

ILO Asia-Pacific Working Paper Series

Industry leadership in human resources development in Myanmar

David Lythe

March 2015



Copyright © International Labour Organization 2015
First published 2015

Publications of the International Labour Office enjoy copyright under Protocol 2 of the Universal Copyright Convention. Nevertheless, short excerpts from them may be reproduced without authorization, on condition that the source is indicated. For rights of reproduction or translation, application should be made to ILO Publications (Rights and Licensing), International Labour Office, CH-1211 Geneva 22, Switzerland, or by email: rights@ilo.org. The International Labour Office welcomes such applications.

Libraries, institutions and other users registered with a reproduction rights organization may make copies in accordance with the licences issued to them for this purpose. Visit www.ifrro.org to find the reproduction rights organization in your country.

Lythe, David

Industry leadership in human resources development in Myanmar / David Lythe; ILO DWT for East and South-East Asia and the Pacific. – Bangkok: ILO, 2015
(ILO Asia-Pacific working paper series, ISSN: 2227-4405 (web pdf))

ILO DWT for East and South-East Asia and the Pacific

human resources development / industry / skill / Myanmar

06.02

ILO Cataloguing in Publication Data

The designations employed in ILO publications, which are in conformity with United Nations practice, and the presentation of material therein do not imply the expression of any opinion whatsoever on the part of the International Labour Office concerning the legal status of any country, area or territory or of its authorities, or concerning the delimitation of its frontiers.

The responsibility for opinions expressed in signed articles, studies and other contributions rests solely with their authors, and publication does not constitute an endorsement by the International Labour Office of the opinions expressed in them.

Reference to names of firms and commercial products and processes does not imply their endorsement by the International Labour Office, and any failure to mention a particular firm, commercial product or process is not a sign of disapproval.

ILO publications and electronic products can be obtained through major booksellers or ILO local offices in many countries, or direct from ILO Publications, International Labour Office, CH-1211 Geneva 22, Switzerland, or ILO Regional Office for Asia and the Pacific, 11th Floor, United Nations Building, Rajdamnernok Avenue, Bangkok 10200, Thailand, or by email: BANGKOK@ilo.org. Catalogues or lists of new publications are available free of charge from the above address, or by email: pubvente@ilo.org.

Visit our website: www.ilo.org/publns or www.ilo.org/asia.

Printed in Thailand

Preface

Emerging from decades of economic, social, and political isolation, Myanmar today shows potentials for advancing with a new developing paradigm based on inclusive growth and poverty reduction. Having embarked on an ambitious program of sweeping reforms to progressively integrate its economy with the global system, Myanmar is facing a period of transition which is inevitably characterized by challenges and opportunities.

As part of this evolving scenario there is a need to ensure macroeconomic stability for sustainable economic growth. In 2010, Myanmar began shifting policies and sought to diversify foreign investment in the country. Indeed, economic growth in Myanmar has been strong over the past several years, with indications that GDP growth for fiscal year 2014 will be just below 8%. This predicted growth is supported by rising investment propelled by improved business confidence, commodity exports, rising production of natural gas, buoyant tourism, and credit growth - all complemented by the government's ambitious structural reform programme. It has also been estimated that by 2030 the GDP can quadruple and that 10 million non-agricultural jobs can be created.

Creating a business environment that is conducive for increased foreign direct investment as well as a vibrant domestic private sector is a key element in generating strong and sustainable economic growth. Myanmar's political transition and economic reconstruction are intimately entwined and achieving either depends on achieving both. Building labour institutions for both sectors in tandem will be a major challenge. The current reform process provides a rare opportunity for Myanmar to put the right institutional framework in place. The aim should be to create a more level playing field for business by eliminating the distortions and obstacles related to the complex political, legal, institutional and regulatory conditions that govern current business activities.

To catch up the rapid growth, skill development is the crucial link to improve productivity, employment growth and socioeconomic development. The ILO Recommendation on Human Resources Development Recommendation 2004 (No. 195) provides guidance on the content of effective skills policies and systems. In 2009, the ILO drew on the agreed framework with the G20 Leaders to develop a training strategy to support innovation and growth. Countries that have succeeded in linking skills to productivity, employment and development have targeted three main objectives: matching supply to current demand for skills; helping workers and enterprises adjust to change; and anticipating and delivering skills needed in the future in order to sustain a dynamic development process.

This study, *Industry leadership in human resources development in Myanmar*, focuses on industry leadership of human resources development in Myanmar so that the newly emerging economy can take advantage of the significant opportunities along with decent works for their people. Five sectors with strong economic impact and significant employment potential are recommended to be prioritised: agriculture; energy and extractive industries; manufacturing; infrastructure; and, tourism and hospitality.

This work also provides a detailed analysis of the prevailing mismatch between supply and demand by sector, the current state of skills supply and its social and labour-market

implications, growth trends in the economic sector and the investment climate as well as the current policies and legislation that could guide the country to employment creation and the provision of technical and vocational education and training (TVET). In addition, the study defines policy recommendations to help narrow the gap identified in the market and a preliminary analysis of TVET in informal enterprises and rural communities. Finally, this study reflects relevant concerns and is designed to assist policy makers in making informed judgments as to whether and how they can pursue the development and growth considering the current state and its social and labour-market implications.



Maurizio Bussi
Director
ILO Decent Work Technical
for East and South-East Asia and the Pacific



Peter Tschumi
Director of Cooperation
Embassy of Switzerland / Swiss Agency for
Development and Cooperation, Myanmar

Table of contents

	Page
Preface.....	iii
Acknowledgements.....	vii
Abstract.....	ix
Acronyms and abbreviations.....	xi
1. Introduction.....	1
2. An emerging economy.....	3
3. Priority sectors: demand for hard investment.....	5
3.1 Agriculture.....	6
3.2 Energy and extractive industries.....	10
3.3 Manufacturing.....	12
3.4 Infrastructure.....	15
3.5 Tourism and hospitality.....	18
4. Current HRD supply and TVET system analysis.....	22
4.1 Skills development for informal enterprises and rural communities.....	22
4.2 National supply of skilled workers.....	23
5. International models: Industry leadership in HRD.....	26
6. Establishing the Myanmar Skills Development Agency.....	28
7. Recommendations.....	36
Reference.....	39
Appendices	
i. Schedule of people interviewed.....	40
ii. Development of the ASEAN Qualifications Reference Framework.....	42
iii. Distribution of the workforce in economic sectors.....	43

List of tables

Table 1. Myanmar: twenty most important agricultural commodities.....	7
Table 2. Estimated employment in tourism and hotels.....	19
Table 3. Major TVET institutions and supervising ministries.....	24
Table 4. Distribution of the workforce in economic sectors.....	44

List of figures

Figure 1. Possible vocational qualifications framework.....	33
Figure 2. Employment and Skills Development Law.....	35

Acknowledgements

We would like to thank David Lythe, the principal author of the report, for taking on this challenging assignment. This report was completed with significant support from Mr Steve Marshall, the ILO liaison officer in Myanmar, and coordination and administrative efforts provided by its staff, in particular by Mr Htet Aung Myo. The support of Swiss Agency for Development and Cooperation (SDC) is valuable. The appreciation is also extended to Mr Nay Myo Zaw for his support.

To ensure its general application and validity, the finalization of this study benefited from valuable comments and inputs received from a consultation meeting with concerned tripartite partners and key stakeholders, including the Ministry of Labour, Employment, and Social Security (MOLES), the Ministry of Industry (MOI), the Ministry of Education (MOE), the Union of Myanmar Federation of Chambers of Commerce and Industry (UMFCCI), the Yangon Young Women's Christian Association (YWCA), the Karuna Myanmar Social Services (KMSS), the Myanmar Engineering Society (MES), the Myanmar Garment Manufacturers' Association (MGMA), the Tourism Federation, the United Nations Educational, Scientific, and Cultural Organization (UNESCO), the Deutsche Gesellschaft fuer Internationale Zusammenarbeit (GIZ), the Asian Development Bank (ADB), the Japan International Cooperation Agency (JICA), and the Hanns Seidel Foundation.

Most significantly, we would like to take this opportunity to thank Carmela Ilustre-Torres, senior skills and employability specialist, for initiating this study, and her technical provisions and guidance that ensured the quality of the content. In addition, Ms Wilawan Wiseschinda and Ms Ruttiya Bhula-or formatted and finalized this publication.

Abstract

This study has a focus on industry leadership of human resources development in Myanmar, so that the newly emerging economy can take advantage of the significant economic opportunities that are currently opening up. It has been estimated that by 2030 the country's GDP can quadruple, and that 10 million non-agricultural jobs can be created. This study considers five priority sectors with strong economic impact and significant employment potential: agriculture, energy and extractive industries, manufacturing, infrastructure, and tourism and hospitality. Human resources issues in these sectors are discussed and recommendations made.

The study reviews the current supply of qualified human resources in Myanmar. Approaches to human resources development in Malaysia and Singapore are summarized. A model is developed for Myanmar, which can be accommodated within recent legislation. Sector committees are proposed, through which industry leadership can be driven in partnership with a Myanmar Skills Development Agency. The low average productivity of Myanmar workers compared to workers from other Asian economies provides an urgent rationale for reform of skills training. Further impetus is provided by the Association of Southeast Asian Nations (ASEAN) Economic Community (AEC), to be established from 2015, in which all ten ASEAN labour markets will be unified, thereby creating both opportunities for high-performing workers, and challenges should Myanmar not move speedily to strengthen its human resources development.

About the author

Mr David Lythe is a specialist in post-secondary school education, training, skills development, and competency standards – in particular the ILO's Regional Model Competency Standards. With his expertise, he played a significant role in central government structural reform and the implementation of new policies in New Zealand from the mid-1980s. He retired in 2001 from the position of general manager of the Office of the Chief Executive of the New Zealand Qualifications Authority, and has undertaken consultancy, including project leadership, in a number of nations in Asia, the Pacific, and the United States of America.

The responsibility for opinions expressed in articles, studies, and other contributions rests solely with their authors, and publication does not constitute an endorsement by the International Labour Office of the opinions expressed in them, or of any products, processes, or geographical designations mentioned.

Abbreviations

AANZFTA	ASEAN-Australia-New Zealand Free Trade Area
ADB	Asian Development Bank
AEC	ASEAN Economic Community
AQRF	ASEAN Qualifications Reference Framework
ASEAN	Association of Southeast Asian Nations
BSNP	National Agency for Educational Standards (Badan Standar Nasional Pendidikan)
CAD	computer-aided design
CESR	Comprehensive Education Sector Review
CLM	Cambodia, Lao People's Democratic Republic, Myanmar
CVT	Centre for Vocational Training
FAO	Food and Agriculture Organization
FDI	foreign direct investment
FESR	Framework for Economic and Social Reform
FOB	free on board
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit
GDP	gross domestic product
GSP	Generalized System of Preferences
GTHS	government technical high school
HRD	human resources development
HTTC	Hotel and Tourism Training Centre
IHLCS	Integrated Household Living Conditions Survey
ILO	International Labour Organization
IMF	International Monetary Fund
IRRI	International Rice Research Institute
ISCED	International Standard Classification of Education
ISCO	International Standard Classification of Occupations
ITO	industry training organization
JICA	Japan International Cooperation Agency
KMSS	Karuna Myanmar Social Society
LSE	London School of Economics Enterprise
MES	Myanmar Engineering Society
MGMA	Myanmar Garment Manufacturers' Association
MIC	Myanmar Investment Commission

MMK	Myanmar kyat
MOAI	Ministry of Agriculture and Irrigation
MOE	Ministry of Education
MOE	Ministry of Energy
MOHT	Ministry of Hotels and Tourism
MOI	Ministry of Industry
MOLES	Ministry of Labour, Employment, and Social Security
MOM	Ministry of Mines
MOST	Ministry of Science and Technology
MOU	memorandum of understanding
MRA	Mutual Recognition Arrangement
MTF	Myanmar Tourism Federation
MVQF	Myanmar Vocational Qualifications Framework
NCDP	National Comprehensive Development Plan
NGO	non-governmental organization
NID	National Institute of Design
NMC	National Management College
NOSS	National Occupational Skills Standard
NSSA	National Skills Standards Authority
OECD	Organization for Economic Cooperation and Development
SDC	Swiss Agency for Development and Cooperation
SEZ	special economic zone
SITRA	South India Textile Research Association
TESDA	Technical and Skills Development Authority
TREE	Training for Rural Economic Empowerment
TVET	technical and vocational education and training
UMFCCI	Union of Myanmar Federation of Chambers of Commerce and Industry
UNDP	United Nations Development Programme
UNESCO	United Nations Educational, Scientific, and Cultural Organization
YESB	Yangon Electricity Supply Board
YMCA	Young Men's Christian Association
YWCA	Yangon Young Women's Christian Association

1. Introduction

This study was carried out during August and September 2013 by David Lythe, an International Labour Organization (ILO) consultant, supported by Htet Aung Myo, Programme Assistant at the ILO Liaison Office in Myanmar. Interviews and visits were completed over a period of three weeks with stakeholders in Yangon, and at Patheingyi City and Ngazun in the Ayeyarwady Delta. The aim was not to duplicate analysis already undertaken by development partners, but to interview key stakeholders and to make good use of information contained in the many recent reports on the economic and social development of Myanmar; then to draft a report with a tight focus on future leadership and human resources development (HRD) in industry. The assignment was to:

- a) review skills demand on a sector basis, and examine the existing mismatches between supply and demand in the labour market;
- b) conduct consultation meetings with concerned tripartite partners and key stakeholders such as the UMFCCI and its members, government or private training institutes, public and private employment services, and sector-based associations, to understand the current state of skills supply and its social and labour market implications;
- c) analyse growth trends in economic sectors, the various factors affecting economic growth, untapped local opportunities, and the investment climate, among others;
- d) review the current policies and legislation related to skills supply, and the provision of TVET, and define policy recommendations to help narrow the gap identified in the market;
- e) provide a preliminary analysis of TVET in informal enterprises and rural communities; and
- f) present and validate findings and recommendations in a consultation forum with tripartite partners and other key respondents, and revise the draft report by incorporating the inputs provided at the forum.

In 2012, Myanmar's population was estimated at 61.12 million, and will keep increasing in the next couple of decades. However, the structure of the population shows that it will start ageing earlier than other countries in the region at similar income levels. There is a risk that the population will age before incomes and living standards can significantly improve.¹

Documents prepared for the historic 2013 World Economic Forum meeting in the capital, Nay Pyi Taw, provided a valuable starting point for analysis of national economic and social development issues. It was noted² that "Myanmar's political spring has fuelled a rush of investors excited by the prospect of transformational change in a nation that for decades had shunned and been shunned by the West"; and that "the surge of interest ... has obscured the fact that Myanmar remains one of the least developed economies in the world." Seventy per cent of the population of 60 million lives in rural areas; electrification only reaches 26 per cent of the population nationally, and much less than this in rural areas.³

Solid progress is, however, being made in many areas of the economy. The government has established development goals through to 2030, and initial priorities through to 2015. The Employment and Skills Development Law was passed on 30 August 2013 to promote employment and skills training. The Cabinet Employment Opportunity Sector Working Group has been set up; one of 16 sector working groups established by the government to promote a coordinated and proactive approach to development effectiveness across all ministries and the whole economy.

¹ Organization for Economic Cooperation and Development (OECD): *Multi-dimensional review of Myanmar*, 2013.

² World Economic Forum: *Courageous transformation for inclusion and integration*, 2013, pp.7.

³ Asian Development Bank (ADB): *Myanmar energy sector initial assessment*, 2012.

Like a new car that has to be driven carefully and fine-tuned once or twice in its first few thousand kilometres, so that it eventually runs at peak performance, Myanmar could risk a crash or malfunction if it goes too fast too soon. So argued Helen E. Clark, administrator, UNDP, New York, a co-chair of the 2013 World Economic Forum on East Asia: "For Myanmar, a lot of boats have been pushed out and are midstream. It is now a question of prioritizing and sequencing the reforms."

Source: Courageous Transformation for Inclusion and Integration, World Economic Forum, 2013.

The UMFCCI is now redeveloping itself from representing government to employers, to becoming the key umbrella organization representing employers in Myanmar. From extended discussions with the Central Executive Committee members,⁴ it has become clear that the transition is proving to be a significant challenge, but that good progress is being made. The UMFCCI is represented on the Central Body established by the new Employment and Skills Development Law. The ILO will support the strengthening of the UMFCCI, and its affiliated sector bodies, so that it can carry out its new mandate, providing significant leadership in skills training and TVET generally.

Many industry associations are affiliated with the UMFCCI, which now functions as an employers' national association. The objectives of the UMFCCI are, in broad terms, to act as an advocate for the private sector, especially in terms of interests in government policy formulation, and to lead the Myanmar business community into the globalized economy. Membership at the time of writing included 53 business and industry associations, 18,310 Myanmar companies, 1,742 enterprises, 800 foreign companies, and 235 cooperatives.

⁴ U.H. Oo, vice-president Myanmar Fisheries Federation, and K. Thane, Managing-Director Golden Myanmar Information and Advertising Ltd.

2. An emerging economy

The McKinsey study⁵ of the economic and social opportunities and challenges facing Myanmar concluded that the average productivity of a worker in Myanmar today is about 70 per cent below that of benchmark Asian countries. The report noted that there are huge opportunities to quadruple annual GDP and to create an additional 10 million non-agricultural jobs by 2030. However, the Organization for Economic Cooperation and Development (OECD) warns that Myanmar has not yet accumulated the set of skills that may be demanded by the labour market in the years ahead. The OECD report makes it clear that a stronger focus on vocational training and a higher number of tertiary graduates in education and health are essential.

During the first Myanmar Development Cooperation Forum, held in January 2013, President Thein Sein announced that the NCDP for Myanmar was being drawn up and would be launched in 2013. The 20-year plan is positioned as the second stage of Myanmar's reform process – the first stage being political reform and national reconciliation undertaken between 2011 and 2012 – and will be made up of four five-year programmes to increase economic development and raise living standards in Myanmar.

The FESR was launched at the same forum, and outlined Myanmar's policy priorities up to 2015, towards achieving the long-term goals of the NCDP. The FESR emphasizes the importance of moving towards a market-driven economy, the need to move from top-down to bottom-up planning, and the development of free markets by employing direct and indirect government policy levers. The FESR is also intended to complement the goals under the government's fifth Five-Year Plan (2011–12 to 2015–16), which include: i) achieving average GDP growth of 7.7 per cent; ii) increasing the industrial share of GDP from 26 per cent to 32 per cent, and reducing its share of the agriculture sector; and iii) achieving GDP per capita growth of 30–40 per cent from 2010. The government has identified four policy priorities under the FESR:

- a) sustained industrial development to catch up with global economies;
- b) equitable sharing of resources among regions and states, and promoting foreign and local investment for regional development;
- c) effective implementation of people-centred development, to improve education, health, and living standards; and
- d) reliable and accurate gathering of statistical data and other information for better public policy decisions.

To achieve these priorities, the government will focus on “quick wins” in the following priority areas: fiscal and tax reforms, monetary and financial-sector reforms, liberalization of trade and foreign investment, development of the private sector, the health and education sectors, food security and improvements in the agricultural sector, governance and transparency, the telecommunications and ICT sector, and development of basic infrastructure.

The enactment of the Employment and Skills Development Law (Pyidaungsu Hluttaw Law No. 29/2013) provides a robust platform for better linking national economic and social development with HRD. The law provides for the establishment of a Skills Development Fund, and a central body for employment and skills development in Myanmar. “Skills development” can be interpreted as including all TVET. Noting that a link has not yet been made between these two national bodies, a major step forward would be for the new central body for employment and skills development to operate in a whole-of-government context provided by the Cabinet Employment Opportunity Sector Working Group. Both are led by the MOLES. The Employment Opportunity Sector Working Group process was launched by the government and its development partners to promote coordinated and proactive

⁵ McKinsey Global Institute: *Myanmar's moment: Unique opportunities, major challenges*, 2013.

approaches to development effectiveness in Myanmar. A key principle for the development partners is alignment of their activities with national priorities. The Employment Opportunity Sector Working Group will focus on the creation of employment, on fostering entrepreneurship, on maximizing job opportunities from FDI, and on TVET.

The Comprehensive Education Sector Review (CESR)⁶ has estimated that of the approximately 1 million young people who leave basic education and high school every year, only a few thousand are able to enter further education and training programmes. The last Labour Force Survey was published in 1990,⁷ so details of the current situation are limited. The total labour force was estimated in 2011 to be 32.5 million people.⁸ Data from 2010 indicates that women constituted 46 per cent of the labour force.⁹ The most recent data on the labour force is provided from the Integrated Household Living Conditions Survey (IHLCS) of 2011. There are some limitations, given that this survey was based on a sample. Some of the data shows significant differences between rural and urban areas. Casual labourers and contributing family workers constituted, respectively, 21.2 per cent and 16.1 per cent of the rural workforce, but respectively only 7.7 per cent and 9.4 per cent of the urban workforce. Employees constituted 36.2 per cent of the urban workforce, but only 12.9 per cent of the rural workforce. Although a low percentage of rural workers were classified as employees, 24 per cent of the rural population was landless. Labour market data from 1990 indicated that approximately 2.8 per cent of the workforce was at the professional level, 2.0 per cent was at the technician level, and 11.7 per cent was at the trade level.¹⁰ The current distribution of the workforce across economic sectors is in Appendix IV.

The short-term outlook is favourable. Notwithstanding the difficult external environment, Myanmar's economic prospects have improved, reflecting reform momentum and favourable business sentiment following the suspension of international economic sanctions. In 2012, growth was projected to accelerate to 6.25 per cent on the back of rising investment. Inflation was expected to rise to around 6 per cent, mostly due to the bottoming-out of food prices after moderation in the previous year. The budget deficit was projected to decline to about 5.25 per cent of GDP, with increased spending on health, education, and infrastructure, afforded by higher net revenues from state economic enterprises (SEEs), as a result of adopting a more realistic, market-based exchange rate in their operations.

Source: International Monetary Fund (IMF), Myanmar. Staff Monitored Programme 2013.

⁶ Swiss Agency for Development and Cooperation (SDC): *Technical and vocational training in Myanmar*, May 2013.

⁷ In cooperation with the MOLES and the Central Statistical Organization (CSO), the ILO is currently undertaking a comprehensive national Labour Force Survey, with analyses of school-to-work transition and child labour issues.

⁸ W. Aung: *Business opportunities in Myanmar*, 2012.

⁹ United Nations. *Work: Labour-force participation, unemployment, and economic data of employment*. Appendix IV to this report has a more detailed breakdown.

¹⁰ Department of Labour, MOLES: 2009 human resources development indicators (Nay Pyi Taw, 2011).

3. Priority sectors: demand for hard investment

The McKinsey analysis suggests that seven sectors can quadruple the size of the economy from US\$45 billion in 2010 to over \$200 billion by 2030, and create more than 10 million non-agricultural jobs. The analysis estimates that 85 per cent of the growth potential by 2030 comes from a further highlighting of four of the priority sectors:

- a) agriculture;
- b) energy and mining;
- c) manufacturing; and
- d) infrastructure.

With regard to employment potential, McKinsey suggests that manufacturing, infrastructure, and tourism can account for 92 per cent in employment growth through to 2030 from the key sectors.

The International Monetary Fund (IMF) has stated¹¹ that raising agricultural productivity is paramount to reducing rural poverty, and that private sector development through special economic zones (SEZs) will attract investment to address infrastructure bottlenecks, and allow a focus on labour-intensive export industries. The Tourism Master Plan reported¹² that in 2011–12 there were, for the first time, over 1 million international visitors to Myanmar, and that a target of 3 million had been set for 2015. The draft Assessment Study of TVET in Myanmar, carried out for the ILO by the London School of Economics (LSE) Enterprise,¹³ identified key sectors as manufacturing, infrastructure, agriculture, energy and mining, tourism, financial services, and telecommunications.

This report takes as its starting point that investment in HRD in Myanmar should assign immediate priority to the following sectors of the economy:

- a) agriculture;
- b) energy and extractive industries;
- c) manufacturing;
- d) infrastructure; and
- e) tourism and hospitality.

Once activity in these sectors is well under way, work can follow to support HRD for the rest of the economy.

Among Myanmar's intrinsic strengths are its rich endowments of natural gas, oil, and precious and semi-precious stones ... Myanmar is blessed with a large working-age population (aged 15 to 64) estimated at 46 million ... Myanmar is also fortunate in its location at the crossroads between Bangladesh, China, India, the Lao PDR, and Thailand, countries that are home to more than 40 per cent of the world's population and are huge potential markets. And by 2025 over half of the world's consuming class, that is those with an income of more than \$10 per day, will live within a five-hour flight of Myanmar.

Source: McKinsey Global Institute. Myanmar's moment: Unique opportunities, major challenges, 2013.

Employers, and others spoken with, had no experience of the breadth, flexibility, and lifelong learning focus of TVET, which is now common in other member states of ASEAN. Skills training in Myanmar

¹¹ IMF: *Country report*, Jan. 2013.

¹² Ministry of Hotels and Tourism (MOHT): *Myanmar Tourism Master Plan, final draft report*, June 2013.

¹³ London School of Economics (LSE): *Draft Assessment Study of TVET in Myanmar*, 10 July 2013.

is viewed narrowly, described as short, low-level training in the manual trades. TVET is commonly institution-based, relatively academic, and with no industry involvement and little practical work. Employers also knew little of the concept of a national qualifications framework, given that the current four-level skills certification system is ministry-led and -developed. Employers were, however, pleased to hear of the new Skills Development Law, and of the potential for industry leadership in HRD through industry sector committees, in which they would gladly participate.

3.1 Agriculture

Employers¹⁴ at the UMFCFI supported the selection of agriculture as a priority sector for investment in skills training. They further suggested that a suitable initial starting point could be inland fisheries.

The ILO 2013 draft report “Skills Development for Sectors in Myanmar” notes that agriculture remains overwhelmingly the most important employer in Myanmar. Agricultural products are essential to sustain the food security of the country’s growing population, and they also have export potential. This means that even if labour productivity grows in the years ahead, agriculture will remain the largest sector in terms of employment for the foreseeable future. The ILO report notes that the ADB 2012 report¹⁵ also identifies opportunities in complementary areas of agriculture and agri-food processing, such as marketing, storage, transport, and logistics. The importance of these activities will grow with the share of agricultural production for export, and will require the development of new skills.

Agriculture is a key sector in Myanmar’s economy, accounting for 36 per cent of GDP,¹⁶ the majority of the country’s employment, and 25–30 per cent of exports by value.¹⁷ The McKinsey report states that agriculture currently accounts for 52 per cent of workforce employment, and also notes that capturing the full growth potential of agriculture is critical to ensuring that the country’s economic growth is shared widely. As noted above, the IMF believes that raising agricultural productivity is a key to reducing rural poverty. The McKinsey report indicates that although water and fertile land is abundant, agricultural productivity in Myanmar is low, with output per worker of only around \$1,300 per year, compared with around \$2,500 per worker in Thailand and Indonesia. The report concludes that there is considerable scope to increase the production of fruit, vegetables, coffee, rubber, and other high-value crops, as well as the production of freshwater fish. The ADB has noted that between 1990 and 2010, the total area planted with rice, beans, sesame seed, and vegetables expanded, and output increased considerably. For example, the area planted with rice has nearly doubled, and production almost tripled. The ADB also observed that almost every rural household raises livestock, which contributes substantially to family nutrition and the farming economy. Family fish ponds are an additional source of food and income.

Announcing¹⁸ that the Ministry of Agriculture and Irrigation (MOAI), and the International Rice Research Institute (IRRI) will cooperate in the development of Myanmar’s rice production, U Myint Hlaing, minister of agriculture and irrigation, and the IRRI’s director-general Dr Robert S Zeigler, signed a memorandum of understanding (MOU) on the Myanmar Rice Sector Development Strategy. A total of 1.4 million tonnes of surplus rice were exported in 2012, and strenuous efforts were made to export 3 million tonnes of rice during 2013.

¹⁴ Principally, U Hnin Oo, whose views were sought on several occasions. He is vice-president of the Myanmar Fisheries Federation, and chairs the Myanmar Organic Agriculture Group.

¹⁵ ADB: *Myanmar in transition*, Aug. 2012.

¹⁶ LSE: *Draft assessment study of TVET in Myanmar*, 2013.

¹⁷ ADB: *Myanmar in transition*, Aug 2012.

¹⁸ *New Light of Myanmar*, 11 Sep. 2013.

Table 1. Myanmar: most important agricultural commodities

Commodity	Value (\$1000)	Weight (millions of tonnes)
Rice, paddy	8 109 981	33 204 500
Indigenous chicken meat	1 176 445	825 919
Beans, dry	1 155 280	3 029 800
Indigenous pig meat	704 810	458 490
Fresh vegetables	700 869	3 719 300
Sesame seed	587 328	880 000
Groundnut in shells	538 809	1 341 000
Fresh fruit	471 196	1 350 000
Indigenous cattle meat	405 363	150 058
Pigeon peas	377 089	724 200
Cow milk	355 313	1 138 600
Sugar cane	305 384	9 700 000
Onions, dry	238 997	1 137 900
Hen eggs in shell	231 897	279 600
Areca nuts	220 511	126 200
Sunflower seed	204 624	770 000
Chick peas	187 982	401 800
Plantains	162 090	785 100
Indigenous duck meat	137 642	83 543
Chilies and dry peppers	122 031	111 400

Source: Food and Agriculture Organization (FAO). 2012. Food and Agricultural Commodities Production – 2010 data.

In addition, the 2012 ADB report noted that the country's abundant water resources provide substantial fisheries in the major rivers, offering considerable potential for aquaculture development in the low-lying delta areas of the south and centre of the country. Training for this huge potential would need to be mostly community-based and rural. The UMFCCL has indicated¹⁹ that the Myanmar Fish Farmers' Association would support training initiatives and could be mobilized for this task. The Food and Agriculture Organization (FAO)²⁰ has confirmed that Myanmar has impressive freshwater fisheries. The inland waters include the interlocking and mingling riverine and estuarine systems of the Ayeyarwady (Irrawaddy, 2,150 kilometres long), the Chindwin (844 kilometres, a tributary of the main Ayeyarwady), and Sittaung (563 kilometres) rivers, plus the large Thalwin River (2,400 kilometres) to the east. The first three waterways have adjacent deltas and are arguably part of a larger joint system. Together these systems extend from the eastern part of the Bay of Bengal to the Gulf of Moattama and along the eastern edge of the Andaman Sea.

The FAO report also notes that the size and scale of activities and opportunities within the inland fisheries and aquaculture sector varies from very small scale to large-scale commercial operations. The livelihoods that were identified were:

- a) leasable fisheries (including sub-leasing);
- b) small-scale capture fisheries (artisanal fish trap operations, larger trapping gears, and trapping of fish resources in paddy fields);
- c) small-scale fish marketing;

¹⁹ Interview with U Hnin Oo, Central Executive Committee member, UMFCCL.

²⁰ Food and Agriculture Organization (FAO): *Myanmar mission report on inland aquaculture and fisheries*, undated.

- d) small-scale aquaculture (family ponds, hatcheries and additional services, and nursing);
- e) licensed fish ponds; and
- f) aquaculture support services (feed production and naturally-occurring fodder supply).

The Myanmar Times recently reported²¹ that former shrimp farmers in Rakhine State are restarting long-dormant businesses following encouraging rule changes by the European Union (EU), which has announced improved market access for Myanmar fisheries exports through its Generalized System of Preferences (GSP).

Fish farming can be highly productive. In the Thone Pwint Hsain Company,²² there are seven freshwater fish farming culture stations, all located at Arrawaddy Division (Delta region). The total area for all fish farming culture stations is over 2,000 hectares, all of which produce freshwater fish. The main fish culture species are *rohu*, *catla*, *cafu*, *mrigal*, *pangush*, *puti*, and tilapia. The fish are cultured naturally without using any chemicals, and the stocking density rate for small fish is 3,500 per 0.4 hectare pond. In one year, Thone Pwint Hsain can produce 20,000 metric tonnes, or over 50 metric tonnes daily, from its seven farms.

The seafood sector in Myanmar has a large potential to contribute to food security, employment, and economic development. Natural resources are widely available, and fisheries are an important source of income and animal protein for the country's population. Many products, like shrimp, crab, and sea bass have a large commercial potential in high-value markets in the EU and other overseas markets. To reach its full potential, many constraints at the production and export level need to be overcome.

Source: LEI Wageningen UR with the Dutch Centre for the Promotion of Imports from Developing Countries.

Regarding the supply of skilled workers, in Myanmar, there is one agricultural university, plus the University of Veterinary Science. The Ministry of Livestock and Fisheries has a Fisheries Science School and two breeding training centres. In a 2012 study²³ of agricultural extension services, Kyoto University found the services to be under-resourced, and, consequently, with poorly-motivated advisers. The advisers had poor transport arrangements, and there was little involvement of local people in the planning of extension activities. There is clearly much to be done to enhance workforce skills in this important sector of the economy.

The opportunity to expand farm output – both at the extensive margin (more land under cultivation) and the intensive margin (increased productivity) – remains enormous. With its good weather, abundant water resources, and large rural population, Myanmar could harvest this “low hanging fruit” as a source of growth in the near term, and further develop a vibrant export sector in farm products.

Source: *Myanmar in Transition: Opportunities and challenges*, ADB, 2012.

This report recommends that agriculture be a priority sector for HRD investment by the new Myanmar Skills Development Agency. The agency, with the support of the UMFCFI, should establish a sector committee to undertake a future-focussed, sector-wide scoping of workforce skills and knowledge requirements and priorities, and map out plans for the coherent and comprehensive identification of workforce competencies and qualifications across the value chain, from entry to advanced levels, as required in the sector. The committee will need to establish development subgroups of high-performing workers, to identify required skills and knowledge at all necessary levels, and to package these into

²¹ 2 September 2013.

²² www.thonepwinthsainmarine.com.

²³ K. Oo and K. Ando: 2012. *Improving Myanmar's agricultural extension services: Empirical study on views and perception of field extension agents in Mandalay Division of Myanmar* (Kyoto, Kyoto University Centre for South-East Asian Studies).

national qualifications at all levels. For the agriculture sector, these are very large tasks that should be undertaken with the relevant ministries, so that a strategic overview of the future of agriculture in Myanmar underpins the skills development focus of the Myanmar Skills Development Agency.

The sector committee should also review the range of training options available, through a competency-based system, and promote the most suitable modalities. Some training may be best carried out in institutions; other training programmes may be best delivered through workplaces or through mobile training. It is suggested that the sector committee could focus initially on inland fisheries, and promote training opportunities in just one area, such as shrimp farming, simply as a way of making early progress, given the support of the UMFCCI and the Myanmar Fish Farmers' Association.

As mandated by the Employment and Skills Development Law, the development group drafting the competency standards and new TVET qualifications will need to work with the committee carrying out accreditation and assessment of training. That will provide the chance to encourage flexible training modalities and to ensure that assessment is to the standard set by the industry. This is further explained in Chapter 6 of this report.

The mobile training unit concept recommended²⁴ in a recent report to the SDC is worth considering in this context. This would bring flexible modular training in a variety of rural skills to isolated communities. It was recommended that the mobile training unit would operate in the SDC's preferred areas of the south-east, where it is intended to bring relevant TVET training in a wide range of occupations to rural areas. The proposed project is to try out a new delivery approach, by transporting equipment and trainers to various rural locations, and using local training venues. The approach is geared to increase access, affordability, and suitability of learning conditions for young people who would otherwise be excluded from education and training at an early age. The target group is characterized in the SDC report by migration, displacement, post-conflict trauma, and basically a lack of employment and business opportunities in rural settings. Mobile units would operate from a "hub" and roam through their catchment areas. Training duration would be measured in weeks. In addition, this proposed project could also improve existing informal apprenticeship systems, and allow apprentices to have their competencies recognized for national certification. It was proposed that the annual output of this component could gradually increase, as the approach could start in one of two states and then be expanded into other areas of the south-east.

The ILO Training for Rural Economic Empowerment (TREE) methodology may also be useful in rural communities. TREE promotes income generation and local development, emphasizing the role of skills and knowledge in creating new economic and employment opportunities for the poor, the underemployed, the unemployed, workers in the informal economy, and the otherwise disadvantaged.²⁵ This report recommends that the ILO consider introducing TREE to Myanmar.

²⁴ SDC: Technical education and vocational training in Myanmar, May 2013.

²⁵ ILO: TREE short description, 2008.

3.2 Energy and extractive industries

Investment in the energy sector is expected to be an important driver of the economy. In response to the reforms, especially those concerning democratic representation, economic sanctions are now being lifted or at least eased. This opens the possibility of extensive international assistance for Myanmar's energy sector, including in partnership with the private sector.

Source: Asian Development Bank, Myanmar: *Energy sector initial assessment*, 2012

In a presentation on 3 July 2013, Dr Aye San Dar Myo, executive engineer of the Yangon Electricity Supply Board (YESB), noted that the Japan International Cooperation Agency (JICA) is already providing training for YESB staff. He invited other international partners to transfer technical know-how through direct or indirect cooperation, by way of consultancy assistance. He indicated a need for capacity-building generally for YESB employees, and particularly for on-the-job training for the control, operation, and maintenance of the electricity distribution system.

Myanmar has abundant energy resources, with its primary energy supply coming from hydropower, oil, gas, coal, and biomass, with hydropower being the main source. Offshore gas is the country's most important source of export revenues.²⁶ A third of FDI is in the oil and gas sector, and Myanmar is one of the five major energy exporters in the region, particularly of natural gas.

Electricity from hydropower contributes nearly 70 per cent of the total electricity generated, with 22 per cent from natural gas, and 8 per cent from coal.²⁷ Myanmar's per capita electricity consumption is the lowest in ASEAN. Average electrification grew from 16 per cent in 2006 to 26 per cent in 2011. For Yangon city, the electrification rate is 74 per cent, but for Mandalay it is only 31 per cent. Rural areas have an overall electrification rate of about 16 per cent. The Ministry of Electric Power aimed to have 3,576 villages electrified by 2013–14; a further 4,116 in 2014–15; and 4,793 in 2015–16. A master plan is being developed for the electricity sector to meet consumption requirements. Auditing firm KPMG has identified²⁸ that there are significant opportunities for both foreign and domestic companies to invest in the generation, transmission, and distribution of power.

In a report²⁹ prepared for the World Economic Forum by Accenture and the ADB, the need to improve human capacity within the energy sectors was highlighted. The report noted that chronic underinvestment in education has created a legacy of low technical expertise at almost all levels, and that an immediate focus is the need for improved technical skills applicable to the energy sectors.

Expansion of other sectors of the economy, such as manufacturing and tourism, depend upon there being a reliable, 24-hours-a-day supply of electricity. In Ngwe Saung, electricity was observed to be only available for resorts in the mornings and evenings. Two new garments factories in Patheingyi will also require the ready and reliable supply of electricity. The 2012 ADB report noted that rehabilitation work in power generation, transmission, and distribution is urgently needed, especially in the Yangon area, where frequent blackouts occur. These are said to be due to poor operation and maintenance of power generation equipment, and transmission and distribution networks.

In Yangon, electricity distribution is in the hands of the YESB, which reports³⁰ an annual increase of 7 per cent in electricity consumers; that there are 1,238,168 electrified family units (74 per cent), and

²⁶ ADB: *Myanmar energy sector initial assessment*, 2012.

²⁷ International Energy Agency (IEA): *Energy statistics*.

²⁸ KPMG: *Infrastructure in Myanmar*, May 2013.

²⁹ Accenture and ADB: *New energy architecture: Myanmar*, 2013.

³⁰ Dr A. San Dar Myo, executive engineer, presentation, 3 July 2013.

285,005 family units not electrified (26 per cent). Rural electrification in the Yangon Division has reached 505 villages, with a further 1,585 villages awaiting connection. The YESB has considerable expansion plans while noting that maintenance issues are also significant.

Mr Kenji Kuronuma³¹ indicated that JICA provided an advisor for the YESB (from June 2012 to June 2014), who facilitated the capacity development of engineers and technicians, and conducted distribution systems training, both in Myanmar and through a study visit to Japan in 2013. He indicated that graduate engineers from the universities of Yangon and Mandalay have a high reputation with the YESB.

As noted above, the YESB executive engineer listed the following as HRD priorities:

- a) capacity-building among YESB employees;
- b) control, operation, and maintenance training for distribution workers; and
- c) effective, on-the-job training, especially for the distribution system.

The YESB is currently establishing a training centre in Yangon, to enable it to produce a more adequate number of skilled workers to meet the projected expansion of power distribution. Graduates from training programmes conducted by the MOI and the Ministry of Science and Technology (MOST) carry out domestic and commercial electric wiring. Data is not available on numbers, but an increase in the supply of such trained workers is needed, some of whom may be employed in distribution. A renewal and development plan is currently being worked on with a JICA expert. This should identify more precisely the current and future shortfall in trained personnel for Yangon. A national electricity plan has yet to be completed. The YESB is only one of a number of supply boards who presumably all have similar HRD requirements.

In an announcement that will only increase the demand for skilled workers, Myanmar's Ministry of Livestock, Fisheries, and Rural Development has said that it will work to provide electricity to 20,000 villages across the country within two years. Deputy Minister Khin Maung Aye made the point at a meeting with local organizations in Yangon on 10 October 2013. "We [the ministry] are now working to build infrastructure such as roads, electricity [supply], water [supply], and housing in the rural areas across the country. We have a target to provide electricity to 20,000 villages in the country in 2015 and 2016. Ten thousand villages will get electricity in the period from 2014 to 2015. The next period from 2015 to 2016 will give power to 10,000 more villages. It's a really big project. Every region and state in the country will be involved," he said.

The government allocated over 75 billion kyats (MMK) for rural development for fiscal year 2013–14. The ministry will work as a focal point for rural development projects currently under way and coming in the future, cooperating with other ministries, non-governmental organizations (NGOs), and donor organizations.

"Villages located near the national power grid will be powered by the grid, and if not, they will be powered by other means such hydropower, solar systems, bio-gas, and bio- mass," the deputy minister added.

This report recommends that the new Myanmar Skills Development Agency, with the support of the UMFCCI, identifies energy as a priority sector for HRD, and establishes a sector committee to undertake a future-focussed, sector-wide scoping of workforce skills and knowledge requirements and priorities, and maps out plans for the coherent and comprehensive identification of workforce competencies and qualifications across the value chain, from entry to advanced levels, as required in the energy sector. The committee should establish development subgroups of high-performing workers, to identify required skills and knowledge at all necessary levels, and to package these into national qualifications. Given the urgent needs, it may be sensible to start with energy distribution, and

³¹ JICA representative, Myanmar Office.

concentrate on skills needs in that one area initially. Adopting a strategic view, with the support of the Ministry of Electric Power, would allow for the skills needs of the entire sector to be addressed over time. It is also recognized that the sector is very wide, including extractive industries, and involves other ministries including the Ministry of Energy (MOE), Ministry of Mines (MOM), and the MOAI (for biofuels). Meeting all training needs, with the support of the Skills Development Agency and the UMFCCI, will necessarily take several years.

The sector committee should also review the range of training options available, through a competency-based system, and promote the most suitable modalities. Some training may be best carried out in institutions; other training programmes may be best delivered through workplaces. The YESB will, it is assumed, make flexible use of its own training facility, with a mix of training at the centre and structured training on the job. Other supply boards may do the same.

An initial focus on electricity distribution would likely result in the development of competency standards and national qualifications in such areas as line mechanic distribution, line mechanic transmission, cable jointer, electrical services technician, fault man, field switcher, and metering technician. There are good examples from other jurisdictions of competency standards and qualifications in these areas.

As mandated by the Employment and Skills Development Law, the development group drafting (or adapting from international experience) the competency standards and new TVET qualifications, will need to work with the agency committee carrying out accreditation and assessment. That will provide the chance to encourage flexible training modalities, and to ensure that assessment is to the standard set by the industry. For the YESB, training may be best carried out largely on the job, but with some off-the-job in the new training centre. This is further explained in Chapter 6 of this report.

3.3 Manufacturing

Manufacturing is set to expand significantly in Myanmar, and will likely absorb many workers currently involved in agriculture. Industries likely to grow include textiles and garments, leather, furniture, and toys. But others such as fisheries, wood fibre, masonry products, electronics, baking, engineering, paint, jewellery, and bottling and packaging will also require additional workers. A reliable supply of electricity will be essential.

The *Eleven* newspaper³² reported that total foreign investment in Myanmar reached \$43 billion in August 2013, according to the Myanmar Investment Commission (MIC). Over 600 foreign businesses had invested a total of \$43.68 billion in 12 sectors as of 31 August 2013. “Myanmar has foreign investments from 32 countries in four major sectors: energy, oil and gas, mining, and manufacturing,” said an official from the MIC. China is the biggest investor in Myanmar, followed by Thailand, Hong Kong (China), the Republic of Korea, the United Kingdom, Singapore, Malaysia, France, Viet Nam, and India. Thailand is the largest importer from Myanmar. As much as 41 per cent of Myanmar’s total exports went to Thailand in 2012, while 15 per cent went to India, 14 per cent to China, 7 per cent to Japan, 4 per cent to the Republic of Korea, 2 per cent to Malaysia, and 1 per cent each to Singapore and Bangladesh. A significant stimulus to growth in manufacturing may come from jobs outsourced from China, where rising wages are negatively affecting the competitiveness of its manufacturing sector.

This report focuses on the garments sector only, although it is clear that skilled workers will be required in many more areas of manufacturing.

The LSE Enterprise draft analysis for the ILO³³ indicates that a modest, export-oriented garments sector was developed in the 1990s, driven mainly by investment from the Republic of Korea and supported

³² 12 Sep. 2013.

³³ LSE Enterprise: *Draft assessment study of TVET in Myanmar*, 10 July 2013.

initially by strong sales to the United States. However, development of the sector slowed following the 2003 United States ban on all imports from Myanmar. Before the United States ban, Myanmar had an estimated 300 garments and textiles factories in operation. Following the ban, however, around 125 factories reportedly closed down. A number of international garments retailers – including Levi Strauss (United States) and Reebok (Germany) – ceased purchasing garments from Myanmar, in response to international consumer boycotts and sanctions.

Even though gender data is limited, the garments industry is largely female dominated. The ADB study³⁴ in 2012 concluded that the abundance of low-cost labour in Myanmar presents an opportunity to expand into labour-intensive and export-oriented manufacturing, including the garments sector. Asian and Western firms may find in Myanmar a new, cost-effective platform for light assembly, as a means for diversifying their production locations and supplying an expanding domestic market.

A leading employer, Dr Aung Win,³⁵ when interviewed, estimated that 80,000 workers are known to be currently employed in the garments sector, but that the real number could be as high as 200,000. New workers need training, and Japan has provided funding, equipment, and the curriculum for training programmes being managed through the MGMA with the UMFCCI. This work could be formalized and increased through the new Skills Development Agency, and Dr Aung Win indicated that the MGMA would welcome that. In particular, Dr Aung Win reported that employers need:

- a) supervisor training;
- b) practical training in sewing techniques, and line processes for different styles of garments, e.g. padding jackets, down jackets, coats, blazers, overalls, and cargo pants, noting that these styles have more than 50 processes per style;
- c) training in how to control and manage line balancing, to achieve productivity and quality;
- d) training for pattern making and degrading, computer-aided design (CAD), and auto CAD for pattern making and marker drawing, noting that these are new skills areas for Myanmar, which local factories cannot use at the moment, but in future will need to upgrade to, so as to compete with the FDI factories; and
- e) mechanic training, especially for the advanced auto machines with computerized circuit boards.

Dr Aung Win indicated a need for at least three months' training for every skill area. He also noted that for the local garments industry to compete internationally, and to earn more, it needs to know how to do free on board (FOB) shipping; for the time being, factories are operating under the CMP system (cutting, making, and packing). He indicated that Bangladesh is very experienced in doing FOB, and that the garments industry is the major source of foreign income for Bangladesh, so the country's banking system very strongly supports the garments industry in carrying out FOB. He noted that there are many such professionals in the Bangladeshi banking system. He proposed that one Bangladeshi expert be invited to come to Myanmar for at least three months to provide awareness training to Myanmar's bank officials, garments factory owners, and responsible personnel in this sector, so that Myanmar can use buyers' letters of credit to buy fabrics and accessories from abroad, by using back-to-back letters of credit.

The MGMA set up a garments training centre in 2009, supported by the Japanese government, with training provided free of charge. There are short courses for sewing supervisors, operators, mechanics, quality control staff, and senior managers, of a maximum of two weeks only. The MGMA's stated aims, among other things, are to act as a medium between its members and foreign buyers, to disseminate market information, and to cooperate with government agencies and internal organizations for the development of the garments industry. A draft report³⁶ prepared by the UK Department for International Development with Pyoe Pin in 2012 notes that there appears to be good evidence that the MGMA enjoys broad support from its members, despite the government-driven origin of its formation.

³⁴ ADB: *Myanmar in Transition*, Aug. 2012.

³⁵ Managing director, Maple Trading Co. Ltd.

³⁶ DFID: *Draft political economy of the garments sector*, Oct. 2012.

Dr Aung Win noted that Pakistan, supported by the ILO, has developed a garments training programme for its garments industry, which is very successful, and indicated that he and other employers would be interested in following that programme if the ILO could facilitate access to the competency standards and associated curriculum materials. Training could be conducted in the MGMA's facilities.

A significant problem for Myanmar, reported by the McKinsey study, is that labour productivity is currently very low, with output per worker only 70 per cent of that in Viet Nam in 2010, 20 per cent of that in China and Thailand, and less than 15 per cent of that in Malaysia.³⁷ The report also notes that labour productivity must increase, and that that will allow for the transition to more value-added sectors, following the example of Thailand, Malaysia, and other Asian economies. Increasing productivity means focussing on the development of available human resources, as noted above.

In a major development, India has offered³⁸ to help in the revival of 300 apparel factories in Myanmar. The South India Textile Research Association (SITRA) will provide technical assistance in the formulation of the revival plans for these factories, while private-sector companies will play a big role in the revival and building joint ventures for these factories.

India will also cooperate with Myanmar in formulating a common compliance code for standards and good practice in the factories, including a code of ethics that covers all critical social and environmental concerns, such as child labour, health, and industrial safety.

For capacity building in the Myanmar textiles sector, India has offered two scholarships for two slots under National Institute of Design (NID), and 250 scholarships for textiles workers under the Integrated Skills Development Scheme. Scholarships have been offered in India in the National Institute of Fashion Technology, and the Institute of Foreign Trade. India will also be setting up India-Myanmar apparel-sector joint ventures in the Thilawa SEZ, in collaboration with other international brands.

This report recommends that the Myanmar Skills Development Agency, with the support of the UMFCCI and the MGMA, establish as a priority a sector committee for the manufacturing industries, with a focus initially on HRD for the garments sector. The sector committee and its development group should undertake a future-focussed, sector-wide scoping of workforce skills and knowledge requirements and priorities, and map out plans for the coherent and comprehensive identification of workforce competencies and qualifications across the value chain, from entry to advanced levels, as required in the garments sector. The committee should establish development subgroups of high-performing workers, to identify required skills and knowledge at all necessary levels, and to package these into national qualifications. There are readily available international good practice examples (from Cambodia and Pakistan) which, if they could be made available, would speed this work along. This approach will have the support of the MGMA.

Over time, the sector committee will need to focus progressively on all manufacturing industries, so as to identify the skills required in Myanmar's workforce.

The sector committee should also review the range of training options available, through a competency-based system, and promote the most suitable modalities. Some training may be best carried out in institutions or at centres established by the garments industry and, later, other industries. Other training programmes may be best delivered solely through workplaces.

As mandated by the Employment and Skills Development Law, the development group drafting the competency standards and new TVET qualifications will need to work with the agency committee carrying out accreditation and assessment. That will provide the chance to encourage flexible training modalities, and to ensure that assessment is to the standard set by the industry. For the garments

³⁷ McKinsey: *Myanmar's moment: Unique opportunities, major challenges*, 2013.

³⁸ Reported in Commodity Online, New Delhi, 10 June 2013.

industry, training may be best carried out largely on the job, but with some off-the-job through the MGMA. This is further explained in Chapter 6 of this report.

3.4 Infrastructure

Two in-depth discussions were conducted with U Ko Ko Gyi, general secretary of the MES and director of Myo and Myint Brothers Co. Ltd. The second discussion focussed mainly on what training modalities would be suitable for the construction sector in Myanmar, given the huge need for skilled workers for the infrastructure sector generally.

The McKinsey report concludes that infrastructure and operations contributed an estimated \$10.5 billion to GDP in 2010, and provided employment for 500,000 people. The report estimates that by 2030 the GDP contribution could be \$48.8 billion, and employment 2.3 million. The infrastructure sector is broken down into three broad categories: transport, water and utilities, and real estate, of which real estate is by far the largest. The majority of infrastructure investment will be in residential and commercial real estate. Considerable investment is also needed in roads, railways, inland waterways, and in ports and civil aviation. Less than 22 per cent³⁹ of the country's roads are paved, and not all townships are reachable by road. Unless addressed, this lack of connectivity will constrain economic growth. Considerable urban development is also required, especially – though not exclusively – in Yangon and Mandalay.

Already the real estate sector is booming as investors respond positively to the country's economic and political reforms. Burgeoning demand and new opportunities are attracting investments from around the world. The extent of this can be judged by the fact that Yangon enjoys the highest property prices in South-East Asia.⁴⁰ The current explosion in tourism is also leading to an acute shortage of hotels and residential buildings. Apart from new projects, old and existing properties are being refurbished and repositioned for generating incremental revenue. The spotlight is also on infrastructure developments and incentives for investments in SEZs like the Thilawa and Myothar industrial zone parks, and the construction of hotels and resorts in key tourist attractions such as Mandalay.

The significant gaps in Myanmar's infrastructure development are reviewed by KPMG in a publication⁴¹ dedicated to promoting investment, especially from the private sector. KPMG indicated that the immediate priorities are in urban transportation systems, and in upgrading of national airports and water utilities. The report notes that the government is committed to restructuring the relevant agencies in the transport, water, and public works sectors, to ensure a clear separation of responsibility between regulatory authorities and service providers and operators. The report identifies investment opportunities in:

- a) roads;
- b) ports;
- c) railways;
- d) airports;
- e) energy and power;
- f) telecommunications;
- g) SEZs; and
- h) social infrastructure (education and health infrastructure and services).

The ILO-London School of Economics (LSE) Enterprise draft report⁴² notes that the construction sector in Myanmar is largely underdeveloped and small vis-à-vis the opportunities summarized above. The largest problem is lack of technical expertise and experience in undertaking large and complex

³⁹ OECD: *Multi-dimensional review of Myanmar*, 2013.

⁴⁰ *The Nation*, 30 Aug. 2013.

⁴¹ KPMG: *Infrastructure in Myanmar*, May 2013.

⁴² ILO-LSE: *Assessment study of TVET in Myanmar*, 10 July 2013.

construction projects.⁴³ The importance of the construction sector is increased by its link to other economic activity. The need for more skilled workers has been endorsed by the MES.⁴⁴

Myanmar needs to build and upgrade the majority of its infrastructure, including housing, schools, shopping malls, hospitals, roads, bridges, railways, airports, seaports, and industrial zones. These developments closely relate to the need to develop affordable housing for Myanmar's poorest people, who account for a quarter of the population.

The draft ILO-LSE Enterprise report notes that the CESR Phase 1: Rapid Assessment estimates a current workforce of approximately 1.4 million, with an estimated trade-skilled level of 164,000.⁴⁵ As noted, the employer view is that the construction sector is in serious need of qualified personnel.⁴⁶ Training is required in all areas throughout the country, including for carpenters, bricklayers, metal workers, electricians, and plumbers. Skills shortages are set to provide significant constraints on development and employment creation. However, a cautionary note is in the draft ILO report⁴⁷ by Hana Rihova, who indicates that skills issues are usually secondary to the main obstacles set by the current legal and institutional framework, and macroeconomic issues such as high inflation, no (or very poor) access to loans for investments, especially in rural areas, and, for SMEs, a lack of strategic planning, a weak private sector, and government-controlled pricing. Skills development in these sectors can only contribute to employment and economic development if the legal and institutional framework enables effective utilization of workers' skills. Any skills development programmes should, therefore, be in line with more general transformation strategies influencing the individual sectors and general environment.

Estimating the current supply of trained workers for the infrastructure sector is not simple. In discussions⁴⁸ with U Ko Ko Gyi, it was made clear that some civil engineering and architecture graduates are employed by construction firms even though their lack of work experience during training does not make them overly attractive to employers. Apart from that, very few skilled workers are supplied by government or private institutions for the construction sector. Employers mostly use skilled workers to train new workers on the job. It was noted that while this has worked well up to now, the huge increase in work foreshadowed by the projected expansion of construction activities means that employers will simply not have enough skilled workers available to train their rapidly increasing workforce.

The issue of suitable training modalities for Myanmar was discussed at some length. Myanmar has no history of apprenticeship-type training, neither are there mixed models involving solid work experience for students in institution-based training. This will pose a significant challenge for the Skills Development Agency. The experience of other ASEAN Member States could be useful in providing guidance as new models of industry training are developed for Myanmar. After discussion of the options with U Ko Ko Gyi, it was considered that, for the immediate future, employers would be prepared to send workers to short, tightly-focussed training programmes where there were good practical facilities and trainers knowledgeable in up-to-date methods and technologies. In the future, as suitably qualified workplace supervisors and trainers become available, other modalities may be possible.

Regarding potential training venues, at least in the Yangon area, it was noted that the facilities at the MOLES' skills training centre in Yangon need urgent upgrading. The ministry's new training facility in Patheingyi was reported to have been completed in 2011, but had yet to open at the time of writing. The Ministry of Construction has a central training centre in Yangon, but it too has an urgent need for

⁴³ Economist Intelligence Unit (EIU): *Myanmar: White elephant or new tiger economy? A special report from the Economist Intelligence Unit*, Executive summary, Apr. 2012.

⁴⁴ Interview with U Ko Ko Gyi, General Secretary of the MES.

⁴⁵ ILO-LSE: *Assessment study of TVET in Myanmar*, 10 July 2013.

⁴⁶ Interview with U Ko Ko Gyi, Director Myo and Myint Brothers Co. Ltd.

⁴⁷ H. Rihova: *Skills development for sectors in Myanmar*, Draft, Feb. 2013.

⁴⁸ Interview with U Ko Ko Gyi, General Secretary of the MES.

upgrading and re-equipping. Practical facilities were either closed (plumbing) or badly run down (carpentry, where there was no timber for practical activities, and the few tools available were rusty). This centre has a focus on training staff for the ministry, but when visited it was conducting a theory-only carpentry training programme for Habitat for Humanity. It is understood that this centre has been nominated (by the former National Skills Standards Authority [NSSA]) to be the national assessment centre for construction, making upgrading and re-equipping even more urgent. In subsequent discussions with Dr Kyaw Thu from the United Nations Human Settlements Programme (UN Habitat), it was indicated that tools and materials for the pilot programme were delayed, but would be available for later training programmes.

This report recommends that the Myanmar Skills Development Agency, with the support of the UMFCCI, identifies infrastructure as a priority sector for HRD, and establishes a sector committee to undertake a future-focussed, sector-wide scoping of workforce skills and knowledge requirements and priorities, to map out plans for the coherent and comprehensive identification of workforce competencies and qualifications across the value chain, from entry to advanced levels, as required in the infrastructure sector. The committee would establish development subgroups of high-performing workers, to identify required skills and knowledge at all necessary levels, and to package these into national qualifications. Given the size and multifaceted nature of the sector, it is suggested that construction could provide an initial area of focus. Training programmes in such areas as carpentry and welding could begin the supply of trained workers so badly needed by employers.

The sector committee should also review the range of training options available, through a competency-based system, and promote the most suitable modalities. Some training may be best carried out in institutions. Other training programmes may be best delivered through workplaces. It is hoped that development partners will be able to support study visits to other ASEAN Member States, to allow senior industry representatives to view the wide range of training modalities being used for workforce development. Rapidly expanding the range of training programmes will not be a simple task, given the current skills shortage in Myanmar. Skilled workers and workplace trainers may need to be recruited from elsewhere in ASEAN as an interim measure.

For the construction sector, competency standards, qualifications, and curriculum materials have been developed in most other ASEAN Member States. The sector committee should be able to speed along development by adapting existing high-quality materials. The committee should consider adopting standards from the ASEAN Constructors' Federation, and the Asian Welding Federation Certification Scheme. The Constructors' Federation has membership from seven ASEAN countries, has close partnerships with trade unions, and hopes to be able to bid for very large infrastructure and construction projects using teams of ASEAN workers assembled from several member countries. The Constructors' Federation has been working with the Technical and Skills Development Authority (TESDA) in the Philippines to use its competency standards throughout ASEAN. The Asian Welding Federation is working towards standardization of welding certification, and has 13 member countries. Further, the ILO has developed its Regional Model Competency Standards (RMCS) in construction and welding, which can also be shared. The RMCS has been recommended to ASEAN Member States as a benchmark for national skills standards development.

As mandated by the Employment and Skills Development Law, the development group drafting the competency standards and new TVET qualifications (or adapting those from the ASEAN Constructors' Federation, the Asian Welding Federation, and from other ASEAN Member States) will need to work with the agency committee carrying out accreditation and assessment. That will provide the chance to encourage flexible training modalities, and to ensure that assessment is to the standard set by the industry. This is further explained in Chapter 6 of this report.

3.5 Tourism and hospitality

From an initial meeting with senior members of the Myanmar Tourism Federation (MTF) – Ms Lynn Lynn (Executive Officer), Ms Kyi Kyi Aye (Senior Advisor), Ms Thu Zar Khin (Deputy Manager, Panorama Hotel), Ms Thida Lay (Joint Secretary, Myanmar Hospitality Professionals' Association), Mr Naung Naung Han (Secretary-General, Union of Myanmar Travel Association), and Ms Ma Ma Thet Thet (AGM, Cooperative Business Centre) – it was immediately clear that key tourism and hospitality employers, and other stakeholders, are strongly unified. The MTF will be able to provide solid sector representation to the Skills Development Agency.

In 2012, Myanmar's tourism businesses and associations formed the MTF. An amalgamation of ten associations and one committee, the stated mission of the MTF is to: (i) promote Myanmar as a tourism destination; (ii) help in the process of sustainable tourism development; (iii) welcome and assist investors; and (iv) develop human resources for tourism-related industries. All of the members, except the Myanmar Hoteliers' Association, the Union of Myanmar Travel Association, and the Myanmar Marketing Committee, were newly formed in 2012 at the time the MTF was established. Myanmar now has a nationally representative body that can play a strong role in the implementation of the Employment and Skills Development Law.

Between 2011 and 2012, visitor arrivals increased by 29.7 per cent, and, for the first time, Myanmar received over 1 million international visitors.⁴⁹ Key drivers of growth include the rapid expansion of scheduled inbound flights, easier visa-on-arrival privileges at gateway airports, improving business and investment conditions, and the growing demand for international travel in regional and long-haul markets. Although Myanmar possesses diverse and extensive cultural, natural, and historic assets, it has only just begun to develop its enormous tourism potential.

Due to the income- and employment-generating opportunities it creates, tourism is a global industry, with special economic significance to developing countries. Consequently, the Government of Myanmar has prioritized tourism development in its FESR. To help ensure that tourism growth delivers broad and equitable social, economic, and environmental benefits, in 2012 the government adopted the Myanmar Responsible Tourism Policy. The policy is also endorsed by the MTF, and is highly acclaimed by both civil society and development partners. The vision for tourism in Myanmar, as set out in the Responsible Tourism Policy is: “we intend to use tourism to make Myanmar a better place to live in – to provide more employment and greater business opportunities for all our people, to contribute to the conservation of our natural and cultural heritage, and to share our rich cultural diversity. We warmly welcome those who appreciate and enjoy our heritage, our way of life, and who travel with respect.”

The McKinsey study estimates that tourism and hospitality will employ 2.3 million people by 2030, contributing \$14.1 billion to GDP. The Tourism Master Plan from the Ministry of Hotels and Tourism (MOHT) has the following conservative estimates for direct employment:

⁴⁹ MOHT: Myanmar Tourism Master Plan, June 2013.

Table 2. Estimated employment in tourism and hotels

Subsector	2012	2013	2014
Accommodation	44 055	63 668	84 458
Food and beverages	146 850	212 225	281 528
Recreation and entertainment	29 370	42 445	56 306
Transportation services	58 740	84 890	112 611
Travel services	14 685	21 223	28 153
Total	293 700	424 450	563 056

Source: MOHT.

It is not clear from the Master Plan how the huge increases in the requirement for staff with basic certificate-level qualifications will be addressed. Employers need information on the range of flexible training possibilities opened up by the competency model. Other ASEAN Member States should be able to assist.

The Master Plan outlines a future based around traditional, off-job institutional training. That cannot deliver the numbers of skilled workers urgently required. The Master Plan notes that the MOHT, with the Ministry of Education, jointly introduced Myanmar's first four-year bachelor's degree programme in tourism in 2012. There is also a post-graduate diploma in tourism studies management (initiated in 2006) offered in Yangon and Mandalay. Additionally, a handful of private schools teach elements of the tourism system through short courses (e.g. ticketing, hospitality, sales, and industry background), while the Myanmar Hospitality Professionals' Association has begun to offer its own courses. The MOHT operates a training centre that offers courses in guide training (three months, about 150 guides per year) and tourism management, which provides basic industry knowledge (two months), and ad-hoc short courses for tourism language training.

The Tourism Training School (established in 1992 by Myanmar Hotels and Tourism Services of the MOHT) has the following training courses:

- a) tour guide training course (basic);
- b) tourism management course (basic);
- c) refresher course for renewal of tour guiding (expired licenses);
- d) Italian language courses (basic/intermediate/advanced);
- e) Spanish language courses (basic/intermediate/advanced);
- f) Chinese language course (basic);
- g) Japanese language course (basic);
- h) English language course (basic);
- i) guide course for motor vehicle drivers; and
- j) eco-tourism.

The Hotel and Tourism Training Centre (HTTC) (established in 1982 in collaboration with the ILO, the United Nations Development Programme [UNDP] and the Government of Myanmar) opened at the Kandawgyi Hotel, now the Kandawgyi Palace Hotel. Since 1992, it has operated as a semi-government training centre, jointly run by the MOHT and Baiyoke Co., Ltd. The HTTC has the following training courses:

- a) front office operations;
- b) housekeeping operations;
- c) food and beverage service;
- d) food and beverage production;
- e) hotel accounting (supervisory);
- f) oriental cookery;

- g) hospitality English; and
- h) hotel management.

The National Management College (NMC) of the Department of Higher Education (Lower Myanmar), the Ministry of Education, is affiliated to Yangon University and offers a bachelor of arts degree in tourism (since 2012), and two post-graduate diploma courses: diploma in tourism studies and management (DTSM) of nine months' duration (since 2007), and diplomas in global English (basic/intermediate/ advanced I & II) of three months each.

Mandalay University (Mandalay) offers a Bachelor of Arts in Tourism (since 2012), and a Diploma in Tourism Studies and Management (DTSM), of nine months' duration (since 2007).

Other institutions offering training include: Star Resources Hospitality and Tourism Management Academy; Myanmar Human Resources Management Institute; Mandalay Hotel and Tourism Training Centre; the TRC Hospitality Training Centre; Asia Masters Hotel Management and Staff Training Centre; and the Centre for Vocational Training (CVT).

Hotels and Tourism Minister Htay Aung said⁵⁰ on 5 September 2013 that the ministry would improve local tour guide competency in anticipation of a boom in tourism following its 28 August 2013 ruling that fully opened four crossing points along the Thai-Myanmar border. The four overland checkpoints were Tachileik-Mae Sai, Myawady-Mae Sot, Kawthaung-Ranong, and Htee Khee-Sunaron. The duration of the tour-guide courses will be eight to ten weeks. The minister indicated that the MOHT had already opened a course in Mogoke, and was planning to open others in Kayah.

On 20 June 2013, the Ministry of Foreign Affairs of Luxembourg mandated LuxDev for the formulation of a project entitled Development of Human Resources in the Hotel and Tourism Sector, and Capacity Development of the Ministry of Hotels and Tourism. The project's duration is five years, with a budget of €5,000,000. The project is to support selected findings of the Master Plan, which identifies building human resources capacity and promoting service quality as a strategic programme essential to Myanmar's successful and sustainable development of the tourism sector, and as a key contributor to economic and social development.

In 2009, the government endorsed the ASEAN Mutual Recognition Arrangement on Tourism Professionals (MRA). This is an important feature of the upcoming ASEAN Economic Community (AEC). The MRA requires the establishment of a National Tourism Professionals' Board and a Tourism Professionals Certification Board. As a result of the full implementation of the MRA, improved standards for all levels of education and training will underpin the delivery of quality services. As new programmes are developed and existing programmes revamped, it is planned that all related tasks will be carried out within a national accreditation and standards process that is aligned with international and ASEAN standards, and overseen by the National Tourism Professionals' Board and Tourism Professionals Certification Board. Other ASEAN Member States are aligning the work of these boards with their national TVET certification arrangements. Now that the Employment and Skills Development Law has been passed, Myanmar can do the same. In a follow-up interview, Ms Kyi Kyi Aye indicated that the two boards have now been established in Myanmar. Confidence was expressed that a partnership can be forged with the Skills Development Agency, as is happening elsewhere in ASEAN.

The MRA aims to facilitate the mobility of tourism professionals within ASEAN, based on competence-based tourism qualifications, and at the same time improve the quality of services delivered by tourism professionals. The ASEAN MRA provides a mechanism for agreement on the equivalence of tourism certification procedures and qualifications across ASEAN. When ASEAN nations mutually recognize one another's qualifications, this will encourage a free and open market for tourism professionals across

⁵⁰ *TTR Weekly*, 6 Sep. 2013.

the region, and boost the competitiveness of the tourism sector in all ASEAN nations, while at the same time attracting needed talent to meet local skills shortages. However, the eligibility to work in a host country will still be subject to the prevailing domestic laws and regulations of the host country.

In order for a foreign tourism professional to be recognized by other ASEAN Member States, and to be eligible to work in a host country, the professional will need to possess a valid tourism competency certificate in a specific tourism job title, as specified in the Common ASEAN Tourism Curriculum, issued by the Tourism Professionals Certification Board in an ASEAN Member State. There are 32 job titles covered under this MRA, ranging from housekeeping, front office, food and beverage services, and food production for a hotel division, to travel agencies and tour operators for a travel division. Qualifications for tourism professionals are at five levels (three levels of certification, followed by two diploma levels).

The MRA will become an important driver in raising the standards of tourism, and improving the qualifications of the tourism workforce in the ASEAN region. Tourism and hospitality professionals are being encouraged to review their existing qualifications if they wish to consider working overseas in the AEC.

This report recommends that the Myanmar Skills Development Agency, with the support of the UMFCCI and the MTF, establish a sector committee for tourism and hospitality made up of practicing professionals, to develop (with the MOHT) a strategic action plan for HRD for the sector, based on the Master Plan, to adopt the ASEAN competency standards and qualifications, and to work with the Skills Development Agency to knit together the two boards being established through the MRA, and the structures being established through the new law. The establishment of the National Tourism Professionals' Board and the Tourism Professionals Certification Board is important, and their roles and responsibilities can be aligned with the roles and responsibilities of the Skills Development Agency. Other ASEAN Member States are doing the same.

The sector committee should also review the range of training options available, through a competency-based system, and promote the most suitable modalities. Some training may be best carried out in institutions; other training programmes may be best delivered through hotels or on the job. Rapidly expanding the range of training programmes will not be a simple task, given the current skills shortage in Myanmar, meaning that skilled workers and trainers may need to be recruited from elsewhere in ASEAN, as an interim measure.

The new National Tourism Professionals' Board and Tourism Professionals Certification Board will be able to work jointly with the new agency to carry out accreditation, assessment, and certification that will be recognized throughout ASEAN. This will provide the chance to encourage flexible training modalities, and to ensure that assessment is to the standard set by the industry. This is further explained in Chapter 6 of this report.

4. Current HRD supply and TVET system analysis

4.1 Skills development for informal enterprises and rural communities

In order to gain some understanding of HRD issues in smaller cities and rural communities, a visit was made to the Ayeyarwady River delta, with interviews conducted in Patheingyi and Ngazun. Patheingyi is a port city with a population estimated at 250,000, and is the capital of the Ayeyarwady Region. Patheingyi is the fourth-largest city in Myanmar. Lying at the western edge of the Ayeyarwady River delta, on the Patheingyi River 190 kilometres west of Yangon, the city is accessible to large vessels and, despite its distance from the ocean, is the most important delta port outside of Yangon. The city (and region) is a rice-milling and export centre. Aside from several rice mills, the city has numerous sawmills and umbrella workshops. Patheingyi is known for its large pottery and colourful, handmade baskets and buckets. People in the surrounding area are employed in agriculture and, apart from rice, cultivate a wide range of vegetables and nuts, along with some livestock.

There are three universities – the University of Patheingyi, the Technological University, and a new and at the time of writing not yet fully operational Computer University under construction far from the city centre. Dr Phyo Mon Win⁵¹ indicated that the Technological University has around 1,600 degree-level students. There is a government technical high school (GTHS) and a (yet to open) MOST vocational training centre. Several NGOs (for example the YWCA, the YMCA, Action Aid, KMSS, and the AIBI Institute) are conducting basic skills training, as well as life skills and leadership training. Company-based training is offered through nearby resorts and two new garments factories. In an interview with one of the managers, Mr Thant Zin Phyo, at the Emerald Sea Resort, it was noted that the resorts in Ngazun close annually in the off-season, and offer hospitality training to national standards through Star Resources from Yangon.⁵² There are also large-scale shrimp farms and significant rubber plantations where, it can be assumed, training is offered to staff.

NGO representatives estimated that perhaps only one third of young people in the region continue schooling beyond grade 5, when government support ends, and also because there may be no government middle school in the village. The ADB estimates⁵³ that 40 per cent of the population nationally is aged 15–28. That must mean that in Patheingyi substantial numbers of young people cannot avail themselves of the current very modest level of TVET and skills training provision. Graduation from high school is required for entry to the government universities, but apart from some NGO programmes and pre-vocational training at the Technological High School, there did not seem to be any other TVET or skills training available to the large number of young people who do not graduate from high school. However, the opening of the MOST skills centre should make some training available for this group. This dire situation must negatively affect the ability of young people to gain decent waged employment.

Discussions with NGO representatives supported the notion of mobile, community-based training, perhaps linked to the availability of microfinance, and a mobile training unit has been proposed in a report to the SDC.⁵⁴ The Patheingyi KMSS already operates in a similar manner at village level, with volunteer trainers supporting skills development leading to income generation in such areas as sewing, organic growing, pig farming, fruit growing, and paddy crop improvement, noting that land ownership issues inhibit commitment to rural initiatives. Other NGOs operate within the city offering

⁵¹ Head of Department, Patheingyi Technology University.

⁵² Confirmed subsequently by Ms Nay Yi Aung, principal and managing director.

⁵³ ADB: *Myanmar in transition*, 2012.

⁵⁴ SDC: *Technical Education and Vocational Training in Myanmar*, May 2013.

empowerment training, English language, computing, small-motor mechanics, and flower arrangement. The YWCA had plans for additional training in 2014 in computing, handicrafts, sewing, cooking and food preservation, and domestic work.

There is clearly huge potential for an expansion of skills training and TVET generally, and there appeared to be surplus capacity in at least two of the three government universities. Internationally, applied universities of technology cater for certificate and diploma as well as degree students, often thereby creating a pathway into higher education for many. The technological university had no students at all on the day it was visited. The impressive Computer University buildings were still to be completed but could, with the necessary staffing and resources, be opened to learners at all levels for perhaps 48 weeks a year, although its remote location rather inhibits a strong partnership with Patheon businesses and industry.

Formal labour market studies are not available for Patheon and its fertile agricultural region. The city appeared busy and the economy running at a good speed, but the supply of skilled labour from formal TVET training was close to zero, especially of workers with trade and technician certificates or diplomas. Demand was also zero, as employers do not expect to receive trained workers.

The following conclusions were drawn from the visit, from meetings with NGOs and other training providers, and from employer interviews at Ngwe Saung:

- a) many young people drop out of school and are absorbed into the informal economy, where they are trained on the job, consequently contributing to the incomes of their mostly agricultural families;
- b) young school drop-outs in the city are similarly trained on the job, in shops, restaurants, and other small businesses in this rural service centre;
- c) the availability of introductory skills training with microfinance in targeted areas could result in increased entrepreneurship and income generation, with areas identified including furniture making, livestock production, and fish farming;
- d) there appeared to be capacity in the technological and computer universities to consider opening to certificate and diploma students who could then be absorbed into businesses and the hospitality sector in particular; the technological university may also have the facilities to offer technician-level skills training for infrastructure including in the electricity and construction sectors;
- e) while expanding the opportunities for school leavers with reasonable academic achievement will help, middle-school basic education opportunities are urgently required for the many young people who drop out of the school system at age nine;
- f) the new MOST skills centre could provide training in many fields through to complete trades level, and in addition offer supervision training to existing workers who are having to lead teams of new workers on infrastructure projects;
- g) mobile skills training initiatives should be considered, so as to reach villages in the huge delta region; and
- h) the ILO TREE methodology should be considered as a way of bringing income generation and skills training to rural communities.

4.2 National supply of skilled workers

While there are reported to be 459 public TVET institutions nationwide, the vast majority of these offer applied degrees, diplomas, and certificates only for those who have successfully graduated from high school. As identified in Patheon, there are few opportunities for those who have dropped out of school at the end of basic schooling.

The Systems Analysis and Proposals report⁵⁵ carried out for the SDC identified that every year, about 1 million young people drop out of compulsory school, but only about 10 per cent get access vocational skills training. Moreover, 60 per cent of those do not finish their training, not being in a position to afford the cost of not working, in view of the poor additional skills they would get in the training. The report concluded that the TVET sector is extensive on paper but is not coherently regulated, nor managed, with 14 ministries offering their own training in 459 public training institutions, many aimed primarily at their own staff. Infrastructure and courses are obsolete, if existing at all. Poorly paid, the teachers and trainers often “complement” their salaries with “private tuition”. In addition, private training centres exist, but mostly do not offer courses leading to official certification. These centres are mainly concentrated in the urban areas. The report concluded that the system is under-used and not relevant to the economy. There are no statistics available on the number of private training providers.

Table 3. Major TVET institutions and supervising ministries⁵⁶

Ministry	Field	TVET institution	Total
Ministry of Agriculture and Irrigation	Agricultural science	Yesin Agricultural University	1
Ministry of Livestock and Fisheries	Veterinary science	Yesin Veterinary Science University (1) <i>Fisheries Science School (1)</i> <i>Breeding training centres (2)</i>	4
Ministry of Commerce	Commerce and trade	<i>Yangon Trade and Commerce Training Centre (short courses).</i>	1
Ministry of Cooperatives	Art, business management and accounting Handicrafts	Cooperative universities (2) Cooperative colleges (2) Lacquerware college (1) <i>Basic weaving schools (5) High-level weaving schools (8)</i>	4 14
Ministry of Science and Technology	Engineering	Technical universities (27) University of Technology ICT (1) Govt. technical colleges (3) Govt. technical institutes (11) Govt. tech. high schools (3) Aerospace Engineering University (1) Universities of technology (4) Universities of computer studies (25) Arts and science universities (38)	108
Ministry of Education	Arts and science	Degree colleges (5) Institutes of economics (3)	44
	Teacher training	<i>Education colleges</i>	20
	Pre-vocational education	<i>Pre-vocational schools (combined with high schools)</i>	120
Ministry of Health	Health science and traditional medicine	Universities of medicine (4) Universities of pharmacy (2) Universities of paramedical science (2) Universities of dental medicine (2) Universities of Nursing (2) University of Public Health (1) University of Community Health (1) Nursing and midwife schools (46) University of Traditional Medicine (1)	61
Ministry of Religious Affairs	Religious and missionary works	<i>International Theravada Bhuddist Missionary University</i>	1
Ministry of Transport	Maritime engineering	<i>Myanmar Maritime University</i> <i>Myanmar Mercantile Marine College</i>	2
Ministry of Culture	Music, theatre, and arts	National University of Arts and Culture	1
Ministry of Environmental Conservation and Forestry	Forestry and plantations	<i>Forestry Training Centre (1)</i> <i>Forestry development training centres (2)</i> University of Forestry (1)	5
Ministry of Defence	Military defence Medical science, Engineering	Defense Service Academy Medical Defence Service Academy	

⁵⁵ SDC: *Technical Education and Vocational Training in Myanmar*, May 2013.

⁵⁶ Japan International Cooperation Agency (JICA): *Data Collection Survey on the Education Sector in Myanmar*, draft interim report, Nov. 2012.

		Technological Defence Service Academy	5
		Nursing and Paramedical Defence Service Institute	
		National Defence College	
Board of the Union Civil Service	Civil service	<i>Central Institute for Civil Service (short courses)</i>	2
Ministry of Border Affairs	Teacher education, Arts and science	<i>University for the Development of the National Races of the Union (1)</i>	
		<i>Youth nationality resource development degree colleges and central training schools (2)</i>	3
	Vocational education	<i>Vocational training schools for women' domestic science</i>	
		<i>Training; schools for youth development of nationalities from border areas</i>	58
Ministry of Industry	Engineering	<i>Industrial training centres (one- year certificate course)</i>	6
Ministry of Labour, Employment, and Social Security	Engineering, Language IT	<i>Skills training centers (short courses)</i>	3 (of which 1 has yet to open)
Ministry of Social Welfare	Non-formal education	<i>Youth Care and vocational training centres for disabled adults (10)</i>	
		<i>Schools for visual and hearing impairment and students with disabilities (4)</i>	14

Bold = higher education institutions that provide undergraduate diploma or higher degrees related to TVET.

Italic = TVET institutions that do not provide degrees.

Bold italic = higher-education institutions that provide both undergraduate diplomas or higher degrees, and TVET without degrees.

Creative use of e-education and vocational training can contribute to improving education throughout East Asia. Online courses can educate students in remote areas, provided that nations upgrade IT infrastructure. The private sector can also play a role in offering on-the-job and vocational training. For example, internship programmes in the hospitality industry can help strengthen the travel and tourism industry, which constitutes more than 10 per cent of South-East Asia's GDP.

Source: World Economic Forum, *Courageous Transformation for Inclusion and Integration*.

It is recommended that ministries be asked to identify regulatory (and any other) impediments that may be preventing them from offering TVET programmes at all levels, for all students, regardless of academic background, and through the full variety of training modalities made possible by competency-based approaches. That could achieve, progressively, the nationwide provision of TVET from entry-level to advanced qualifications, through a flexible network of public and private training centres, including structured training in workplaces, through NGOs and in community settings. The proposal should respect the autonomy of the many ministries involved in TVET, and seek to maximize the utilization of existing training infrastructure. Extending the electricity supply to more villages will also open up e-learning opportunities nationwide.

5. International models: Industry leadership in HRD

There are international examples of good practice in industry leadership in TVET, which may be instructive for the current situation in Myanmar:

In Malaysia, the Department of Skills Development under the Ministry of Human Resources, is responsible for the quality of qualifications in the skills sector. The Department manages, coordinates, and promotes entry-level training programmes and career development based on the competencies identified through the National Occupational Skills Standards (NOSS). The NOSS specifies the competencies expected of a skilled worker at an occupational level, which provide a pathway directly related to an occupational career structure. The NOSS are developed by industry practitioners and skilled workers directly involved in an occupation. Sixteen industry-led bodies have been established. For other skills areas, the ministry convenes industry representatives to carry out the development of the NOSS, or contracts this work out to private sector specialists. There are currently 20 formal skills development advisory committees. The NOSS competency units can be packaged according to specific needs, with core and elective competency units allowing for multi-skilling and customized programmes for specific industry needs.

In Singapore, an Industry Skills and Training Council has been established for every skills area, to help drive the development and validation of skills standards, assessment strategies, and training curricula for industry. There are 33 industry skills and training councils for the 33 skills areas so far identified. Each council, represented by key industry partners including employers, industry associations, training organizations, and unions, draws up:

- a) an industry competency map, which captures the types of skills needed in the industry and classified as:
 - 1) employability skills;
 - 2) occupational skills and knowledge; and
 - 3) industry skills and knowledge;
- b) competency standards and curriculum – the competency standards list the skills, knowledge, and attitudes needed to perform a job task, and describe the acceptable levels of performance, with the resulting curriculum guiding the design of the training programmes and assessment plans; and
- c) qualifications to reflect the acquired skills and lay the foundation for career-based training, upgrading pathways and skills recognition, with the skills standards and training modules organized into seven levels of nationally-recognized qualifications, ranging from certificate to graduate diploma.

In New Zealand, industry training organizations (ITOs) have been focussing increasingly on one of their key mandated roles – to be the leaders on behalf of their industries in skills development. This goes beyond helping to “up-skill” individual workers, it involves working closely with industry to forecast future needs and develop solutions to meet those needs. ITOs have responded to the industry skills leadership challenge in a number of ways. These include smarter forecasting methods, workforce development initiatives, and programmes to overcome skills shortages and improve productivity in the workplace, so that businesses can survive and flourish. It also includes developing clearer pathways for career development, and working with secondary schools to provide better information and programmes for school leavers to make career decisions.

Some industries have realized that they need to attract workers from sections of society that are under-represented in their industries, in order to avoid labour shortages in the future. With support from ITOs,

they are developing ways to do that. The ITOs understand that the future workforce will require better management skills and higher levels of literacy and numeracy. There are several initiatives that address this need.

6. Establishing the Myanmar Skills Development Agency

The Employment and Skills Development Law was approved by Parliament on 30 August 2013. A comprehensive, industry-led HRD system can now be established in Myanmar, closely linked to national economic and social development goals.

The passage of the Employment and Skills Development Law opens the way for employers to take the lead in TVET in Myanmar. The government will establish a Central Body to implement the law. This will have at least seven members, including the mayors of Nay Pyi Taw, Yangon, and Mandalay cities; the chair of the UMFCCI; and the chairs of the Myanmar employers' and workers' organizations. The UMFCCI is a key national body for future HRD in Myanmar.

The Central Body will form a body that could be called the Myanmar Skills Development Agency. Included in this subcommittee will be managing directors of relevant departments or enterprises; a representative of the UMFCCI; the chairs of technical organizations; representatives of labour organizations; and representatives of employers' organizations. The Myanmar Skills Development Agency will prescribe skills, register training institutions, and accredit training programmes.

The Myanmar Skills Development Agency will form two committees to enable it to carry out its functions: the Skills Standards Committee, and the Skills Standards Assessment and Certification Committee.

The Central Body will also establish a body that could be called the Employment Development Agency, to promote employment and reduce unemployment.

The law also establishes an Employee Skills Development Fund through a levy of 0.5 per cent on wages and salaries, to be paid by employers. The fund may be used for:

- a) training for skills development and skills enhancement for employees;
- b) retraining to provide new skills for employees who are terminated from service and want to change to other work.

Sectors of the economy

An immediate task for the Myanmar Skills Development Agency is the nomination of the major sectors of the economy for the comprehensive development of new, industry-led competency standards and national technical and vocational qualifications. Based on good practices in other ASEAN Member States, a potential schedule for initial consideration could be:

- a) agriculture, forestry, and fisheries;
- b) agri-food processing;
- c) business development;
- d) community and social services;
- e) computing and information technology;
- f) electronics and electrical;
- g) energy and extractive industry;
- h) engineering;
- i) health;
- j) infrastructure;
- k) manufacturing;
- l) tourism and hospitality;
- m) transport; and
- n) wholesale and retail.

These industry-led sector committees will need to have specific working groups for individual areas of skills and knowledge. It is proposed that the role of the sector committees will be to:

- a) undertake a sector-wide scoping of workforce skills and knowledge requirements and priorities, and map out plans for the coherent and comprehensive identification of future-focussed workforce competencies and qualifications across the value chain, from entry to advanced levels, as required in their sector;
- b) establish subgroups of high-performing workers, to identify required skills and knowledge at all necessary levels, and to package these into national qualifications; and
- c) work with the Skills Assessment and Recognition Committee to ensure that institutions accredited to offer training meet industry standards, and that assessment and certification is to the industry standard specified.

An achievable, prioritized work plan will need to be developed so that competency standards and new qualifications are available first in key economic and employment sectors.

It is suggested that representatives of the relevant ministries (e.g. MOHT, Ministry of Electric Power) join the industry representatives on these skills identification committees. Over time, a wider role may evolve for the sector committees, they could contribute significantly to national development by:

- a) providing research and leadership to their sector in:
 - 1) identifying current and future skills needs;
 - 2) developing strategic plans for industry to meet its skills needs;
 - 3) benchmarking against international standards and productivity levels; and
 - 4) promoting training to meet the needs of employers and employees;
- b) setting competency standards and qualifications for their industry sector;
- c) providing information, career guidance, and placement services to trainees and their employers;
- d) developing arrangements for the delivery of training in industry, including capacity development, quality assurance, and assessing and certifying trainees;
- e) making arrangements for apprenticeships and other similar training and employment contracts; and
- f) monitoring the quality of education and training in their sector.

Competency standards and qualifications

The Skills Development Agency can take the opportunity – as recommended by the recent GIZ report⁵⁷ – to review the formatting of competency standards for the new certificate and diploma qualifications. A manual should be developed, outlining industry leadership in this process, and the roles and responsibilities of the facilitators of that process. A suitable manual could be adapted from that developed by the ADB TVET project in the Lao People's Democratic Republic. GIZ plans to offer training, so there will be skilled facilitators and writers to work with industry representatives to develop the competency standards. It is assumed that these facilitators will also be trained in functional sector analysis, and in the packaging of the competency standards into new technical and vocational qualifications.

Policies and procedures should be established for the packaging of the competency standards into technical and vocational qualifications. These should include any policies for the inclusion in the qualifications of generic and “soft” skills.

The requirements for the specification of applied degree programmes, in outcome terms, needs to be developed. For this, the policies of the Malaysian Qualifications Agency will be useful. These will

⁵⁷ Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ): *Analysis of capacity development needs of the National Skills Standards Authority*, 2012.

almost certainly meet the benchmarking requirements of the ASEAN Qualifications Reference Framework for worker mobility within the AEC.

The International Standard Classification of Education (ISCED) is suggested for consideration for the classification of competency standards and the new national technical and vocational qualifications. The new technical and vocational qualifications (and their competency standards), identified by industries, offer a ready-made tool for acquiring and recognizing competence in the workplace. The standards can be used for a range of human resource applications including:

- a) staff recruitment, selection, and succession planning;
- b) training needs analysis and the design of training programmes;
- c) promotion of a learning environment to support business growth;
- d) staff motivation; and
- e) staff performance measurement and development.

The competency standards will describe nationally agreed competencies within an industry. Workers and students can be assessed in the workplace, or in simulated settings in training institutions, against the performance requirements specified for the competency standards. Companies can select appropriate standards and make them available to workers to suit training needs. Alternatively, enterprises may find that the pre-packaged formal industry qualifications contain the set of skills required by their workers.

Internationally, competency standards are no longer⁵⁸ linked solely to the International Standard Classification of Occupations (ISCO). While these ILO-developed occupational definitions have been very useful in the past, as a guide to common approaches to occupational trade skills, they may not in every circumstance describe emerging patterns of work. As an example, a number of industries, such as automotive manufacturing, use trade occupations such as those in mechanical and electrical engineering. However, they now tend to want more multi-skilled workforces, and require combinations not usually covered in a narrow trade definition. Therefore, a traditionally qualified electrical fitter would perhaps also be expected to utilize some mechanical skills, and combine these with work on production-line robotics and mechatronics. A conventionally qualified electrical fitter would therefore need to have some, but maybe not all, of the skills required to fulfil the demands of some more advanced automotive enterprises. As a result, nations with competency-based systems generally now prefer their standards to reflect broad sectors such as engineering, agriculture, food processing, or tourism, and qualifications packages have a broader industry, industry subsector, or occupational cluster coverage rather than the traditional, narrower, single occupational focus.

In addition to the industry skills, employability competency standards (including skills in small business management and entrepreneurship) will need to be developed at the worker and supervisor levels for inclusion in training programmes. The Workforce Development Agency in Singapore has developed an excellent set of employability standards, to which access for use in Myanmar is worth exploring.

A very important issue will be the designing of the Myanmar register of qualifications that meet the Myanmar Vocational Qualifications Framework (MVQF) standard, as this will be the basis for negotiating recognition throughout ASEAN. Along with the design, there will need to be careful consideration of how to progressively enter all recognized qualifications into the register. A national classification system for qualifications will be required. Ministries may consider taking into account national reporting obligations to international agencies such as UNESCO and the ILO when determining the website classification system. A common classification system could be derived from the ISCED. Several years ago, Australia and New Zealand jointly agreed to a common classification system, derived from the ISCED, of 12 broad categories:

- a) natural and physical sciences;

⁵⁸ Edited from information supplied by Andre Lewis, Australian National Training Authority, 1997.

- b) information technology;
- c) engineering and related technologies;
- d) architecture and building;
- e) agriculture, environment, and related studies;
- f) health;
- g) education;
- h) management and commerce;
- i) society and culture;
- j) creative arts;
- k) food, hospitality, and personal services; and
- l) mixed field programmes.

As qualifications are confirmed by the Skills Development Agency as meeting the MVQF requirements, they can be entered on the combined database and website, along with details of the institutions authorized to offer them. The Skills Development Agency could consider that the following core data be supplied for all qualifications to be entered on the database:

- a) the title of the qualification, conforming to the MVQF;
- b) the name(s) of the provider(s) of the qualification;
- c) an outcome statement indicating what it is that the whole qualification represents in terms of application of knowledge, understanding, skills, and attitudes;
- d) summary detail of the components of the qualification, and their learning outcomes, which, in their combination, make up the complete qualification;
- e) information as to where further information on the training provider is available;
- f) summary detail of the regulatory, quality-assured status of the qualification; and
- g) summary detail of industry stakeholder endorsement of the qualification.

Representatives of industry and professional bodies, and those responsible for providing careers advice to prospective students, should be asked to comment on the adequacy and suitability of the above-proposed core data.

Ministries should be asked to promote the website nationally and internationally, which will lead to increased confidence in HRD on the part of stakeholders, with recognition and mobility benefits for students and workers, and confidence from companies considering investing in Myanmar or purchasing Myanmar goods and services. The MOST may consider briefing diplomatic representatives, at some future date, especially those from key ASEAN and other trading partners, or whose countries are key destinations for Myanmar skilled workers.

It is recommended that the sector committees adopt an “all-levels, whole-of-sector” approach, so that competency standards and new national technical and vocational qualifications are progressively available to cover the entire value chain from pre-vocational up to advanced technician levels, so as to meet the requirements of the local and international labour market. Where possible, relevant high-quality competency standards may be sourced and adapted from other jurisdictions, and from international professional and other agencies. However, this is a major task involving considerable expert facilitation and writing. The result will be refreshed national vocational qualifications meeting national and international HRD requirements, so as to produce, over time, an internationally competitive workforce.

It is recommended that, to promote system sustainability, key staff of the Myanmar Skills Development Agency be trained in identifying workforce skills by a process of functional analysis; then be trained in preparing competency standards and any associated teaching and assessment resource materials; and in packaging the competency standards into flexible technical and vocational qualifications.

Curriculum development

Consideration must be given to whether or not to invest in the development of curricula based on the competency standards and the qualifications packages. This approach constrains institutional delivery, and inhibits flexibility and responsiveness to student needs through the modalities now available to those delivering training. It does, however, support TVET teachers who may be unsure how to deliver training to nationally-identified competency standards. The competency-based approach opens training and assessment to new modalities:

- a) education and training through public and private institutions;
- b) skills and knowledge acquisition from structured training in the workplace;
- c) informal training through NGOs and community-based agencies; and
- d) direct assessment to recognize prior learning.

It is proposed that there be sustained investment in TVET teacher and trainer development, so that TVET teachers and trainers are equipped with the skills to develop high-quality programmes responsive to the needs of students and trainees. Should that occur, national curriculum development would be unnecessary.

Flexible acquisition of skills and knowledge

The establishment of a national technical and vocational qualifications system based on national competency standards makes possible considerable flexibility in worker skills acquisition. Training providers can develop full-time training programmes. They can modularize training and offer part-time courses at times to suit workers, so that a full qualification is achieved over time. There can be a mix of training off the job and training in the workplace, with assessment results being combined towards a full award. Assessment can be conducted in the workplace. Assessment can recognize prior learning and award competencies without course attendance. Implementation of this maximum flexibility in Myanmar will open learning opportunities to many more workers, so that the talents of all citizens can potentially be enhanced in support of national HRD.

The existence of national competency standards can be a significant aid for the informal sector. With flexible, modular training opportunities and access to recognized assessment, workers in very small enterprises can build up their skill base, no matter how modest. Further skills can be added as needed. “Just-in-time” skills acquisition, with valid nationally and internationally recognized certification, can give the informal sector the credibility to win contracts and remain viable.

Myanmar vocational qualifications framework

The four-level structure adopted by the former NSSA from earlier regional developments through the ASEAN ministries of labour, now needs revision and expansion. Adopting a comprehensive, sector-wide view, and participation in the imminent AEC, require additional levels and updated descriptors. ASEAN countries may commonly have up to four initial levels of certificate, two levels of diploma, followed by levels for degrees. For initial consideration, the following figure suggests a seven-level vocational qualifications framework for Myanmar:

Figure 1. Possible vocational qualifications framework

POSSIBLE MYANMAR VOCATIONAL QUALIFICATIONS FRAMEWORK FOR CONSIDERATION	
LEVEL	QUALIFICATIONS TITLES
7	Applied Bachelor's Degree
6	Diploma
5	Diploma
4	Certificate
3	Certificate
2	Certificate
1	Certificate

Full level descriptors will be required but can be adapted from good international practices. Those used in Scotland, Saudi Arabia, Hong Kong (China), and Australia are recommended for consideration. The level descriptors used for assigning competency standards and qualifications to the proposed levels will likely cover knowledge, cognitive skills, psychomotor skills, interpersonal skills and responsibility, communication, information technology, and numerical skills, as well as worker application of these.

It is suggested that a complete qualifications framework should be considered later for Myanmar. A vocational framework will meet initial needs through benchmarking to the ASEAN Qualifications Reference Framework currently being finalized, and provide for consequent skills recognition for departing (and arriving) migrant workers. Six ASEAN Member States have implemented, or are implementing, qualifications arrangements across all levels. Viet Nam will extend from a vocational to a complete framework from 2015. Cambodia is currently implementing a vocational framework, and has developed plans for its extension. The Lao People's Democratic Republic has yet to establish a national qualifications structure, but is likely to decide to do so shortly. Progress on the development of the ASEAN Qualifications Reference Framework is summarized in Appendix III.

Qualifications frameworks are commonly established to support a national response to pressures caused by significant workplace and labour market changes that have occurred worldwide over the past few decades. Globalization has resulted in many industries being restructured, and new services and products having to be developed. The nature of work has often changed, with a greater demand for flexible, multi-skilled workers who can take responsibility for quality, and who can work in teams in a flat management structure. Demarcations between traditional occupations are breaking down, resulting in the need to rebalance the focus of education and training from fixed occupations to broader industries. In addition, there is now an increased desire in many economies to cater for the unemployed, young school leavers, and older workers displaced as a result of structural changes in industry, and to respond to pressures for a more inclusive approach to education and training, giving all people more equitable access to the workforce.

Qualifications frameworks respond to a wish for education and training to be available lifelong, not only in formal institutions, but also in the workplace and the community, with valid certification being achievable for the acquisition of skills and knowledge, no matter how modest. This formal certification should be open to those in the informal economy, many of whom may have skills, but no formal

qualification, thereby enabling them to be competitive while remaining in the informal economy. Consequently fully developed frameworks have qualifications:

- a) with a “whole of industry” focus rather than being based on a single occupation or job with a restricted and static skill set;
- b) that are the basis for lifelong learning and continuous flexible skills acquisition;
- c) that integrate the development of skills, knowledge, attitudes, and values; and
- d) which give workers options, as the nature of work changes and the effects of globalization become even more apparent.

At its most simple, a qualifications framework will provide a sensible structure for qualifications, and for promoting high quality and relevance. A qualifications framework should be seen as just one component, and not the totality, of a wider HRD strategy. The features of the desired qualifications framework for Myanmar should be determined in that context by stakeholders, after considering what is feasible and affordable given the available human and other resources, and in line with the major national policy ambitions. Commonly, a single unified national qualifications structure promotes lifelong learning and international mutual recognition. The framework can be thought of as a skills recognition system that makes clear the learning outcomes to be achieved, and through which all achievements can be recognized. Such a framework can encourage the systematic development by stakeholders of competency standards and qualifications across all levels of the skills value chain. Assessment may take place in institutions, workplaces, community locations, and in recognition of prior learning. A framework should aim to promote a multi-skilled, flexible workforce, and have a resolute focus on supporting the national HRD strategy.

The establishment of a qualifications framework, with the strong involvement of industry, professional bodies, and community stakeholders, will provide the government with a strategic platform that it has not had previously for ensuring that all of the strategies for TVET are linked to one another and support national development objectives. Export earnings and rewarding employment opportunities, domestically and internationally, can be increased through proactive, sector-wide industry planning and development strategies stimulated by the vocational qualifications framework, through which stakeholders identify required workforce and professional standards at all levels.

Having qualifications linked together across the levels can create value chains of skills development and industry investment. For example, in the forestry sector, the value chain could promote increasing returns, beginning with initial harvesting and extending to transportation, milling, the development of specialty products such as composites, and furniture manufacturing; and then including business management and marketing. Increasingly, higher-level skills are needed, and value is added to the harvested timber at each point along the value chain. A qualifications framework has the potential to provide the planning “connectivity” for a forestry sector-wide skills and capability needs analysis that: can be linked directly to market opportunities and, ultimately, to applied research; that establishes the potential to minimize transfer costs between each step; and promotes education and training at all levels. A similar approach can be applied to traditional areas such as agriculture, as well as to tourism, to the development of new technology-based industries, or perhaps to national initiatives aimed at meeting international labour market opportunities in targeted areas (such as in information technology), thereby creating employment and remittance potential for individuals and families in Myanmar.

Operational policies and procedures

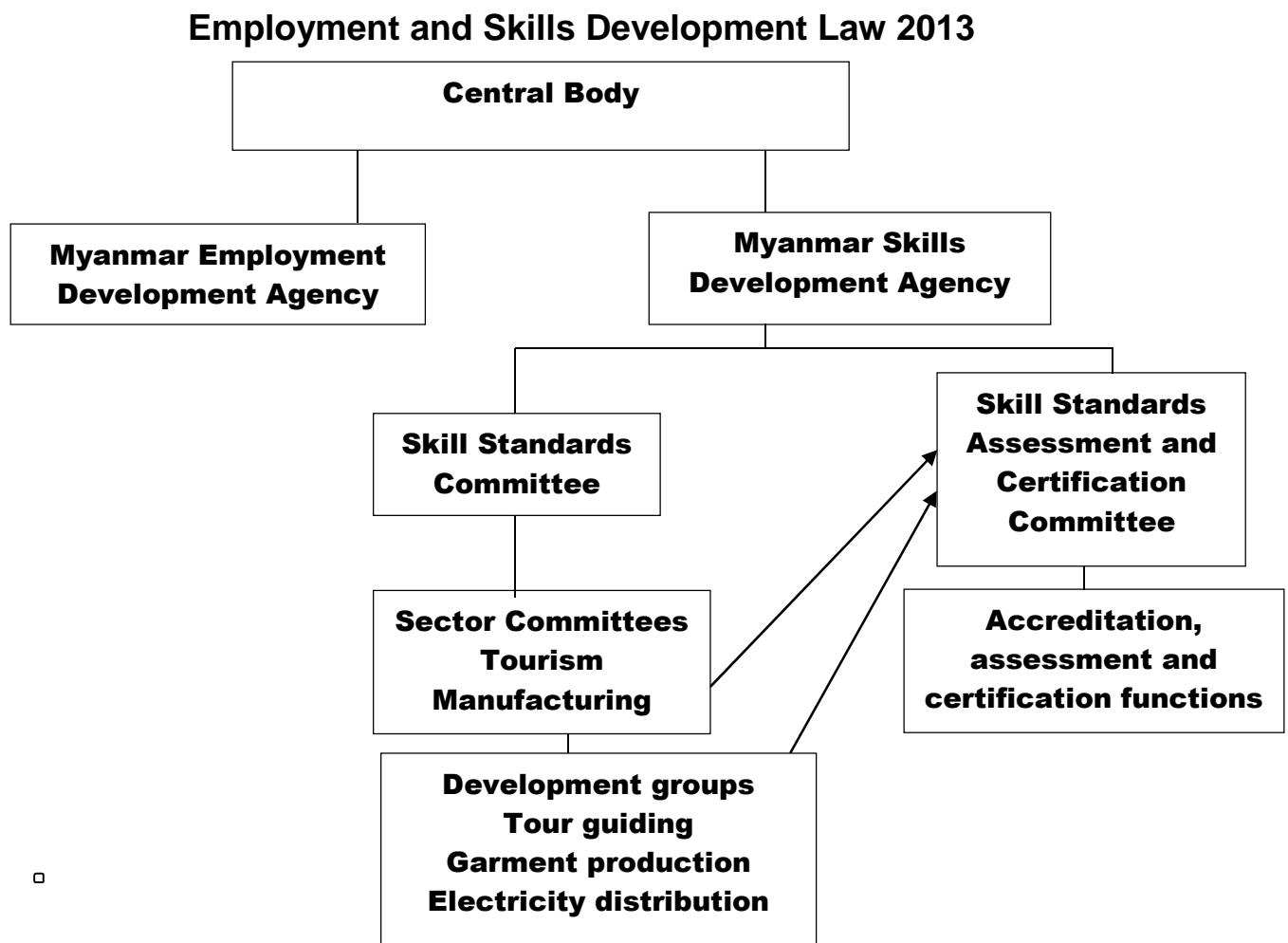
Policies and procedures need to be developed to support the establishment of the overall architecture of a functioning HRD system based on the new technical and vocational qualifications structure. Support is required to operationalize regulatory accreditation of training institutions, and to open up all the delivery modes that a competency-based system makes possible:

- a) skills and knowledge acquisition from training through public and private institutions;
- b) skills and knowledge acquisition from structured training in the workplace;
- c) skills and knowledge recognition from assessed informal training through NGOs and community-based agencies; and

- d) skills and knowledge recognition through direct assessment to recognize prior learning.

Policies and procedures will be needed to support national assessment and certification. As mandated by the Employment and Skills Development Law, and shown in the figure below, the development group drafting the competency standards and new TVET qualifications will need to work with the agency committee carrying out accreditation and assessment. That will provide the chance for industries to encourage flexible training modalities and to ensure that assessment is to the required standard. Nationally, industries will need to identify and establish sector assessment centres. Bangladesh has good models for this, especially for the footwear sector.

Figure 2. Employment and Skills Development Law



Source: Htet Aung Myo 3 Sep. 2013

7. Recommendations

Recommendation 1

That the Employment Opportunity Sector Working Group be asked to determine:

- a) that TVET be aligned with national development priorities;
- b) a unified, all-levels qualifications focus, to build value chains of skills and knowledge;
- c) effective, efficient, flexible rural and urban training opportunities through coordination between ministries and the NGO, private, and community sectors; and
- d) an initial pragmatic focus on five priority economic sectors – agriculture, energy, infrastructure, manufacturing, and tourism and hospitality.

Recommendation 2

That the ILO further supports the strengthening of the UMFCCEI and its affiliated sector bodies, so that they can assume a leadership role for the new, unified, demand-driven, and future-focussed TVET system in Myanmar.

Recommendation 3

That, with the close involvement of the UMFCCEI and other industry sector groups, industry sector committees be established immediately by the Myanmar Skills Development Agency, for the five priority economic sectors, to:

- a) undertake sector workforce strategic planning;
- b) identify and package workforce skills and knowledge into flexible qualifications; and
- c) support the agency to operationalize the new training system, especially accreditation, assessment, and certification.

Recommendation 4

That the Myanmar Skills Development Agency assign an initial focus on becoming fully operational in the priority sectors, at all levels, with:

- a) sector committees established;
- b) whole-sector workforce planning undertaken;
- c) standards formatting determined for certificates, diplomas, and applied degrees;
- d) standards and qualifications developed under industry leadership;
- e) quality assurance established in partnership with industry and professional bodies;
- f) sector assessment centres established with industry support; and
- g) national certification in place, endorsed by industry.

Recommendation 5

That the industry sector committees adopt an “all-levels, whole-of-sector” approach, so that competency standards and new national technical and vocational qualifications are progressively available to cover the entire value chain from pre-vocational up to advanced technician levels, so as to meet the requirements of the local and international labour market.

As mandated by the Employment and Skills Development Law, the industry sector committees and the development groups drafting the competency standards and new TVET qualifications will need to work closely with the committee responsible for accreditation and assessment of training. That will provide the chance to encourage flexible training modalities, and to ensure that assessment is to the standard set by the industry.

Recommendation 6

That the sector development groups be made up of high-performing workers, who will undertake a future-focussed, sector-wide scoping of workforce skills and knowledge requirements and priorities, and map out plans for the coherent and comprehensive identification of workforce competencies and qualifications across the value chain from entry to advanced levels, as required. This differs from current practice.

Recommendation 7

That ministries be requested to give priority to TVET initiatives in the five sectors identified, so as to:

- a) lift workforce skills, knowledge, quality, and productivity; and
- b) model industry leadership in HRD.

And that ministries be asked to identify regulatory (and any other) impediments that may be preventing them from offering TVET programmes at all levels, for all students, regardless of academic background, and through the full variety of training modalities made possible by competency-based approaches.

Recommendation 8

That ministries and the Myanmar Skills Development Agency encourage flexible education and training initiatives in the five priority sectors, leading to training and assessment for TVET qualifications through:

- a) education and training offered by public and private institutions;
- b) skills and knowledge acquisition from structured training in the workplace;
- c) informal training through NGOs and community-based agencies; and
- d) direct assessment to recognize prior learning.

Recommendation 9

Noting the value of bringing together skills training, entrepreneurship, and income generation for rural communities, that the ILO be asked to investigate introducing the TREE methodology to Myanmar, in particular to support non-formal skills development linked to income generation in rural communities, with skills assessment and certification where desired.

Reference

Asian Development Bank (ADB). 2012. *Myanmar in transition: Opportunities and challenges* (Manila).

–. 2012. *Myanmar energy sector initial assessment* (Manila).

Association of Southeast Asian Nations (ASEAN Secretariat). 2013. *Mutual Recognition Arrangement on tourism professionals (MRA)*, handbook (Jakarta).

Bertelsmann Stiftung's Transformation Index (BTI). 2012. *Myanmar country report* (Gütersloh).

The Economist. 2013. “*Infrastructure for the new Myanmar*”, 12 July.

Food and Agricultural Organization (FAO). 2013. *Myanmar mission report on inland aquaculture and fisheries*, undated. Available at:
<https://www.fao.org/docrep/004/ad497e04htm> [10 July 2013].

Harvard Kennedy School. 2012. *Electricity demand and supply in Myanmar* (Cambridge).

International Labour Organization (ILO). 2013. *Skills development for sectors in Myanmar: Needs and opportunities*, Hana Rihova, draft (Bangkok).

–. and London School of Economics (LSE). 2013. *Demand for skills in the economy, data analysis*, draft (London).

International Monetary Fund (IMF). 2013. *Myanmar: Staff monitored programme*. Available at:
<https://www.imf.org/external/pubs/cat/longres.aspx?sk=40248.0> [Jan. 2013].

Japan International Cooperation Agency (JICA). 2012. *Data collection survey on the education sector in Myanmar*, draft interim report (Tokyo).

KPMG. 2013. *Infrastructure in Myanmar* (Amstelveen).

McKinsey MGI. 2013. *Myanmar's moment: Unique opportunities, major challenges* (New York).

Ministry of Tourism. 2013. *Myanmar Tourism Master Plan 2013–2020*, draft (Naypyidaw).

Organisation for Economic Cooperation and Development (OECD). 2013. *Multi-dimensional review of Myanmar, Volume 1* (Paris).

Swiss Agency for Development and Cooperation (SDA). 2013. *Technical education and vocational training in Myanmar* (Bern).

World Economic Forum. 2013. *New energy architecture: Myanmar* (Geneva).

–. 2013. *Courageous transformation for inclusion and integration* (Geneva).

Appendix I. Schedule of people interviewed

Yangon

UNESCO

Robyn Jackson (Programme Specialist, UNESCO), r.jackson@unesco.org

GIZ

Konrad De Bortoli (Head of Project GIZ), konrad.debortoli@giz.de

Naing Yee Mar (Senior Advisor GIZ), naing.mar@giz.de

Andreas Dernbach (Consultant Forderung der Beruflichen Bildung), andreas@dernbach.net

Asian Development Bank

Carsten Huttemeier (Consultant), cah@aarhustech.dk

Myanmar Tourism Federation

Ms Lynn Lynn (Executive Officer), info@myanmartourismboard.org,

myanmartourismboard@gmail.com

Ms Kyi Kyi Aye (Senior Advisor), kyikiaye.mm@gmail.com

Ms Thu Zar Khin (Deputy Manager, Panorama Hotel), thuzarkhin69@gmail.com

Ms Thida Lay (Joint Secretary, Myanmar Hospitality Professionals' Association), mhp.a.myanmar@gmail.com

Mr Naung Naung Han (Secretary General, Union of Myanmar Travel Association), secretary@umtanet.org, UMTA@mptmail.net.mm, office@umtanet.org

Ms Ma Ma Thet Thet, mathet.007@gmail.com

Yankin Skills Training Centre

Ms Khin Mar Aye (Assistant Director) khinmaraye61@gmail.com

Mr Khin Maung Lay (Retired Director, Ministry of Labour, Employment, and Social Security)

Construction Training Centre

Mr Oo Han (Principal), oohanroad4@gmail.com

UMFCCI

U Hnin Oo (Central Executive Committee Member, UMFCCI), hhninsapphire@gmail.com

Mr Kyaw Thane (Central Executive Committee Member, UMFCCI), umcci@mptmail.net.mm

Yangon Technology University

Professor Nyi Hla Nge (Advisor for the MOST and chairman of the Steering Committee for YTU and MTU), nyihlange1@gmail.com

Dr Toe Toe Win, toetoewin.civil@gmail.com

Mr Khin Maung Zaw

Myanmar Engineering Society and Director of Myo and Myint Brothers Co. Ltd.

Mr Ko Ko Gyi (General Secretary), kokogyi.kokogyi@gmail.com

Myanmar Garment Manufacturers' Association

Dr. Aung Win (Vice Chairman), doctoraungwin@gmail.com, winmaple@mptmail.net.mm

JICA

Kuronuma Kenji, Kuronuma.Kenji@jica.go.jp

Hanns Seidel Foundation
Achim Munz (Resident Representative), munz@hss.de

Star Resources
Ms Nay Yi Aung (Principal/Managing Director), nyaung@starresources.com

Pathein

YMCA
Kyaw Moe Hlaing (Secretary), ptnymca2005@gmail.com
Saw Hser Ner Moo, icecff6@gmail.com

YWCA
Octavia, mobile 09-42243384, octavialay.octavia@gmail.com

Action Aid
Pathein Myaung Mya, association partner with Action Aid Myanmar
Saw Alzora, saw.alzora@gmail.com
Saw Myat Moe
Naw Paw Paw Htoo, kdnppawpawhtoo@gmail.com, mobile 09-49758422

AIBI Institute and Ayyarwaddy Youth Society
Mr Maung Maung Oo, mmo.aibi@gmail.com, mmoo.ntt@gmail.com, 09-49717428, 09-422496600

University Christian Fellowship
Naw Thant Sin Oo, 09-49716820

Help Age International (Myanmar)
Naw Anna, anna.malay2010@gmail.com, 09-422544650

Marie Stops International Myanmar
Dr Kyaw Htun Naing, kyawhtun.naing@gmail.com, 09-5176992

Pathein Technology University
Dr Phyo Mon Win, phyomonwin@gmail.com, 09-422443223

Karuna Myanmar Social Society (Pathein)
Fr Pius Win Thein (Director), mobile 09-8853803, winpathein@gmail.com
Peter Soe Min Oo (Trainer), 09-31364351, petersmoeoo@googlemail.com
Sylvester Thaik Soe Aung, 042-21209, moeyansoe1@gmail.com
James, 09-49719876, jamezawwin1500@gmail.com
Raymond Soe Lay, 09-8570557, raymondsoe2010@gmail.com

Emerald Sea Resort, Ngwe Saung Beach
Thant Zin Phyo (Room Service Manager) 042-40247, 09-5200740, emeraldsea.ng@gmail.com
Alan Wilkinson (volunteer community worker in Myanmar), ay_wilkinson@hotmail.com

Appendix II. Development of the ASEAN qualifications reference framework

Development of the reference framework is being undertaken through a project under the ASEAN-Australia-New Zealand Free Trade Area (AANZFTA). It has two main objectives:

- a) to increase trade in services, particularly education services and the temporary movement of natural persons, through the development of mutually comparable national qualifications frameworks based on a common reference framework; and
- b) to strengthen education and training systems within each country through the development of policy frameworks for national qualifications frameworks.

A Multi-Sectoral Working Group was established in 2012 to design the ASEAN Qualifications Reference Framework (AQRF), which is made up of officials from the AANZFTA Committee on Trade in Services, staff from the ministries of Education, Labour, and Manpower Development, other relevant ministries, and agencies involved with skills recognition. The chair is the Philippines, with Indonesia as the vice-chair.

Phase 1 of the AANZFTA project aimed to scope the basic requirements for a regional reference framework, and to complete a “stock-take” of relevant developments in all ten ASEAN countries. Phase 2 established a task force (May 2012) to further develop and agree on the regional reference framework initially scoped out in Phase 1.

There is a general consensus regarding the importance of a common reference framework for the purposes of transparency, as well as learner and labour mobility. ASEAN members have affirmed that national frameworks and the regional reference framework are excellent tools to assist individual economies, but are only credible if linked to national quality assurance systems. Moreover, it is also acknowledged that there is still significant work to be done across the countries regarding understanding of the purpose and functions of a common reference framework.

Phase 3 will support ASEAN countries as they implement their own qualifications frameworks in the context of the regional recognition framework. Thailand is to be the pilot. This phase will supplement specific capacity-building being undertaken in Cambodia, the Lao People’s Democratic Republic, and Myanmar (the CLM countries).

Indonesia (through the National Agency for Educational Standards [Badan Standar Nasional Pendidikan] BSNP) has proposed further work to support all ASEAN members to benchmark their qualifications systems with the regional reference framework. Three main objectives have been proposed for conducting this further assignment:

- a) to develop an ASEAN Guidelines for Qualifications and Skills Recognition Arrangements;
- b) to determine concrete actions among ASEAN countries in realizing the harmonization of competence standards and certification systems with its implementation; and
- c) to achieve a qualified, competent, and well-prepared ASEAN labour force supporting the AEC, which is due to become effective at the end of 2015.

Furthermore, the proposed ASEAN Guidelines – objective a) above – on the development of national qualifications frameworks will be synchronized with the ongoing AANZFTA project.

Appendix III. Distribution of the workforce in economic sectors

Table 4. Distribution of the workforce in economic sectors

Economic sector	2011 Report data			2005 Report data total
	Male (% of male workforce)	Female (% of female workforce)	Total (% of total workforce)	(% of total)
Agriculture, hunting and forestry	52.3	47.4	50.2	50.2
Fishing	3.2	0.7	2.2	2.8
Mining and quarrying	2.2	0.7	1.6	1.2
Manufacturing	5.0	7.2	5.9	7.4
Electricity, gas, and water supply	0.7	0.2	0.5	0.3
Construction	6.1	1.1	4.0	2.7
Wholesale and retail trade, repair of motor vehicles, motorcycles, personal and household goods	8.0	13.9	10.5	11.6
Hotels and restaurants	1.3	1.4	1.3	0.9
Transport and storage	6.1	0.7	3.8	3.3
Financial intermediations	0.1	0.3	0.2	0.2
Real estate, renting, and business activities	4.1	10.8	7.1	5.8
Public administration and defence, compulsory social security	1.5	1.1	1.3	2.0
Education	1.0	4.9	2.7	2.0
Health and social work	0.6	0.8	0.7	5.6
Activities of private households as employers, and undifferentiated production activities	7.3	8.7	7.9	1.5
Extraterritorial organizations and bodies	0.1	0.1	0.1	0

Source: Ministry of National Planning and Economic Development et al. 2011. Integrated Household Living Conditions Survey (2009–2010).