

Deliverable 2D

**Best Practice Guidelines on how to  
create a  
European Sectoral Occupational Map**

**Project Acronym:** VALLA

**Project title:** Validation of All Lifelong Learning in Aquaculture

**Agreement number:** 2007 / 10342 / TRA EQF / IE / EACEA  
**Project number:** 137860 – LLP – 2007 – IE – KA1EQF



Education and Culture DG

Lifelong Learning Programme

This project has been funded with support from the European Commission. This publication reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

## Introduction

In the development of standards of occupational competence and vocational qualifications, it is essential that there is a clear understanding of the occupational areas and the activities or functions that have to be included.

An **Occupational Map** is essentially a report describing the main features and characteristics of an industry or sector. It gives a picture of the sector in terms of its coverage and boundaries, providing information on the numbers employed, industry trends, job titles and job roles. In this way it contributes to the context and background for the development of **national occupational standards** for a sector.

**Occupational Standards** are benchmarks of performance. They provide the means for assessing performance in a job: they are work-related statements of the ability, knowledge, understanding and experience that an individual should have to carry out key tasks effectively. Anyone in an occupation covered by Standards can use them to determine what level of competence is required and, more importantly, whether their own performance meets that industry expectation. In the VALLA Project, the competencies required to work in the Aquaculture sector across Europe have been clearly identified through a combination of desk research using identified sources (e.g., SQA, LANTRA (Sector Skills Council for the Land based Industries), and consultation with industry and industry representatives in the Partner countries.

The development of an **Occupational Map** is an important first stage in the process of developing a national framework as it analyses the professional areas covered. In particular, it examines the structure of the professional area, the occupations within it and explores current and future skills requirements. The Occupational Map developed by VALLA does this and identifies the job roles within the industry.

The next stage in developing Occupational Standards is developing a **Functional Map**. The functional map gives an overview of the types of major work activities which are carried out within an industry or sector. It describes the outcomes of the work in broad terms. The development of a functional map begins with the definition of the industry. The next stage is to define the key functions that may be carried out by the industry and the process is continued until the functions or activities identified can be carried out by an individual rather than by a team or organisation. The Functional Map developed by the VALLA Project clearly defines the functions – competencies – required to work effectively in the Aquaculture sector. Using this example, it is clear to see how the principles of Functional Mapping can be transferred across differing occupational sectors.

## Distinction between Occupational and Functional Maps

At the outset there has to be a clarification of the distinction between the two mapping exercises, as there is plenty of scope for confusion and misunderstanding, as well as appreciating the different methodologies employed to produce the two maps.



Education and Culture DG

Lifelong Learning Programme

This project has been funded with support from the European Commission. This publication reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

To help this understanding, without going into a great deal of analytical detail, it might be helpful to consider functions or activities that cover all occupational areas and those that are specific to one area or discipline.

It is also important to concentrate initially on the functions or activities rather than job roles or organisational structures. In due course and as part of the mapping processes, will emerge national standards and vocational qualifications 'fit' with an organisation; to try and do it the other way round not only compromises the effort but invalidates the mapping processes.

### **Cross Sectoral and Sector Specific Issues**

An easy example is that of Health and Safety. Across all occupational areas, workers have to have a basic understanding of health and safety – e.g., safe use of electrical equipment, tidying cables away to avoid tripping, locking away drugs, medicines and harmful substances, taking precautions when climbing ladders, wearing protective gloves when handling abrasive or toxic material, wearing safety glasses when operating certain machinery and wearing ear defenders when in a particularly noisy environment.

In specific occupational areas, health and safety is a specialist activity and higher level training, knowledge and understanding is required - e.g., working in the nuclear reactor industry, working with complex machines such as cranes, working on oil rigs, using mining machinery, commissioning electricity generating plants or constructing tower blocks. Whilst there will be a considerable degree of commonality in health and safety across these areas, there will also be a significant body of essential specific specialist knowledge.

### **Initial Maps**

So, the ideal way to begin (but often not the way many organisations start, as they consider that all the functions are unique to their area and tend to try and reinvent national standards and vocational qualifications) is to have an initial Functional Map and Occupational Map that identify and broadly describe the functions or activities to be included and across what sorts of occupational areas (Note: occupational areas, not jobs at this stage).

Having the initial functional map, allows for the exploration of whether there are existing national standards that are sufficiently relevant and approximate to be used or tailored to meet the required specifications.

### **The Occupational Map**

Assuming that there are no appropriate standards or vocational qualifications, then the next step is to devise an Occupational Map, to determine the range of activities that should be included in the exercise to develop national standards and vocational qualifications. The Occupational Map is a broader brush approach than the Functional Map and is more allied to the views and expectations of employers.

The methodologies employed in the development of the map are – desktop research,



Education and Culture DG

Lifelong Learning Programme

This project has been funded with support from the European Commission. This publication reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

 consultation and questioning via questionnaires, interactive web site and focus groups that

have the knowledge and experience to help define the occupational area and interpret the blurring of demarcation lines with other occupational areas.

Once the occupational boundaries have been established and agreed with employers, employees, trades union, professional bodies and trade bodies and there is a clear idea as to the activity areas involved, work can begin on the Functional Map.

### **The Functional Map**

The Functional Map describes in detail the functions undertaken within an occupational area or a sub-group of the occupational area. There is considerable concentration on the employee or practitioner, although employers have the key executive role in agreeing or disagreeing with the outcomes, as it is about what functions are being undertaken in the workplace.

The methodologies used are – desktop research, a series of regular focus groups with practitioners, supervisors and managers to ensure that the functions being described are accurate and relevant to what is actually happening in the workplace, (the hoary joke of understanding what is actually happening in the workplace and not what the employer or manager thinks is happening) and checking the emerging Functional Map at regular stages through online and personal consultation.

The functions described in the Functional Map then allow for the development of specific national standards and vocational qualifications that provide the detail of the learning, knowledge and understanding required to be achieved by a person to before he/she can be regarded as competent. The Occupational Map provides the marketing and delivery range focus for those providing vocational education courses and assessment services. By using both Maps, employers and training providers can develop courses and qualifications based on clearly defined competencies to meet the needs of their industry. By aligning the competencies to agreed benchmarks, such as national qualification frameworks, they can be confident of producing courses/qualifications which can be recognised and have a value. This promotes the concept of Lifelong Learning and provides ongoing opportunities for individuals to gain recognised occupationally-specific outcome-based qualifications.



Education and Culture DG

Lifelong Learning Programme

This project has been funded with support from the European Commission. This publication reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

## Summary

- Occupational and Functional Mapping allow an industry to identify and define the key job roles and functions required to work effectively within that industry.
- The Maps provide the opportunity to define the essential knowledge, skills and competencies associated with the component parts of the industry across the levels from basic grade worker to owner/director
- The Functional Map allows for Outcome-based units of competence to be developed by identifying the key competency and breaking it down into knowledge and understanding of the process and the skills required to achieve the competence.
- The outcome-based units of competence can then be aggregated to develop training programmes, courses and qualifications which can then be credit rated and levelled against nationally agreed benchmarks such as National Qualification Frameworks and the EQF.
- Occupational and Functional Maps are dynamic: they will grow and evolve as an industry adapts to meet new operating practices and techniques, changing legislation, emerging trends, market changes and the like.
- Finally, it is important to revisit the Maps to ensure their ongoing validity and relevance to the industry. We would recommend that this is done by utilising the process of incremental change on a regular basis, perhaps every three-to-five years.



Education and Culture DG

Lifelong Learning Programme

This project has been funded with support from the European Commission. This publication reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.