

An MPA is only effective if stakeholders and users comply with the legislation that has been put in place to support management. The MPA management authority and relevant government agencies play a primary role in enforcing legislation, but compliance is greatly improved if the stakeholders also actively take part. This sheet focuses on patrolling, which is a key activity undertaken by an MPA to ensure that the regulations are being respected.

Patrolling or surveillance refers to physical observation of the MPA area to see who is using it and how, and in particular to check that:

- Regulations on zoning, fishing, and mangrove and forestry legislation, are known, understood and are being respected;
- User fees are being appropriately collected and tickets issued;
- Mooring buoys are being used;
- Tourism operators are appropriately licensed and tourists are using beaches, dive sites and other popular areas according to regulations;
- Other activities in or adjacent to the MPA, that might have an adverse impact on it, are monitored.

Patrolling to check on compliance involves ensuring that regulations are understood, discussing infractions with offenders, issuing a warning where required, and arrest and prosecution if compliance cannot be achieved in any other way. The process should be laid out in the MPA management plan and regulations.

Most MPAs operate as a partnership between national and local government agencies, local communities and sometimes the private sector. To promote voluntary compliance, MPA users must be consulted when the regulations and by-laws are prepared, and education and public awareness-raising should be made part of the enforcement programme. Incorporation of a coast-watch (such as a coastal radar system or using local volunteers) or reef-watch component (monitoring the impact of management activities on the reef) may be possible, but individuals participating in such schemes should not usually undertake any direct enforcement action. Where local people are participating in compliance activities, it is essential that their role is clearly defined and mandated by official enforcement agencies, and that roles and responsibilities are fully understood.

Some MPA legislation comes under the mandate of other government agencies, not of the MPA itself. For example, the Fisheries Department may be responsible for enforcing fisheries legislation, the Forest Department for enforcing mangrove use regulations, and the Tourism Department for issuing licences to tourism operators. The MPA personnel responsible for compliance must therefore fully understand the wider national legal framework, and consult with police, coastguard, navy and other agencies as appropriate. Information obtained during surveillance of an MPA may be useful to other management agencies, and the latter may be able to provide information valuable to the MPA.

Monitoring, control and surveillance (often known as MCS) of fisheries legislation and management systems is well developed in many countries and may provide guidance for an MPA. There may already be national standards for surveillance activities, and for training in surveillance techniques, and other MPAs in the country may have established programmes. Coordination with such groups can help to improve overall standards and efficiency.

RESPONSIBLE PERSONNEL

Most MPAs have rangers or enforcement officers who are responsible for daily patrols, on foot or by boat. These are often salaried MPA personnel but sometimes staff from other agencies are seconded for this purpose. For example, in northern Tanzania, the Honorary Ranger for Maziwe Marine Reserve, is the local District fisheries officer, and enforcement of the collaborative fisheries management areas is assisted by naval personnel seconded to the Districts. In other places, community representatives provide their services voluntarily, for an honorarium, or are paid by the MPA (see case study).

Involving local stakeholders in patrolling and surveillance has many advantages. It promotes sharing of responsibility for compliance, which reduces costs and encourages a sense of local ownership of management activities. There are also disadvantages. In some situations MCS can provoke violence, and so local participants, as well as the MPA staff involved, must be appropriately selected and trained. The personal risk to those involved in surveillance activities must be minimised. It is crucial for surveillance to be carried out efficiently, honestly and accurately; problems may arise if locally recruited rangers cast a blind eye over illegal activities by their own communities, and if equipment is misused.



Park 'ecogardes' in Moheli Marine Park, Comores.

Training of those responsible for MCS is essential and should cover verbal communication skills, radio communications, navigation, boarding and inspection techniques, chain of evidence, and preparation of legal staff and witnesses for court proceedings. Although some government protected area personnel may automatically receive military training, it is important for enforcement staff to avoid aggression; training should include advice on appropriate behaviour for this task.

EQUIPMENT

The appropriate equipment for surveillance will be determined by the physical characteristics of the MPA (e.g. shape, size, habitat types, location of villages). Some surveillance is best done by foot, although much will be done by boat. A basic equipment list would include:

- Binoculars;
- Radios;
- Formal identification (ID-card, uniform);
- Hand-held GPS;
- Standardized report forms, notebook and pens;
- A base station for communications and support.

For surveillance operations at sea, the patrol vessel must be marked, and contain the necessary safety equipment including radio and/or telecommunications system. In Senegal a small coastal radar system is being used, which allows a 'no-force' approach. When an intruder is detected by the radar system, officials request a local fisher to go alongside the intruder, take a picture, record its position with a hand held GPS, record identifying markings on the vessel, and return to the beach. The information is then passed to the local law enforcement personnel who take appropriate action to apprehend the vessel. Coastal radars are also being tested in Indonesia in two MPAs to provide early warning against intruders and permit MCS enforcement staff to intercept the vessels.

Sources of further information

Corfield, T. 1993. *The Wilderness Guardian: A Practical Handbook*. African Wildlife Foundation/The David Sheldrick Wildlife Trust. Longman, Kenya. 701pp.

Flewwelling, P., et al. 2003. Recent Trends in Monitoring, Control and Surveillance Systems for Capture Fisheries. *FAO Fisheries Technical Paper # 415*. ISSN 0429-9345. FAO, Rome.

Salm, R.V., Clark, J.R. & Siirila, E. 2000. *Marine and Coastal Protected Areas: A Guide for Planners and Managers*. 3rd Edition. IUCN, Washington, D.C., USA.

SADC/EU MCS Project: <http://www.schoemans.com.na/sadc>

FAO Document Repository: <http://www.fao.org/DOCREP>

CASE STUDY

Moheli Marine Park, Comores - community involvement to promote compliance

Moheli Marine Park was established through individual co-management agreements with each of the 10 villages bordering the Park and the government. The Park manager is a government appointee, but the rangers, known as 'ecogardes' come from the villages. Each village environmental association selects an ecogarde, jointly with the local environment department officer on Moheli Island, on the basis of their educational achievements, their previous involvement in environmental activities and their availability. Their tasks are defined in the legislation that created the Marine Park and include monitoring, surveillance, education and awareness-raising. They are supervised by the MPA manager and receive a salary from the Park. They make daily patrols, each covering the part of the park over which their village has particular responsibility.

Although not armed, they must report infringements of legislation to the police who then take action; in case of any contest, their statements take precedence. They have however felt at risk of violence on occasions, particularly from turtle poachers, and there are discussions about possibly arming them. The UNDP/GEF project that helped with the establishment of the Park, with technical assistance from IUCN, enabled all the ecogardes to receive basic training in terrestrial and marine ecology, navigation, first aid and other management related issues. Some have also had specific training in ornithology and turtle protection and monitoring. The ecogardes provide a key link between the MPA authority and the local communities and visitors and tourists, and have proved a very effective mechanism for improving compliance.

KEY POINTS FOR THE MPA

Given that safety, security and legality are so important, 'Standard Operating Procedures' must be developed (see website for SADC/EU MCS Project). These should cover:

- Aim of the patrol - What is the purpose of the mission, and what resources are required?
- Operational Profile - What does the patrol have to do? How, where, when and for how long? What other factors might affect the effectiveness of the patrol (e.g. weather, tides, staffing)?
- Equipment and logistics - Is the correct equipment available and functioning? What extra equipment might be required? Is this available and budgeted for? Are fuel, water and other consumables available?
- Personnel - Are correctly qualified personnel available? Is their personal safety equipment available and functioning correctly? Are there support staff at the operations base?
- Telecommunications - Are the telecommunications functioning properly?
- Dual-tasking - Are there any other functions the surveillance activity can perform during the patrol, such as research? Can costs be shared with another agency?
- Establish a rigorous 'chain of evidence' protocol, with advice from appropriate legal authorities, so that the prosecution is not hampered by legal technicalities that might allow alleged offenders to escape the charge.