APEC Integrated Referencing Framework for Skills Recognition and Mobility

Literature review

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<th>Description</th>
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<tr>
<td>ANZSCO</td>
<td>Australian and New Zealand Standard Classification of Occupations</td>
</tr>
<tr>
<td>APEC</td>
<td>Asia-Pacific Economic Cooperation</td>
</tr>
<tr>
<td>AQRF</td>
<td>ASEAN Qualifications Reference Framework</td>
</tr>
<tr>
<td>CANTA</td>
<td>Caribbean Association of National Training Agencies</td>
</tr>
<tr>
<td>CARICOM</td>
<td>Caribbean Community and Common Market</td>
</tr>
<tr>
<td>CARIFTA</td>
<td>Caribbean Free Trade Association</td>
</tr>
<tr>
<td>CEDEFOP</td>
<td>European Centre for the Development of Vocational Training</td>
</tr>
<tr>
<td>CSME</td>
<td>Caribbean Community and Single Market and Economy</td>
</tr>
<tr>
<td>CVQ</td>
<td>Caribbean Vocational Qualification</td>
</tr>
<tr>
<td>CXC</td>
<td>Caribbean Examinations Council</td>
</tr>
<tr>
<td>DACUM</td>
<td>Developing a Curriculum</td>
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<tr>
<td>EAS</td>
<td>East Asia Summit</td>
</tr>
<tr>
<td>EAS TVET QAF</td>
<td>East Asia Summit Technical Vocational Education and Training Quality Assurance Framework</td>
</tr>
<tr>
<td>EOF</td>
<td>European Qualifications Framework</td>
</tr>
<tr>
<td>ETF</td>
<td>European Training Framework</td>
</tr>
<tr>
<td>GFCQ</td>
<td>General Framework for CXC [Caribbean Examinations Council] Qualifications</td>
</tr>
<tr>
<td>ILO</td>
<td>International Labour Organisation</td>
</tr>
<tr>
<td>IMO</td>
<td>International Maritime Organisation</td>
</tr>
<tr>
<td>ISCED</td>
<td>International Standard Classification of Education</td>
</tr>
<tr>
<td>ISCO</td>
<td>International Standard Classification of Occupations</td>
</tr>
<tr>
<td>MRA</td>
<td>Mutual Recognition Arrangement</td>
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<td>NZQA</td>
<td>New Zealand Qualifications Authority</td>
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<td>NZQF</td>
<td>New Zealand Qualifications Framework</td>
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<tr>
<td>OECD</td>
<td>Organisation for Economic Co-operation and Development</td>
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<tr>
<td>PQAS</td>
<td>Pacific Quality Assurance Standard</td>
</tr>
<tr>
<td>Abbreviation</td>
<td>Full Form</td>
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<td>--------------</td>
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<tr>
<td>PQF</td>
<td>Pacific Qualifications Framework</td>
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<td>PRQS</td>
<td>Pacific Register of Qualifications and Standards</td>
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<tr>
<td>QA</td>
<td>Quality assurance</td>
</tr>
<tr>
<td>RMCS</td>
<td>Regional Model Competency Standards</td>
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<tr>
<td>RQF</td>
<td>Regional Qualifications Framework</td>
</tr>
<tr>
<td>SPBEA</td>
<td>Secretariat of the Pacific Board for Educational Assessment</td>
</tr>
<tr>
<td>SPC</td>
<td>Secretariat of the Pacific Community</td>
</tr>
<tr>
<td>TRA</td>
<td>Trades Recognition Australia</td>
</tr>
<tr>
<td>TTMRA</td>
<td>Trans-Tasman Mutual Recognition Arrangement</td>
</tr>
<tr>
<td>TVET</td>
<td>Technical, Vocational Education and Training</td>
</tr>
<tr>
<td>UK</td>
<td>United Kingdom</td>
</tr>
<tr>
<td>UNESCO</td>
<td>United Nations Educational, Scientific and Cultural Organization</td>
</tr>
<tr>
<td>VUSSC</td>
<td>Virtual University for Small States of the Commonwealth</td>
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Executive summary

This literature review was commissioned by Department of Education and Training, Australian Government in relation to the proposal to establish an APEC Integrated Referencing Framework for Skills Recognition and Mobility.

This literature review is a part of a broader project that aims to build on existing research and add value to current activities to establish an APEC Integrated Referencing Framework for Skills Recognition and Mobility. The new framework would aim to draw together into a cohesive architecture the following key elements:

- Qualifications referencing framework – enables mapping against national qualification levels for occupations/qualifications,
- Quality assurance referencing framework – enables confidence in the quality of provision of training against occupational standards and the integrity of qualifications issued
- Occupational standards referencing framework – enables common understanding of skills required for specific occupations and determination of relevance of skills held by individuals.

This literature review draws upon relevant sources of information in relation to strategies to mutually recognise qualifications and skills. The literature review considered various mechanisms that support recognition of qualifications and skills, such as regional qualifications frameworks, regional quality assurance frameworks, bilateral and multilateral arrangements, national procedures and industry sector specific procedures. It also included in depth analysis of two existing integrated frameworks; in the ASEAN and Caribbean communities. The need for integrated approaches becomes clear when the separate strategies and developments are explained.

The field of recognition of knowledge, skills and competences is complex, there is no single model that informs local practice and different countries/regions have worked in different ways to bring coordination between occupational standards, qualifications systems and quality assurance procedures at the local level. The advent of regional qualifications frameworks and international quality assurance processes have made it possible to consider the potential of a more coordinated international approach to recognition that includes occupational standards. In this sense the APEC proposal is future oriented, ambitious and, because of its potential scale, unique.

This literature review should be read in conjunction with the APEC Integrated Referencing Framework for Skills Recognition and Mobility: Discussion Paper. The Discussion Paper focusses on the options for the development of a new Occupational Framework. The Discussion Paper also includes issues related to developing a fully integrated framework for the APEC economies and how the framework may be described and utilised by end users.
Introduction

This literature review was commissioned by Department of Education and Training, Australian Government to support any future work on developing an APEC Integrated Referencing Framework for Skills Recognition and Mobility.

APEC currently include the following economies: Australia, Brunei Darussalam, Canada, Chile, People's Republic of China, Hong Kong, Indonesia, Japan, Republic of Korea, Malaysia, Mexico, New Zealand, Papua New Guinea, Peru, The Philippines, Russia, Singapore, Chinese Taipei, Thailand, The United States and Viet Nam.

The literature review is part of a broader project that aims to build on existing research and adding value to current activities to establish an APEC Integrated Referencing Framework for Skills Recognition and Mobility. The new framework would aim to draw together into a cohesive architecture the following key elements:

- Qualifications referencing framework – enables mapping against national qualification levels for occupations/qualifications,
- Quality assurance referencing framework – enables confidence in the quality of provision of training against occupational standards and the integrity of qualifications issued
- Occupational standards referencing framework – enables common understanding of skills required for specific occupations and determination of relevance of skills held by individuals.

The project aims to determine how these elements can combine to support recognition arrangements in TVET across APEC, explore the feasibility of adding value to existing qualifications and quality referencing frameworks, and to develop a draft referencing framework for regional occupational standards. This area of education and training frameworks and systems is complex and different countries/regions have worked in different ways to bring coordination to their systems and recognition processes. In many countries specific agencies are established to provide a consistent national approach to recognition, particularly for qualifications. Recognition of skills and competences is generally less formalised and left to employers to operate an approach that suits the organisation. Quality assurance processes operate at a range of levels and on different parts of the education, training and qualification system. Once again quality assurance as applied to qualifications is generally better developed and more consistent than for interpretation of occupational standards and generally speaking employers develop their own ways of using occupational standards for training, recruitment, skills audits, work process analysis, staff appraisal and other company processes.

The field of recognition of knowledge, skills and competences is complex, there is no single model that informs local practice and different countries/regions have worked in different ways to bring coordination between occupational standards, qualifications systems and quality assurance procedures at the local level. The advent of regional qualifications frameworks and international quality assurance processes have made it possible to consider the potential of a more coordinated international approach to recognition that includes occupational standards. In this sense the APEC proposal is future oriented, ambitious and, because of its potential scale, unique.
This literature review aims to draw upon relevant sources of information in relation to strategies to mutually recognise qualifications and skills to inform a model that integrates the key structures to facilitate recognition of qualifications and skills in the APEC region. However, recognition is not achievable if:

- There is no trust between countries on the quality of the qualifications undertaken, their basis in occupational or educational standards and the certificates that are issued.
- Quality standards are not transparent and fully implemented across each participating country/provider/qualification.
- Facilitating mutual recognition is not a principle adhered to by participating countries/agencies/providers.
- There is no specific regional governance of the recognition process.
- There is no mechanism for mutual recognition to occur.

To develop a zone of trust\(^1\) between the APEC member economies in terms of occupational standards and of qualifications there needs to be an appreciation by people in key agencies (e.g. learning providers, qualifications bodies/quality assurance agencies, professional bodies, employers, employee organisations) that the APEC Integrated Referencing Framework is helpful for understanding occupational standards and the qualifications systems in other member economies.

This zone of trust between the APEC member economies is critical to the success of the 'Earn, Learn, Return’ model as proposed within the APEC region by the APEC Business Advisory Council. This model includes four key components of which the first two components relate or can be enhanced by the proposed the APEC Integrated Referencing Framework:

1. A sector-based regulatory structure built around a new category called an “APEC Worker.” APEC members could identify or create the ideal multilateral or regional organization that would provide the governance structure for each sector. For example, the International Maritime Organization governs the shipping industry’s workforce.
2. An APEC-wide regulatory convergence of training, assessment and certification of skills and qualifications for each position in each sector.
3. An APEC-wide transparent, regulated and standard process for the recruitment, job placement, and deployment of workers.
4. A next generation of APEC-wide services catering exclusively for the needs of an APEC Worker.

The ‘Earn, Learn, Return’ model is dependent on the recognition of knowledge, skills and competence of APEC workers to ease the concerns with skills shortages and mismatch across the region.

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\(^1\) Coles, M. and Oates, T., 2004, Zones of Mutual Trust, Cedefop Thessaolonikki
Methodology

This review is based on the outcomes of a range of evaluative tools, including:

- A literature review related to regional frameworks and strategies for the recognition of qualifications including models for competency standards development
- Discussions with key people in APEC countries, e.g. Philippines (proposed), Malaysia, Vietnam and Taipei (proposed)
- Attendance at relevant meetings e.g. APEC Business Advisory Council (ABAC) meeting in Melbourne (August 2015) and APEC Transport & Logistics project validation workshop in Manila (September 2015).

This review is structured in three parts:

A. An overview of definitions and issues related to recognition
B. A classification of Recognition approaches, including strategies for the recognition of qualifications, and a summary of various strategies that aim to facilitate recognition of qualifications, including a focus on the ASEAN Qualifications Reference Framework and East Asia Summit TVET Quality Assurance Framework and models for developing achievement standards
C. A review focussing on integrated frameworks such as those in the ASEAN and CARICOM communities

The literature review should be read in conjunction with the APEC Integrated Referencing Framework for Skills Recognition and Mobility: Discussion Paper. The Discussion Paper focusses on the options for the development of a new Occupational Framework. The Discussion Paper also includes issues related to developing a fully integrated framework for the APEC economies and how the framework may be described and utilised by end users.

A glossary of terms is included in Appendix 6 and list of organisations and structures are included in Appendix 7.

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2 Bateman & Coles 2015
APEC Integrated Referencing Framework: Literature Review

A: Overview

The context for this research occurs within a world where both people and jobs are globally mobile. In addition, organisations, information and occupations are also increasingly internationalised. This globalisation is an undeniable trend and countries and regions are faced with developing policies and strategies in the context of the global economy that has free trade of goods and services and free movement of capital, technology and skills. There are significant differences of in country implementation to recognise skills and qualifications, these differences are important but at the regional level regions need to design their own coordinated strategy on how to cope with the challenges of globalization.

Within the APEC region there is concern with skills shortages and skills mismatches and it is accepted that their needs to be improved structures to support and manage labour flows in the region. The APEC Advisory Council has proposed the ‘Earn, Learn, Return’ model as proposed within the APEC region. This model includes four key components of which the first two components relate or can be enhanced by the proposed the APEC Integrated Referencing Framework:

1. A sector-based regulatory structure built around a new category called an “APEC Worker.” APEC members could identify or create the ideal multilateral or regional organization that would provide the governance structure for each sector. For example, the International Maritime Organization governs the shipping industry’s workforce.
2. An APEC-wide regulatory convergence of training, assessment and certification of skills and qualifications for each position in each sector.
3. An APEC-wide transparent, regulated and standard process for the recruitment, job placement, and deployment of workers.
4. A next generation of APEC-wide services catering exclusively for the needs of an APEC Worker.

This global mobility of students and labour has led to the increasing need to facilitate the recognition of qualifications and skills. How occupational standards and qualifications are recognised takes many forms and requires countries to implement a range of complementary strategies. As all stakeholders need to have confidence in the outcomes of the programmes undertaken and the certification process, there is a need for the APEC economies to have confidence in the quality of the certificates issued.

Within the APEC economies there is a need to not only develop in the education and training sector a community of trust but there is also a need to facilitate the development of generic occupational standards for specific industry sectors. These occupational standards can provide a reference point for national or local standards, they also reflect international standards established by international organisations and trade bodies. Importantly they can also facilitate a common understanding of knowledge, skills and competence required in occupations across the APEC region.

The landscape of qualifications and occupational standards can be summarised as a kind of hierarchy where learning outcomes (from work and study) underpin a progressively more generic series of instruments. The learning outcomes themselves and the generic instruments all play a role in recognition of skills, competences and qualifications.
The ways learning outcomes and standards underpin all kinds of qualifications and structures is evident in Figure 1. Also important is to note that qualifications frameworks and qualifications systems also have an effect on the ways standards are presented and learning outcomes are expressed. There is an interaction between elements of the system that needs to be taken into account in the design of an integrated system. A second important point is that quality assurance procedures apply to every part of the landscape in Figure 1.

In this report the main sources of evidence about occupational standards, National Qualifications Frameworks (NQFs), Regional Qualifications Frameworks (RQFs) and quality assurance have been reviewed. The depth of data on standards, frameworks and quality assurance varies.

Published papers and reports on occupational standards is vast and stretches back to the 1960’s and beyond. The focus of this published work pays attention to, inter alia, design of standards and ensuring they are fit for purpose, to the implementation of sets of occupational standards and to the benefits and adverse effects of the use of competency standards. There are two main or generic international approaches to defining occupational standards (the DACUM method and functional...
analysis) but there are a multitude of variations on these approaches for example the creation of job profiles in some European countries. A useful review document is *Linking Vocational Education and Training Standards and Employment Requirements - An International Manual* by Mansfield and Schmidt (ETF 2000).

Qualifications frameworks are a relatively new development although the earliest frameworks can also be traced back to the 1960’s in France. Since the 1990s NQFs have gained increased acceptance in countries across the world: first in Anglo-Saxon countries such as Australia, New Zealand, Scotland, Ireland and England and then closely followed by South Africa, Malaysia and others. Regional qualifications frameworks in Europe, Southern Africa, the Caribbean and South-East Asia and the Pacific have also followed, albeit at different levels of development. Recent reviews by UNESCO/ETF and Cedefop provide a good overview of developments (Cedefop 2015a, Cedefop 2015b, UNESCO 2015).

The field of quality assurance is also well represented in literature but the focus on international approaches is relatively recent. Much of the discussion of international quality assurance generally is linked with NQF discussions. However recent reviews are now considering quality assurance as an approach linked to NQFs. Regional quality assurance frameworks in the TVET sector have been developed in Europe and for the East Asia Summit countries; there also established regional frameworks in higher education. Recent reviews from Cedefop provide a summary of quality assurance at an agency and provider level (Cedefop 2011, Cedefop 2015c).

**Linking qualifications to labour market**

Qualifications can be defined as

> ...a formal certificate issued by an official agency, in recognition that an individual has been assessed as achieving learning outcomes or competencies to the standard specified for the qualification title, usually a type of certificate, diploma or degree...A qualification confers official recognition of value in the labour market and in further education and training.3

Regardless of the definition, there are differences in the understanding of qualifications. The fundamental difference is ‘between those that understand the qualifications as meaning the certification of achievement via a formal assessment of prescribed learning, and those that understand qualifications as a status endowed by communities of practice’. In the first interpretation the concept of qualification is linked to certification, which means to possess formal certification of the level of competence which the individual has reached. In the second interpretation, the term qualification refers to job setting, where a worker is qualified to perform certain work functions.6

There is evidence that apart from initial school leaving qualifications, the importance of qualifications in job seeking is becoming weaker, with a focus being applied by recruiters to a broader range of

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3 Coles, Keevy, Bateman and Keating, 2014
4 Due for endorsement in 2016.
5 Coles & Werquin 2006, p. 21 & 22.
6 Keevy and Chakroun 2015 draft, p. 78.
abilities and experience than qualifications can represent.\(^7\) There is a need to find ways that convey a person’s knowledge skills and wider competences more fully than through qualifications alone. Occupational standards can provide a framework for identifying the elements for this wider representation.

Wheelahan, Buchanan and Yu (2015) argue that in many instances the link between qualifications and jobs is tenuous, and that barriers to pathways are evident in education and training and the workforce. Wheelahan et al (2015) considers that students should be prepared ‘for a vocational stream rather than for a narrowly defined occupation or particular job’. The term vocation is ‘to practice — what people do in jobs, and the knowledge, skills and attributes they are required to use. A vocation is based on a continuum of knowledge and skill, in which work, vocational education, and higher education are linked, and is premised on the capacity to accrue knowledge and skills in a coherent, cumulative fashion’ (Buchanan et al. 2009, p.29 as cited in Wheelahan et al 2015).

Wheelahan et al (2015) consider that vocational streams refer to the structure of occupations and the way they are linked horizontally in related occupations at the same level, but they may also be linked vertically in specialist or more senior occupations. A vocational stream therefore links occupations that share common practices, knowledge, skills and personal attributes. Wheelahan et al (2015) argue that qualifications based on vocational streams prepares people for broad rather than narrow fields of practice.

The issue of at what level to pitch achievement standards in TVET is not new. In general, most TVET systems are based on occupational standards, described by groups of competency specifications. In many countries, occupational standards are based on those listed in an occupational classification system. These are often based, or related to, international classifications systems such as the International Standard Classification of Occupations (ISCO).\(^8\) In Europe a new multilingual database is under development that classifies occupations, qualifications and skills and competences (ESCO).\(^9\) This database supports job seeking and recruitment across the diverse employment structures in European countries. In some countries, the competency specifications directly inform training and assessment however in others countries curriculum is designed to specify the related learning outcomes, or in others training or program standards are designed to inform training and assessment.

The ILO in the *Guidelines for Development of Regional Model Competency Standards (RMCS)* (2006) argues that the model applied is that occupational standards are based on a broader notion of occupation and address ‘broader industry, industry sub-sector or occupational cluster’ (p. 2). The unit specifications are clustered according to primary functions of a broad, functional structure and do not identify discrete occupations or job roles. In Australia, TVET qualifications are structured around a job role or occupation and the unit of competency specifications are job tasks or functions; this model is reflected in a range of APEC economies.

Fretwell, Lewis and Deij (2002) not only emphasise the role of employers in defining occupational standards but also discuss the issue of occupational versus sector standards. They suggest that

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\(^7\) Cedefop, 2010  
\(^8\) International Classification of Occupations, ILO 2012  
\(^9\) European classification of skills, competences and occupations, [https://ec.europa.eu/esco/home](https://ec.europa.eu/esco/home)
occupational standards should be generic to facilitate individuals working in similar occupations in different sectors as opposed to occupational standards that are sector specific (i.e. analogous to a job).

Agreeing on such terms as ‘skills, occupations and sectors’ will be a critical discussion point for the development of the proposed Occupational Standards Referencing Framework and for agreeing on the level at which these standards will be pitched. Although local and national occupational standards generally include a range or mix of agreed competencies and include detailed specification of these competencies; in a regional framework such a level of detail could be a barrier to countries reaching an agreement on regional occupational standards. This may be especially pertinent given the broad range of countries within APEC and their respective occupational standards systems and education and training systems.

A summary of definitions (e.g. skills, occupations, vocation) from key texts are included in Appendix 1 and from international classification standards in Appendix 2. Various definitions of competence are included in Appendix 3.

**Role of occupational standards**

Occupational standards set the requirements for performance in an occupation, can help keep qualifications relevant to the needs of the labour market and also inform employers and learners of a job profile or occupation addressed by a qualification. Fretwell, Lewis and Deij (2001) indicate that the link of occupations (and training) standards to social and economic benefits is well documented, and that by providing a cohesive structure also addresses other reforms such as recognition of prior learning and stakeholder involvement in human capital development.

The European Training Framework (ETF 2014) notes that a majority of ETF partner countries have developed or are developing occupational standards. Many countries have developed coordinated systems of standards, e.g. United Kingdom, Germany, Australia, New Zealand and Canada with similar initiatives being established in a diverse range of countries, e.g. Malaysia, Chile (Fretwell et al 2001). The ETF report (2014) indicates that in the EU countries there are three distinct groups of countries whereby:

1. Occupational standards take the form of a more or less comprehensive classification system whose primary function is supporting labour market monitoring
2. Occupational standards are designed as benchmarks for measuring occupational performance, either in a work context or in an educational context
3. Occupational standards describe the occupation targeted by a qualification. It is noted that in this group they are generally developed in an integrated process with education standards; although this is not always the case in some countries internationally.  

How countries define and document occupational standards varies. A number of key definitions are included in Appendix 1. Occupational standards are generally developed around occupations and described by sets of competency specifications. In some countries occupational standards are limited to specifications of an occupation and do not include competency specifications. Alternatively some
countries utilise competency specifications (variously termed competency standards or units of competency) which are broadly speaking documented job tasks within an occupation. In most instances, occupational standards do not include specifications related to education and training or qualifications.

Within this literature review, the following ‘working definitions’ apply:

- Occupational standards shall be defined as specifications of an occupation which may or may not include competency specifications.
- Competency specifications shall be defined as specifications related to job tasks or functions within an occupation.

**Role of qualifications frameworks and quality assurance**

One underlying assumption related to the recognition of qualifications is the level of trust that can be placed in the qualification process and certificate issued. This trust is engendered by two key factors:

- Transparency and common understanding of a country’s qualifications and its education, training and qualifications institutions, for example, as made evident through an agreed NQF.
- The quality assurance process that operates in each country. Without an accompanying quality assurance system a national qualifications framework ‘is unlikely to be effective in building the quality of and trust in national qualifications’.

In 2015 Cedefop estimated that over 150 countries have established or are establishing NQF. There has been a rapid expansion especially in Europe, which is generally accepted to be as a result of the establishment of the EQF. A similar trend is reflected in the ASEAN countries with many countries recently establishing or planning an NQF as a result of the need for a regional economic focus but also because of the recent establishment of the ASEAN Qualifications Reference Framework (AQRF).

A qualifications framework is described as ‘an instrument for the development, classification and recognition of skills, knowledge and competencies along a continuum of agreed levels. It is a way of structuring existing and new qualifications, which are defined by learning outcomes’ (Tuck 2007 as cited in ETF 2013, p. v). Typically qualification frameworks (education sector specific or national) classify qualifications according to a hierarchy of levels, the qualifications allocated to a particular level depending on their complexity and challenge, and in many instances they also have a volume of learning measure. The development of NQFs has also seen the increasing use of learning outcomes as a basis for the qualifications.

NQFs can bring transparency and clarity to qualifications issued within a country, can facilitate a common understanding or can bring change to existing qualifications systems. Such initiatives are linked to recognition of qualifications as they provide a basis for analysis and comparison of qualification types (e.g. bachelor) between countries. Increased transparency can benefit learners, employees and employers and those who deal with understanding people’s qualifications national

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11 Bateman & Coles 2013
12 Cedefop 2015
13 Usually measured as credit points equating to hours of student effort or as a duration (of years).
and internationally for employment, student mobility and labour mobility. NQFs can also support a greater alignment between qualifications with knowledge, skills and competences and their relationship to occupational (and broader labour market) needs, and facilitate involvement of industry in the system. The European Union has produced a fuller description of the added value of NQFs.\textsuperscript{14}

Linked to NQF initiatives are those of regional qualifications frameworks. These frameworks function differently to national qualifications frameworks and are seen more as translation devices through which countries can compare their qualifications across borders without entering into lengthy and time consuming bilateral approaches with other countries. These frameworks are used in communities of countries to facilitate mutual trust in qualifications and promote student and worker mobility; therefore, they are linked to other initiatives related to mutual recognition of qualifications, of goods and of services.

Overarching or ‘meta frameworks’ have very different functions to that of NQFs and aim to add value to the NQFs.\textsuperscript{15} The table below outlines the differences between the two types of frameworks.

**Table 1: Functions and rationales of national and regional qualifications frameworks**

<table>
<thead>
<tr>
<th>Area of comparison</th>
<th>National</th>
<th>Regional</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Main function...</strong></td>
<td>To act as a benchmark for the level of learning recognised in the national qualifications system</td>
<td>To act as a translation device to enable comparison of levels of qualifications across member countries</td>
</tr>
<tr>
<td><strong>Developed by...</strong></td>
<td>National governments, in many cases through national agencies set up for this purpose</td>
<td>Countries in a region acting jointly, mostly facilitated by a regional body or regional association</td>
</tr>
<tr>
<td><strong>Sensitive to...</strong></td>
<td>Local, national and regional priorities (e.g. levels of literacy and labour market needs)</td>
<td>Collective priorities across member countries (e.g. enabling mobility of learners and workers across borders)</td>
</tr>
<tr>
<td><strong>Currency/value depends on...</strong></td>
<td>The extent of regulatory compliance required; the level of buy-in from key role players (such as industry, learning institutions and professional associations); the perceived or real value to the broad population</td>
<td>The level of trust between member countries; the transparency of national quality assurance systems; mutually agreed regional priorities</td>
</tr>
<tr>
<td><strong>Quality is guaranteed by...</strong></td>
<td>Adherence to nationally agreed quality assurance systems, exemplified in the practices of national bodies and learning institutions</td>
<td>The common application of the referencing criteria and guidelines, as well as the robustness and transparency of the national</td>
</tr>
</tbody>
</table>

\textsuperscript{14} European Union 2010  
\textsuperscript{15} Bateman & Coles 2012
<table>
<thead>
<tr>
<th>Area of comparison</th>
<th>National</th>
<th>Regional</th>
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</thead>
<tbody>
<tr>
<td><strong>Levels are defined by reference to...</strong></td>
<td>National benchmarks which may be embedded in different learning contexts, e.g. school education, work or higher education</td>
<td>General progression in learning across all contexts that is applicable to all countries</td>
</tr>
</tbody>
</table>


A key concept in the development of these regional approaches is that they support and add value to national approaches. In no case do they replace or reduce the scope of the national approach. However they do have a coordinating effect and this is often due to the guidance offered to countries on the commonalities and differences between the national approach and the approaches in other countries. It seems that the regional developments facilitate policy learning\(^{16}\) between countries in the community. These regional frameworks are discussed in the next section as a strategy to support mutual recognition of qualifications.

NQFs can also be seen as part of the quality assurance process in that they can act as a mechanism for the quality of qualifications included in the NQF. In this way NQFs can support the wider national quality assurance processes.

In some instances quality assurance arrangements may not include reference to a NQF especially when the NQF is seen simply as a classifier (and/or register) of all qualifications in a country, or when NQFs can be directly linked to more established and transparent quality assurance processes. NQFs and associated quality assurance processes are at the core of building trust in qualification outcomes and whether qualifications are an accurate reflection of what a person knows and can do.

Quality assurance processes are focussed on providing confidence in educational services provided by training organisations under the remit of relevant authorities or bodies. Quality assurance of education and training includes:

- The product, through the approval of achievement standards (such as educational and/or competency standards as well as certification of a qualification)

- The education and training providers, through approval processes based upon key requirements (e.g. infrastructure, financial probity and health, staff qualifications and experience, management systems, delivery systems, and student support systems)

- The monitoring and auditing of provider processes and outcomes, including student learning and employment outcomes and student and user satisfaction levels

- The control, supervision or monitoring of assessment, certification and graduation procedures and outcomes

\(^{16}\) Grootings 2007, ETF 2004
• Provider or system-wide evaluations of quality, including evaluations by external agencies

• The provision of public information on the performance of providers, such as program and component completions, student and employer satisfaction.\(^\text{17}\)

In recent years, significant developments have taken place in the fields of occupational standards developments, qualifications frameworks developments in countries and regions, and in the development of quality assurance processes in countries and internationally. Generally speaking, these three areas have developed independently until the wider international role of regional qualifications frameworks evolved. There is scope for a more coordinated approach even in the relatively well developed European model.

\(^{17}\) Bateman, Keating, Gillis, Dyson, Burke & Coles 2012, p. 8 & 9.
B: Mechanisms that support recognition

This section outlines various mechanisms that support the recognition of qualifications and skills. Recognition can be seen as a process that allows the qualifications or skills gained in one organisation, nation or region to be recognised in another and facilitates an environment where the mobility of qualified persons can be encouraged and facilitated. Recognition of qualifications and skills is an essential component in working towards the free flow of services. The role of qualifications frameworks in the recognition process is discussed in detail in a joint report between the European Union and the Australian Government. In particular the value of a link between qualifications frameworks is explored so that the potential of these links can be evaluated to see if they support official procedures for qualification recognition. In countries such as Australia, assessment processes of international qualifications or of existing skills of workers, the NQF can provide a critical reference point for immigration policies. This report indicates that as qualifications frameworks become established elements of qualifications system, other policies and rules related to recognition and quality assurance integrate them as a reference. For countries without NQFs, other types of reference (such as the type of education provision, or profile of the provider) are used.

Mechanisms that support recognition take many forms and a number of strategies have been proposed for further discussion and exploration in this literature review. This list is not exhaustive but provides examples of various mechanisms that support the recognition of qualifications and of skills.

Table 2: Mechanisms that support recognition

<table>
<thead>
<tr>
<th>Mechanisms for supporting recognition</th>
<th>Examples</th>
</tr>
</thead>
</table>
| 1. Regional qualifications frameworks, including transnational qualifications frameworks or common reference frameworks | • European Qualifications Framework (EQF)  
• Transnational Qualifications Framework for the Virtual University for Small States of the Commonwealth (TQF for the VUSSC)  
• Pacific Qualifications Framework (POF)  
• ASEAN Qualifications Reference Framework (AQRF)  
• Caribbean Community (CARICOM) |
| 2. Regional quality assurance frameworks | • East Asia Summit TVET Quality Assurance Framework  
• European Quality Assurance Reference Framework for VET  
• Pacific Register of Qualifications and Standards: quality assurance standards |
| 3. Multilateral arrangements related to qualifications | • International conventions: |

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18 European Commission and Australian Department of Education, Employment and Workplace Relations, 2011
19 Common reference frameworks are generally the result of an agreement of a community of countries. They are addressed separately due to the specific nature of these agreements.
20 Regional quality assurance frameworks are generally the result of an agreement of a community of countries. They are addressed separately due to the specific nature of these agreements. Although not directly related to recognition of qualifications they underpin the trust within the process.
<table>
<thead>
<tr>
<th>Mechanisms for supporting recognition</th>
<th>Examples</th>
</tr>
</thead>
</table>
|                                      | • Convention on the Recognition of Qualifications concerning Higher Education in the European Region (Lisbon Convention)  
• UNESCO Asia Pacific Convention on the Recognition of Qualifications in Higher Education  
• APEC Higher Education Diploma Supplement model |
| 4. Bilateral and Multilateral arrangements related to occupations or occupational standards | • Trans-Tasman Mutual Recognition Agreement - occupations  
• ASEAN mutual recognition agreements:  
  • Occupations  
  • Occupational standards |
| 5. Stand alone national procedures | • Referencing to other national qualifications frameworks  
• Referencing to a regional frameworks or models for occupational/training standards  
• Referencing to International classification systems (e.g. education and occupational)  
• Credential evaluation and skills assessment |
| 6. Industry sector specific procedures | • International standards agreements e.g. in maritime, in civil aviation  
• Professional body or licensing agreements e.g. engineering, chefs  
• Organisation and vendor programs |

Source: Adapted from Bateman 2015

These mechanisms are explored below.

### 1. Regional qualifications frameworks

Countries that have a regional, economic or social identity, or wish to see one develop, have cooperated in the development of regional qualifications frameworks (RQFs). A regional qualifications framework or a common reference framework is defined as ‘a means of enabling one framework of qualifications to relate to others and subsequently for one qualification to relate to others that are normally located in another framework’.

Regional common reference frameworks can:

- Deepen integration and harmonisation
- Create a common identity
- Facilitate:
  - transparency of multiple complex systems
  - mobility of workers and students
  - recognition and credit transfer.

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There is considerable variation in the characteristics of regional qualification frameworks; they vary in their purposes, coverage of sectors, design and use. There are several regional qualifications frameworks or common reference frameworks at various stages of development or implementation, each with a different focus or emphases. These include:

- The European Qualifications Framework (EQF) is a translation tool that helps communication and comparison between qualifications systems in Europe. It is seen as a key instrument for the promotion of lifelong learning and its 8 levels cover the 'entire span of qualifications, from those achieved at the end of compulsory education to those awarded at the highest level'.

- The Transnational Qualifications Framework for the Virtual University for Small States (VUSSC) of the Commonwealth acts as a translation device for 'the classification of VUSSC qualifications according to a set criteria for specified levels of learning achieved'.

- The Caribbean Community (CARICOM) has established a 5-level vocational framework and has taken a number of initiatives in the area of occupational standards and qualifications. These developments have concentrated upon the efficient development of standards and qualifications across member nations, including a Competency-based Education and Training model, and the sharing of materials.

- The Pacific Qualifications Framework (PQF) is a common reference framework that links to a regional register of national qualifications from participating countries. The register and the framework are underpinned by a set of quality assurance standards for agencies (including the registration of providers and accreditation processes of qualifications) and minimum standards for providers. The quality assurance standards are supported by various policies and procedures, guidelines and criteria. All qualifications to be entered onto the register are to be referenced against the PQF, for example, a volume and level profile is included in the information on the register.

- ASEAN Qualifications Reference Framework (AQRF) is a common reference framework that will function as a translation device to enable comparisons of qualifications across participating ASEAN countries.

The CARICOM and ASEAN integrated frameworks are discussed later in this report.

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22 Coles (2012) personal communication as cited in The ASEAN Qualifications Reference Framework (Bateman & Coles 2014)
24 EQF (2010)
25 Keevy, West, Schmidt, Hope, Lene, Manabile (2008), p. 100
26 CINTERFOR (2005)
27 This community and initiatives in recognition of qualifications is discussed in the next section, and this model includes both a reference framework and multilateral agreements.
28 Secretariat of the Pacific Community (September 2011a)
29 Bateman & Coles, ASEAN 2014
The most recent regional initiative is that proposed by Keevy and Chakroun (draft 2015). Keevy and Chakroun (draft 2015) propose the notion of world reference levels. These world reference levels could contribute directly to the way in which international qualifications are developed and offered. A global standard against which all other descriptors can be benchmarked should provide some commonality and contribute to transparency. This UNESCO initiative is being developed in collaboration with other international bodies including the World Bank, the OECD, the European Union and the ILO. The initiative is also linking with quality assurance arrangements and transnational developments in higher education provision. APEC work on a coordinated approach to standards, qualifications and quality assurance could be informed and benefit from this initiative.

2. Regional quality assurance frameworks

The key aim of a regional quality assurance framework is to develop mutual understanding amongst member countries. In addition, a regional quality assurance framework can act as:

- An instrument to promote and monitor the improvement of member countries’ education and training systems
- A reference instrument that outlines benchmarks to help member countries to assess clearly and consistently whether the measures necessary for improving the quality of their education and training systems have been implemented and whether they need to be reviewed
- A self-assessment instrument that can include internal and external assessment which can be made public.

There are varying models or frameworks at regional level and only three are discussed here:

- **European Quality Assurance Reference Framework for VET**
- **Pacific Register of Qualifications and Standards: quality assurance**
- plus the **East Asia Summit Technical and Vocational Education and Training Quality Assurance Framework (EAS TVET QAF)** which is of particular interest in the development of the APEC Integrated Referencing Framework.

The **European Quality Assurance Reference Framework** was established through the European Parliament and Council in June 2009. Its key purpose is as ‘a reference instrument...to promote and monitor continuous improvement of...VET systems’. The framework is based on the continuous improvement cycle of planning, implementation, evaluation and review/revision and includes: quality criteria, indicative descriptors for TVET system level, indicative descriptors for TVET provider level, and a reference set of quality indicators for assessing quality in TVET. The implementation of European Quality Assurance Reference Framework is supported by the development of an active and highly effective community of practice which brings together Member States, employers, trade

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30 Bateman, Keating, Gillis, Dyson, Burke & Coles 2012
32 Note that the Pacific’s approach to quality assurance is still in trial stage.
33 European Union 2009, p. 2.
34 Refer to [www.eqavet.eu](http://www.eqavet.eu)
unions and the European Commission to promote European collaboration in developing and improving quality assurance.

Within the Pacific, the approach to quality assurance is part of a broader strategy, which includes a regional register of qualifications and occupational standards (Pacific Register of Qualifications and Standards) and the Pacific Qualifications Framework. The regional register seeks to ensure that the quality assurance system across all Pacific Island Countries and its subsequent implementation is designed, developed and implemented at a high standard and to foster mutual trust between a country and any of its multiple stakeholders. The quality assurance framework ensures that qualifications to be entered on the regional Register meet agreed standards. The Pacific’s approach to quality assurance focusses primarily on registering and accrediting agencies and includes:

- Quality Assurance Standards for Agencies:
  - Standards for agencies
  - Standards governing the relationship between agencies and their providers
- Minimum quality standards for training providers.

**EAS TVET QAF** is a recently developed quality assurance framework covering 18 countries. The key purposes of the EAS TVET QAF are to:

- Enable countries to promote and monitor the improvement of their quality assurance systems
- Facilitate cooperation and mutual understanding between member countries
- Support other initiatives within and across the region that enhance connectivity, integration, education and labour mobility.

The EAS TVET QAF is based on a number of components:

- Principles (transparency, accountability, continuous improvement, flexibility and responsiveness, comparability)
- Quality standards (agency standards plus advisory provider standards – both based on establishment, accountability and improvement elements)
- Quality indicators (based on themes focussed on context, input, process and output/product indicators).

The EAS TVET QAF is one of the quality assurance frameworks that ASEAN Member States are to utilise in the referencing process to benchmark their quality assurance processes. As part of the development project for this quality assurance framework eight countries have already undertaken

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35 Secretariat of the Pacific Community 2011b, p. 4.
36 The 18 member countries of the East Asia Summit (EAS) include the ten Association of Southeast Asian Nations (ASEAN) countries (Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Singapore, Thailand and Vietnam), as well as Australia, China, India, Japan, Korea, New Zealand, Russia and the United States.
37 Bateman, Keating, Gillis, Dyson, Burke & Coles 2012
38 Lao PDR, Cambodia, India, Indonesia, Myanmar, Philippines, Thailand, Vietnam
a self-assessment activity of their quality assurance arrangements assisted by a self-assessment template and project consultants to develop an action plan for improvement.

3. Multilateral arrangements related to qualifications

In addition to regional frameworks, there are a range of multilateral arrangements that facilitate and support the recognition of qualifications, including: international conventions, regional mutual recognition agreements (ASEAN model), and international professional association or licensing agreements.

International conventions

Two well-known conventions related to recognition of qualifications are the Lisbon Convention and the Asia Pacific Convention.

Convention on the Recognition of Qualifications concerning Higher Education in the European Region (Lisbon Convention)\(^ {39} \)

The Convention on the Recognition of Qualifications concerning Higher Education in the European Region (Lisbon Convention) was adopted in 1997. Of note in this Convention is the requirement for adequate access to assessment processes, for having a central focal point for information on recognition of foreign qualifications, and finally the encouragement to use a Diploma Supplement as an instrument to describe qualifications and the qualification system. A summary of the Convention is provided in Appendix 4. The Convention is accompanied by support documents, Toolkit for the Recognition of Foreign Qualifications: A Reference for Asia-Pacific Practitioners (UNESCO 2013).

APEC countries that are signatories to or have ratified this Convention include: Australia, Canada, New Zealand, Russia and United States of America.

UNESCO Asia Pacific Convention on the Recognition of Qualifications in Higher Education

The UNESCO Regional Convention on the Recognition of Studies, Diplomas and Degrees in Higher Education in Asia and the Pacific (1983) was revised and updated ‘to better reflect the significant changes that have taken place in the region’.\(^ {40} \) The new convention, the Asia-Pacific Regional Convention on the Recognition of Qualifications in Higher Education (2011), aims to ‘ensure that studies, diplomas, and degrees in higher education are recognised as widely as possible, considering the great diversity of educational systems in the Asia-Pacific region and the richness of its cultural, social, political, religious, and economic backgrounds’.\(^ {41} \)

The Convention relates to higher education which is defined as ‘post-secondary education, training or research that is recognised by the relevant authorities of a Party as belonging to its higher education system’.\(^ {42} \) This Convention provides general guidelines intended to facilitate the implementation of

\(^{39}\) http://www.coe.int/t/dg4/highereducation/recognition/LRC_EN.asp


\(^{42}\) UNESCO 2012, p. 3
regional cooperation regarding recognition of qualifications specifically in the higher education sector, and could be applied in the TVET sector.

The basic principles addressed in the Convention include:

- The assessment of qualifications
- Recognition providing access to programs
- Recognition of partial studies
- Recognition of qualifications
- Recognition of qualifications held by refugees
- Displaced persons and persons in a refugee-like situation
- The provision of information
- The implementation of the convention.

The current signed version of the 2011 Convention on the UNESCO website indicates that of the APEC countries, Korea and China have signed this agreement.

**APEC Higher Education Diploma Supplement model**

A diploma supplement is a key initiative identified in the 1997 ‘Lisbon Convention’, *Convention on the Recognition of Qualifications concerning Higher Education in the European Region*:

“The Parties shall promote, through the national information centres or otherwise, the use of the UNESCO/Council of Europe Diploma Supplement or any other comparable document by the higher education institutions of the Parties.” (Article IX.3)

As mentioned previously, Australia, Canada, New Zealand, Russia and United States of America have ratified the Lisbon Convention. Both Australia and New Zealand have promoted the development of locally relevant diploma supplement initiatives.

A diploma supplement is an additional document to a student’s academic transcript and testamur that provides additional information in relation to the content (e.g. length or volume of the qualification), the structure of the program and the context in which it was provided, making it easier for graduates to have their qualifications understood and recognised across different higher education systems internationally for the purposes of further study or work (Palmer and Bateman 2014). At a national level a Diploma Supplement may be referred to as something else, for example, Australian Higher Education Graduation Statement and the New Zealand Tertiary Education Qualification Statement.

The European Union Diploma Supplement is a document that accompanies a higher education testamur that is issued by higher education institutions according to standards agreed by the European Commission, the Council of Europe and UNESCO. The European Union Diploma
Supplement is also part of the Europass framework transparency tools. It aims to aid recognition (but does not guarantee it).43

The APEC Higher Education Diploma Supplement model is similar to that utilised in Europe, and is an initiative designed to support higher education cooperation and graduate mobility in the APEC region. The APEC Higher Education Diploma Supplement model is a guideline that:

- Provides clarity about the structure and intent of diploma supplements
- Encourages similarity between diploma supplements both within and between education systems and institutions.

The APEC Higher Education Diploma Supplement model is non-binding by member countries and the agreed sections to the document include:

- Graduate identification
- The graduate’s achievements
- Description of the qualification
- Description of the awarding institution
- Description of the higher education system (including qualifications frameworks)
- Certification information.44

In Australia, the Australian Higher Education Graduation Statement is managed through the Australian Government (Department of Education and Training).45 Guidelines were set for the format of the Statement and were developed in consultation with the higher education sector to provide information for institutions intending to implement the Statement. These guidelines define the principles of the Statement in terms of its purpose, relationship to other documentation, content and style, issuing and authentication. In Australia this document is generated and issued at provider level.

The New Zealand Qualifications Authority (NZQA) has implemented a Tertiary Education Qualification Statement. The Tertiary Education Qualifications Statement is viewed as an expanded transcript.46

Such a document could support recognition processes when qualifications are linked to the occupational standards that may be developed under the proposed APEC Integrated Referencing Framework.

4. Multilateral or Bilateral arrangements related to occupations or occupational standards

A bilateral arrangement is an agreement between two parties and is generally used in reference to agreements between nations, whereby both nations agree to or promise to comply with the terms of

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43 http://ec.europa.eu/education/tools/diploma-supplement_en.htm
44 Palmer & Bateman 2014
the agreement. Bilateral arrangements tend to involve a degree of comparison and benchmarking and have no further reach than that of the two parties.\textsuperscript{47}

Bateman (2015) notes that in many instances, bilateral arrangements are specific and may not be commonly known beyond the immediate affected group. At a national level bilateral arrangements may be specific to occupations and/or qualifications and may include partial or full recognition. At provider level, arrangements could be between two institutions for specific qualifications and, again, public knowledge of these arrangements is dependent on transparency of information of these institutions. In many instances, bilateral arrangements of qualifications between institutions focus on equivalence of content and rigour (or level) of qualifications as well as trust in the quality assurance arrangements that support the provision and validation of the qualification.

**Trans-Tasman Mutual Recognition Arrangement**

An example of a long standing bilateral agreement related to recognition of occupations\textsuperscript{48} is that of the Trans-Tasman Mutual Recognition Arrangement (TTMRA), between New Zealand and Australia.

In both Australia and New Zealand the TTMRA is formalised through national legislation. In Australia the TTMRA legislation is ‘for the purpose of recognising within Australia regulatory standards adopted in New Zealand regarding goods and occupations’.\textsuperscript{49}

*A User’s Guide to the Mutual Recognition Agreement (MRA) and the Trans-Tasman Mutual Recognition Arrangement (TTMRA)* (Commonwealth of Australia 2014) indicates that:

- The agreement relates ‘to a person registered to practise an occupation in Australia [who] is entitled to practise an equivalent occupation in New Zealand, and a person registered to practise an occupation in New Zealand [who] is entitled to practise an equivalent occupation in Australia, without the need to undergo further testing or examination’.\textsuperscript{50}

- The agreement covers all occupations for which ‘some form of legislation-based registration, certification, licensing, approval, admission or other form of authorisation is required by individuals in order to practise legally the occupation. No such occupations are exempt from the MRA except for medical practitioners; as doctors with their primary medical qualifications obtained in New Zealand or Australia are automatically recognised through another agreement’.\textsuperscript{51}

- The basis of mutual recognition of occupations is not based on direct equivalence of qualifications or of other requirements as there may be potential differences between requirements for registration of occupations. The focus is on the activities authorised to be carried out under the registration and whether or not these requirements are substantially the same. Under this agreement, mutual recognition of occupations does not mean that all qualifications have to be the same or equivalent.

\textsuperscript{47} Bateman 2015

\textsuperscript{48} This agreement relates to mutual recognition of occupations and not of qualifications.


\textsuperscript{50} Commonwealth of Australia 2014, p. 5

\textsuperscript{51} Commonwealth of Australia 2014, p. 13
ASEAN mutual recognition agreements

Many regions or sub-regions that have close economic and social ties enter into various mutual recognition arrangements; the ASEAN MRAs are discussed here as an example of such an agreement. The ASEAN Economic Blueprint (ASEAN 2007), signed by member countries in 2007, called for areas of cooperation, including the recognition of professional qualifications. In the ASEAN member states a focus has been on establishing Mutual Recognition Arrangements (MRAs) across key identified occupational areas. MRAs in engineering and nursing were completed in 2005 and 2006 respectively; five additional MRAs were agreed between 2007 and 2009 in the fields of architecture, surveying, medical practitioners, dental practitioners and accountancy. The most recent ASEAN agreement has been in tourism professional, which was confirmed in 2012.

The agreements vary in format and detail but they either agree to recognise occupations or occupational standards:

- **Occupations** - The earlier ASEAN mutual recognition agreements, for example medical practitioners, relates to recognising the occupation. In this agreement, a foreign medical practitioner may apply for registration in the host country to be recognised as qualified to practise medicine in the host country in accordance with its domestic regulations subject to a number of conditions. This agreement is linked to labour mobility within the region.

- **Occupational standards** - This ASEAN mutual recognition agreement relevant to various tourism professionals includes agreed to occupational standards. The agreement addresses the occupational standards for hotel and travel services (with a list of competency specifications included in the appendix) and links the recognition of these occupational standards to labour mobility. Countries who are signatories are now implementing these occupational standards (including the competency specifications) and associated curriculum as the basis of their own national qualifications, which in turn should facilitate future labour mobility within the region.

5. Stand alone national procedures

There are many strategies that can support and facilitate recognition of qualifications (and of occupations) and which could be linked to, or integrated into, an APEC Integrated Referencing Framework. Five strategies are outlined below.

Referencing national qualifications frameworks

With the increasing number of NQFs being established across the world, countries are now looking towards comparing NQFs and qualifications within their qualifications system with that of qualifications within another qualifications system. In such instances comparison are generally drawn between the level descriptors that make up the NQF and also the qualification type descriptors.


54 This agreement is supported by additional documents, [http://www.asean.org/communities/asean-economic-community/category/other-documents-11](http://www.asean.org/communities/asean-economic-community/category/other-documents-11)

55 Competencies specifications are noted as core competencies, generic competencies and functional competencies.
When comparing NQFs and qualifications countries can undertake this exercise on a bilateral basis with each country in which they wish to develop further relations, for example, for MRAs or student and labour mobility, or countries can utilise a regional qualifications reference framework to compare their qualifications to and then make this information public to other member countries. In the referencing process, outlining the quality assurance arrangements within the qualifications system is also critical to ensuring that member countries have trust with the qualifications issued.

In supplementary text to the Lisbon Convention, European Union Council of ministers and UNESCO establish the role of qualifications frameworks in the recognition of qualifications in higher education. This text formalises current practice and encourages the use of qualifications frameworks in the recognition of qualifications more generally.

The most common and well-established regional qualifications framework is the European Qualifications Framework. This framework enables countries to compare qualifications systems and is supported by relevant guidelines and processes (from which the ASEAN Qualifications Reference Framework has modelled their processes). The European Qualifications Framework has an excellent website which allows immediate comparisons of NQFs levels of learning complexity and of qualification types from different countries.57

Behind this immediate comparison facility are country reports whereby the countries report on their qualifications system, for example, NQF and quality assurance arrangements.

A similar public facility would enhance the role of the APEC Integrated Referencing Framework and assist in the mutual recognition of qualifications at a country. The governance arrangements and management of such a model would need to be explored beyond the scope of this report.

Referencing to regional frameworks or models for occupational/training standards

One key aspect of the proposed APEC Integrated Referencing Framework is the inclusion of an Occupational Standards Referencing Framework. There are two models that could inform the development of this framework:

- Guidelines for development of Regional Model Competency Standards (RMCS)58
- A Framework for defining and assessing occupational and training standards in developing countries.59

The ILO RMCS guidelines are utilised by the ASEAN Members States to inform the development of agreed occupational standards for mutual recognition of agreements (as per the most current agreement related to tourism). This ILO RMCS outlines:

- Agreed definitions
- Structure of the competency specifications including:

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57 https://ec.europa.eu/ploteus/search/site?f[0]=im_field_entity_type%3A97Ag7
58 ILO 2006
59 Fretwell, Lewis & Deij 2001
Industry descriptor and coverage
Primary functions
Units (including performance criteria, evidence requirements, critical skills and essential knowledge, and range statement).

- Method for development
- Skills level descriptors (nine levels based on three domains [knowledge and skills, application and degree of independence]).

The ILO RMCS guidelines separate skills into: those specific to a single occupation in industry, those common to job roles within an industry and those common to many functions in many industries. In terms of development, the ILO RMCS notes that a combination of strategies can be used including: DACUM or modified DACUM, functional analysis, nominal group technique and critical incident analysis.

The ILO has also developed regional occupational standards for various industry sectors including: manufacturing, construction, welding services and domestic work. These regional occupational standards are viewed as a set of benchmarks that define the skills, knowledge and attributes required for a particular sector. The standards are designed to be used as a basis for developing national standards and as a regional reference point. It is not known the level of use of these standards at a national level.

_A Framework for defining and assessing occupational and training standards in developing countries_ (Fretwell, Lewis and Deij 2001) outlines some key aspects when developing occupational standards and their link to training standards. The _Framework for defining and assessing occupational and training standards in developing countries_ proposes:

- The development of local standards in the first instance and moving towards national standards to promote labour mobility
- Strong involvement of employers, professional associations, and labour representatives from the beginning of the development process
- Sourcing labour market information (beyond short term data) to inform standard development
- Developing occupational standards through a variety of processes including job analysis, functional analysis and DACUM
- Assessing occupational standards
- Linking occupational standards and training standards.

There is no clear definition of a training standard; however it could be:

- An educational standard that refers to statements of learning objectives, content of curricula, entry requirements and resources required to meet learning objectives
- A standard that is less detailed and provides advice related to training expectations and inputs, such as associated achievement standards; resources (for example staff, students, materials) which should be available in an institution; duration or volume of learning of the programme; NQF level of qualification.

The working definition for the purposes of this literature review includes both these notions. Refer to
Achievement Standards and Training Standard in the Glossary.

**Referencing to international classification systems**

Utilising international classification systems may assist communities to come to a common understanding of qualifications and/or occupations or to compare their qualifications system to another country’s qualifications system.

The most commonly known international education classification system is the International Standard Classification of Education (ISCED) developed and used by UNESCO.\(^60\) The most current version of ISCED 2011 includes nine levels of programmes:

1. Early childhood education
2. Primary education
3. Lower secondary education
4. Upper secondary education
5. Post-secondary non-tertiary education
6. Short-cycle tertiary education
7. Bachelor’s or equivalent level
8. Master’s or equivalent level
9. Doctoral or equivalent level.

It is also able to classify programmes according to categories, such as:

1. Early childhood educational development
2. Pre-primary education
3. General / academic
4. Vocational / professional
5. Orientation unspecified.\(^61\)

Of particular interest in the proposed APEC Integrated Referencing Framework is the classification of occupations. The most commonly known occupational classification standard is International Standard Classification of Occupations (ISCO) developed by the ILO.\(^62\) ISCO informs the development and organisation of occupational standards, and for employers it can also act as a common reference to understand occupational groupings and levels. The most current version, ISCO-08, classifies skills based on four levels. It also classifies occupations at the broadest level into: manager; professionals; technicians and associate professionals; clerical support workers; service and sales workers; skilled agricultural, forestry and fishery workers; craft and related trades workers; plant and machine operators, and assemblers; elementary occupations; and armed forces occupations. These major groups are subdivided a number of times.\(^63\) The classification links skills level and skills specialization

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\(^60\) [http://www.uis.unesco.org/Education/Pages/isced-new-classification.aspx](http://www.uis.unesco.org/Education/Pages/isced-new-classification.aspx)

\(^61\) UNESCO 2012b


\(^63\) Grouping includes: major, sub major, minor and unit groups.
to these groups. However, recent work by the Transport and Logistics working group have found that the ISCO classification has limitations and does not include a broad enough range of occupations.

At a national level some countries have developed classification standards as well. Australia and New Zealand have developed the Australian and New Zealand Standard Classification of Occupations (ANZSCO), with the 2013 version being the most current. ANZSCO is a skills based classification and the scope is all legal occupations and jobs in the Australian and New Zealand labour markets undertaken for pay or profit, including jobs occupied by people working for themselves. Major group classifications are matched to skills levels as noted below, and to skills specialization.64

Table 3: ANZSCO Major Groups

<table>
<thead>
<tr>
<th>Major Group</th>
<th>Predominant Skill Levels</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Managers</td>
<td>1, 2</td>
</tr>
<tr>
<td>2 Professionals</td>
<td>1</td>
</tr>
<tr>
<td>3 Technicians and Trades Workers</td>
<td>2, 3</td>
</tr>
<tr>
<td>4 Community and Personal Service Workers</td>
<td>2, 3, 4, 5</td>
</tr>
<tr>
<td>5 Clerical and Administrative Workers</td>
<td>2, 3, 4, 5</td>
</tr>
<tr>
<td>6 Sales Workers</td>
<td>2, 4, 5</td>
</tr>
<tr>
<td>7 Machinery Operators and Drivers</td>
<td>4</td>
</tr>
<tr>
<td>8 Labourers</td>
<td>4, 5</td>
</tr>
</tbody>
</table>


ANZSCO includes five skills levels that have been aligned to AQF and NZQF qualifications. Australia also has developed Australian Standard Classification of Education (ASCED) (2001) which has 8 levels of qualifications plus ‘other’. In Australia, occupation and education classification codes65 are utilised in the approval process and documentation of qualifications.

Such international classifications may be utilised in any occupational standards developed under the APEC Integrated Referencing Framework, to enhance a common understanding of the proposed occupation and/or the potential qualification level documented and agreed by the APEC community.

Agencies for credential evaluation and assessing skills

Keevy and Chakroun (draft 2015) note that credential evaluation is part of national qualifications frameworks, and note that ‘credential evaluation agencies base their practices on international guidelines’ (such as those in the Lisbon Convention). The Lisbon Convention differentiates between ‘national information centres’ which provide advice and ‘competent recognition authorities’ which make binding decision on recognition. Keevy and Chakroun (draft 2015) clarifies that ‘competent’ refers to legal status and/or common agreement in a particular community.

Bateman (2015) notes that in Australia there is no single authority that assesses or recognises overseas qualifications. Many professional, government and other organisations are involved,

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65 ISCED, ANZSCO and ASCED.
depending on the type of qualification or occupation and whether the assessment is for the purpose of migration or employment in a particular state or territory of Australia.

What is termed 'qualifications assessment' refers to evaluating international qualifications and determining a comparable level on the Australian Qualifications Framework. These assessments are for general purposes only and do not compare overseas qualifications by content (e.g. the study area, subject/units or competency standards). The assessment and information provided is not binding, but aims ‘to assist individuals by helping organisations, such as a prospective employer, understand the educational level of an overseas qualification in the Australian context’.  

In relation to skills (or occupations) assessment for migration purposes the Department of Immigration and Border Protection provides lists of occupations and for each occupation provides links to the relevant assessing authority, and notes that to assess skilled workers for migration purposes in a specific occupation the ANZSCO descriptors are used.

An example of a relevant assessing authority (as opposed to a professional or licensing body) is Trades Recognition Australia. Trades Recognition Australia is a government skills assessment service provider specialising in assessments for people with trade skills gained overseas or in Australia, for the purpose of migration and skills recognition. These services are for specific individuals and are not related to a mutual recognition of a qualification.

Such structures need to be in place to operationalise qualifications recognition at a national level. Recent research for implementation of the ASEAN QRF (Bateman and Coles 2015) indicates that in general ASEAN Member States lacked facilities or processes for the recognition of international qualifications. It is anticipated that assisting in the establishment of such structures will be a focus for support by the ASEAN Secretariat.

6. Industry sector specific procedures

International professional association or licensing bodies

Most professional or licensing bodies have standards or apply standards from other professional bodies to control the levels of membership of their profession and may have in place mutual recognition arrangements. Professional bodies that are commonly referred to in any discussions related to mutual recognition generally relate to the maritime (e.g. International Maritime Organisation), trades (e.g. electrician), medical or related medical professionals (e.g. doctors, nurses), accountants and engineers.

66 https://internationaleducation.gov.au/Services-And-Resources/services-for-individuals/Pages/Services-for-individuals.aspx
70 http://www.tradesrecognitionaustralia.gov.au/Pages/default.aspx#
71 Bateman 2013
In Europe some professions (for example architects, medical practitioners) are in the scope of a European Union law, the Directive on the recognition of Professional Qualifications\(^72\). This Directive allows automatic recognition for people with certain qualifications, for example a medical degree and this allows them to move around European Union countries with confidence that their qualification will not be a barrier.

In terms of engineering qualification agreements, currently there are three international agreements governing mutual recognition of engineering qualifications, including:

- The Washington Accord (1989) recognises substantial equivalence in the accreditation of qualifications in professional engineering, normally of four years’ duration.
- The Sydney Accord (2001) recognises substantial equivalence in the accreditation of qualifications in engineering technology, normally of three years’ duration.
- The Dublin Accord (2002) recognises substantial equivalence in the accreditation of qualifications in technician engineering, normally of two years’ duration.\(^73\)

For practicing engineers there are three agreements that recognise individual engineers as meeting benchmark standards.\(^74\) These include:

1. APEC Engineer Agreement (1999) which includes organisations in each APEC economy creating a register of engineers wishing to be recognised as meeting generic international standards
2. International Professional Engineers agreement (2001) operates as per the APEC agreement, but any country/economy may join

Another sector that is frequently cited in terms of recognition related to labour mobility is that of the maritime industry. The International Maritime Organization (IMO) is the United Nations agency with responsibility for setting and maintaining international ship safety standards. There are two conventions related to human resources:

- International Convention on Standards of Training, Certification and Watchkeeping for Seafarers sets the standards of competence for seafarers internationally
- International Convention on Standards of Training, Certification and Watchkeeping for Fishing Vessel Personnel.\(^75\)

The IMO has developed a series of model courses which provide suggested syllabi, course timetables and learning objectives to assist instructors develop training programmes to meet the standards of


\(^73\) http://www.ieagreements.org/

\(^74\) These agreements enable a person recognised to be minimally assessed (primarily for local knowledge) prior to obtaining registration in another country that is party to the agreement.

\(^75\) http://www.imo.org/en/OurWork/HumanElement/TrainingCertification/Pages/Default.aspx
Training, Certification and Watchkeeping for Seafarers. The IMO website also includes information on individual country’s recognition of other country certificates and requires countries to have a register of workers and their certification for verification purposes.

Other sectors have also developed recognition systems for their area of competence. For example the World Association of Chef’s Societies (WACS) which is preeminent in the field, has developed an online validation system that operates in member countries.\(^7\) City and Guilds of London have collaborated with WACS to offer quality assurance advice on the process of recognition and its certification. In order to qualify for entry onto the scheme, applicants need to meet two types of requirements in general terms of standing in the industry and some specific technical requirements which have been developed as occupational standards across the nine levels of chef activity. These standards are effectively world standards for chef work and can apply across all kinds of culinary activity.

In some countries the licensing requirements of specific occupations are related to qualifications. In the Australian TVET sector, the licences connected to regulated trades (e.g. carpentry, plumbing) are directly related to qualification outcomes. In Australia, TVET qualifications are based on competency standards, and qualifications are generally aligned to an occupation level outcome.

**Organisation and Vendor programs**

A large number of multinational organisations define and manage training programs and offer their own ‘industry standard’ qualifications. These programmes and qualifications are always related to competencies specific to the organisation. However they link formally (through NQF) and informally (through signalling important content of programmes and industry job types) to local programmes and local qualifications. The international bodies feel no obligation to make explicit the links to local provision but many seek recognition of their qualifications in frameworks of qualifications as it is a signal of broad comparability to established, broader, sets of qualifications. The recognition of industry specific qualifications in frameworks also offers additional status and promotes the qualifications in countries with frameworks.

How these programs are recognised depends on the qualifications system in the relevant country. In Scotland and Ireland the Microsoft Organisation has shown how its qualifications match the requirements of the NQFs and some qualifications have been accommodated in the frameworks. In the Australian TVET sector, many multinational organisations have developed occupational standards that are approved at a national level (these may be accessible publically such as those related to humanitarian relief developed by World Vision Australia or may be confidential to the corporation such as that related to Boral). In addition, there are a range of what is termed vendor programs (such as CISCO or Microsoft) for which extensive mapping to nationally approved qualifications based on competency standards has been undertaken.\(^7\) This mapping assists information technology trainers to recognise the relationship between the relevant competencies as listed in the qualification and that of the information technology vendor programs. It can facilitate ‘fast track’ program design and recognition of prior learning.

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\(^7\) See [https://www.worldchefs.org/?q=en/worldchefs-global-culinary-certification](https://www.worldchefs.org/?q=en/worldchefs-global-culinary-certification)

\(^7\) [https://www.ibsa.org.au/vendor-mapping](https://www.ibsa.org.au/vendor-mapping)
Conclusion

There are a range of approaches that countries can deploy to facilitate the recognition of qualifications. However at a regional level, APEC economies could utilise some existing regional structures to develop a framework for assisting in the development and understanding as well as facilitating recognition of occupational standards and qualifications.
C: International integrated approaches

Two of the regional qualifications frameworks discussed previously are strongly linked to an existing economic community, and include free trade and movement of persons (labour and student mobility), i.e. CARICOM and ASEAN. The strategies employed cover the range of mechanisms noted in the previous section and are discussed in more detail below. These two examples may best inform the development of an APEC Integrated Referencing Framework.\textsuperscript{78}

CARICOM

The Caribbean Community and Common Market (CARICOM)\textsuperscript{79} has its origins in the British West Indies Federation established in 1958 and ended in 1962. With the end of Federation an effort was made to strengthen cooperation in the area. In 1965 the Caribbean Free Trade Association (CARIFTA) was established. It was decided to transform CARIFTA into a Common Market and to establish the Caribbean Community, and in 1973 the Caribbean Community and Common Market was established.

The Community has the following objectives:

i. Improved standards of living and work;

ii. Full employment of labour and other factors of production;

iii. Accelerated, coordinated and sustained economic development and convergence;

iv. Expansion of trade and economic relations with third States;

v. Enhanced levels of international competitiveness;

vi. Organisation for increased production and productivity;

vii. The achievement of a greater measure of economic leverage and effectiveness of Member States in dealing with third States, groups of States and entities of any description;

viii. Enhanced coordination of Member States’ foreign and [foreign] economic policies; and

ix. Enhanced functional cooperation, including –

a) more efficient operation of common services and activities for the benefit of its peoples;

b) accelerated promotion of greater understanding among its peoples and the advancement of their social, cultural and technological development;

c) intensified activities in areas such as health, education, transportation, telecommunications’.\textsuperscript{80}

CARICOM utilises two qualifications frameworks:

- General Framework for CXC [Caribbean Examinations Council] Qualifications (GFCQ)

\textsuperscript{78} The other regional frameworks are not primarily designed to be an integrating influence over the range of occupational standards and or quality assurance.

\textsuperscript{79} Member states: Antigua and Barbuda, The Bahamas, Barbados, Belize, Dominica, Grenada, Guyana, Haiti, Jamaica, Montserrat, Saint Lucia, St. Kitts and Nevis, St. Vincent and the Grenadines, Suriname, Trinidad and Tobago, plus 5 associate members.

\textsuperscript{80} http://www.caricom.org/jsp/community/objectives.jsp?menu=community
• Regional Qualification Framework (RQF) for vocational qualifications.

In many respects these frameworks are transnational frameworks (i.e. used by all participating countries as opposed to a reference [or translation] framework). Both these frameworks are 5-level frameworks and do not extend to higher education qualifications. There is interest in developing a Caribbean Qualifications Framework that spans all levels of learning and that will facilitate comparisons of qualifications.81

CARICOM established the CARICOM Single Market and Economy (CSME) in 1989 and included the free movement of skills initiative. The free movement of skills included the right to seek employment in any Member State and the elimination of the need for work permits and permits of stay. From January 1996, CARICOM nationals, who were university graduates, were to be allowed to move freely in the region for work purposes82 and this right has been extended to holders of a professional, technical or vocational qualification from a duly accredited body which is comparable to an Associate Degree.83

To implement such a strategy as the free movement of skills initiative, member states had to enact legislation (for which model legislation was provided) and also put in place an administrative and procedural framework to process applications under the free movement of skills. To facilitate movement, the community has a Certificate of Recognition of CARICOM Skills Qualification, which can be obtained from the relevant ministry in each participating country. The Certificate allows entry for six months into a participating country and allows the receiving country time to review the skilled personnel’s qualifications.84

Each participating country’s quality assurance agency provides a service for Certificate of Recognition of CARICOM Skills Qualification (or designates an education provider in specific areas for assessment purposes). The agency, for example, the Barbados Accreditation Council works with responsible bodies (e.g. General Nursing Council) to certify that persons qualify for recognition as skilled CARICOM nationals. Graduates or holders of professional qualifications, which are equivalent to a degree, can apply directly for the Certificate of Recognition.85

The Caribbean Community has also two other key strategies in place for the mutual recognition of vocational qualifications:

• Caribbean Vocational Qualifications (CVQ)

• Caribbean Association of National Training Agencies (CANTA) Quality Assurance Criteria and Guidelines for the Caribbean Vocational Qualification.

CANTA is an association of national training agencies and other TVET apex bodies in CARICOM member states and was established via a memorandum of understanding in November 2003. It aims

81 Wright 2012
82 http://www.caricom.org/jsp/single_market/free_movement.jsp?menu=csme
84 http://www.caricom.org/jsp/single_market/free_movement.jsp?menu=csme
85 https://bac.gov.bb/
to promote the development of a competitive regional workforce and to facilitate free movement of certified skilled workers within the CSME.\(^{86}\)

CANTA’s Quality Assurance Criteria and Guidelines for the Caribbean Vocational Qualification provide guidance in terms of quality assurance for the establishment of a regional certification scheme to award the CVQ. The guidelines focus on the importance of quality assurance and transparency of processes and requirements as essential to the integrity and acceptance of CVQs. The guidelines are based on the following premises, that all countries:

- Subscribe to the provision of standards-driven, competency-based training, assessment and certification systems as documented in the ‘CARICOM Process for Workforce Training, Assessment and Certification’
- Adhere to the Regional Qualifications Framework with the five levels of certification.\(^{87}\)

The guidelines focus on the development of occupational standards, training delivery, approval of assessment centres, assessment and certification.

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**Occupational standards** are defined as ‘statements about the knowledge, skills and attributes that individuals need to perform in the workplace’.\(^{88}\) They form the basis for ensuring that training and assessment meets the needs of industry and are the basis for National and Caribbean Vocational Qualifications. National quality assurance agencies are to adhere to key documents for the format and design of these standards.\(^{89}\)

**Training delivery/approval of assessment centres** are noted as key areas for quality assurance. The guidelines note that approval Criteria cover: Management of Information (record management, security and storage), Staff resources, Physical resources, Learning resources, Statutory compliance, Internal verification procedures, and assessors. Quality assurance agencies authorised to award CVQs are required to specify and evaluate organisations against the approval criteria for the areas listed above and require endorsement by CANTA’s Quality Assurance Committee.

**Assessment** is defined as ‘the process of collecting evidence and making judgements about whether or not competence has been achieved when measured against the occupational standards’.\(^{90}\) The guidelines indicate that assessment instruments are to be validated, assessors are to be trained and certified in competency-based assessment methodology (including achieving 4 competencies in assessment), internal and external verification (audit) is to be conducted periodically, CVQ Awarding Bodies and assessment centres are required to adhere to the 3 key guidelines,\(^{91}\) and monitoring arrangements are to be implemented.\(^{92}\)

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\(^{86}\) [http://cantaonline.org/index.php?option=com_content&view=article&id=176&Itemid=28]

\(^{87}\) CANTA 2009

\(^{88}\) CANTA 2009, p. 3.


\(^{90}\) CANTA 2009

\(^{91}\) These documents are: Assessment Guidelines for the CVQ, Internal Verification Guidelines for the CVQ, External Verification Guidelines for the CVQ

\(^{92}\) Assessments are to be conducted by qualified assessors; assessments are to be conducted in assessment centres; verification of assessments is to be regularly conducted with an involvement of occupational experts; moderation of assessment results is conducted to maintain consistency.
Certification includes candidates being issued a Caribbean Vocational Qualification from the local awarding body who have met the requirements.

Best practice of awarding bodies is noted in the guidelines as an additional requirement – essentially performance standards for awarding bodies. The guidelines indicate that key aspects of best practice include: leadership and management, awarding and assessment, customer service, design and development, diversity and continuous improvement.

CANTA’s Quality Assurance Criteria and Guidelines for the Caribbean Vocational Qualification also includes advice in regards to: format of occupational standards, development criteria, assessment guidelines, rating scales, common glossary of terms, internal verification guidelines, external verification guidelines, and more detailed information regarding best practice of awarding bodies.

Finally, Regional Occupational Standards, which are National Occupational Standards that have been developed by participating countries and regionally approved by CANTA, cover a range of sectors:

- Agriculture Industry
- Automotive Industry
- Business Services
- Construction
- Creative Industries
- Education
- Energy
- Engineering & Maintenance
- Entertainment
- Fish & Fish Processing
- Food & Beverage
- Health
- Health, Safety, Security and Environment
- Information Technology
- Manufacturing Industry
- Maritime
- Merchant Marine
- Printing and Packaging
- Public Services
- Tourism and Hospitality
- Transport
- Personal Services
- Water and Wastewater.

All the occupational standards are accessible to participating countries, quality assured by the national quality assurance agency and recognised regionally in the Caribbean community.

ASEAN

The ASEAN member states include: Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Singapore, Thailand, and Vietnam.

The basis for the ASEAN Qualifications Reference Framework is derived from the ASEAN Charter signed by the ten ASEAN leaders in Singapore on 20 November 2007, where aspirations to become a single entity – an ASEAN Community – were reinforced. The Charter aimed to develop human
resources through closer cooperation in education and lifelong learning, and in science and technology, for the empowerment of the peoples of ASEAN and for the strengthening of the ASEAN Community, and to enhance the wellbeing and livelihood of the peoples of ASEAN by providing them with equitable access to opportunities for human development, social welfare and justice.93

The ASEAN Qualifications Reference Framework was finalised in 2014 by the AQRF Taskforce and endorsed by all relevant ASEAN Ministers mid 2015. The ASEAN Qualifications Reference Framework will act in a similar manner to that of the EQF – as a translation device. The referencing process established has a strong focus on, not just reviewing alignment of NQF levels against the 8-level regional framework, but also on the review of each referencing country’s quality assurance system in relation to qualifications and certification. These criteria are included in Appendix 5.

Criteria 6 notes that ‘The national quality assurance system(s) for education and training refer(s) to the national qualifications framework or system are described. All of the bodies responsible for quality assurance state their unequivocal support for the referencing outcome.’

Therefore the referencing report needs to explain the main national quality assurance systems that operate in the education, training and qualification system. Other quality assurance measures that could be addressed include, for example, qualification requirements for teachers and trainers, accreditation and external evaluation of providers or programs, relationship between bodies responsible for quality assurance from different levels and with different functions.94

Countries are to use benchmarks for evaluating their quality assurance processes for all education and training sectors, and suggested quality assurance frameworks are listed:

- East Asia Summit Vocational Education and Training Quality Assurance Framework (includes the quality principles, agency quality standards and quality indicators)
- The INQAAHE Guidelines of Good Practice for Quality Assurance (International Network for Quality Assurance Agencies in Higher Education)95

The 11 criteria are also supported by a report outline to assist member states in the documentation process. The referencing process will culminate in a country report that will be listed on the ASEAN Qualifications Reference Framework website, similar to the EQF website,97 and provide for easy comparison of frameworks.

It is envisaged that the AQRF will support other multilateral and bilateral arrangements within the ASEAN community related to mutual recognition of occupations and occupational standards.

A significant basis for mutual recognition in the ASEAN model is that of mutual recognition agreements. The initial mutual recognition agreement in 199298 was an agreement as to how the

93 ASEAN 2007, Charter of the Association of Southeast Asian Nations, Chapter I, Article 1, paragraph 10 and 11.
94 Bateman & Coles, ASEAN 2014
95 Requirements for full member
96 Requirements for full member
97 http://ec.europa.eu/ploteus/search/site?%t%o%O%D:im_field_entity_type%3Ag7
mutual recognition agreements would be developed and responsibilities of the participating countries in the process, including identification of priority areas.

General responsibilities included:

- ‘Harmonisation of standards with relevant international standards, particularly those relevant to the Sectoral MRAs;
- Establishing or improving of infrastructure in calibration, testing, certification and accreditation to meet relevant international requirements;
- Actively participating in relevant arrangements undertaken by specialist regional and international bodies;
- Effectively using the existing MRAs developed by regional and international bodies which the majority of ASEAN Member States are parties to;
- Research and development; and
- Exchange of information and training’.  

The 1992 agreement also outlined the key components of a mutual recognition agreement including:

‘A Sectoral MRA shall include:

- Scope and coverage with respect to products;
- A list of the relevant legislative, regulatory and administrative provisions pertaining to the conformity assessment procedures and technical regulations for the specified products and provisions to update other Member States to the Sectoral MRA on changes;
- A list of Designating Bodies;
- The procedures and criteria for listing Conformity Assessment Bodies;
- The current list of agreed Conformity Assessment Bodies and a statement of the scope of the conformity assessment and relevant procedures for which each has been accepted;
- A description of the mutual recognition obligations;
- A sectoral transition arrangement that provides for a specified time period where Member States to a Sectoral MRA require time to implement legislative or regulatory changes to effect the Sectoral MRA;
- A list of contact points, who shall not be members of the relevant Joint Sectoral Committee;
- Provisions for the establishment of a Joint Sectoral Committee; and
- Additional provisions as required.

The Sectoral MRAs may include a statement or arrangement related to mutual acceptance of the standards or technical regulations or mutual recognition of the equivalence of such standards or technical regulations’.  


As previously mentioned, the ASEAN community has also developed a number of mutual recognition agreements that are either occupation specific or related to occupational standards. The most recent ASEAN mutual recognition agreement provides an excellent example as to how the ASEAN community has agreed to occupational standards in a specific area, tourism professionals,\textsuperscript{101,102} and the link to labour mobility. The agreement also outlines the recognition structures that need to be in place at a national level and at a regional level, e.g. roles of the national tourism boards, national certification boards and ASEAN monitoring committee. This acknowledgement of recognition structures that need to be in place at a regional and national level is an approach that could be considered affirming in an APEC Integrated Referencing Framework.

It is envisaged that the ASEAN Qualifications Reference Framework will support mutual recognition agreements in the future.

**Summary of integrated models**

The CARICOM model relies on regional developments and initiatives, but still encourages country sovereignty through national quality/qualifications agencies and national qualifications, as well as regional recognition of national occupations.

The ASEAN community on the other hand, has aimed for both strong individual sovereignty and a free trade zone. Therefore, their model of mutual recognition relies heavily on:

- NQFs and national quality assurance arrangements
- Strong referencing process to the ASEAN Qualifications Reference Framework of NQFs and quality assurance arrangements
- Documented mutual recognition agreements relating to specific occupations or occupational standards.

\textsuperscript{101} \url{http://www.asean.org/images/2013/economic/matm/MRA_Tourism_Professionals_bw.pdf}

\textsuperscript{102} This agreement is supported by additional documents, \url{http://www.asean.org/communities/asean-economic-community/category/other-documents-11}
In Conclusion

This literature review has outlined the positions with regard to qualifications frameworks, quality assurance frameworks and occupational standards and provided an up-to-date review of international developments in these fields. The need for integrated approaches becomes clear when the separate developments are explained and in its final sections the paper summarises experience so far with integrated approaches to better inform the proposed APEC Integrated Referencing Framework.
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education.aspx


UNESCO 2013, Toolkit for the Recognition of Foreign Qualifications: A Reference for Asia-Pacific Practitioners, UNESCO Bangkok


Key websites accessed

CARICOM http://www.caricom.org/
CANTA http://cantaonline.org/
ASEAN http://www.asean.org/
Appendices
## Appendix 1: Standards definitions

<table>
<thead>
<tr>
<th>Source</th>
<th>Skills</th>
<th>Job tasks</th>
<th>Occupational standard</th>
<th>Sector</th>
<th>Vocation</th>
<th>Vocational stream</th>
</tr>
</thead>
<tbody>
<tr>
<td>NTB</td>
<td>May be intellectual, manual, motor, perceptual or social. Most tasks require a combination of these and involve the application of cognitive and psychomotor functions together with appropriate knowledge.</td>
<td>Discrete, identifiable and meaningful component of work that is carried out by a person for a specific purpose and leads to a specific outcome. The performance of a task requires the application of skills and knowledge.</td>
<td>Are built from a collection of units (of competency)</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>ILO RMCS</td>
<td>May be intellectual, manual, motor, perceptual or social. Most tasks require a combination of these and involve the application of cognitive and psychomotor functions together with appropriate knowledge.</td>
<td>Discrete, identifiable and meaningful component of work that is carried out by a person for a specific purpose and leads to a specific outcome.</td>
<td>Sets of competency standards in streams of occupational or industry sector groupings</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fretwell et al</td>
<td></td>
<td>Job - Hire for a given service or period.</td>
<td>Developed around occupations not jobs. Includes duties that must be performed by a person to function successfully in an occupation.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wheelahan et al</td>
<td></td>
<td>Occupation - relates to a person and his/her role in the labour market (e.g. accountant). It is a more general concept than a job.</td>
<td>Defines a group of related economic entities or enterprises (e.g. financial sectors, mining sector, and agricultural sector).</td>
<td></td>
<td></td>
<td>Refers to practice — what people do in jobs, and the knowledge, skills and attributes they are required to use. A vocation is based on a continuum of knowledge and skill, in which work, vocational education, and higher education are linked, and is premised on the capacity to accrue knowledge and skills in a coherent, cumulative fashion</td>
</tr>
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</table>
## Appendix 2: International classification definitions

<table>
<thead>
<tr>
<th>Source</th>
<th>Skill</th>
<th>Skill level</th>
<th>Job</th>
<th>Occupation</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISCO</td>
<td>Is defined as the ability to carry out the tasks and duties of a given job.</td>
<td>As a function of the complexity and range of tasks and duties performed in an occupation.</td>
<td>A set of tasks and duties performed, or meant to be performed, by one person, including for an employer or in self employment</td>
<td>The kind of work performed in a job. The concept of an occupation is defined as a ‘set of jobs whose main tasks and duties are characterized by a high degree of similarity’. A person may be associated with an occupation through the main job currently held, a second job, a future job or a job previously held.</td>
</tr>
<tr>
<td>ANZSCO</td>
<td>The ability to competently perform the tasks associated with an occupation</td>
<td>As a function of the range and complexity of the set of tasks performed in a particular occupation. The greater the range and complexity of the set of tasks, the greater the skill level of an occupation.</td>
<td>A set of tasks designed to be performed by one person for an employer (including self-employment) in return for payment or profit. Individual persons are classified by occupation through their relationship to a past, present or future job.</td>
<td>A set of jobs that require the performance of similar or identical sets of tasks. As it is rare for two actual jobs to have identical sets of tasks, in practical terms, an ‘occupation’ is a set of jobs whose main tasks are characterised by a high degree of similarity.</td>
</tr>
</tbody>
</table>

Source: ILO 2012, ABS 2013
## Appendix 3: Definition of competence

<table>
<thead>
<tr>
<th>Source</th>
<th>Competence</th>
</tr>
</thead>
<tbody>
<tr>
<td>NTB</td>
<td>Comprises the specification of the knowledge and skills and the application of that knowledge and skill across industries or within an industry, to the standard of performance required by the employer.</td>
</tr>
<tr>
<td>ILO RMCS</td>
<td>Relevant knowledge and skill applied to the standards of performance expected in the workforce. Includes the capacity to apply skills and knowledge to new tasks in a range of environments.</td>
</tr>
<tr>
<td>ASEAN QRF</td>
<td>Competence is an ability that extends beyond the possession of knowledge and skills. It includes: i) cognitive competence involving the use of theory and concepts, as well as informal tacit knowledge gained experientially; ii) functional competence (skills or know-how), those things that a person should be able to do when they work in a given area; iii) personal competence involving knowing how to conduct oneself in a specific situation; and iv) ethical competence involving the possession of certain personal and professional values.</td>
</tr>
</tbody>
</table>

Appendix 4: UNESCO Convention

Key aspects of the Convention are summarised below.

- Holders of qualifications issued in one country shall have adequate access to an assessment of these qualifications in another country.
- No discrimination shall be made in this respect on any ground such as the applicant’s gender, race, colour, disability, language, religion, political opinion, national, ethnic or social origin.
- The responsibility to demonstrate that an application does not fulfil the relevant requirements lies with the body undertaking the assessment.
- Each country shall recognise qualifications – whether for access to higher education, for periods of study or for higher education degrees – as similar to the corresponding qualifications in its own system unless it can show that there are substantial differences between its own qualifications and the qualifications for which recognition is sought.
- Recognition of a higher education qualification issued in another country shall have one or more of the following consequences:
  - access to further higher education studies, including relevant examinations and preparations for the doctorate, on the same conditions as candidates from the country in which recognition is sought;
  - The use of an academic title, subject to the laws and regulations of the country in which recognition is sought;
  - In addition, recognition may facilitate access to the labour market.
- All countries shall develop procedures to assess whether refugees and displaced persons fulfil the relevant requirements for access to higher education or to employment activities, even in cases in which the qualifications cannot be proven through documentary evidence.
- All countries shall provide information on the institutions and programmes they consider as belonging to their higher education systems.
- All countries shall appoint a national information centre, one important task of which is to offer advice on the recognition of foreign qualifications to students, graduates, employers, higher education institutions and other interested parties or persons.
- All countries shall encourage their higher education institutions to issue the Diploma Supplement to their students in order to facilitate recognition. The Diploma Supplement is an instrument developed jointly by the European Commission, the Council of Europe and UNESCO that aims to describe the qualification in an easily understandable way and relating it to the higher education system within which it was issued.¹⁰³

¹⁰³ http://www.coe.int/t/dg4/highereducation/recognition/LRC_EN.asp
Appendix 5: AQRF Referencing Criteria

The referencing process includes 11 criteria:

1. The structure of the education and training system is described.
2. The responsibilities and legal basis of all relevant national bodies involved in the referencing process are clearly determined and published by the main public authority responsible for the referencing process.
3. The procedures for inclusion of qualifications in the national qualifications framework or for describing the place of qualifications in the national qualification system are transparent.
4. There is a clear and demonstrable link between the qualifications levels in the national qualifications framework or system and the level descriptors of the AQRF.
5. The basis in agreed standards of the national framework or qualifications system and its qualifications is described.
6. The national quality assurance system(s) for education and training refer(s) to the national qualifications framework or system are described. All of the bodies responsible for quality assurance state their unequivocal support for the referencing outcome.
7. The process of referencing has been devised by the main public authority and has been endorsed by the main stakeholders in the qualifications system.
8. People from other countries who are experienced in the field of qualifications are involved in the referencing process and its reporting.
9. One comprehensive report, setting out the referencing and the evidence supporting it shall be published by the competent national bodies and shall address separately and in order each of the referencing criteria.
10. The outcome of referencing is published by the ASEAN Secretariat and by the main national public body.
11. Following the referencing process all certification and awarding bodies are encouraged to indicate a clear reference to the appropriate AQRF level on new qualification certificates, diplomas issued.\(^{104}\)

\(^{104}\) Bateman & Coles, ASEAN 2014
### Appendix 6: Glossary

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
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</table>
| Achievement standards       | Statement approved and formalised by a competent body, which defines the rules to follow in a given context or the results to be achieved. A distinction can be made between competency, educational, occupational, assessment, validation or certification standards:  
  - competency standard refers to the knowledge, skills and/or competencies linked to practising a job;  
  - educational standard refers to statements of learning objectives, content of curricula, entry requirements and resources required to meet learning objectives  
  - occupational standard refers to statements of activities and tasks related to a specific job and to its practise;  
  - assessment standard refers to statements of learning outcomes to be assessed and methodology used;  
  - validation standard refers to statements of level of achievement to be reached by the person assessed, and the methodology used;  
  - certification standard refers to statements of rules applicable to obtaining a qualification (e.g. certificate or diploma) as well as the rights conferred. |
| Competence                  | Competence is the ability that extends beyond the possession of knowledge and skills. It includes:  
  - Cognitive competence involving the use of theory and concepts, as well as informal tacit knowledge gained experientially  
  - Functional competence (skills or know-how), those things that a person should be able to do when they work in a given area  
  - Personal competence involving knowing how to conduct oneself in a specific situation  
  - Ethical competence involving the possession of certain personal and professional values. |
| Competency specifications    | Specifications related to job tasks or functions within an occupation. This is a working definition for this literature review.                                                                                                   |
| Learning outcomes           | Learning outcomes are clear statements of what a learner can be expected to know, understand and/or do as a result of a learning experience.                                                                                                                                       |
| Licensing bodies            | Licensing boards are generally established via legislation in relation to specific trades. In addition, licensing bodies have remit over the declaration of trades and may be involved in trade testing. Their role in quality assuring programs is similar to that of professional bodies. Trade training and testing bodies may also be linked those agencies with remit over training levies. |
| National qualifications      | National qualifications are those developed to meet a specific national priority need or interest, and whose development has involved the appropriate national industry, profession or community group related to the qualification outcomes. |

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105 Majority of these definitions are included in the ASEAN QRF.  
106 Cedefop (2011), p. 109, included in ASEAN QRF.  
107 Coles & Werquin (2006), p. 23, included in ASEAN AQRF.
The qualification and its development process must have widespread endorsement to be termed a national qualification.

### National Qualifications Framework

Instrument for the development and classification of qualifications according to a set of criteria or criteria for levels of learning achieved. This set of criteria may be implicit in the qualifications descriptors themselves or made explicit in the form of a set of level descriptors. The scope of frameworks may be comprehensive of all learning achievement and pathways or may be confined to a particular sector, for example initial education, adult education and training, or an occupational area. Some frameworks may have more design elements and a tighter structure than others; some may have a legal basis whereas others represent a consensus of views of social partners.\(^{108}\)

### Occupational standards

Specifications of an occupation which may or may not include competency specifications. This is a working definition for the purposes of this literature review.

### Professional bodies

A professional association or body is usually a nonprofit organisation seeking to further a particular profession, the interests of individuals engaged in that profession, and/or the public interest. The role of professional bodies varies; however, many are involved in the development and monitoring of professional educational programs, and the updating of skills, and thus perform professional certification to indicate that a person possesses qualifications in the subject area, e.g. nurses. In some instances, membership of a professional body is synonymous with certification, though not always. Membership of a professional body, as a legal requirement, can in some professions form the formal basis for gaining entry to and setting up practice within the profession, for example, doctors.

### Qualification

Qualifications are a meaningful and coherent cluster of learning outcomes that meet the specified qualification type descriptors, that are capable of being assessed and are subject to external quality assurance processes.

### Qualification (award of)

Formal recognition by a recognised awarding organisation that a person has successfully achieved all the required learning outcomes relevant to an identified programme of study.\(^{109}\)

### Qualifications framework

Instrument for development and classification of qualifications (at national or sectoral levels) according to a set of criteria (such as using descriptors) applicable to specified levels of learning outcomes.\(^{110}\)

### Qualifications system

Qualifications system includes all aspects of a country’s activity that result in the recognition of learning. These systems include the means of developing and operationalising national or regional policy on qualifications, institutional arrangements, quality assurance processes, assessment and awarding processes, skills recognition and other mechanisms that link education and training to the labour market and civil society. Qualifications systems may be more or less integrated and coherent. One feature of a qualifications system may be an explicit framework of qualifications.\(^ {111}\)

### Quality assurance

Quality assurance is a component of quality management and is ‘focused on


\(^{109}\) This may be referred to as certification.

\(^{110}\) Cedefop Glossary (2011) p. 82.

providing confidence that quality requirements will be fulfilled.\textsuperscript{112}

In relation to education and training services, quality assurance refers to planned and systematic processes that provide confidence in the design, delivery and award of qualifications within an education and training system. Quality assurance ensures stakeholders interests and investment in any accredited program are protected.

<table>
<thead>
<tr>
<th>Quality assurance framework</th>
<th>A set of principles, guidelines, tools and standards that act as a reference for guiding the consistent application of quality assurance activities.\textsuperscript{113}</th>
</tr>
</thead>
</table>
| Quality assurance system    | Quality assurance system includes all aspects of a country's activity related to assuring the quality of education and training. These systems include the following elements:  
  - clear and measurable objectives and standards, guidelines for implementation, including stakeholder involvement,  
  - appropriate resources,  
  - consistent evaluation methods, associating self-assessment and external review,  
  - feedback mechanisms and procedures for improvement,  
  - widely accessible evaluation results.\textsuperscript{114} |
| Referencing                 | Referencing is a process that results in the establishment of a relationship between the national qualifications framework and that of a regional qualifications framework. |
| Regional qualifications framework | A broad structure of levels of learning outcomes that is agreed by countries in a geographical region. A means of enabling one national framework of qualifications to relate to another and, subsequently, for a qualification in one country to be compared to a qualification from another country. |
| Training standard           | A training standard could be an educational standard as noted in ‘Achievement Standards’ or could be a standard that is less detailed and provides advice related to training expectations and inputs, such as associated achievement standards; resources (for example staff, students, materials) which should be available in an institution; duration or volume of learning of the programme; NQF level of qualification. This working definition for the literature review includes both these notions. |


\textsuperscript{113} Adapted from Cedefop Glossary (2011), p. 21

Appendix 7: List of organisations

The field of recognition of knowledge skills and competences is complex, there is no single model that informs local practice and different countries/regions have worked in different ways to bring coordination between occupational standards, qualifications systems and quality assurance procedures at the local level. The advent of regional qualifications frameworks and international quality assurance processes have made it possible to consider the potential of a more coordinated international approach to recognition that includes occupational standards. In this sense the APEC proposal is future oriented, ambitious and, because of its scale, unique. To begin to illustrate the complexity of the field the following list provides a summary of key agencies or structures that require explanation.

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Name</th>
<th>Description</th>
</tr>
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<tbody>
<tr>
<td>AQRF</td>
<td>ASEAN Qualifications Reference Framework</td>
<td>The ASEAN Qualifications Reference Framework, a common reference framework, functions as a device to enable comparisons of qualifications across ASEAN member states.</td>
</tr>
<tr>
<td>CANTA</td>
<td>Caribbean Association of National Training Agencies</td>
<td>CANTA is an association of national training agencies &amp; other TVET apex bodies in CARICOM states.</td>
</tr>
<tr>
<td>CARICOM</td>
<td>Caribbean Community and Common Market</td>
<td>Caribbean Community and Common Market is an organisation of Caribbean nations and dependencies. Its main purposes are to promote economic integration and cooperation among its members, to ensure that the benefits of integration are equitably shared, and to coordinate foreign policy.</td>
</tr>
</tbody>
</table>
| CSME    | Caribbean Community and Single Market and Economy | CSME creates one large market among the participating member states. The main objectives of the CSME are:  
  - Full use of labour (full employment) and full exploitation of the other factors of production (natural resources and capital)  
  - Competitive production leading to greater variety and quantity of products and services to trade with other countries. |
| EQF     | European Qualifications Framework | The EQF is a translation tool that helps comparison between qualifications systems in Europe and supports mobility of people. |
| IMO     | International Maritime Organisation | IMO is the United Nations specialised agency with responsibility for the safety and security of shipping and the prevention of marine pollution by ships. |
| NQF     | National Qualifications Framework | Instrument for the development and classification of qualifications according to a set of criteria or criteria for levels of learning achieved. This set of criteria may be implicit in the qualifications descriptors themselves or made explicit in the form of a set of level descriptors. The scope of frameworks may be comprehensive of all learning achievement and pathways or may be confined to a particular sector, for example, initial education, adult education and training, or an occupational area. Some frameworks may have more design elements and a tighter structure than others; some
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<tr>
<th>Acronym</th>
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</tr>
</thead>
<tbody>
<tr>
<td>NZQA</td>
<td>New Zealand Qualifications Authority</td>
<td>NZQA’s role in the education sector is to ensure that New Zealand qualifications are regarded as credible and robust, nationally and internationally, in order to help learners succeed in their chosen endeavours and to contribute to New Zealand society. NZQA is responsible for:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Managing the New Zealand Qualifications Framework</td>
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<tr>
<td></td>
<td></td>
<td>• Administering the secondary school assessment system</td>
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<tr>
<td></td>
<td></td>
<td>• Independent quality assurance of non-university education providers</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Qualifications recognition and standard-setting for some specified unit standards.</td>
</tr>
<tr>
<td>PQAS</td>
<td>Pacific Quality Assurance Standard</td>
<td>The PQAS provides broad quality principles on the roles and functions of accrediting agencies in monitoring and sustaining quality within post school education and training institutions. The PQAS provides a common standard for mutual understanding and implementation.</td>
</tr>
<tr>
<td>PQF</td>
<td>Pacific Qualifications Framework</td>
<td>The PQF is a reference for linking the national qualifications framework and/or individual qualifications of each PIC. It functions as a translation device for Pacific Island qualifications.</td>
</tr>
<tr>
<td>PRQS</td>
<td>Pacific Register of Qualifications and Standards</td>
<td>The PRQS is the regional record or database of quality assured:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Qualifications (and components of qualifications)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Pacific traditional knowledge and indigenous skills in traditional guilds</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Professional licensing and occupational standards</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Regional benchmarks for literacy, numeracy and life skills for basic education.</td>
</tr>
<tr>
<td>RQF</td>
<td>Regional Qualifications Framework</td>
<td>A broad structure of levels of learning outcomes that is agreed by countries in a geographical region. It is a means of enabling one national framework of qualifications to relate to another and, subsequently, for a qualification in one country to be compared to a qualification from another country.</td>
</tr>
<tr>
<td>SPBEA</td>
<td>Secretariat of the Pacific Board for Educational Assessment</td>
<td>SPBEA provides a regional quality assurance function in assuring the quality of Pacific education and training, and solicits multi-sectoral support from respective Government Ministries (Education, Labour, Foreign Affairs, Trade, and Economic), private sector, professional bodies, accrediting agencies, and institutions. It provides oversight of the PRQS, PQF and PQAF.</td>
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<tr>
<th>Acronym</th>
<th>Name</th>
<th>Description</th>
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<tbody>
<tr>
<td>TRA</td>
<td>Trades Recognition Australia</td>
<td>TRA is a skills assessment service provider specialising in assessments for people with trade skills gained overseas or in Australia, for the purpose of migration and skills recognition.</td>
</tr>
<tr>
<td>VUSSC</td>
<td>Virtual University for Small States of the Commonwealth</td>
<td>VUSSC is a network initiated by and built on the support of Ministers of Education of developing small states of the Commonwealth. The Commonwealth of Learning coordinates the development of VUSSC on behalf of Commonwealth Ministers of Education.</td>
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</tbody>
</table>