

# Managing Coastal Marine Biodiversity and Protected Areas

*For MPA managers*

## Module 10

# Change Management and connectedness to nature



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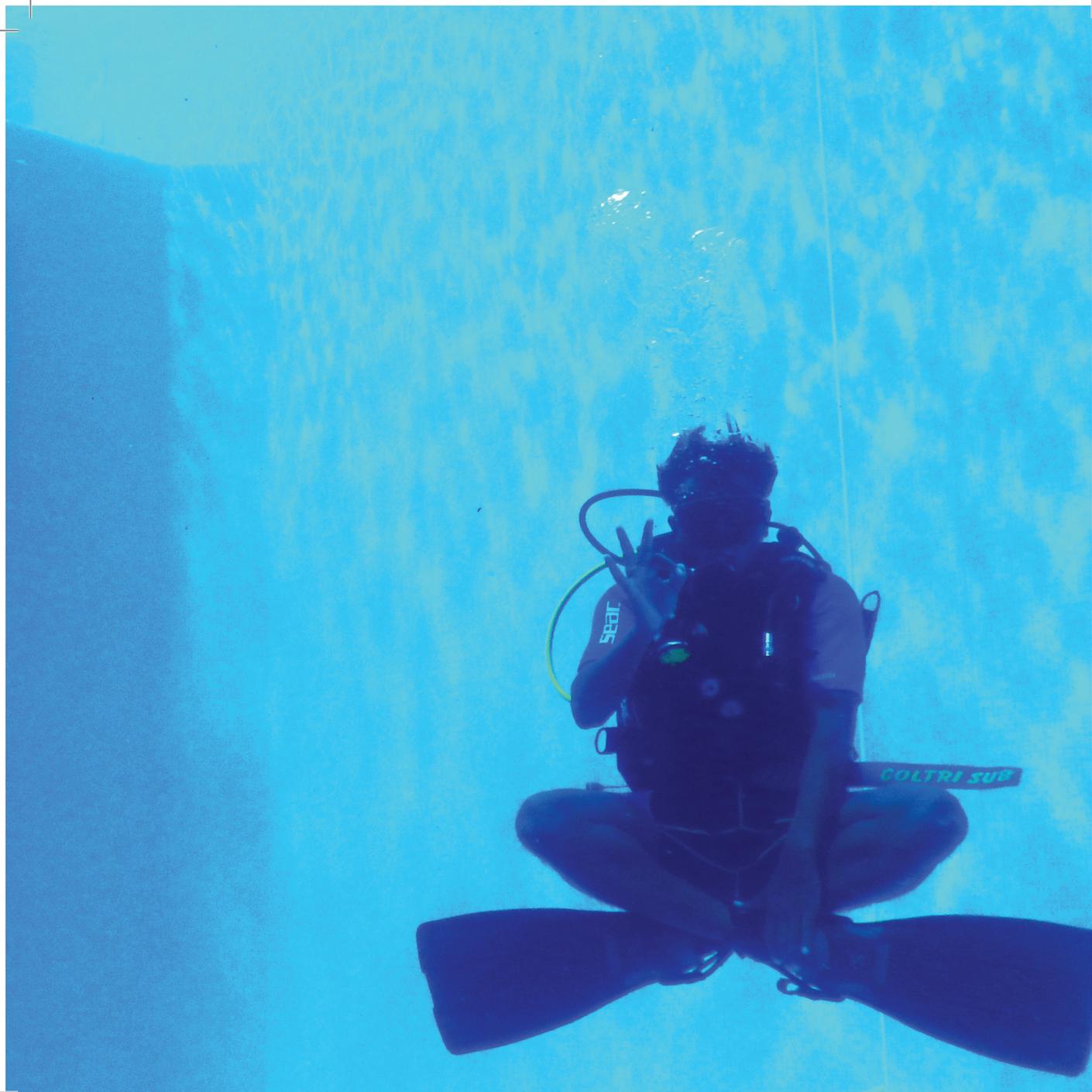
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# Summary

This module will take up the prioritized global competencies as identified for the MPA managers to effectively communicate with key stakeholder and for an effective cross-sector dialogue. These are connectedness and ecological consciousness, communication skills, leadership qualities and stakeholder engagement approach.

# Key Messages

- Planning, implementing, and managing Marine Protected Areas (MPAs) requires that attention be paid not only to the biological and oceanographic issues that influence the performance of the MPA, but equally to the human dimensions: social, economic, and institutional considerations that can dramatically affect the outcome of MPA implementation
- Adult memory performance can be disturbed by just a few days of elevated levels of the stress hormone cortisol, and even low-level elevation of the levels of pro-inflammatory immune chemicals (cytokines) impairs verbal and nonverbal memory. If nature can lower stress hormone levels and keep inflammation in check, it follows that nature can be of enormous importance to cognitive health.
- Contemplative practice creates a naturalness orientation and inner motivation for a simpler and richer life more in line with the biological and agricultural roots of human civilization. Evidence for the positive outcomes of sustained contemplative practice on health and behavioural transformations is increasing.

## 10.1 Why change?

Planning, implementing, and managing Marine Protected Areas (MPAs) requires that attention be paid not only to the biological and oceanographic issues that influence the performance of the MPA, but equally to the human dimensions: social, economic, and institutional considerations that can dramatically affect the outcome of MPA implementation.

For centuries, indigenous peoples and artisanal fishers have used various forms of closures and protected areas to manage fisheries. These locally created and managed MPAs have included spatial, gear, seasonal, species, size, and access or tenure restrictions. Historically, their locations and regulations were shaped by local knowledge, beliefs, and values and implemented through traditional mechanisms and governance institutions. The relative success of these sites and compliance with regulations could be attributed to their cultural or spiritual value, their perceived legitimacy, the strength of social contracts between users, and the implementation of local enforcement and sanctioning mechanisms. In the absence of commercial-scale fisheries and when local management and enforcement was effective, such areas could increase fisheries and harvesting yields for local fishers and subsistence harvesters.

However, in many places around the world, top-down fisheries management regimes have resulted in the decline or loss of traditional fisheries management mechanisms, including closures. MPAs were 're-discovered' by scientists in the 20th century, promoted by conservationists, fisheries managers, and international policy makers and then implemented in a mostly top-down fashion that has often been met with opposition by local fishers and communities

The reasons for small-scale fisher opposition to top-down MPAs are commonly threefold.

- First, exclusionary MPA policies can lead to unintended social and economic consequences including livelihood impacts, poverty, loss of tenure, community conflicts, and even physical displacement . These negative impacts occur when lack of consideration is given to the needs and values of local stakeholders and communities during the creation and management of MPAs. This is exemplified in the principal mandates of many MPAs citing knowledge, enjoyment, and conservation – all values that may ignore the needs of local fishers and communities in developing nations who rely directly on the ocean for livelihoods and survival.

- Second, top-down MPAs have often resulted in the further marginalization of vulnerable groups and populations from marine governance processes.
- Third, the conservation goals, and thus legitimacy, of top-down MPAs is often not well communicated and therefore questioned or not understood by local fishers.

Understandably, inequity in governance processes or socio-economic outcomes and/or illegitimacy and ineffectiveness in management goals and outcomes can lead to lack of support by local fishers for MPA initiatives.

### **10.1.1 What is to be changed?**

A study from Philippines, and many such studies and experiences strongly suggest that in the establishing MPAs based primarily on national law, international targets, and command-and-control policy are likely to fail.

The pressing imperative of ocean-wide environmental decline should not be used to justify infeasible and poorly designed management interventions that ignore local dynamics and institutional constraints.

Non-compliance with marine protected area (MPA) regulations is a problem worldwide, and this is being addressed through community programmes in many parts of the World now.

A study on park service and fisheries department personnel, and fishers living adjacent to three parks in Kenya reveals that the strongest factor for the perceptions of local communities towards MPAs was employment, with fishers having significantly less positive perceptions towards areas closed to fishing than government managers, although all groups agreed area management benefited the nation.

Government personnel thought that fishers and their communities benefited from area management, while most fishers did not share this view.

Fishers adjacent to the oldest MPA held significantly more positive perceptions than fishers living adjacent to the newest MPA, although only a slight majority agreed that they and their communities benefited

### 10.1.2 How the change can take place?

The experiences so far point to:

- a need for patience in expecting change in resource users' perceptions,
- adopting an approach in which there is more communication between fishers and managers, so that both are more aware of MPA functions, particularly closed areas and the indirect benefits.



## 10.2 Connectedness to nature<sup>1</sup>

True connectivity in any relationship, be it interpersonal or with elements of nature, serves to strengthen empathy and concern. Because of personal transformations brought about by the positive effects of nature, connectedness will give rise to novel types of directives to MPA managers that will result in care and attentiveness to what is happening in the coastal and marine ecosystems around them.

The responses of society to the loss of biodiversity are increasing dramatically, and judging from national plans and commitments, they are expected to continue to increase. However, the overall responses appear to be insufficient relative to the pressures. This sobering outlook leads one to conclude that there is something fundamental lacking in our relationship with nature. The term 'nature connectedness' encompasses both our inner and outer nature. Contemplating natural settings calms the psyche and is a way of connecting not only to our natural surroundings, including other creatures, but also to our own consciousness. Ecological consciousness then is simply the consequence of a clear and quiet mind in contact with its origins.

Rapidly increasing scientific evidence reviewed by Selhub and Logan (2012) confirms that the brain is absolutely influenced by nature. The sciences of biology, psychology, neurology and mind–body research all inform us of different aspects of *how* nature influences the human mind and affects health and behaviour. Our perception of stress, our mental state, our immunity, our happiness and our resilience are all chemically influenced by the nervous system and its response to the natural environment.

Adult memory performance can be disturbed by just a few days of elevated levels of the stress hormone cortisol, and even low-level elevation of the levels of pro-inflammatory immune chemicals (cytokines) impairs

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<sup>1</sup> Text contributions by Martina Hoft and Ajay Rastogi for this section are gratefully acknowledged.

verbal and nonverbal memory. If nature can lower stress hormone levels and keep inflammation in check, it follows that nature can be of enormous importance to cognitive health.

Lyubomirsky et al (2005) showed that time spent in contemplation, particularly what is called ‘loving kindness meditation,’ produces increases in positive emotions and builds personal resources.

**Contemplative practices are gradually gaining ground in the academia. Schools as well as universities are adopting elements of contemplative education in teaching mainstream subjects** (see, e.g. ACMHE Association for Contemplative Mind in Higher Education). Discoveries in science, artistic breakthroughs and the common classroom experience are instances of direct perception breaking into our habitual awareness with a novel cognitive insight. A number of studies have shown that immersion in and connectedness to nature foster pro-environmental attitudes and behavioural patterns (Zaradic et al 2009; Lohr and Person-Mims 2005; Thompson et al 2005; Frantz et al 2005). The practice of nature contemplation and experiences of nature connectedness can ignite ecological consciousness and strengthen the motivation to lead truly sustainable lifestyles in line with the biological and agricultural roots of human civilization.

## 10.3 Tools for behavioural transformation

There is an urgent need to develop tools and techniques to reset the balance, to strengthen our innate bond with nature, to give emotions their rightful place at par with rational thinking and to acknowledge the wisdom inherent to ancient Eastern philosophies, native or indigenous perceptions and the principles alive in traditional communities, which emphasize equilibrium, reciprocity, solidarity and collectiveness. These are often reflected in meaningful ceremonies related to natural cycles and mindful thanksgiving, which can significantly improve our connection with both our external and internal nature.

Compassion, loving kindness, integrity and care strengthen the resolve to protect and respect nature. Several techniques are proposed for reorientation and anchoring. Ceremony and practical exercises, including contemplation, play an essential part.

The peaceful state of mind, tranquillity and clarity of thoughts and feelings resulting from nature connectedness have the inherent power to counteract destructive consumerism, which is generally acknowledged to be one of the root causes of environmental degradation.

### GOALS

- Strengthen the mind–body connection with nature, in particular with the marine and coastal environment.
- Strengthen the resolve to implement decisions that respect nature and ecosystem processes.
- Enable appreciation of key elements inherent to nature and in particular the marine and coastal environment: power, functionality, beauty and connectedness. Encourage MPA managers to actively participate and engage stakeholders in the practice of nature contemplation.
- Enable nature and human wellness to be experienced.

## 10.4 Contemplation of nature

Eastern tradition informs us that contemplation leads to powerful insights of connectedness and oneness, which make it simply impossible to disregard and not care for nature or for each other. This consciousness in conjunction with exposure to nature can be a driving force in modifying the many harmful and destructive practices that we came to rely on for modern lifestyles.

Contemplation of nature deserves a special place among the many practices that are advocated for connecting with nature, such as *shinrin-yoku* (a Japanese concept that could best be translated as ‘forest bathing’ (Park et al 2010), exercising outdoors, owning a pet, gardening or wilderness therapies. While all these have their proven benefits, the emphasis is on human well-being, and care for nature is a side effect at best

Contemplation of nature can be practiced anywhere, anytime, and no equipment and no special instructions are needed. Anyone can take up this practice and incorporate it into their daily routine. Multiple benefits for the body and mind arise from a contemplative mind-set.

Contemplation of nature is akin to a meditative practice done in association with the natural environment. It involves three steps: soft gaze, disinterestedness and sympathetic attention.

*Soft gaze.* One chooses a view to observe. This could be a landscape, water body, agricultural field, garden or hedge. If there is no access to nature outdoors, one can choose to contemplate on a potted plant, flowers, leaves, stones, sea shells, etc. indoors. One’s attention is gently focussed on the view or the object. The eyes can blink as naturally as they do. If one is tired or feels better by closing the eyes briefly, there is no problem. Often thoughts start to rush in as soon as the eyes are closed. If that happens, the eyes should be opened as one reminds oneself about contemplating nature. Open eyes help because nature is a multi-sensuous engagement (sight, hear, smell, etc.). This is a support even though one is not consciously engaging the senses.

*Disinterestedness.* This is about distance from the subject’s own needs, desires, concerns and outcomes in the process of contemplation. To put it more classically, this element in the practice is ‘transcendental.’ Though one is fully aware of one’s own presence and that of the view or the object, one is not exercising the mind to find out any details about the view or the object.

*Sympathetic attention.* This comes from the well-developed field of loving kindness meditation. This practice, in which one directs compassion and wishes for well-being toward real or imagined others, is designed to create changes in emotion, motivation and behaviour in order to promote positive feelings and kindness towards the self and others. What is required is to just gently remind oneself once that without the elements of nature survival would be impossible and to continue, remaining disinterested and maintaining a steady soft gaze.

The recommended duration is about 30 minutes. Scientific research into the mind–body connection has pointed out that after about 22 minutes of a restful mind, a much deeper physiological relaxation starts to take place. This finding has ushered a relaxation revolution and given rise to several techniques such as mindfulness-based stress reduction (MBSR).



## THE ECOLOGICAL CONSCIOUSNESS

Life carries meaning and purpose. Purposeless growth is profligate and cancerous. The tree must give fruit, the seeds must be formed. If we have worked our way stepwise to the flame of dying and becoming, if we have felt reverence before nature and committed ourselves to service, then the death of the husk, which is to say our lower self, is nothing fearsome. We are certain to uncover the real self thereby.

At the close of the contemplation, guide yourself back by recalling the full importance that awaits you here upon the good Earth. Contemplating in this way can help us form a true spiritual relationship with the Earth in a way many traditional societies and philosophers did. Arne Naess placed the experience of profound ecological interconnectedness at the heart of his philosophy of 'deep ecology' and recognized the spiritual foundations of ecological ethics. Satish Kumar called it 'reverence ecology.' Naess, Kumar and so many others rightly acknowledged that an ethics governing the relationship of humanity with the Earth cannot be the outcome of a rational cost-benefit analysis merely but must be predicated on a lived spiritual relationship to her. The above-mentioned approach and methods help us connect deeply with nature and cultivate ecological consciousness.

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