



AQUAVET

INTRODUCING AQUAPONIC IN VET:
TOOLS, TEACHING UNITS AND TEACHER TRAINING

Result 13:

Identification of necessary procedure for national accreditation in all partner countries

Internal evaluation of the result

Version	
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1 Developing a new profession in Switzerland

The state, cantons and nationally operating organisations from the world of work together develop a new profession. To gain federal recognition, national employability of graduates has to be ensured. The development is tied to a defined implementation plan with milestones. (SBFI 2014) The State Secretariat for Education, Research and Innovation (SERI) describes this development process in a step-by-step guide. For an overview of the first phase of development, see figure 1 below. The impetus has to come from organisations from the world of work, such as companies or their professional organisations. The first step is to create a project plan. The organisation from the world of work approaches the SERI, which then organises a first planning meeting with all relevant organisations from the world of work, and a representative each from the commission of VET development of the federal conference of VET departments and from the SERI. (BBT 2007: 8) In a second step the partners undertake analyses of possible developments within the profession, the field of the profession and related possibilities. In the end, a job profile needs to be established that gives a detailed overview of all the tasks that form part of the new profession. Additionally, a job trend profile is compiled. This includes taking into account the current and prospective job environment. Once the course of the reform is clear, a project organisation has to be formed. Included are representatives of organisations from the world of work, the SERI, a pedagogical consultancy, the cantons and the teacher's association. The next step is to draw up a reform concept that contains information on project contents, project organisation and project activity. This leads to an application for a "pre-ticket" to show that the organisation from the world of work is willing to execute the reform. (ibid.: 9-10) The EHB (centre for job development) helps organisations of work with the process of developing a new profession. They support organisations with analysing the job and possible job developments, formulating qualifying competences, educational goals, organisation and duration of the education. (EHB IFFP IUFFP 2014) For further details on the process of creating a new profession in Switzerland, refer to the step-by-step guideline from the SERI (BBT 2007).

For the AQUA-VET project this means that partners within the world of work have to be found, which are willing to start the process of introducing the new profession in VET. The project in turn offers a knowledge base on aquaculture, hydroponics and aquaponics, has developed educational material for VET level, includes educational institutions that can offer the courses within VET training, and has several test facilities for Aquaponics stationed with different project partners. This network should be used for developing the new profession.

Another possibility would be to get fish declared as a farm animal, since in Switzerland it is classified as a wild animal. A change would mean that aquaculture and/or aquaponics would be a part of general agricultural education. The current situation is and the steps to be taken are described by Roger Bolt from Strickhof:

According to the Animal Protection Act of 16 December 2005 (TSchG) and the corresponding animal welfare regulation (TSchV) of 23 April 2008 (as of 1 July 2014), on federal level fish are declared to be wild animals. As such, fish are not subject to the federal law on agriculture (agricultural law, LwG) of 29 April 1998. Based on this classification fish take up a different position to agricultural livestock in the federal law

on land use planning of 22 June 1979 (land use planning law, RPG). This impedes their commercial use in the agricultural zone.

Legislative changes at federal level need a political process in parliament that takes about 2-3 years and requires a lot of lobbying. Representatives and Senators need to support the idea to define fish as farm animals. These political actors need to be found and briefed beforehand. The process can be shortened by the Federal Office for Agriculture (BLW) directly drawing up a proposal. The proposal contains the planned adjustments to the respective laws and regulations and details corresponding consequences. This requires discussions with the BLW. The discussions have to be prepared, since it is important to already think about how the laws and regulations are to be adjusted. Changing the status of fish from wild animal to farm animal necessitates a preceding discussion of the effects this will have on the direct payment system of the Swiss state as well as on the allocation of investment credits. Proposals for possible solutions should be put forward. The concrete proposals can then be submitted to the BLW. To this end the support of the Swiss Farmers' Association (SBV) is imperative. The first step will be to present the idea of "fish as farm animal" to the SBV.

Professional fishermen are another consideration. At the moment they see Aquaponics as competition. The idea should be to get them on board to see Aquaponics as a supplementary source of income to their normal catches. Aspiring fishermen doing their federal VET diploma (EFZ) in Switzerland have to go to school in Germany or Austria. Further education to Aquaponic Farmer would be possible domestically.

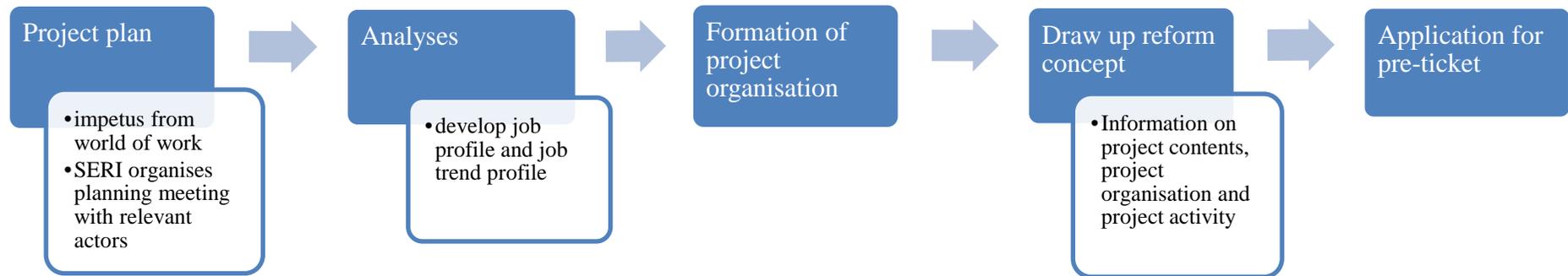


Figure 1: First phase to develop a new profession in Switzerland.

2 Developing a new profession in Slovenia

The first step in developing a new profession in Slovenia is to set new occupational standards. They are the legal basis for development of VET programmes. (ReferNet Slovenia 2010: 84) An occupational standard is a document that establishes the content of a vocational education at a specific level of complexity and specifies the knowledge, skills and aptitudes (general and vocational) that have to be achieved for a specific occupation. The occupational standard is linked to an existing occupation on the labour market. (ReferNet Slovenia 2010: 84) The introduction of new occupational standards steps up the adaptability of the education system responding by modularization and development of educational programmes to meet real employment needs. (National Institute for VET 2007: 19) All the key partners at national level are systematically involved in developing occupational standards (initiators). These might comprise members of chambers, ministries, companies or individuals. (National Institute for VET 2007; ReferNet Slovenia 2010: 84) The need for a standard derives from new types of work or knowledge within a sector or existing vocation, which in turn has to be described in the proposal by the initiators. Additionally they have to assess what kind of need for the occupation will exist for the next five years. (ReferNet Slovenia 2010: 84)

Chapter 8 of the ReferNet report: “Slovenia. VET in Europe – Country Report 2010” describes how occupational standards form the basis for developing new VET programmes and to proceed after that first step. For the AQUA-VET project we list the necessary measures to be taken for Aquaponic Urban Farmer to become a new profession or part of an existing one in Slovenia:

- develop occupational standard:
 - o initiators: representatives from chambers, ministries, companies, unions and employees (see dissemination targets)
 - o know about new types of work or knowledge
 - o identify need of occupation for future and situation on labour market using data from ESS or economic actors;
- confirmation of occupational standard by Council of experts for Vocational Education
 - o this confirmation is order to develop education programme
 - working group of teachers and social partners;
- monitoring of programmes (this goes beyond initial development of programme).



Figure 2: Development of new profession in Slovenia.

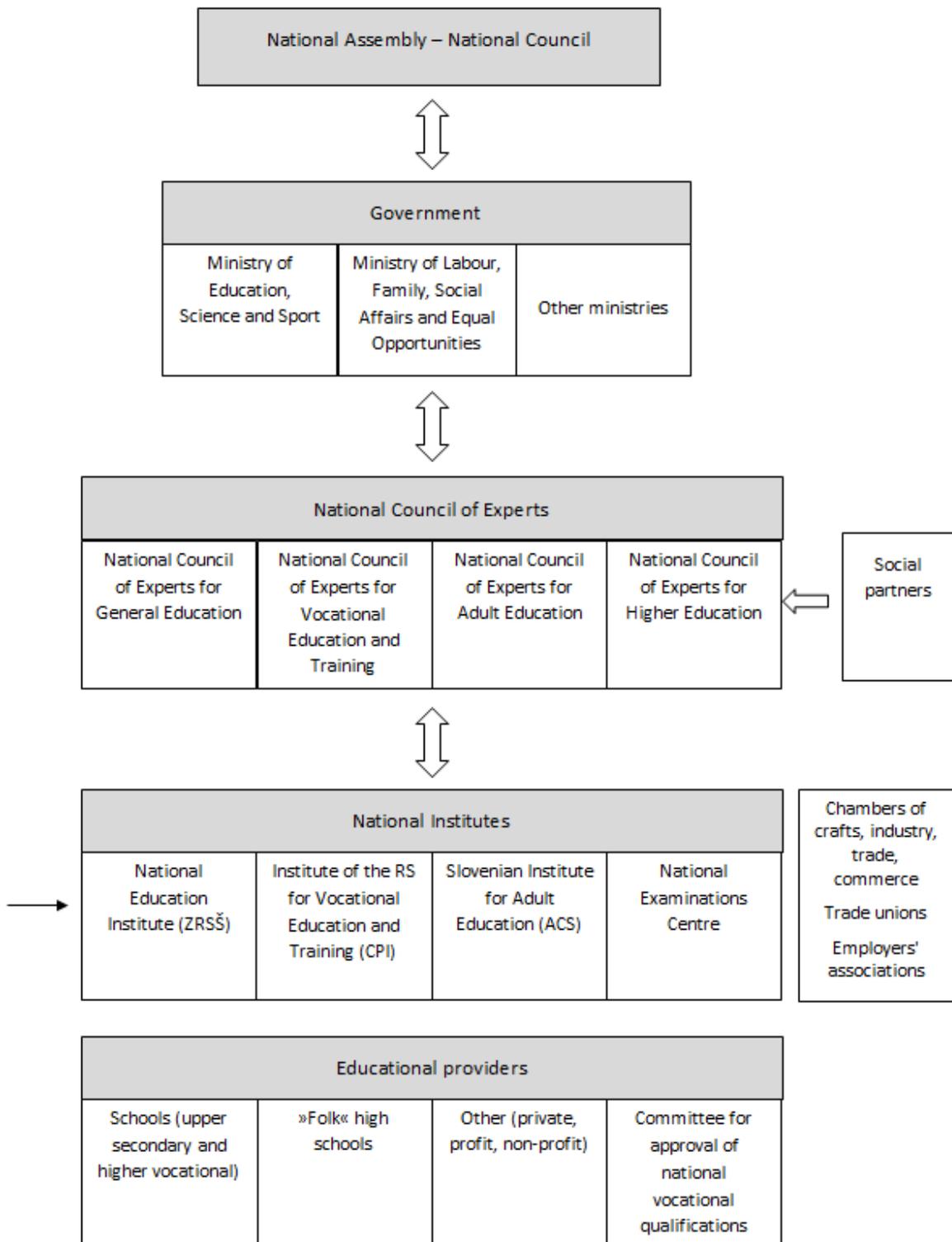


Figure 3: Administration of education and training in Slovenia (Source: ReferNet Slovenia 2010: 45).

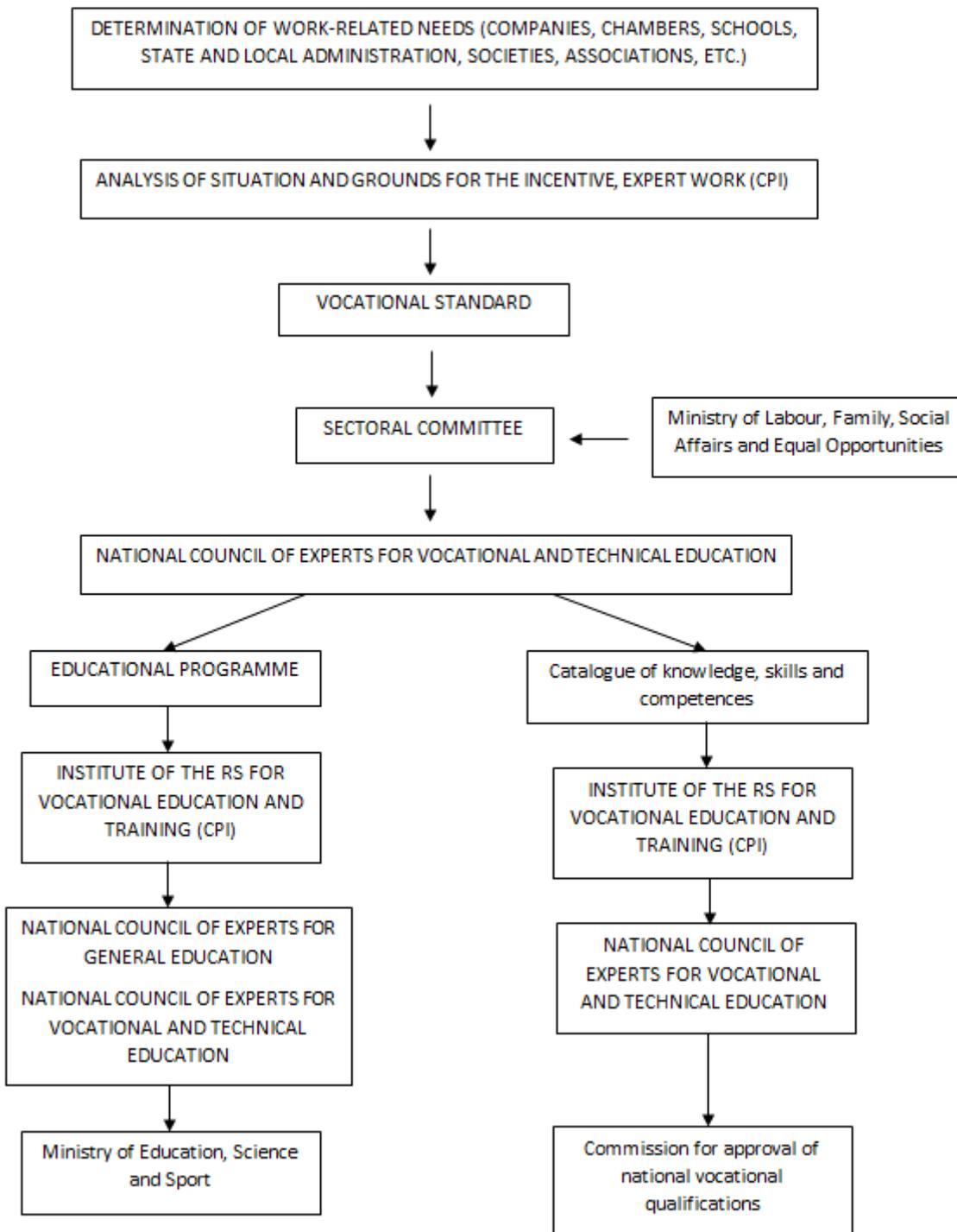


Figure 4: Decision-making process for content of education in Slovenia (Source: ReferNet Slovenia 2010: 46).

Phases in drawing up competence based and modularly structured educational programmes

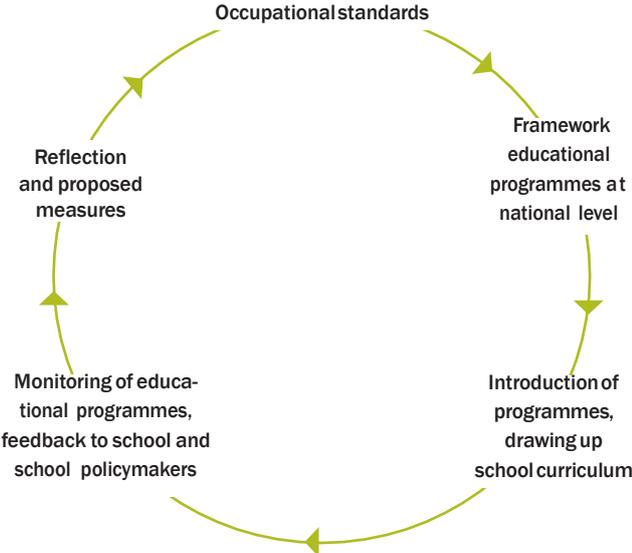


Figure 5: Phases of developing a new profession in Slovenia (Source: National Institute for VET 2007: 18).

3 Developing a new profession in Italy

In Italy the introduction of new qualifications in the national qualification system is directly managed by the authorities that are responsible for awarding them:

- The Ministry of Education, University and Research (MIUR), that is responsible for setting the minimum public service performance levels for the education system;
- The Ministry of Labour and Social Policies, that is responsible for setting the minimum public service performance levels for VET system;
- The Regions and Autonomous Provinces, that are the administrations in charge of planning, organizing and supplying VET system;
- The social partners that contribute to designing and organizing active labour policies and particularly VET policies.

Compulsory education lasts 10 years (i.e. up to 16 years of age) and includes the whole first education cycle and the first two years of the second (either upper secondary schools or three/four-year vocational training courses). Everyone has the 'right/duty' to pursue education and training for at least 12 years in the national school system, or until a three or four-year vocational qualification is obtained within the VET system before reaching 18 years of age.

Over the last few years, the increased cooperation between the State, the Regions and the Provinces has made the education system more flexible, enabling students to switch to different pathways and from the education to the vocational training system to prevent school drop-out. The courses provide basic common education and lead to a vocational qualification recognised at national level (certificate after a three-year course, diploma after a four-year course).

Since 2011, following the reorganization of the VET schools by national Law n.87 15.10.2010, the Veneto Region have been programmed the Regional Plan of VET courses that can be activated in the VET schools. The figures that can be activated as new profession at VET institutes are strictly limited to those included in the 'Repertorio nazionale stabile di qualificazioni', a national index of the qualifications which was established by the Agreement in the Conference of State and Regions of 27.07.2011 and afterwards integrated with the Agreement at the Conference of State of 19.01.2012.

The Veneto Region and Regional Education Office have the aims to integrate, expand and differentiate the plan of training for the completion of compulsory education and the right and duty to education and training realized by the accredited offices, with the aim of preventing and combating early school leaving and prepare excellent and trained workers.

Currently the Regional Plan 2014-2017 is in charge to supply subsidiary education and training in the VET school, as stated by Regional Decree 1609 of 09.10.2013.

According to this law, in order to activate three-year VET courses, VET schools apply to Veneto Region providing a project with the following information:

- Data project resume;
- Person making;

- Partnerships/network;
- Project description;
- Training activity;
- System/support/stage activity.

Each school can activate one or more approved courses if there are a minimum number of students. Specific operational protocols are adopted with private companies for the realization of internships working. The course applies to the Region, which examines, evaluates and verifies the documents and the structure, according to the mentioned decrees, and finally communicates the outcome to the Ministry of Labour.

Accredited VET institutes, which already presented and obtained the approval of one or more VET paths in the 2012-2015 and 2013-2016 offering plans, can submit request to activate the same paths for the 2014-2017 one with a simple application. This procedure keeps simple the process of activation in many VET schools.

At the end of the three years period there is a final examination that will evaluate, not only the basic knowledge, but also the training periods and its evaluation done during the course.

4 Comparison between the systems

When comparing the systems in Switzerland and Slovenia, it stands out that they are very similar to one another. In both cases organisations from the world of work have to initiate the development of new profession. For Slovenia, that means to develop an occupational standard. Corresponding to this is the Swiss job profile, which is not developed until further along the process. Nonetheless, in both cases various stakeholders or social partners are involved. Another similarity is the analysis of future developments in the field of the proposed occupation. It must be ensured that the need for this specific occupation exists and that opportunities for professionals will further develop. After the occupational standard in Slovenia has been approved by the Council of Experts, the school curriculum can be developed and implemented. Compared to Switzerland this seems to take less time. In Switzerland the reform plans have to be handed in when applying for a pre-ticket, which too is the starting point to develop the curriculum. Nevertheless, the further process up to implementation seems to take more time than in Slovenia. Unlike in Slovenia and Switzerland, in Italy new professions are accredited by the Regions and Autonomous Provinces. New qualifications are strictly limited to those included in the National Index of the Qualifications, which is established between the State and the Regions. Also, qualifications are in limited number and any changes or addition can be made only through authorisation of the same bodies. The development of new profession is initiated by VET schools, which then apply to the Region (e.g. Veneto Region), which examines their proposal and reports to the State (Ministry of Labour). Similar like in Switzerland and Slovenia, operational protocols in Italy are also adopted together with the world of work (companies) and the goal setting of The Ministry on Labour and the Regions is done in cooperation with social partners.

In conclusion, the first stage of establishing new profession in all of the three countries seems to be similar – first, need for a new profession has to be proven by the world of work. Further accreditation process depends on the regulations of each country and thus, takes different amounts of time.

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