

ECO-Center needs analysis in Cyprus

National report

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1. Current environmental status and sustainable development in Cyprus

1.1. Basic data about current environmental status of the country

Cyprus is the third largest island in the Mediterranean Sea with an area of 9 251 km² and population of 1 141 166 people (2013 estimates). The climate of the country is subtropical – Mediterranean and semi-arid. Besides its relatively small territory Cyprus possesses unique natural landmarks and currently has designated 40 Sites of Community Interest (SCI) and 30 Special Protected Areas (SPA) for their inclusion in the Natura 2000 Network. This initiative is undertaken in order to overview conservation status of habitats and species in Cyprus and to implement the Habitat Directive 92/43/EC and the Birds Directive 2009/147/EC.

At present the country is facing complicated situations regarding the environmental protection. It is suffering from extensive droughts, *i.e.* a remarkable climate change that reflects on its turn the water supply and the biodiversity. The data for the national emissions indicate a rise by 52 % for the period 1990 – 2012 (inventory, submitted to the United Nations Framework Convention on Climate Change (UNFCCC) secretariat), although the expressed tendency for reduction of total emissions by an average of 3 % annually since 2008, primarily due to the financial situation of the country and the impact of the promotion of renewable energy sources (RES). The largest source of emissions (a total of 71 %) is the energy, mainly the production of electricity and the ground transportation. Trying to realize energy savings the government has stipulated ambitious targets, such as increase of 14.3 % (463 ktoe) in energy savings in the projected primary energy consumption of the year 2020 and increase of the contribution of RES to 13 % of the total energy consumption by the year 2020. By 2012 the first parameter has reached 12.3 % and the second – 7.7 %.

The quality of air and air pollution is another crucial problem. The main contributors to the emissions of different air pollutants in Cyprus are the road transport, public electricity and heat production, and industrial sources. In the country operates a network of major and minor monitoring stations (a total of 13) for measurement of Ozone, Nitric Oxide, Nitrogen Dioxide, Nitrogen Oxides, Sulphur Dioxide, Carbon Monoxide, BTEX, Particulate Matter (PM), and meteorological parameters. The measurements together with other useful information on air quality are regular and accessible to the public through a dedicated air quality website. The air quality measurements data indicate progressive improvement of air quality in Cyprus with figures about air pollutants that commonly do not exceed the limits, with the exception of

Ozone and PM₁₀. The former exceedances is observed mainly in non-urban areas and is primarily due to trans-boundary pollution, while the latter exceedances are due to natural sources (sea salt), trans-boundary pollution anthropogenic sources.

Another serious environmental challenge Cyprus is facing, is the fast rising waste generation rate, which is due to the very high consumption patterns in the country. For instance, in 5-years period (1996 – 2011) the total amount of municipal waste generated increased by over 44.8 % (from 400.12 tons to 579.68 tons). The uncontrolled disposal of waste imposes environmental, health and socioeconomic impacts. Thus, the reduction of waste generation rates and their management according to the waste hierarchy as well as the reduction of waste generation remains a key priority for future waste management. In this direction efforts are put in the increase of separate collection (mainly packaging and WEEE) and energy recovery. The principal environmental problem is related to the chronic shortage of water, although Cyprus' physical relief is dominated by two mountains and a central plain. Cyprus is characterized by lack of natural reservoir catchments; seasonal disparity in rainfall, sea water intrusion to island's largest aquifer, increased salination in the north. The country faces serious water pollution from sewage and industrial wastes as well as loss of wildlife habitats from urbanization.

In an attempt to solve this crucial environmental and meanwhile – social problem, Cyprus government has invested considerable resources in creation of water desalination plants, which have supplied almost 50 % of domestic water since 2001. At the same time efforts are concentrated in raising public awareness of the situation and in encouragement of domestic water users to be more responsible for the water conservation.

1.2. Cyprus environmental policies

The environment protection is an important component of Cyprus economic and social policies. The integration of the country in the European Union has imposed serious revision of its environmental policy and legislation as part of the harmonization process with EU requirements. This resulted in more than 250 European legislative acts that have been harmonized into national laws and regulations covering a wide range of issues relating to the environment, including water, soil and air pollution, nature protection, waste management and noise regulation. The improvement in the legislation has established solid basis for the

implementation and enforcement of the environmental policy, which in turn ensures protection along with the improvement of the environmental status.

The Department of Environment (former Environment Service) of the Ministry of Agriculture, Natural Resources and Environment is playing the key role in the harmonization of the environmental policy with the European requirements for the environment. The institution has a dual role, being authorized to ensure environmental policy and law enforcement on the one hand, and the co-ordination of EU environmental issues and legislation with other competent Agencies/Departments, on the other. It provides advice on the environmental policy and co-ordinates plans and programmes that deal with the environment.

The country has ratified many international conventions and protocols related to environmental protection, among which Convention for the International Trade of Endangered Species of Wild Flora and Fauna; the Bern Convention for the Protection of European Wildlife and Natural Habitats; the Barcelona Convention for the Protection of the Mediterranean Sea; the Basel Convention for the Transboundary Movement of Hazardous Waste; the Vienna Convention and the Montreal Protocol on Substances that Deplete the Ozone Layer; the Convention on Biological Diversity and the Biosafety Protocol; the Convention to Combat Desertification; the Climate Change Convention and the Kyoto Protocol; the Ramsar Convention for the Protection of Wetlands; the Convention on Environmental Impact Assessment in a Transboundary Context. It also participates in numerous environmental organizations and programmes concerning Global Environmental Protection and has contributed to the shaping of EU policies in areas such as an integrated maritime policy.

The main national policy issues focused on environment protection include:

- The Action Plan for Environmental Technologies, aiming to identify new technologies to resolve environmental problems;
- The Law on Genetically Modified Organisms regulating the import, marketing and deliberate release into the environment of GMO, ensuring the protection of human health and the environment;
- Regulation of the substances that deplete the ozone layer;
- Climate change, with efforts concentrated on the reduction in the rate of increase of greenhouse gas emissions;
- Regulation of industrial pollution;

- The Eco-Management and Audit Scheme, which promotes the improvement of the environmental performance of organizations;
- The Ecolabel Scheme, which provides consumers with accurate and scientifically verified information regarding various products;
- The protection and management of the natural environment, mainly through the Natura 2000 Network of protected areas; development of management plans for the sites of the Network;
- The assessment and management of environmental noise and waste management;
- Regulation of the quality of water.

1.3. The obstacles and constraints in environment protection

Although environmental issues took a place on Cyprus public agenda in the late 1980s, the country is still developing a comprehensive and coherent environmental policy, which entirely to meet EU obligations. As important steps on the path to achieve progress in this area it is necessary the ministerial responsibilities to be integrated, more information efforts to be invested and administrative coordination to be improved.

The major constraints that face Cyprus in the realization of the environment protection are focused on the following:

- Climate change: the response of the country to the demands for climate protection is insufficient. Although exploitation of solar energy has begun to improve in recent years, the progress in using RES remains still slow. Energy-consumption levels are high, and the deficient public-transportation infrastructure results in an overuse of private cars. Urgent measures are necessary to meet the country obligations to contain emissions and create an efficient waste-management infrastructure.
- Water deficiency: water is a major problem for Cyprus, due to substantial dependence on rainfall. The country has tried to implement desalination as a potential solution. Waste water is insufficiently exploited, since sewage systems has just beginning to be installed in the rural regions. The groundwater sources are threatened by depletion because of drilling for water. Water conservation and sustainable management are still a big challenge to the country.
- Forest protection: governed by a national 2010 – 2020 program, which aims at reforestation and reduction of fire hazards. Other measures seek to protect forests from pollution and other problems caused by visitors, even in Natura 2000 protected sites.

- Biodiversity policy: Cyprus has a strategic plan for biodiversity policy through 2020. However, here there are also policy gaps and a lack of efficient implementation plans and corresponding effective measures to protect the environment. Ecosystem protection measures, including the Natura 2000 programme, have not been effectively promoted. Hunting poses another threat to protected species.

1.4 Green production policies

One of the key objectives of the European Union is to integrate environmental sustainability with economic growth and welfare by decoupling environmental degradation from economic growth and doing more with less. The Europe 2020 Strategy has identified the key goal of smart, more inclusive and sustainable growth. It determines the production of green technologies and improvement of environmental and economic performance as its major pillars. To enforce green production policy means both making greener products and greening the production processes, *i.e.* to realize sustainable production & consumption.

The main policy priorities pursued by Cyprus in this context include:

- establishment and expansion of the environmental infrastructure for sustainable management of resources and waste;
- protection, preservation and management of coastal areas;
- promotion of energy saving and renewable energy sources;
- reduction of greenhouse gas emissions and internalization of environmental costs.

1.4.1. Climate change management

National adaptation strategy is launched by the end of 2014. In 2009 Cyprus committed to reduce non-ETS emissions by 5 % by 2020 compared to 2005 through the Effort Sharing Decision. In 2013 Cyprus committed internationally to take action to reduce emissions stressing primary on domestic mitigation. In this context measures have been taken for introduction of natural gas to Cyprus, mainly for use in electricity generation; increase of the RES share to electricity, heating, cooling and transport; promotion of public transport and low emission vehicles and improvement of solid waste disposal sites.

1.4.2. Nature and biodiversity preservation

The effects of climate change are the most severe threats to nature and biodiversity in Cyprus. Activities such as land use change, illegal hunting, long drought periods and forest fires contribute to this problem as well. The ecosystems are facing serious problems, among which residential development, infrastructure, tourism, and quarrying. Furthermore, transportation infrastructure contributes to habitat loss and a fragmentation of nature areas. Because of these unpleasant and dangerous facts, Ministerial Decrees have been issued to ensure strict protection and enforce new restrictions on anthropogenic activity within the Natura 2000 areas, designated as Special Areas of Conservation.

1.4.3. Air quality and air pollution management

To address the anthropogenic contribution, Cyprus has prepared a National Action Plan with specific measures to limit PM emissions. For the reduction of air pollution in Cyprus, measures have been established in compliance with the provisions of Directive 2010/75/EU in relation to emission limit values. In 2009, Cyprus provided an update of the national critical load data.

1.4.4. Energy & Waste

The introduction of natural gas to the national energy system is a major contributor to the increase of energy efficiency. Other measures foresee grant schemes for energy saving and domestic generation for RES in all sectors. Measures for increasing the contribution of RES to the gross final energy consumption by 2020 are ongoing. Currently, efforts focus on a pilot project announced by the Cyprus Energy Regulatory Authority (CERA) in 2012 for examining the effects of Net-metering.

According to legal requirements, the Department of Environment has prepared the Waste Management Strategy, the Waste management Plan for municipal waste and the Waste Prevention Programme.

1.4.5. Country specific issues – the marine environment

The marine environment is of particular importance for Cyprus, both for environmental as well as economic reasons. The status of the marine and coastal environment of Cyprus is evaluated from Good-High environmental ecological status, based on the implementation of the Water Framework Directive (2000/60/EC). Cyprus has completed the 1st phase of the Marine Strategy Framework Directive.

Cyprus has established 6 marine Natura 2000 sites and implemented monitoring programmes under the EU Habitats Directive (92/43/EEC) for threatened species, as well as for marine habitats. The implementation of the Marine Strategy Framework Directive is a challenging task due to the limited human and economic resources. The effective management of the marine Natura 2000 areas as well as all the marine protected areas significantly contributes towards the objectives of maintaining good marine water status.

2. Focus on environmental adult education: good practices in Cyprus

2.1. Brief historical overview of environmental education

Cyprus made the first steps towards sustainable development education with special attention paid to environmental education in the 1990s. It was a slow and difficult beginning lasted over a decade due to the lack of structured educational plan related to environmental education in the educational system of the country. During this time environmental education presented quite limited in both formal and informal education in comparison with other European countries.

The approaches for integrating the environmental education into the strategic goals of the country for a better society in a healthier environment have been quite recently adopted by the country policy makers engaged with education. A crucial point in this direction was the decision of all EU member states by 2015 to design and implement National Strategic Action Plans, following the suggestions and general guidelines of the ratified Strategy for Education and Sustainable Development in Europe in 2005. In this connection Cyprus prepared a **National Strategic Plan for the “Environmental Education with Focus on Sustainable Development”** in 2007. The plan placed special emphasis on:

- linking formal and non-formal education;

- utilization of the external environment as a basic educational tool and learning space;
- opening of school to society and its problems;
- acquiring by students of analytical skills, critical thinking and synthesis capacity, through personal, experiential involvement in environmental problems.

The implementation of the National Action Plan began in 2009, when the Ministry of Education and Culture published a new Study Programme for Environmental Education and Education for Sustainable Development. The main goals of the programme are focused on the transformation of school units into “sustainable schools”, grounded on the understanding of the importance of sustainable development not just as another school subject but as a “philosophy” that should be applied at all levels of education.

Another important aspect of this programme is the strong emphasis on the social elements of development along with respect for the environment. The Board of Ministers has recently ratified the Revised National Strategy for Sustainable Development (2011-2015), a product of an year debate at the level of both educational stakeholders and wide social communities, which *inter alia* is trying to establish mechanisms to align all stakeholders in a common strategy for sustainable development that has a real impact on all levels of society.

To implement this strategy in real practice 7 Centres for Environmental Education were established in selected country regions of high environmental value and infrastructured in a **Network of Centres for Environmental Education**. The establishment of Centres for Environmental Education of the Cyprus Educational Institute (Ministry of Education and Culture) appears to be the first attempt to use the potential advantages of the involvement of local non-governmental organizations for sustainable development in researching and developing practices and tools for environmental education. These collaborative centers work to upgrade the educational system through improvement of the efficiency and quality of education on issues relating to the environment. Their main objective is raising greater awareness of students and teachers about environmental issues and their role to protect the environment – individually and within the society.

Selected examples of the Network members are:

- The **Environmental Studies Centre (ESC) of Kritou Terra**, located in a restored primary school in the village of Kritou Terra and organizing number of activities, ranging from practical conservation work, through hiking expeditions and training, to pure environmental education (including courses for adults and families). ESC is the first centre for practical environmental education or "field studies" in Cyprus.

- The **Pedoulas Environmental Education Centre** is the first Centre to be organized on the basis of investigating and analyzing environment in a holistic view through open-ended procedures. An important aspect of this Centre is that the local community is a core and active member in various Environmental Programmes of the Centre.
- The **Akrotiri Environmental Education and Information Centre** is located at the Akrotiri community and operates since July 2004.

2.2. Formal/non-formal environmental education (incl. adult education): legal basis; responsible organizations; training settings and systems; tendencies and problems

2.2.1. Structure of Cyprus Educational system

- Fundamental principle: every person has the right to receive and every person or institution has the right to give education or instruction.
- Education governance: mainly centralized. The main authorities responsible for education are the Council of Ministers, the Ministry of Education and Culture, the Educational Service Commission and the Local School Boards.
- Structure of educational system: from pre-primary to postgraduate levels (Fig. 1).

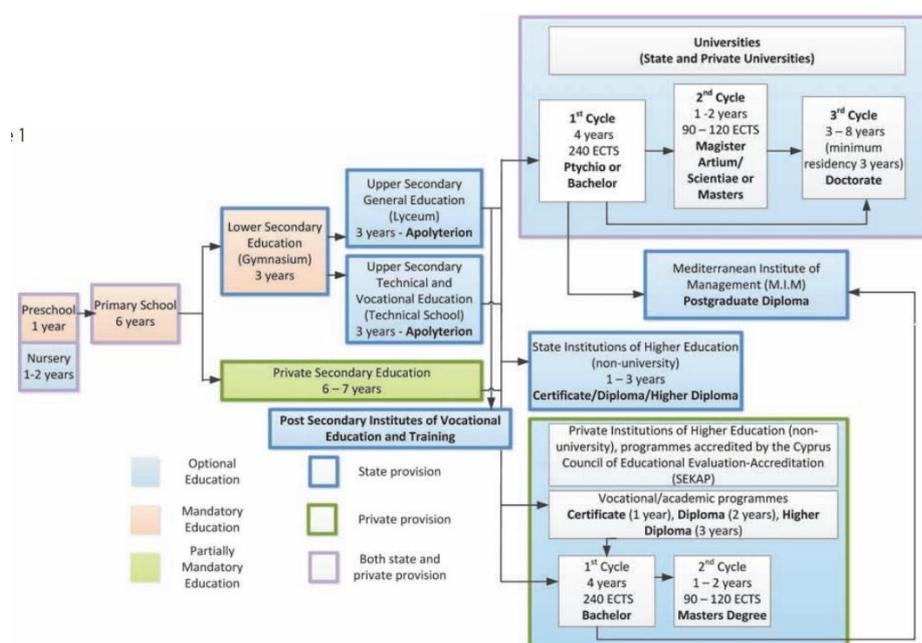


Fig. 1. Structure of the educational system in Cyprus.

2.2.2. Adult Education in Cyprus – an overview

Political background

Key players in policy development for education and training in Cyprus are the Planning Bureau (PB), the Ministry of Education and Culture (MoEC), the Ministry of Labour and Social Insurance (MLSI) and the Human Resource Development Authority (HRDA).

The political priorities in the field of vocational education and training include:

- the implementation of the comprehensive Lifelong Learning Strategy;
- the promotion of the education reform in all grades of education;
- the continuous upgrading of skills to match labor market needs;
- increasing female participation;
- the upgrade of training;
- the development of a National Qualifications Framework and its implementation;
- the operation of the System of Vocational Qualifications.

Legal framework

Legislative authority is exercised by the House of Representatives. All activities on the provision of adult and continuing education are legitimized by decisions of the Council of Ministers and/or Acts passed by the House of Representatives. There is not a comprehensive legislative framework for Adult and Continuing Education in Cyprus. Instead, there are a number of legislative provisions related to the different authorities involved in.

Financial issues

The financial support of adult education is responsibility of:

- the state, comprising federal, regional or local authorities;
- private organizations (enterprises, unions, foundations, educational institutions);
- the individuals, *i.e.* the participants of adult education programmes;
- a combination of the above groups.

Provision of Adult Education

In Cyprus adult education is offered at public, semi-government and private institutions. These settings are grouped in three categories, depending on the type of education or training they offer:

- institutions offering formal adult education;
- institutions offering non-formal adult education;
- institutions offering (continuing) vocational training.

The major institutions and organizations offering adult education within the above categories encompass the following clusters.

Cluster ‘Formal adult education’:

- Evening Gymnasia (5) and Evening Technical Schools (2);
- Post-Secondary Institutes of Vocational Education and Training;
- the Open University of Cyprus;
- the Mediterranean Institute of Management;
- Higher Education Institutions (both public and private) offering flexible learning programmes for adults.

Cluster ‘Non-formal adult education’:

- the Adult Education Centres;
- the State Institutes of Further Education (41);
- the Pedagogical Institute;
- Private Institutes registered with the Ministry of Education.

Cluster ‘(Continuing) Vocational Training’:

- the Cyprus Productivity Centre;
- the Cyprus Academy of Public Administration;
- afternoon and evening classes at the technical schools;
- the Apprenticeship Scheme offered jointly at technical schools and private industries;
- in-company courses funded by the Human Resource Development Authority.

Additionally, certain civil society institutions (or NGOs) and ministries and as well as social partner organizations provide wide range of formal or non-formal adult education activities, both job- and non-job related. The courses offered may be both free of charge and paid; the fees differ according to the subject, provider, target group, urbanity of the area or the number of residents. These forms of training refer to VET programmes, which do not lead to a formal qualification but to professional development and updating of specific skills and competences. These are:

- training for the employed;
- training for the unemployed;
- training for other groups at risk of exclusion from the labour market;
- training for adults in general – in adult education centres; More than 31 000 citizens (73 % of which were female and over 8 % were over 65 years of age) attended the Adult Education Centres during the school year 2012-2013 and 30 % attended courses in rural areas. In 2011, expenditure was EUR 2 303 342, including teacher salaries.

Adult educators

Adult and continuing education in Cyprus is delivered by teachers/trainers who (until recently) have had no specific education in adult education and learning. They lack background in “andragogy” and generally have passed some sort of in-service training but not in the education of adults. Moreover, teachers and trainers in adult education in Cyprus constitute a very mixed group with a broad variety of qualifications – in most cases recruited on the basis of an assessment of their first degree subject knowledge. Predominantly, their supplementary training, e.g. attending a Masters course in adult education is a question of personal good will. The reasons for this situation are grounded in the fact that the regulatory framework for Adult Education in Cyprus is still shaped, the focus on the education of adult educators is not strong, and the possibilities of offering teachers/trainers normal occupational conditions are limited.

- Tendencies and problems of adult education

Cyprus has joined the European Union in 2004. Three years later, in November, 2007 a Decision of the Council of Ministers was issued regarding the preparation of the National

Lifelong Learning Strategy, as a harmonization effort with the vision of making a European Area of Lifelong Learning. At present Cyprus lifelong learning strategy, CyLLS for 2014-20 is in action. It addresses the following challenges and needs with regards to adult and continuing education:

- to increase accessibility of education and training systems for all citizens of Cyprus and to facilitate the links to the labor market;
- to improve infrastructure of education and training systems, including infrastructure for continuing training, accreditation, validation and certification of qualifications in order to meet the educational and training needs of Cypriot society;
- to enhance research and development activities, including skills forecasting and research on the economic and social outcomes of education and training;
- to attain efficiency in governance of lifelong learning systems, introducing new mechanisms and tools for efficient governance of the education and the training system.

The main policy measures in the Lifelong Learning Strategy that relate to adult education aim at:

- promoting continuing training and strengthening the employability of young, unemployed people and economically inactive women;
- modernizing teaching methods and curricula to include the use of technologies in teaching;
- supporting systems for the education and training of people with special needs and disadvantaged people;
- expanding the opportunities offered to young people to higher education studies in Cyprus;
- improving teachers' skills to a level higher than their basic vocational skills and/or the skills acquired during their professional experience;
- conducting feasibility studies for the operation of public vocational lifelong learning schools;
- strengthening the administrative capacity of the public sector through training and development;
- encouraging the private sector to get involved in education and training development;

- encouraging cooperation between relevant stakeholders, including policy makers, teachers' unions, trade unions, political parties, parents' and pupils' associations for lifelong learning.

3. Development of innovative solutions for education of adult training providers: EQF/NQF introduction

The main actions designed to achieve the objectives of CyLLS 2014-20 include the development of the National Qualifications Framework and the promotion of the System of Vocational Qualifications, the enhancement of lifelong guidance and counselling services, the improvement of the attractiveness of Secondary Technical and Vocational Education and the modernisation of curricula. Furthermore, the Strategy includes actions for training the unemployed in order to acquire the necessary knowledge, skills and attitudes in sectors with a potential for development, job placements of the unemployed to acquire work experience in enterprises/organisations and enhancement of the New Modern Apprenticeship.

3.1. EQF – NQF interrelation

3.1.1 Cyprus national qualifications framework for lifelong learning

Cyprus has developed a comprehensive national qualifications framework (NQF), which encompasses all levels and types of qualifications from all subsystems of education and training. A decision to create the NQF was taken by the Council of Ministers in 2008 (Decision No 67 445) and the first referencing report was presented to the EQF advisory group in June, 2014. The final version of the Report is prepared taking into account the comments of the EQF Advisory Group and is presented and submitted again to the Group in February, 2015.

The Human Resource Development Authority of Cyprus (HRDA) has also developed a System of Vocational Qualifications (SVQ) as an integral but separate part of the NQF. The common structures and elements of NQF and SVQ, which will offer opportunities for combining and transferring credits, are being discussed.

3.1.2 Development and introduction of NQF

The main role of NQF is to classify qualifications according to predefined levels of learning outcomes. The idea (in long term) was to link the NQF to the assessment and award of qualifications but also to wider reforms and procedures for quality assurance.

The objective of NQF is to develop and implement a framework that can operate outside formal education and allows awarding of qualifications in accordance to common unified criteria.

The first step in the realization of this objective was to include the vocational qualifications system – established by the HRDA – in the framework. The vocational qualifications refer to occupational standards and certify learning outcomes acquired at work.

The aim of NQF to promote LLL is being progressively achieved by increase of adult participation in lifelong learning (currently at 7.4 %), which remains below the EU average of 9.0 % in 2012. Thus the NQF development and implementation will give a second chance to all Cypriots for educational advancement and job progression through LLL.

NQF developments are initiated and coordinated by the general directorate for VET at the Ministry of Education and Culture.

The framework is not yet operational. However, Cyprus NQF will be established at the Ministry of Education and Culture as an in-service department and will be implemented gradually.

3.1.3. Prospects for implementation of NQF

The implementation of NQF requires the joint efforts of all stakeholders, responsible for accreditation of qualifications. Since the development of a NQF to promote recognition of academic and vocational qualifications acquired in Cyprus is a government priority, a new permanent body – council of the NQF of Cyprus – including all relevant stakeholders is structured. The Council functions as an advisory body with main tasks focused on:

- consulting with stakeholders on NQF development and implementation;
- developing, implementing and reviewing NQF procedures;
- disseminating public information on the NQF;
- advising the Ministry of Education and Culture on policy and resource implications.

To facilitate the process, the Council of Ministers appointed a high-level national committee comprising the Directors-General of MoEC, the MLWSI and the HRDA. At the same time, a number of meetings with all the stakeholders involved (students' and parents' organisations, education providers, VET providers, employers' and employees' organisations, teachers' organisations, the HRDA) have taken place, as the first step of the implementation plan. The testing period of the implementation of the NQF will be between September, 2015 and May, 2016. The testing results will be evaluated and final tuning of the framework will be done.

Regarding the regulated professions, Cyprus has fully transposed the new Directive 2005/36/EC into national law by adopting eight different laws, one for the general recognition of regulated professions and seven others for the seven sectoral professions (nurse responsible for general care, dental practitioner, veterinary surgeon, midwife, architect, pharmacist and doctor).

3.1.4 NQF structure

The existing national qualifications system is mainly based on the length of education and training programmes. Implementing the learning outcomes approach in the building of the NQS allows different interpretation across levels and sectors. The EQF eight-level reference structure has been adopted in general, reflecting the national qualification system's main characteristics. Level descriptors are described in terms of knowledge, skills and competence. The descriptors are simultaneously formulated for all levels to define clear progression from one level to the next. They indicate the standards a learner should achieve, when awarded certificates at different education levels.

- **Knowledge** is defined by type and complexity of knowledge involved and ability to place this knowledge in a specific context.
- **Skills** are formulated by type of skills involved, complexity of problem-solving, and communication skills.
- **Competences** contain the following aspects: space of action, cooperation and responsibility, and learning skills.

VET qualifications are aligned from level 3 to 7 of the NQF (Fig. 2).

NQF levels	Education certificates/diplomas/degrees	SVQ	EQF levels
8	Doctoral degree		8
7c	Master degree		7
7b	Post-graduate diplomas	SVQ level 5	
7a	Post-graduate certificates		
6	Bachelor degree	SVQ level 4	6
5c	Higher certificates and diplomas (three years)	SVQ level 3	5
5b	Post-secondary certificates and diplomas (two years)		
5a	Post-secondary certificates and diplomas (one year)		
4	Upper secondary general education and evening schools certificates (12th class or 12 and 13th for some private schools)	SVQ level 2	4
	Upper secondary technical and vocational education and evening technical schools certificates (12th class)		
3	Lower secondary education certificate 10th class New modern apprenticeship	SVQ level 1	3
2	Lower secondary education certificate ninth class Preparatory programme (new modern apprenticeship)		2
1	Compulsory education certificate (elementary school certificate, or graduates of seventh and/or eighth class)		1

Fig. 2 Cyprus NQF and SVQ interrelation

The emphasis in NQF put on learning outcomes, demands on its turn a need to revise curricula, learning programmes and assessment methodologies towards the learning outcomes. In this context, several reforms are under way. For example, the reform for upgrading curricula for pre-primary and upper secondary education, upgrading VET through introduction of post-secondary institutes for VET (technological lyceums) (launched in September, 2012), and introduction of new modern apprenticeships. In addition to curricula and programmes, strong emphasis is given to upgrading teachers' competences and establishing and monitoring quality of learning outcomes.

In formal education, learning outcomes are mainly expressed as part of a subject and stage-based general education. Experience gained in developing competence-based vocational qualifications contributes significantly into NQF implementation. Since vocational qualifications are based on occupational standards it is possible to award a qualification to candidates irrespective of how and where they acquired the necessary knowledge, skills and competences.

3.1.5 NQF for validation of non-formal and informal learning – referencing to EQF

The development of a competence-based system of vocational qualifications, which will constitute an integral part of a future NQF, is a high priority for Cyprus. The vocational qualifications system is designed for the assessment and certification of the competence of a person to carry out a specific job in real or/and simulated working conditions. The standards of vocational qualifications define the framework for the training and development of a person, providing him or her, the opportunity to reach the appropriate competence level. Opportunity for access is provided to persons regardless of the way they have acquired the knowledge, skills and competence.

Standards of Vocational Qualifications

The system is being established and implemented by HRDA in a dual-phases fashion. During the first phase (2006-09), five standards of vocational qualifications at level 2 have been developed in three sectors of activity of high importance for Cyprus economy: hotel and restaurants, construction and retail trade for the occupations of waiter, cook, receptionist, construction mason and sales person. The standards that are developed, are discussed by the sectoral technical committees of vocational qualifications and approved by the Board of Directors of the HRDA.

During the second phase (2007–15), co-financed by the ESF, 80 new standards are expected to be developed (67 already available). The standards cover a broad range of occupations in the sectors of hotels and restaurants, retail and wholesale trade, construction, manufacturing, repairs of motor vehicles, systems and networks of communication and computers and hairdressing as well as the occupation of trainer of vocational training. This phase is characterized as well with the real opportunities for access provided to the employed, unemployed and economically inactive persons. It is expected that during the second phase, 5 500 persons will be given the opportunity to get their qualifications recognised.

Assessment and Certification of Vocational Qualifications

The process of assessment and certification includes three stages:

- Diagnosis of knowledge and competences: it is conducted by an internal assessor, usually through an interview with the individual. The internal assessor uses a template to identify whether the applicant fulfils the requirements for the whole or part of the qualification.
- Assessment: it is conducted by an assessment committee, which includes internal and external assessors. It comprises a series of meetings in Assessment Centres. Both the Assessment Committee and the Assessment Centres have been approved by HRDA. The assessment methods and processes are verified by an external verifier.
- Certification: assessment results are submitted to HRDA, which decides whether the candidate will be fully certified and consequently, be awarded the qualification or will be partially certified and receive a certificate for specific units.

3.2. European Credits System vs. national grading systems

The European Credit System for Vocational Education and Training (ECVET) is unseparable part of the development of European cooperation in VET. It constitutes one of its operational tools. The process of development and implementation of ECVET in Cyprus, as a unit-based credit system, started in September, 2011 when working committee on the subject was set up. This committee comprises stakeholders from the public and the private sector, such as the MoEC, the MLWSI, the Directorate General for European Programmes Coordination and Development, the HRDA, the Foundation for the Management of the European Lifelong Learning Programmes in Cyprus and private providers of VET.

Special efforts have been input by the responsible stakeholders to support recognition of qualifications abroad and mobility. They actively participate in the management and promotion of activities related to Europass documents, as well as for the provision of information regarding the documents.

In 2013, almost all interested organisations both private and public have been contacted to promote the Europass documents and make them accessible to all citizens. Around 80 % of the higher educational institutes automatically issue the Europass diploma supplement to their graduates, and the number of Europass diploma supplements issued in 2013 reached 5 000. Furthermore, 1 300 Europass certificate supplements have been issued to the 2013 technical schools' graduates and the graduates of the CPC accelerated training programmes.

Additionally, the Cyprus NEC in cooperation with the Foundation for the Management of the European Lifelong Learning Programmes in Cyprus is encouraging all organisations

participating in mobility programmes to issue the Europass mobility document and during 2013, more than 400 documents were issued.

In 2013, the Cyprus NEC organised 60 workshops with 758 participants. During the workshops, the participants created their own Europass CV and were advised on how to write a cover letter and on how to perform well in an interview.

3.3. Specific national legislation, strategies and programmes for clean environment / sustainable development

- **National strategy for sustainable development, 2007.** Cyprus developed and issued its national strategy for sustainable development in compliance with the EU strategy for sustainable development, introducing and promoting the embodiment of environmental dimensions in all of its policies. The main targets of this strategy are: the protection of the natural environment; social justice and cohesion; economic prosperity; undertaking international responsibilities.
- **The Electricity Supply Model for Cyprus (ESMC), 2014:** a long-term energy planning model of the current power system in Cyprus to examine options for economically optimal deployment of renewable energy under different scenarios, and to understand the potential impact of key policy decisions on the power generation mix.
- **3rd National Energy Efficiency Action Plan (NEEAP), 2012** - describes the programs, actions and schemes related to energy efficiency and the exploitation of the economic potential for combined heat and power technologies.
- **National Reform Program of Cyprus, 2014** on Europe 2020 for smart, sustainable and inclusive growth.
- **National biodiversity strategy and action plan – in progress;**
- **The Rural Development Plan (2007 – 2013)** - the main instrument for the implementation of EU Agricultural Policy in Cyprus. The objectives are to protect and maintain the natural environment and socio-economics of rural areas, the protection, development and sustainable management of natural resources and to protect agro-ecosystems (biodiversity) in countryside.
- **National Management Plan under the water policy** and the implementation of the Water Framework Directive sets out the basic principles for a sustainable water policy and to protect the aquatic environment.

- **Protection of aquatic species, inland and marine waters programme** - implemented since 1971 and its related regulations, and the provisions of EU Directive (92/43/EEC) for the Conservation of Natural Habitats and Wild Fauna and Flora, the Barcelona Convention for the Protection of the Mediterranean Sea against Pollution and in particular the Protocol concerning Specially Protected Areas and Biodiversity in the Mediterranean (SPA Protocol).
- **The Strategy for the management of waste (Waste management Plan) for Cyprus**, published in 2004 and determined the policies and actions the government must follow in order to achieve the maximum environmental and human protection.
- **Water Pollution Control Law, Regulations and Ministerial Decrees issued under the provisions of the Law, and the Sewerage Law** - control and prevention of water and soil pollution arising from the operation of wastewater treatment plants and the discharge of the treated urban wastewater.
- **National Action Plan and Programme of Measures towards Combating Desertification in Cyprus, 2008**. NAP is a basic instrument, through which the principles and objectives of the UN Convention to Combat Desertification (UNCCD) and the sustainable land management (SLM) are transformed to specific activities. Its main objectives are identification of environmentally sensitive areas threatened by desertification; elaboration of a programme of measures to combat desertification, public awareness and consultation.
- **National Action Plan for Air Quality Improvement, 2008** - with measures to support public transport and stricter standards and procedures for used vehicles.
- **National Biomass Action Plan of Cyprus, 2009** - covers the three main axes of the European Biomass Action Plan: biomass for electricity production, biomass for heating and cooling, and biofuels for transport.

3.4. Selection of key qualifications for adult learning providers in the field of clean environment

Increasing environmental awareness is recognised as strategically important in order to face up ambitious European environmental objectives on the one hand, and the creation of jobs and increasing competitiveness on the other.

For workers in eco-industries and in jobs that depend on the environment, there is a particular need to take account of environmental concerns in their decision-making, and apply products, processes and technologies to reduce the impact of economic activity on the environment. While these environmental awareness skills – sometimes known as ‘generic green skills’ or ‘green literacy’ – are particularly pertinent to jobs directly linked to the environment, an understanding and appreciation of the issues and demands to lessen the environmental impact or use fewer natural resources are required in almost any occupation.

In places where job creation is envisioned as part of a green economy, there is a recognised need for re-training and increased environmental awareness. The impacts on skills within sectors are likely to be both quantitative (in terms of the number of jobs) and qualitative (in terms of job content). Technical ‘green’ skills will depend on developments within different industrial sectors and occupations.

As far as managers are concerned, environmental pressures – through legislation, changes in consumption and competition for resources – will present a wide variety of challenges and opportunities for managers in services and production. The main groups of skills required comprise:

- Sales and customer service skills for occupations engaged in delivering environmental and energy saving technologies and advice to consumers;
- Management and coordination skills for holistic and interdisciplinary approaches towards design solutions to meet economic, social and environmental objectives;
- Innovation skills and analytical thinking to identify opportunities and create new strategies to respond to green challenges;
- Business acumen and entrepreneurial skills for those seeking to commercialise new product innovations and seize the potential of environmental technologies;
- STEM skills: general understanding of the role of the Science, Technology, Engineering and Mathematics’ contribution to the process of greening economies and societies;

4. National support evaluation in terms of innovation, success and sustainability of adult education

Currently, the biggest challenge of the country’s economy is the creation of adequate number of new and quality jobs. Therefore, the major emphasis of the measures implemented in 2013 and foreseen for 2014/15 is on the facilitation of creating new jobs towards 75 %-77 % of the

population aged 20–64 to be employed by 2020. The measures include subsidised employment schemes, placements for acquiring work experience, enhancement of the skills and competencies of the unemployed and the promotion of entrepreneurship, the extension of the working hours of retail shops and fighting undeclared work.

Among the measures which have been in place and their implementation continues at present are the New Modern Apprenticeship, the Post Secondary Vocational Education Institutes, the job placement and training of young unemployed tertiary education graduates, the accelerated training of young newcomers and other unemployed persons, training programmes for upgrading the skills of unemployed persons, a scheme for the improvement of the employability of the unemployed, a scheme for the improvement of the employability of economically inactive women, the enhancement of cooperation between universities and enterprises, the development of a competence-based system of vocational qualifications, the reform of the curricula at secondary and tertiary education, employment forecasting as well as the evaluation of the impact of the Human Resource Development Authority's (HRDA)

In order to achieve improvement and development on Adult Education in our country, the following suggestions indicate some of the priorities:

- legislation for adult education;
- establishment of a central authority for adult education to improve the administrative/organisational structures of the system;
- involvement of the University of Cyprus in adult education and the establishment of an adult education research centre;
- more funds should be allocated to adult education;
- continuing professional development for staff and volunteers responsible for the adult education centres' development;
- awareness of lifelong education;
- sharing experience from different countries on policy and technical matters through strengthening relationships between nations and governments;
- formal recognition of adult education as an inseparable part of the educational system.

In a longer term perspective, the following trends seem likely to become more marked during the next decade:

- more specialised courses and further diversification of the actual market of the adult education programmes;

- introduction of an effective mechanism to coordinate the programmes;
- involvement of the University of Cyprus in an effort to upgrade the status of adult education, especially in the field of training and retraining adult educators.

Appendix 1: Cyprus in environmental facts

PRINCIPAL SOURCES OF ENERGY (2007):

- *Oil*. Oil products (mainly imported) make up 97% of Cyprus' primary energy consumption.
- *Renewable Energy Sources* (solar, wind and biomass). Renewable energy sources consist of only 1.7% of Cyprus' primary energy consumption but the country has high solar potential with mean daily sunshine from 9.8 to 14.5 hours. Wind potential also is available (some areas have mean wind velocity 5-6m/s, while a few areas have 7m/s). Moreover Cyprus has potential for bio-energy, with its significant amount of agricultural residues for developing bio-fuels and prospects for the development of energy crops. The government has policies and plans to encourage exploitations of renewable energy sources.
- *Solid Fuels* (mainly firewood), consisting of 1.3% of Cyprus' energy consumption.

CO₂ EMISSIONS:

- Total: 7,788,000 metric tons, 101st of the world (2006)
- Per capita: 8.9 metric tons, 38th of the world (2003)

RANKING ON 2010 ENVIRONMENTAL PERFORMANCE INDEX: 96th (56.3).

PRINCIPAL NATIONAL ENVIRONMENTAL LAWS & REGULATIONS:

- Law of access to the general public to environmental information (30 Apr 2004);
- Law of dangerous substances (1991);
- Law of control of atmospheric pollution (2002);
- Law of integrated pollution prevention and control (2003);
- Law of air quality (2002);
- Law of control of water and soil pollution (Jul 2002).

CONSTITUTIONAL PROVISIONS ON ENVIRONMENTAL PROTECTION:

No express constitutional provisions on environmental protection

GOVERNMENT AGENCIES WITH PRIMARY ENVIRONMENTAL PROTECTION RESPONSIBILITIES:

- The Council of Ministers: overall responsibility for the formulation of environmental policy;
- Ministry of Agriculture, Natural Resources and Environment (MANRE), coordinating Environmental policy;
- Ministry of Labor and Social Security (MLSS), responsible for industrial pollution control, air pollution control and air quality

PROTECTED AREAS (2003):

- Nature Reserves, Wilderness Areas, and National Parks: 9000 ha.
- Natural Monuments, Species Management Areas, and Protected Landscapes and Seascapes: 67000 ha.
- Areas Managed for Sustainable Use and Unclassified Areas: 1000 ha.
- Total Areas Protected: 77000 ha.
- Protected Areas as a Percent of Total Land Area: 8.3%

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