

### 3 PROGRAMME ORGANIZATION AND TRAINING

The data that observers collect are the programme's output and this is vital for its success. There is a direct relationship between the professionalism and morale of observers and the quality of the data they collect. So how can the professionalism and morale of observers be assured? There is no magic ingredient, but experience has shown that a well-designed programme structure, implemented by a good management system in support of well-trained observers provides the best guarantee.

This chapter explores the different systems that a FMA might use to manage an observer programme and the options available for management and observer structures. Observer training is introduced in Chapter 4, supported by examples of training materials.

#### 3.1 Types of management system

Observer programmes gather information for government fisheries authorities or regional fisheries organizations. This does not imply that the observer programme must be managed within these institutions, nor does it imply that observers need to be government or direct employees. Some regional fisheries organizations rely on at-sea observers from the flag States of their vessels operating in the region.

**Table 8 A comparison of different observer management systems**

	<b>Advantages</b>	<b>Disadvantages</b>
<b>Observer programme part of FMA</b>	<ul style="list-style-type: none"> <li>Full integration with the fisheries management, science and compliance elements of the FMA</li> <li>FMA maintains complete control over the programme</li> <li>Provides employment security for all staff and observers</li> <li>Administrative aspects will be reduced as no agreements or lengthy contracts will be needed</li> <li>Programme will be able to respond quickly to changes in the fishery management plans or priorities</li> <li>Allows cost sharing of personnel and equipment</li> <li>Personnel in the programme will have a close relationship to broader fisheries issues</li> <li>Expertise developed through the programme is maintained in the FMA</li> </ul>	<ul style="list-style-type: none"> <li>Observer work is by nature at sea and this requires flexible labour laws to accommodate the working hours and conditions</li> <li>The system may become bogged down in government procedures</li> <li>If it is a new programme it may be difficult to create the number of new positions that are required in a government system</li> <li>Pay scales will be set, thus reducing flexibility when it comes to rewarding good work</li> </ul>
<b>Management in FMA and observers contracted</b>	<ul style="list-style-type: none"> <li>Partial integration with the fisheries management, science and compliance elements of the FMA</li> <li>FMA maintains control over programme management and can still influence selection of observers</li> <li>Some cost sharing will still be maintained</li> <li>Programme will be aware of changes in the fishery management plans and priorities</li> <li>In financial analysis this is often the cheapest option as many costs can be 'hidden' in the FMA but the establishment is not 'burdened' with the employment of observers</li> </ul>	<ul style="list-style-type: none"> <li>Observers may resent not being part of the organization they feel they work for</li> <li>Contracts will be required with the observers or the service provider</li> <li>The system may become bogged down in government procedures</li> </ul>
<b>Observer programme contracted to FMA</b>	<ul style="list-style-type: none"> <li>FMA free from day-to-day responsibility for the observer programme; maintains only a quality control role</li> <li>Programme is required to perform and therefore the quality of outputs will generally be high</li> <li>Programme will have flexibility to respond to circumstances outside framework of government procedures (e.g. for hiring and firing)</li> <li>Programme does not become 'controlled' by any one fraction of the FMA</li> </ul>	<ul style="list-style-type: none"> <li>FMA loses the close connection to the observers and feedback can often be slow and cumbersome</li> <li>FMA works to strict annual planning and operational documents and this reduces the flexibility to respond to changes in management plans or priorities</li> <li>It takes time to develop terms of reference</li> <li>Developing countries often lack national private companies with expertise to run an observer programme</li> </ul>

There are three common options for the management of observer programmes:

- **Option one:** management staff (i.e. the shore based staff) and observers are all employed by the fisheries authority and they function as an integrated part of that organization.
- **Option two:** management staff are employed by the fisheries authority and function as an integrated part of that organization; and observers are contracted to the programme either as private contract workers or through a company.
- **Option three:** management staff and observers form a separate entity to the fisheries authority, either as a government agency (or other similar semi-private organization) or as a private company contracted to the fisheries authority.

No one system is inherently superior to the others. Each has distinct advantages and disadvantages (Table 8). When considering these options it is important to keep in mind that the aim is to achieve the programme objectives in the most efficient way, taking into account the social, political and economic environment.

**Option one** is straightforward and is administratively easy to develop as no contracts or agreements are required (except under civil service rules). This option is a good way to start especially if it is small or ad-hoc and staff is already available within the current organization. It allows for flexibility in the early stages of development. Later on, when the programme is more established, it is always possible to transfer to one of the other options if required. The option is not realistic, however, when staff within the existing organization is unavailable to be trained and the organization cannot absorb new positions into its current structure. This option will only be successful if the fisheries authority has the capacity to totally manage the envisaged programme.

**Option two** is also a useful option for a new programme when the level of baseline information on a fishery is low and it would be difficult to draft fixed guidelines for an agreement. It maintains most of the advantages of option one, but does not require the authority directly to employ the observers. Observers instead are employed as temporary or contract workers or via a company that provides observer services. Whatever the arrangement, the fisheries authority will need to organise all aspects of the programme, including observer training.

**Option three** has proved to be successful when a programme has clearly defined objectives and has developed a system to achieve those objectives. Decentralisation and outsourcing (privatization) of a non-core function of government may hold quite strong appeal. Privatized or semi-privatized systems can often function more efficiently and effectively, as they are less subject to conditions imposed by government administrative procedures.

Outputs and performance targets can be specified and monitored in a far more robust manner than is sometimes possible to achieve under government administration. The service must be paid for and so no costs will be hidden as in a government system when many costs are absorbed into the general budget. In return for the cost of option three, the fisheries authority will be free from day-to-day management of observers and will be able to focus on its core functions. There will always be a need to recognize the balance of responsibilities between the fisheries authority and any agency or contracted partner. (See Box 8.)

There are two principal ways to run an observer programme outside the fisheries authority, either through a majority state-owned or controlled entity, such as an agency, or through a private company. While both function in a similar way, an agency is likely to be administrated through a board, whereas a company will simply be contracted to perform the work, although it may be subject to an Advisory Committee or have fishery authority board members. The latter requires an agreement or contract, which may be a complex document. An example agreement is given in Appendix 1.

## 3.2 The management team

The management team of the programme are the shore based staff who supervise and co-ordinate the programme. Key function areas will be:

- Recruitment and employment and training.
- Programme management and development (strategic, information, personnel and financial).
- Liaison with the fisheries authority and industry.

The team will usually be headed by a Chief Executive Officer in an agency, or by an inspector, scientist or other staff member from the fisheries authority. The type and number of staff required can differ enormously from a small programme, with perhaps one manager running the entire operation to a programme managed from a head office with satellite offices at other key sampling ports.

The structure of a large observer programme is given as an example in Figure 4. Its structure includes a shore team of 13 staff divided between two offices in two ports. The fisheries observer management unit forms the shore staff element of the programme. Links to the observers and the FMA liaison group are also shown. It is vital to form these types of links to core scientific, compliance and management personnel within the fishery authority in order to have monitoring, feedback and information exchange. This example demonstrates the functional needs of a large programme. Many of the posts can be merged together for smaller programmes.

## Box 8

An example of the possible balance in responsibilities between a fisheries management authority and the observer programme contractor (private or semi-private) are given below:

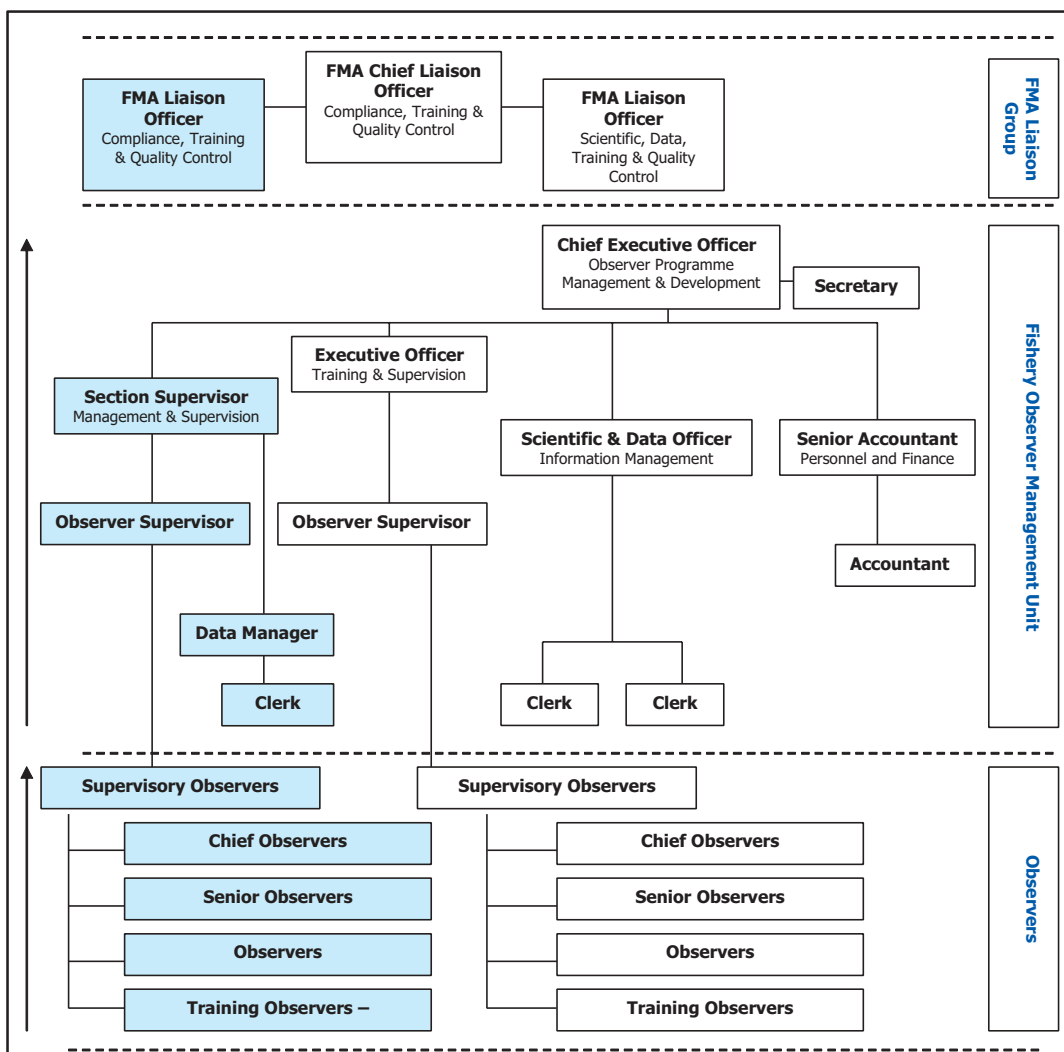
### Fisheries management authority responsibilities:

- ensuring that the observer programme is appropriately addressed in law, and continues to be so;
- establishing the tasks, terms and conditions of the observer programme and embedding these into a contract;
- setting the recruiting, training and performance standards, and embedding these into the contract;
- inviting tenders, suitably evaluating the bids and awarding the contract;
- monitoring the output of the programme for accuracy, veracity and validity;
- paying for the services of the contractor and assuring correct financial management;
- setting the annual objectives and ensuring that the annual and strategic plans address these.

### The observer programme contractor is responsible for the following:

- recruiting of personnel who meet to the minimum criteria;
- training the observers to set standards of ethics and knowledge certified by examination as approved by the FMA;
- ensuring the appropriate timely response for deployment, disembarkation and observer activities at sea;
- reviewing the observer output and performance and either retraining, updating training or disciplining the observer as required;
- remuneration of observers at an agreed rate;
- producing and following an annual planning cycle including financial plans;
- ensuring the validity and quality of the programme output in relation to the agreed guidelines.

**Figure 4** An example of a management structure for a large observer programme based at two ports. Positions in the main port are in white; the positions in the smaller port are in blue.



*The minimum requirements for observers are to be healthy, to have a basic level of education, to have some initiative and above all be keen to do a good job.*

### 3.3 The observers

A large part of the success of a programme depends on the calibre of the observers. High standards for hiring, training, certifying and monitoring observers are required in order to assure users that data are high quality. Observers mostly work on their own, in an unsupervised capacity, and it is therefore important to create a structure, training and monitoring system that encourages superior performance and rewards it.

#### 3.3.1 Qualifications and structured training

Many observer programmes have been too ambitious in their requirements for observers, partially based on an assumption (seeded by examples of observer programmes from developed countries) that observers need to be qualified scientists. This need not be the case. The minimum requirements for observers are to be healthy, have a basic level of education, have some initiative and above all be keen to do a good job. The key is perhaps to be realistic about who will be available for an observer programme. If there is a pool of trained biologists available then it would be advisable to use them, because basic biological skills are part of a trained observer's requirements. If not, then it is advisable to evaluate the labour market to determine the level and calibre of potential observers. Decisions on observer training programme and sampling strategy will need to be developed according to available persons. If no trained fishery personnel are available to begin the establishment of an observer programme, donor assistance to provide some technical expertise and training might be considered.

It is important to retain good observers. Seasoned and well-trained observers can make a programme, and even a fishery, a success. They are a programme's main asset and they need appropriate motivation through a programme structure that rewards responsibility and quality performance. The easiest way to achieve this is through a ranking system embedded in the training programme, a clear career path and quality employment conditions.

Figure 4 gives an example of a relatively complex structure with five levels, from training observers through to supervisory observers. This number of ranks would be suitable for a large programme, but it would be unrealistic for a smaller operation where two or three ranks would suffice. The lowest rank should be treated as a probationary position for any programme.

This provides a chance to assess how new observers perform at sea before they are permanently accepted within the programme.



*Seasoned observers can make a programme a success (S.L. Davies).*

Appendix 2 provides an in-depth example of training and performance standards for observers covering four ranks. This example is a model for observers performing a wide range of tasks to meet scientific, compliance and management objectives. It could therefore be easily adapted for most programmes.

#### 3.3.2 Occupational standards

Occupational standards are similar to the terms of reference for a specific job. An occupational standard setting out the demands of the job should be developed for each rank of observer. It can be time consuming to establish these, but they provide a logical framework for developing the training programme and for evaluation criteria.

An occupational standard is a hierarchy of competencies necessary to perform the observer's duties, tasks and activities. The hierarchy is developed through a functional analysis, which divides observer job functions into units, elements and performance criteria (see Box 9). An example of one unit is given in Appendix 3. Competencies are the



knowledge, skill, attitude and personal attributes that, when combined, are those required by observers to get the job done properly.



Staff from the management team make ideal trainers for the observer programme (Anon).

#### Box 9

##### *Details about the elements of occupational standards*

##### **Units of Competence**

A unit of competence reflects the main duties, functions, activities and skills clusters for the occupation. It has three essential components - the unit title which describes a duty or function, the elements of competence which describe the tasks necessary to carry out the duty or function, and performance criteria, which describe the activities which enable the task to be performed competently. A unit of competence may also include a range statement and or a list of evidence required for the assessment of competence.

##### **Elements of Competence**

An element of competence is a description of an action, task behaviour or resulting outcome thereof, which a person should be able to demonstrate on the job or in a realistic simulation in training. Elements of competence are the basic building blocks of the unit of competence and thus continue the description of the key purposes of the occupation itself.

##### **Performance Criteria**

Performance criteria are sequences of activities pertaining to an element that should be performed in order to accomplish the task described in the element. An assessor uses Performance Criteria to judge whether an individual can perform each activity competently.

### 3.3.3 Monitoring and evaluation

Monitoring and evaluating the performance of observers is important for many reasons, including:

- Assessment of conduct and outputs, and evaluation and determination of career progress;
- Training requirements (individual and collective);
- General programme evaluation against its objectives.

An individual's performance can be monitored using an Observer Record Book that records personal details (including leave and training) and trip details (one per trip with the opportunity for the captain to sign the book). Appendix 4 shows sample pages that can form the basis of an Observer Record Book.

In addition, observers' work may need to be evaluated on an annual basis through a defined set of standards covering:

- Compliance outputs - number of reporting of violations and quality and content of trip reports;
- Sampling outputs - level of competency and quality of work;
- General behaviour and attitude;
- General ability and knowledge - also assessed in training courses.

Standard evaluation reporting forms and interview methods can be used (perhaps on an annual or ad hoc basis), together with the information in the Observer's Record Book, to establish progress against performance criteria. Recommendations for further training or follow up (promotion or termination) should form a transparent part of the individual's reports.

### 3.3.4 Code of conduct

A general code of conduct for observers may be used to establish expected standards of behaviour in a transparent manner (i.e. available to all parties, including fishing captains and companies) and consistent with their legal authority, functions and tasks. The example given in Appendix 5 can be adapted for most programmes.

*Seasoned observers can make a programme and even a fishery a success. Their detailed understanding of the fishery and fishing operations contributes significantly to fisheries management.*

### 3.3.5 Safety

In 2001<sup>9</sup> FAO reported that fishing at sea claims more than 70 fatalities every day, making it the most dangerous occupation in the world. Furthermore, 97% of fishers employed in marine fisheries work on vessels that are less than 24 meters in length, which are largely beyond the scope of international conventions and guidelines.



*Observers in survival suits and life jackets ready to board a fishing vessel (S.L. Davies).*

Fishery observers are therefore also at risk when at sea. An observer programme may be accused of negligence and observers themselves will become more careless unless the observer programme ensures that:

- Observers are provided with adequate equipment and clothing to safely perform their duties.
- Training courses are given in basic survival, safety measures for the prevention of accidents, reducing the risk of their occurrence and/or lessening their impact (including first aid).



*Sampling in cold and rough conditions when good protective clothing, lifejacket and a hard helmet are essential (J. Hunter).*

The International Convention on Standards of Training, Certification and Watch-keeping for Seafarers was adopted by the International Maritime Organization (IMO) in 1978 and was revised in 1995. The new Convention and the associated Safety Codes (STCW-95 and STCW-F) establish minimum requirements for all personnel on board fishing vessels. These safety codes apply only to vessels over 24 meters or powered by more than 750 kW, but have not yet come into force. When they do, they will only be mandatory for countries that have signed the Convention. However, many of the provisions can be utilised within observer programmes even if a country is not a party to the IMO Convention.

Appendices 6.1 -6.5 include text relating to the safety of observers based on the STCW-F. Appendix 6.6 gives an occupational standard for basic first aid in observer training programmes.

### 3.4 Training in general

Without specially designed training an observer programme will suffer from unprofessional behaviour, poor data outputs and lack of respect from the industry and other sections of the fisheries management authority. Training must therefore be considered as a key element in the development of an observer programme.

The qualifications and background of current or potential observers must be analysed in relation to the objectives of the programme and any proposed programme structure, which can then be used as a basis for designing a training plan, and which should consider:

- The base level of knowledge and qualifications of observers.
- The occupational standard for observers (terms of reference).
- The career structure for observers.
- The potential instructors and teaching facilities.
- The potential for recognizing the training.
- The possible (and practical) length of courses.
- The financial implications.

<sup>9</sup> FAO: The State of the World Fisheries and Aquaculture 2000.

### 3.5 Vocational training

Even if already qualified as biologists, fisheries administrators or fisheries managers, observers will still need vocational training to build the very special kinds of knowledge and skill that the observer needs in order to achieve the job as set out in the occupational standards (Section 3.3.2).

Training courses should be structured so that learning tasks are grouped according to outcome modules (e.g. safety, estimating catch composition, biological sampling). Appendix sections 7.1 to 7.6 provide some examples of curricula developed for different grades of observers. The module system of this training curriculum is efficient and flexible in several respects:

- Modules can be put together into short courses or in one longer course.
- Observers are very clear about what skills and knowledge they require.
- Assessment is straightforward.
- Modules can be divided across the ranks of observers to give a clear career structure.
- More advanced modules can always be developed and added.
- Courses or modules are easy to update or to adjust.
- Courses can be used for a small or large number of observers.
- Courses can be used for observers with different levels of educational background.
- Courses can be taught by one or many instructors.
- Courses can be taught at-sea or on land.



*Vocational training of observers (S.L. Davies).*

### 3.6 Instructors

An important advantage of the vocational module system is that the instructors can be drawn from the programme management team or the ranks of advanced observers. If well-designed manuals and instructors' guides support the curricula, it is possible to have different people teaching the courses while maintaining a set standard of training.

The best instructors are those who have an intimate knowledge of observer work, have experienced conditions at sea, have a good understanding of the fishery, and can communicate training messages in clear and straightforward terms. It is preferable to have the programme supervisors taking part in (if not completely running) the training in order to develop closer relationships with observers.

Training for the instructors themselves should be provided wherever possible. This may be specific to the course content or related to presentation skills and other general qualities considered important for instructors to hold. There may also be an occasion to bring in instructors not related to fisheries at all, such as for language or mathematical training that might be required as a baseline for other training. All instructors should be subject to performance criteria to ensure that a certain level of quality is maintained in their teaching. All instructors should also be suitably rewarded for their work.



*Instructors should be suitably rewarded for their work (S.L. Davies).*

### 3.7 Observer material

A new observer's first experience at sea on a fishing vessel after training can be quite daunting. One way to make sure that observers do not feel too isolated is to provide creative, informative and encouraging manuals, newsletters and information sheets. A manual should be packed with all the information an observer needs to do the job, but should also be easy to use. The most effective approach is to develop manuals based on training course

*One way to make sure that observers do not feel too isolated is to make creative, informative and encouraging manuals, newsletters and information sheets.*



manuals. Each module becomes the basis of a separate chapter, with the addition of appropriate examples, pictures, stories and diagrams.

Observers can also be encouraged to contribute to a programme newsletter (monthly, quarterly, etc.). In addition to accounts of personal experiences, the newsletter could feature graphs from the sampling work, progress updates on the fishery, and other general articles of interest.

### **3.8 Recognition of training courses**

The accreditation of courses according to national academic or vocational training standards must be considered before the training plan is designed. Firstly, verification should be sought as to whether a course can be recognized by academic or vocational authorities, including their approvals of curricula and

standards. Secondly, recognition of training progress should be established in the form of eligibility for promotion to a higher rank, bonuses or higher salary. Both kinds of recognition are important for staff recruitment and motivation purposes, and ultimately for programme sustainability.

### **3.9 Safety courses**

Aspects of safety can be incorporated into the standard observer training courses, perhaps based on a commercially available at-sea safety course. The simplest ones last for 2-3 days and give instructions in the use of life rafts, life vests, first aid, fire extinguishers and other essential elements of safety. Any maritime authority will have details of courses available or instructors that can give training. It is important to revalidate these courses every few years to refresh and enhance the safety awareness of the observers.



*After one week of at-sea training observers celebrate a successful course (S.L. Davies).*