APPENDIX H
Revolutionizing Fisheries Management Training: Putting Workshop Ideas Into Action

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Participants in the Training Managers for 21st Century Fisheries workshop (Queenstown, New Zealand, December, 2001) heard many times that new approaches to training fisheries managers are required to match fundamental changes in the structures and institutions of fisheries management that mark the beginning of the 21st century. In many parts of the world, public officials and government agencies are no longer the fishery managers—commercial, recreational, indigenous fishermen, and coastal communities are increasingly being granted opportunities, privileges, and rights for managing and co-managing fishery resources. In some jurisdictions, such as the European Union, Australia, and New Zealand, this process has been formalised in legislation. In other jurisdictions such as the United States and parts of Canada, industry-based co-management has occurred despite impediments limiting authentic industry and stakeholder involvement in fishery management and research.

As a new disciplinary field, education for fisheries managers is poorly supported. Compared to forestry and agricultural fields, fisheries management training lacks at a country and international level, the flexible learning pathways, learning and management institutions, and leadership necessary to meet the needs of fisheries managers in the 21st century. Alarmed at the detrimental impact that this situation will have on the professional development of fisheries managers and management, workshop participants resolved the following actions to revolutionise fisheries management training:

- Develop and implement flexible learning pathways responsive to the needs of all participants in the management process.
- Reform both learning and management institutions to better recognise the individual and collective needs of successful fishery managers.
- Management and learning institutions must show domestic and international leadership in the creation, implementation, dissemination, and coordination of training programmes and related material.

Note that the “consensus” strategies and actions described in this section are a synthesis of multiple suggestions for training strategies. Records of discussions and working group summaries are contained in Appendix E (available online only at http://oregonstate.edu/dept/trainfishmngr/report.html).
Individual training needs and flexible learning pathways

Individual needs
A tendency towards isolation in its relationship with other resource management disciplines means that there are many examples of proven training practices and philosophies from other fields that fisheries management can draw upon.

A key lesson from the forestry management experience in the United States, coastal community development in Denmark, and vocational training in New Zealand is that training is first and foremost an activity that individuals undertake. Individuals, whether in a government agency, a non-governmental organisation, or vessel owners engaged in management processes, require flexible learning pathways that match their individual and institutional needs.

Individual training needs depend on the level at which an individual is involved in fisheries management processes and whether his or her role is a specialist adviser or more generalist synthesiser. The level of needs is contingent on the management context in which an individual is operating. This will vary within a jurisdiction depending on the management question and process at hand and also across jurisdictions.

Ideally it is possible to benchmark an individual’s current level of knowledge, attitude, skills, and ability (KASA) against an idealised KASA profile for his or her particular current and/or potential role in the fisheries management process. For example, a line manager may assess a hypothetical fishery agency official as follows:

<table>
<thead>
<tr>
<th>KASA</th>
<th>Score</th>
<th>Profile Score</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total KASA score</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Knowledge of Stock Assessment</td>
<td>1</td>
<td>2-3</td>
<td>Limited formal training in stock assessment or related discipline. Key training need.</td>
</tr>
<tr>
<td>Cost benefit analysis skills</td>
<td>1</td>
<td>2-3</td>
<td>Sound innate skills, overall score restricted by limited knowledge/experience of formal analytical methodologies, e.g., multi-criteria analysis.</td>
</tr>
<tr>
<td>Communication skills</td>
<td>3</td>
<td>4</td>
<td>Good skills, require taking to next level to be persuasive and influential communicator.</td>
</tr>
<tr>
<td>Fisheries law</td>
<td>3</td>
<td>4</td>
<td>KASA equivalent to required profile.</td>
</tr>
<tr>
<td>Leadership ability</td>
<td>2-3</td>
<td>2-4</td>
<td>Needs training and opportunities to be able to lead diverse groups through to successful outcomes. Particular emphasis required on transformational leadership skills.</td>
</tr>
<tr>
<td>Project management</td>
<td>1-2</td>
<td>3</td>
<td>No tradition of project management in agency for non-technical staff. KASA would develop quickly with training.</td>
</tr>
<tr>
<td>Team work</td>
<td>4</td>
<td>4</td>
<td>Great member of a team, already strong KASA will be enhanced as other competencies develop.</td>
</tr>
<tr>
<td>Understanding government</td>
<td>3</td>
<td>4</td>
<td>Needs rounding out with knowledge and</td>
</tr>
</tbody>
</table>
APPENDIX H cont.

<table>
<thead>
<tr>
<th>KASA</th>
<th>Score</th>
<th>Profile Score</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>RATING KEY:</strong> 1 = Training, 2 = Developing, 3 = Competent, 4 = Advanced, 5 = Expert</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Fisheries Management Specific KASAs</strong></td>
<td></td>
<td></td>
<td>experience of non-agency public institutions.</td>
</tr>
<tr>
<td><strong>Management Team Competencies</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Achieve results</td>
<td>2-3</td>
<td>4</td>
<td>Needs development so that the drive is there to push projects through to completion.</td>
</tr>
<tr>
<td>Communicate openly</td>
<td>4</td>
<td>3</td>
<td>Strong KASA</td>
</tr>
<tr>
<td>Focus on clients and quality</td>
<td>3-4</td>
<td>5</td>
<td>As an advisory unit, exceeding clients’ expectations is key to our success and ability to influence outcomes.</td>
</tr>
<tr>
<td>Maintain professional relationships</td>
<td>3-4</td>
<td>4</td>
<td>Well respected but perhaps need to develop recognition and respect as agency officer. Will develop rapidly as KASAs evolve.</td>
</tr>
<tr>
<td>Promote agency business and values</td>
<td>4</td>
<td>4</td>
<td>Strong KASA</td>
</tr>
</tbody>
</table>

The first column identifies the KASAs appropriate to the individual’s role in the management process. The second column benchmarks for each KASA the individual’s KASA score against a KASA profile score for the position/role in the third column. The final column provides contextual comment to the individual and potential training providers.

Many potential KASAs were identified during the course of the workshop. Only a few are listed in the hypothetical example above. More extensive listings are contained in Appendix E.

This individualised approach to training needs makes two major assumptions:

- Institutions carry out individualised training assessments for their staff and external participants involved in fisheries management processes.
- Profile KASAs can be identified and developed specifically for the management processes being followed.

Without the appropriate institutional commitment to individualised training of fisheries managers, any collective training initiative is dead in the water.

**Flexible learning pathways**

Having identified the “KASA” approach as a potentially effective way to assess individuals and identify their fisheries management training needs, the workshop noted that suitable training pathways for individuals must also exist.

Suitability refers to meeting both an individual’s learning need and also fitting with an individuals work environment and life style. Only offering 2-year residential degree programmes cannot meet the training needs of the vast majority of participants in
management processes. Multiple academic and continuing education pathways are required to be delivered in a variety of locations and modes. This need challenges the conventional training provider programme targeted at people engaging in tertiary education straight out of secondary education, or people already in employment seeking to change careers or enhance promotion prospects.

Training providers in the 21st century must meet the need for:

- Academic training to be formally integrated with life and work experiences.
- Multiple, transferable learning pathways.
- Demand-driven training provision where users design training structures and curricula.

For example, users might determine that the training structure identified in Figure 1 is useful for commercial fisher representatives engaged in fisheries management activities. The pyramid shape represents the number of industry participants at each level, the potential number of training providers, and the more specialist nature of advanced training needs.

Figure 1. Industry fisheries management education pyramid created after Cloughesy and Reed (Appendix G).
At the “training level” basic two day scientific and economic concept courses are taught to fishers involved in their local associations. At the developing level, regional fisher representatives are encouraged to undertake a modular certificate in fisheries management taught in evenings at regional colleges. Recognition for up to two-thirds of course credits in the certificate is given for work experience.

The diploma in advanced management advocacy is aimed at the professional employee of industry associations or senior industry representatives who are regularly engaged in management processes and consists of courses, short-term secondments to industry bodies and companies, and peer assessment of leadership skills and attitude to collaborative management. Masters programmes are intended to be programmes providing for different fisheries management specialisation (e.g., enforcement, research, co-management, etc.). They would be offered by universities and require either an undergraduate degree or completion of the fisheries management certificate. They are 1-year full-time or 2-year part-time courses and are offered to industry advisers and managers and non-industry individuals such as government officials. The advanced Masters degree may require a dissertation.

Although hypothetical in its structure, the industry-training pyramid exemplifies the comprehensive, integrated yet flexible approach to fisheries management training espoused by workshop participants.

**Revolutionary changes in training and management institutions**

Effective demand-driven, individually focused training delivered through multiple pathways must be supported by changes to both training and fisheries management institutions according to workshop participants.

Training providers and academic institutions have to become demand driven rather than supply focused. Courses cannot be designed around the skills of existing tenured staff or the latest large budget research grants. Nor can potential “bums on seats” be a major factor in determining the funding of a course if an institution has a genuine commitment to training fisheries managers. In many instances private sector or small public training providers will have the flexibility in staffing and programme delivery to fill specialised training niches that large institutions cannot. Nevertheless, despite potential institutional inertia, large training providers and academic institutions have the experience and resources to develop, coordinate and deliver comprehensive fisheries management programmes.

Just as training providers and academic institutions must change so must the attitudes to training of agencies and participants in fisheries management processes. Continuing education through training and professional development must be provided for and rewarded. Processes have to be established and people assigned to work with training providers and academic institutions. Working together, managers and providers can ensure that training meets the needs of fisheries managers and that sufficient trainees take
part in courses, activities, and programmes to justify institutional investment in fisheries management training.

If on-the-job learning is to be formally recognized, management agencies will need to be actively involved in the assessment of work-based/life achievements against standards. Culturally appropriate assessment is required for skills and experiences that have been derived from outside western management and scientific paradigms.

Fisheries managers and participants in management processes will have to actively engage in training activities as teachers, mentors and role models. Meaningful secondment opportunities and internships have to be offered to individuals who may lack fisheries experience or work for traditionally opposed sides in management debates.

Having undertaken training, people must be able to utilise their new found skills and be rewarded. This can be done by:

- Improving salaries in recognition of training development
- Giving stretch assignments, allowing individuals to use and refine new knowledge and skills.
- Opening up career advancement to individuals in any position if they show aptitude and promise in promoting good fisheries management outcomes.
- Reinforcing formal training with practical experience and continued mentoring by role models.

For non-professional participants in the management process, special attention has to be given to ensuring training and participation is rewarded. Too often fisheries management processes are seen as litigious win-lose or lose-lose games. Proactive, constructive participation is discouraged while votes or enhanced standing with peers rewards political grandstanding. Unfortunately, the changes creating a positive external environment for fisheries management negotiations and debates are fundamental and long-term. Gains will be incremental, assisted by positive training initiatives that improve fisheries management knowledge, attitudes, skills, and management ability.

**Leadership in the creation, implementation, dissemination, and coordination of training programmes**

Collective leadership from training providers, management agencies, and participants in management processes is a prerequisite for the successful training of fisheries managers in the 21st century. This leadership, determined by workshop participant, needs to manifest itself in an international training network with a defined structure in which the roles of partners and delivery mechanisms for training initiatives are clearly articulated.

At the highest level, having an international organisation such as the FAO or World Bank as a sponsor is seen as desirable. The role of the sponsor is to:

- Provide the initiative with a significant international profile.
- Attract new international partners to the initiative.
• Provide seed funding and support for external funding.

Irrespective of the presence of an international sponsor, a coordinating body is essential to the success of the initiative. The body would facilitate and coordinate the development, implementation and dissemination of:

• Core training curricula incorporating:
  o biological sciences
  o social sciences including cultural anthropology
  o development of transformational leadership skills in individuals
• Assessment standards
• Moderation processes
• Best training practices
• Secondment, internship and other professional development opportunities

The coordinating body would also actively seek new partners and new training opportunities in different parts of the world in recognition that fisheries management is increasingly global in context. Periodic review of the coordinating body’s progress could occur in conjunction with international conferences such as the World Fisheries Congress and the International Institute for Fisheries Economics and Trade Conference.

The coordinating body or institution should give effect to the collective wishes of its partners. These partners include government agencies, agencies representing the interests of commercial, recreational, and indigenous fishers, environmental NGOs, and other groups with a participatory role in fisheries management.

Partners, including training providers and management agencies in the training network:
• Commit to training excellence in their own management agencies or to meeting the needs of agencies if a training provider.
• Provide input to the development of training curricula, assessment systems, and moderation standards.
• Submit examples of their own successful training curricula/programmes, assessment and/or moderation material to the coordinating body.
• Use the resources of the network to implement effective training practices within their organisations, whether provider or purchaser of training.
• Commit, within the resources of the organization, to providing internships and secondment opportunities.
• Resource within their own organisation a contact person for the training network.
• Are responsible for developing fisheries management training opportunities at a national and regional level in their own jurisdictions.

Workshop participants discussed at length the tools available to the coordinating body and international training network. Key methods of co-ordination the development and dissemination of training material included:
• Websites
• Electronic lists
• Case study library (written and video in digital form)
• Special journal issues
• Links and memorandums of understanding with World Bank Fisheries initiatives, FAO, and regional fisheries management organisations and professional organizations, such as the American Fisheries Society and International Institute for Fisheries Economic and Trade.

Summary

Education for fisheries managers is poorly supported. Fisheries management training lacks the flexible learning pathways, learning and management institutions, and leadership necessary to meet the needs of fisheries managers in the 21st Century. Three key changes are required.

First, training must be recognised as an activity that individuals undertake. People require flexible learning pathways that match their individual and institutional needs. The level of need depends on the management context in which an individual is working. This will vary within a jurisdiction depending on the management question and process at hand and also across jurisdictions. Without institutional commitment to individualised training of fisheries managers any collective training initiative is likely to fail.

Second, effective demand driven, individually focused training delivered through multiple training pathways must be supported by changes to both training and fisheries management institutions. Courses cannot be designed around the skills of existing tenured staff or the latest large budget research grants. Continuing education through training and professional development must be provided for by employers and rewarded.

Third, collective leadership from training providers, management agencies and participants in management processes is a prerequisite for the successful training of fisheries managers. This leadership must manifest itself in an international training network with a defined structure in which the roles of partners and delivery mechanisms for training initiatives are clearly articulated.