevant Thai legislative and industry standards.
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Table 7. Employability Skills

Communication	Makes suggestions for improved sustainability workplace processes and reporting as required. Able to follow and apply instructions from site managers/supervisors in relation to sustainability. Can understand, interpret and apply sustainability environmental information, requirements and principles as directed. Understands organisational policies and procedures in relation to environmental sustainability. <u>Reports and records environmental workplace hazards and risks.</u>
Teamwork	Works effectively as part of a team and provides assistance and encouragement to other team members. Identifies and utilises the strengths of other team members. Relates to people from diverse social, cultural and ethnic backgrounds in a respectful, cordial and friendly manner. <u>Participates positively in on-site meetings, making suggestions for workplace improvements.</u>
Problem solving	Examines cooking tools and equipment prior to use for damage, missing components or other defects prior to commencing work. Identifies sustainable procedural faults and workplace problems and takes appropriate action and/or reports to manager/supervisor.
Initiative and enterprise	Responds positively to workplace changes and challenges. Identifies opportunities and maximises use of resources by recycling, re-using or using appropriate disposal methods and puts sustainable workplace suggestions into action.
Planning and organising	Identifies environmental workplace hazards and risks, and implements appropriate hazard control measures. Chooses appropriate materials, tools and equipment which minimise environmental hazards and maximises efficiency. Determines material quantity requirements and conformity to environmental standards. Applies correct time management skills to ensure satisfactory work completion and prioritises and sequences tasks.
Self management	Evaluates and manages own performance to meet sustainable workplace standards. Requests support and direction to ensure environmental efficiency. <u>Cleans up work area, including tools and equipment according to instructions and specifications.</u>
Learning	Identifies own learning needs and seeks skill development as required and has a positive attitude to learning new ideas, procedures and techniques, related to environmental sustainability.
Technology	Uses technology efficiently and implements new technologies in the workplace (including machinery, tools, etc) to ensure environmental efficiency.

Table 8. Elements and Performance Criteria

Identify current workplace resource use to minimise the effects of pollution in the workplace and adjoining areas.	Workplace environmental and resource efficiency issues are identified. Precautions are taken to ensure chemicals, detergents, and kitchen cleaning materials do not pollute the work environment and adjoining areas. Routine checks are conducted or organized to ensure a clean kitchen/workplace environment is present. Cleaning equipment is operated efficiently to minimise air and noise pollution and potential damage to the environment. Unnecessary running of kitchen equipment is avoided to minimise energy usage and pollution of the air/noise environment. Kitchen/worksites are kept clean and tidy during work operations and the disposal of waste is in accordance with environmental regulations and workplace procedures.
Comply with Thai regulations and prepare for work following green environment conventions.	Work processes are followed to ensure compliance. Sustainable ingredients are purchased according to regulations and instructions by supervisor/ manager. Material quantity requirements are calculated in accordance with sustainability plans and specifications. Sustainable environmental requirements are identified and applied according to Thai statutory and regulatory authority standards.
Seek opportunities to improve resource use, efficiency and workplace sustainability.	Suggestions and ideas are shared for improvements to workplace practices in own work area. Workplace practices to improve environmental practices and resource efficiency are followed. Meetings are held on a regular basis to adopt workplace policies to minimise/mitigate damage to the environment. Resources used in a sustainable and responsible manner, minimizing waste and pollution. Appropriate practices are used in measuring and documenting workplace resources. <u>Identification and reporting of environmental hazards to supervisors and appropriate authorities.</u>
Ensure clean up procedures are correctly adhered to.	Select environmentally sustainable equipment for cleaning task. Check that equipment is clean and in safe working condition prior to use. Select and prepare suitable wet and dry cleaning agents according to manufacturer instructions, work health and safety and environmental requirement. Select and use sustainable protective clothing where necessary. Tools and equipment cleaned, maintained and stored in safe location. Unused ingredients are safely stacked, stockpiled or stored. Equipment is cleaned to meet production and hygiene requirements <u>Cleaning is conducted in accordance with workplace environmental guidelines.</u>
Ensure waste disposal procedures are followed.	Waste is disposed of using appropriate sustainable procedures. Waste is disposed in a manner that minimizes environmental damage or is neutral to the environment. Waste is disposed in a safe manner without posing risk to third parties. Site is cleaned and cleared of debris and unwanted materials. Rubbish is deposited in designated rubbish disposal bins and according to regulatory specifications and chemicals and noxious products are safely stored, catalogued and safely handled. Select and apply correct cleaning agents or chemicals for specific work areas, surfaces and equipment, according to manufacturer recommendations, safety and organisational procedures. Avoid unhygienic personal contact with food or food contact surfaces. Avoid unhygienic cleaning practices that may cause illnesses. Maintain environmental conditions for specific food types to ensure freshness, quality and appearance.

Table 9. Evidence Guide

Overview of assessment	- A person who demonstrates competence in this unit must be able to provide evidence of the ability to follow workplace procedures according to instructions given, to participate in the improvement of environmental and resource efficient work practices at own level of responsibility. - Evidence must be strictly relevant to the particular workplace role. This unit of competency could be assessed in the workplace or a close simulation of the workplace environment.
Method of assessment	- Assessment should occur: - through appropriately simulated activities at the registered training organisation, and/or - in an appropriate range of situations in the workplace.

Table 10. Range Statement

Workplace environmental resource issues and requirements may include:	Large, medium or small kitchen; indoor/outdoor; clean-up protection; hygiene management techniques; waste management; cleaning chemicals and detergents; rubbish and effluent; noise; wastes; workplace personnel; site visitors.
Tools and equipment may include:	Barbecues; charcoal grills; cooking ranges; cutting, chopping and slicing implements; food processors; knives; microwaves; mincers; roasting drums; sharpening steels and stones; steamers; strainers; ovens; utensils; woks; cutting, chopping and slicing implements; grills and griddles; mortar and pestle; pans;; stone grinders.
Typical ingredients include:	Condiments; eggs; flour products; herbs and spices; poultry; meats; seafood; rice; vegetables; specific ingredients for particular Thai and other Asian dishes and cuisines.
Thai regulations, compliance, information and documents include:	Thai OH&S and environmental protection regulations; workplace procedures and policies; codes of practice for environmental protection; material safety data sheets; regulations and policies concerning hygiene and food handling; relevant Thai legislation, regulations and related documentation.
Suggestions may include ideas that help to:	Prevent and minimise risks and maximise opportunities such as usage of solar or other alternative forms of energy where appropriate; reduce emissions of greenhouse gases; reduce use of non-renewable resources; improve energy efficiency; increase use of renewable, recyclable, reusable and recoverable resources.
Information/documents may include:	OH&S and environmental protection regulations; workplace procedures and policies; codes of practice for environmental protection; material safety data sheets; regulations and policies concerning noise, waste disposal; environmental conditions such as temperature, humidity, ventilation, use of containers, etc; other environmental protection issues; relevant Thai legislation, regulations and related documentation.

9. CONCLUSION AND RECOMMENDATIONS

This paper presented a rationale for the emergence of green occupations in Thailand as a response to climate change, and as a way to transition the Thai economy into a low carbon economy by transforming the labour market under the assumption that 'every job can become a green job'. A mechanism for achieving this goal is through training and retraining the workforce with a set of well-defined green knowledge and skill sets. These skill and knowledge sets can be developed through the elaboration and implementation of green competencies.

The paper proposed a framework for transforming standard jobs into green jobs as an adaptation method to respond to the challenges emerging from climate change. As a model this was done by identifying and analysing the 'green skill' gaps and needs of one occupation as a means of transforming a standard job into a green job. To do this, a methodology to develop a set of green 'green competencies' was developed following the ILO definition of a 'green job'. This methodology can also be applied to transform occupations from other industry sectors into green jobs, not only in Thailand but in other economies facing climate change. To accelerate this process it is recommended that vocational institutions in Thailand as well as other parts of ASEAN and the world begin to adopt 'green competencies' as part of training and retraining programs in the vocational and academic sector.

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