



A Critical Review of Progress towards Integrated Coastal Management in the Baltic Sea Region

Peter R. Burbridge

University of Newcastle upon Tyne

Abstract

This paper presents a review of the development of Integrated Coastal Zone Management (ICZM) processes in the Baltic region. Excellent “State of the Art” reports on ICZM have been prepared that catalogue specific ICZM activities in individual Baltic States. However, these reports do not utilise a well established methodology for analysing the outcomes of the ICZM activities or assess the progress that may have been made towards a robust and sustainable ICZM process.

Available methodologies and indicators that might be used for these purposes are reviewed and the conclusion is drawn that we do not have a competent methodology or appropriate indicators. The author assesses progress towards ICZM in the Baltic based on what has been achieved in respect to well-established elements of good practice, effective management responses and potential outcomes. The conclusion is drawn that substantive progress has been achieved. The challenge we face is to capitalise of this progress by determining what further technical, financial, or other forms of support would help strengthen ICZM and achieve sustainable improvements in the environmental conditions in the Baltic ecosystem and the social and economic welfare of the Baltic States.

1 Introduction

The Baltic is a prime example of a shallow enclosed coastal sea where human development activities continue to have a major influence on the ecology and sustainable use of coastal and marine ecosystems. The Baltic Sea Region is also influenced by climatic changes that influence the hydrology of river basin systems that drain into the Baltic Sea with consequent effects on sea level, salinity and ecosystem productivity.

Historically, the Baltic has formed a focus of human settlement, natural resources production, and international trade. There have been both positive and negative effects associated with these diverse forms of human development. Positive effects include the improvement of human welfare through the expansion and diversification of the economic bases of the Baltic States. There have been a number of negative economic, social and environmental effects associated with the human development process and broader climatic features of global change. These include contamination of terrestrial soils and marine sediments with toxic chemicals and heavy metals, reduction in fish stocks, loss of biological diversity, increasing natural hazards and increased vulnerability of people to natural and man-induced hazards such as flooding. The combination of human induced changes to terrestrial and marine systems and natural climatic changes can be referred to as Global Change affecting the Baltic Sea region.

Growing recognition of these adverse effects has stimulated a search for improvements in development strategies, policies, institutional arrangements, laws and regulations, and human resources development as means of achieving more sustainable and equitable forms of development. Integrated Coastal Zone Management (ICZM) forms one of the development planning and management tools widely adopted by the Baltic States in their search for more sustainable forms of development.

The Baltic has enjoyed a substantive international, national, and more local support for ICZM. The author has been asked to comment on how successful ICZM has been in the Baltic Sea Region in respect to the European Union Integrated Coastal Zone Management Strategy (CEC, 1999). This strategy seeks to promote sustainable use of coastal ecosystems and their renewable natural resources, and a move away from a project-by-project approach to the adoption of a strategic approach that provides a stronger enabling environment at Member State level.

From the outset, it must be stated that measuring the success of ICZM is not an easy task, nor can it be measured in terms of a final product. **In essence, what we are searching for is evidence of the development of a robust ICZM process that is capable of sustaining improvements in environmental, social and economic conditions in the context of Global Change.** In the following paragraphs, the author discusses the difficulties of assessing the State of the Art in developing ICZM, including the lack of a suitable methodology and indicators. The author then attempts to assess the progress that has been achieved in the Baltic Sea Region. This is one person's viewpoint and it is hoped the materials presented and conclusions drawn will promote a lively discussion at this workshop!

2 Coastal and Marine Problems and Issues faced by the Baltic States

A number of reports provide detailed accounts of the coastal management problems and issues facing the nations in the Baltic Sea region (see the Progress Report from the HELCOM-WWF project on Management Plans for Coastal lagoons and Wetlands, Baltic Sea, 1999; PROCOAST State of the Art Report, 2000; EUCC ICZM in the Baltic States-: State of the Art Report, 2003). It is important to recognise that some of the problems identified are common to more than one nation while other problems may be experienced by only a few Baltic States.

The Baltic ecosystem is shared by a number of sovereign nations and many of the issues and problems associated with the sustainable use of the Baltic region's coastal and marine resources are common to a number of these nations. Issues such as pollution from land-based activities are common to more than one nation; for example, non-point source pollution derived from agriculture or forestry, or point sources of industrial chemical contamination of waters and sediments. The adverse effects on ecosystems and the production and utility of natural resources may be shared among a wide cross section of interest groups beyond the borders of individual nations where the pollution originated. These issues have an international dimension and their resolution will require international cooperation.

Other problems or issues are specific to individual countries, or are not shared by all Baltic nations. Erosion is a case in point where the causes of erosion may be the result of local actions such as sand mining, or regional climatic change resulting in increased wave energy. The effects may be local or may affect a number of countries sharing the same regional coastline. Relative sea-level rise is another example. In the case of Sweden the geological characteristics of Sweden's Baltic coastline and post glacial isostatic rebound mean that a rise in sea level poses less of a problem for coastal development than in a country where the coastal landforms are dominated by poorly consolidated sediments and where sections of the coastline are eroding and the shoreline is retreating as a consequence of relative sea level rise.

While State of the Art reports are useful in identifying the range of environmental problems associated with coastal development, they tend to indicate which problems or issues have not been resolved in the relatively short history of ICZM in the Baltic Sea region. These reports also tend to assume that there are standard components of an ICZM project or programme that must be in place before tangible results can be achieved.

The State of the Art reports do not really measure progress because there is insufficient information to form a baseline from which to assess what has been achieved in resolving problems and issues. The State of the Art reports are helpful in providing an account of what information has been gathered, the number of people participating, and which management plans have been formulated, etc. These are

OUTPUTS and do not tell us much about the effectiveness of investment in developing a competent ICZM project or programme, and whether ICZM is delivering effective OUTCOMES in terms of solutions to perceived problems and issues. In effect, these reports form a baseline for each Baltic State from which we can try to measure progress towards the achievement of outcomes. However there is a danger that this approach can fail to give sufficient emphasis to the obstacles individual countries have overcome in making substantive progress towards developing a robust ICZM process that will deliver sustainable solutions to complex problems.

3 Support for the Development of ICZM in the Baltic

The international dimensions of many of the problems and issues in the Baltic are addressed through global conventions, for example the Convention on Biological Diversity. There are also international measures designed to protect the marine and coastal environment at a more regional level; examples include 1974 and subsequent 1992 Conventions on the Protection of the Marine Environment of the Baltic Sea Area. Although the main objectives of this latter Convention are “to prevent and eliminate pollution in order to promote the ecological restoration of the Baltic Sea Area and preservation of its ecological balance”, the recommendations from the governing body for the Convention provide strong support for coastal zone planning and management. See for example HELCOM Recommendation 15/1 of 1994 which suggests that protected areas up to 300 metres landwards and seawards from the shoreline be established and that a “coastal planning zone” at least 3 kilometres inland of the mean high tide line be established. Further HELCOM recommendations have been formulated for a system of coastal and marine protected areas (15/5 of 1994) and for conservation of natural coastal dynamics (16/3 of 1993).

There has also been innovative international support for spatial planning linked to coastal management in the Baltic Sea Region that pre-dates the EU INTERREG and European Spatial Development Perspective. This is exemplified in the report “Visions and Strategies around the Baltic Sea 2010” (VASAB 2010) presented in 1994 to the Third Standing Conference of Ministers from the Baltic States. This was reinforced at the Fourth Ministerial Conference held in 1996 where priorities and common recommendations for spatial planning of the coastal zone in the Baltic region were adopted.

The “PROCOAST” project for “Harmonisation of the Uses and Interests in the Baltic Sea Coastal Zones” is designed to help translate environmental concerns into practical planning and management solutions for the coastal zones in the Baltic Sea Region (BSR) through the exchange of experience between stakeholders and experts from the Baltic States (PROCOAST 2000). This international initiative is funded mainly through the European Regional Development Fund INTERREG II C. This initiative provides a comprehensive overview of the “state-of-the-art” of implementation of HELCOM, VASAB and other environmental recommendations into coastal plans and management arrangements in the Baltic Sea Region.

The NORCOAST project has similar objectives to the PROCOAST; although it focuses on the North Sea region, it does include countries such as Germany that have both Baltic and North Sea coasts. The NORCOAST project complements the efforts to improve coastal management and spatial planning in the Baltic by focusing on planning methods at a regional level that assist in the delivery of effective integrated coastal management. The recommendations of the NORCOAST project address three main issues, namely:

1. How to facilitate and improve the process of Integrated Coastal Management and Spatial planning;
2. How to apply Planning techniques to the process of Integrated Coastal Management and Spatial planning; and
3. The design of a regulatory framework to provide a stronger basis for coastal planning.

These international measures have been reinforced by the 1996-2000 European Commission Integrated Coastal Zone Management (ICZM) Programme that funded 35 demonstration pilot projects

in 17 countries and a series of thematic studies designed to derive lessons learned and examples of good coastal management practice. The principles for coastal zone management and research findings derived from the demonstration projects reinforce those derived for the Baltic from HELCOM and VASAB 2010. The findings of the European ICZM Programme have culminated in a Recommendation that encourages all European Member States to adopt Integrated Coastal Zone Management and to formulate complementary national, provincial and more local coastal management policies, plans and implementation strategies.

The global and international measures, and the measures adopted by the individual Baltic Sea States to protect biological diversity, promote ICZM and spatial planning form a comprehensive and very valuable kit of tools to use in the improvement of coastal planning and management, and sustainable natural resources development.

4 Existing Evaluations of ICZM

The various “State of the Art” reports produced under the PROCOAST project (PROCOAST 2000), VASAB 2010 programme (VASAB 2010, 2000), NORCOAST project (NORCOAST 1999; 2001) and EUCC (EUCC 2003 a; b) have generated a comprehensive overview of how the individual Baltic States have attempted to develop coastal zone planning and management. These are all excellent documents. However, they tend to identify what is missing, or has not yet been put in place, instead of giving full recognition to what has been achieved under often very difficult conditions.

It is clear from these reports that some Baltic States are more advanced in the implementation of ICZM. These countries are generally characterised by high levels of per-capita income, strong public tax bases, well established property rights, strong public institutions with highly qualified and experienced staff, strong NGOs, and active public dialogue on development issues, and strong political recognition of the value of ICZM as a development planning and management tool. At the same time, some of these characteristics can actually inhibit the ICZM process. For example, in Finland the cultural tradition of people enjoying the right to build holiday homes along the coast is proving a constraint to the development of comprehensive coastal management plans and the conservation of habitats. In this case, well-established private property rights may conflict with measures designed to protect a wider public interest in the conservation of habitats and species.

Some of the Baltic States are in transition from the former Soviet system to a free market economic system. This transition poses constraints on the development of ICZM. Examples include, the shortage of public funds to compensate land owners for loss of development rights when coastal areas are designated for conservation purposes; land reform and slow changes in working practices from a collective based system of sectoral management; radical changes in the economic basis of agriculture and forestry to facilitate entry into the European Union, low levels of public participation in forward planning and decision making, etc.

There are also differences in the interpretation of coastal and marine issues and problems and the priorities that are given to their resolution within individual Baltic States. Even where high priority is given to the resolution to a common problem, such as pollution of coastal lagoons and marine waters, the technical ability, institutional capacity and financial resources available to individual Baltic States to reduce the generation of pollutants can differ significantly. There is also a practical limit to the reduction of pollution as in the case of the Odra lagoon where major improvements have been made through the joint efforts of the Polish and German authorities in reducing sources of pollution; however, the residual contamination of sediments in the lagoon is both very expensive and technically very difficult to remove without adversely affecting the marine environment. In such cases, difficult decisions have to be made about the allocation of scarce financial and technical resources in the resolution of competing development issues. Poland and Germany may decide that they will use their resources to solve different problems such as coastal erosion, reducing flooding hazards, relocating people away from flood prone areas, or restoration of degraded habitats.

The legal and regulatory framework available to support ICZM differs significantly from one Baltic State to another. The HELCOM State of the Art report (EUCC 2003a) makes it clear that none of the Baltic States has specific legislation relating to ICZM; however, existing laws and regulation can be used to support ICZM. This report goes on to suggest that the main challenge is to apply ICZM in a systematic manner in each of the Baltic States (EUCC 2003a, page 9). This assumes that the political will and actual ability to use existing laws and regulations is not an obstacle. This may be an incorrect assumption. All of the State of the Art reports identify major gaps in legislation, weaknesses in the application and enforcement of laws and regulations, and -in selected cases- shortage of public funds to finance the implementation of ICZM plans.

The shortage of data and information on coastal systems and how they function is also cited as a weakness in the State of the Art reports. It is assumed in these reports that this will pose a constraint on the “systematic” application of ICZM. It is a common mistake to assume that investment in developing a comprehensive information base and information management system will lead to improved decision making.

A further point to consider in understanding the constraints faced by many Baltic States is that their experience with ICZM is often limited to small-scale projects with a nature conservation focus. While valuable lessons, experience and information may have been gained from the implementation of ICZM in pilot projects, it is often difficult to demonstrate how ICZM would be useful in resolving other issues, such as planning for sustainable tourism, due to the nature protection bias of the original projects. Where specific issues, such as habitat and species protection, form the basis of an ICZM, these can seem remote from broader societal development concerns such as the restructuring of agriculture, human health or employment. ICZM works best where a broad body of public support is developed through raising public awareness of priority issues, enabling stakeholders to take an active part in the ICZM process, and where the public is able to see that issues and concerns that affect their welfare are being effectively dealt with as a result of their participation in the ICZM process. In other words, ICZM can be seen to deliver effective OUTCOMES.

5 Factors to Consider in Assessing Progress to Date in developing Integrated Coastal Management

5.1 Has there been sufficient time and support to allow individual Baltic States to establish effective ICZM projects or programmes?

One of the key lessons we have learned in the thirty or so years that the science and art of coastal management has been practiced is that it takes a great deal of time, consistent effort and continuity in funding to achieve substantive improvements in the way societies manage coastal systems and human development pressures. Experience has also shown that at least ten years of consistent effort and funding is required to achieve substantive ICZM outcomes. It must also be remembered that ICZM is not an end product, it is an adaptive management process. Care must therefore be taken to assess progress in developing a robust and sustainable ICZM development process and not to focus on outputs. This is especially true in the Baltic Sea Region where many nations have only recently regained their sovereignty and have witnessed major changes in their political and economic systems. In the relatively short time in which they have been encouraged to develop ICZM, they have also had to face major challenges that have made it difficult to develop their expertise and to demonstrate tangible outcomes.

5.2 Do we have a Competent Methodology and Relevant Indicators to measure The “Success” of ICZM ?

Measuring the “success” of ICZM initiatives is by no means easy nor is it necessarily a fully scientific and objective process. The nature of ICZM challenges the standard approaches to project and programme monitoring and evaluation. The majority of evaluation methods and criteria used in

assessing ICZM initiatives are designed to measure **outputs** (e.g. how many people were trained in the principles of ICZM) rather than **outcomes** (e.g. did the training and institutional development activities achieve a significant improvement in the application of ICZM principles) (see Humphrey & Burbridge 1998; Olsen et al. 1998).

A survey of methods and indicators used by European agencies to evaluate projects and programmes by Humphrey and Burbridge (2003) identifies two main evaluation methodologies. The first is the Pressure-State-Response (PSR), which is designed to help in reporting on national sustainability with respect to Agenda 21. The second is Logical Framework Analysis (LFA). These have typically been designed to look at projects with clearly defined outputs rather than outcomes or the strength of the development planning and management processes. This survey found that some agencies are beginning to tackle the issues associated with monitoring and evaluation of *process* as opposed to *blueprint* projects; however, none of the agencies surveyed have developed specific procedures or approaches for the evaluation of ICZM initiatives. A third approach is to look at stakeholder perceptions of and satisfaction with a project or programme, and the outcomes.

PSR Framework

Considerable effort has gone into developing indicators that are primarily based on measurable changes to the environment or to environmental pressures. Few indicators are based on management responses regarded as prerequisites for sustainability. Relatively little effort has gone into developing social or economic indicators. However, this is being addressed under the LOICZ, EUROBASINS and EUROCAT (see Turner 2004). The majority of indicator sets, which have been developed focus on environmental quality, and thus the emphasis is on pressure and state variables. There are a number of drawbacks with respect to their application to assessing progress towards the achievement of desired ICZM outcomes from individual programmes or projects:

- Difficulties in establishing cause-effect relationships
- Difficulties in attributing outcomes to specific programme actions
- Time-lags or delays between actions and outcomes (relaxation time)
- Most of the sets of variables, or indicators, lack the level of detail required for reporting at the project or programme level
- More comprehensive sets of variables are costly (in time and effort) and may be largely irrelevant to a particular situation.

A more promising approach focuses on assessing the effectiveness of **management responses** - the measures, which, on the basis of experience, contribute to successful ICZM outcomes. This approach has been developed by Plan Bleu to look at water management. Analysis of ICZM “responses” offers perhaps the most feasible and cost effective means to evaluate a project or programme using the PSR framework (Humphrey 2003). However, does this really tell us whether ICZM is being successful or that the ICZM process can be sustained? The structures that indicate the successful development of ICZM (policies, institutional arrangements, revised governance) are *instrumental* outcomes – however, their existence does not guarantee success or sustainability of the ICZM process.

The PSR evaluation methodology is essentially an organising framework for available indicators, few of which represent social or economic factors. If we consider one of the key **management outcomes** identified by HELCOM and VASAB 2010 - that coastal ecosystem dynamics are maintained as a prerequisite for sustainable natural resources utilisation- the PSR framework for assessing management outcomes may not be of great help. As a model of the coastal system, it presents an over-simplistic view, which at worst may encourage sectoral responses in addressing individual pressures. As has been pointed out by the EU ICZM Demonstration Project- Integrated Planning and Management is the **ONLY** way to solve problems in areas of intensive use and multiple pressures and/or problems

(CEC, 2000). A characteristic of the Baltic is the complex interrelationships between environmental, social and economic problems and development issues. The PSR evaluation framework is therefore of limited value in assessing how well an ICZM process is developing and whether ICZM is helping to achieve sustainable improvements in the functional integrity of the coastal system, or sustainable improvements to the social and economic welfare of a society.

Logical Framework Analysis

Logical Framework Analysis is increasingly used as a tool for project design and as a basis for appraisal and monitoring, and is a standard procedure used by the WWF and other agencies for project design, planning and monitoring. In the survey by Humphrey and Burbridge (1998) the objectively verifiable indicators (OVIs) used in evaluations relate to specific project activities, and there is a tendency to focus on the project performance and outputs rather than outcomes.

LFA may also be used in project evaluation; although it is recommended by IUCN that it be supplemented by other approaches, which examine relevance and outcomes. The main strengths of LFA are in improving project design and planning.

Analysis of Stakeholder Perceptions

Techniques such as the Balance Score Approach based on interviews with stakeholders in government, other national partners, communities and other interested and affected parties can provide valuable information on the effectiveness of ICZM in terms of the level of satisfaction with project or programme processes and outcomes. Perceptions will in part reflect the degree to which the programme has concentrated on building participatory mechanisms, and on communication, awareness building and education.

Monitoring of stakeholder perceptions and satisfaction should form a central component of programme monitoring and self-assessment. Participatory monitoring techniques are being developed by a number of agencies including IUCN.

The various State of the Art reports do not appear to have utilised these methodologies in assessing progress to date in developing ICZM in the Baltic States.

6 Progress Towards a Robust and Sustainable ICZM in the Baltic Sea States

Having argued that the State of the Art reports for the Baltic are useful documents, but that they do not really help us assess the progress that has been made in ICZM, can we actually assess the effectiveness of ICZM to date in the Baltic? The answer is YES, what we need to do is recognise and appraise what has been achieved through the efforts of international donors, regional organisations such as the Helsinki Commission, VASAB, and of course the individual Baltic States. Because we do not have a truly scientific and statistically sound methodology or relevant indicators, we have to rely of experience and professional judgement. This will of course be open to criticism as value judgements have to be made. Nevertheless, the author believes such an assessment can be useful in illustrating what has been achieved, and in forming the basis of an informed dialogue about what might be the most useful ways to support the development of ICZM in the Baltic States.

6.1 Three key considerations in assessing progress in developing a Robust ICM process and Sustainable Outcomes:

1. A clear and explicit Goal for ICZM with relevant indicators.

Different goals are postulated for different coastal regions depending on perceived management issues and interpretation of what ICZM can deliver. Following the UNCED Agenda 21 most goals for

ICZM projects and programmes provide a basis for defining indicators reflecting progress towards sustainability in three areas: quality of life, biological diversity, and productivity.

Criteria for the selection of indicators have been developed by a number of organisations, for example the OECD (1994). Such criteria stipulate that indicators should be policy relevant, analytically sound and measurable. It is also important to consider the cost, technical difficulty, and time required to gather and analyse indicators that are meaningful. This is particularly important in addressing significant issues that must be addressed in a logical sequence to achieve longer-term ICZM goals. This is by no means a simple exercise when examining outcomes and determining which specific outcomes can be attributed to ICZM project or programme activities (Humphrey 2003).

2. Instrumental outcomes or an enabling environment for ICM

ICZM is complex and many different outputs can have a major influence on outcomes. The creation of an enabling environment in which a robust ICZM process can be created requires substantive support to develop awareness of ICZM issues among relevant stakeholders, well trained personnel, good quality information, an effective coordinating mechanism to allow sectoral interests to cooperate and contribute to the ICZM process. These are substantive governance issues and it is often difficult to distinguish between outputs (training of staff, development of an information system, etc.) and outcomes (enhanced technical skills in ICZM, improved sectoral cooperation, etc.). It may be helpful to consider the development of a robust ICZM process as a series of stages from initial awareness of common issues, to dialogue among stakeholders, to capacity building and human resources development, enhanced cooperation among different interest groups and sectoral agencies, coordinated policy development, coordinated program planning, integrated implementation of strategies and management plans, and finally, impacts on the coastal systems.

Measurements of management efforts, or responses, are an inexpensive and rapid way to look at progress in developing the ICZM process. Experience over the past 30 years has helped to define mechanisms that make ICZM work (see Burbridge 1997; Olsen et al. 1998; Humphrey 2003). However, we still need to objectively evaluate whether ICZM efforts are being successful in terms of their effects on the coastal system and the resulting ability of the system to sustain human development objectives.

3. Sustainability of the ICM Process

ICZM will only be sustained where it is recognized as an effective means of achieving improvements in environmental, economic and social conditions. Features that can be indicators of sustainability will of course include environmental conditions such as the health and productivity of the coastal ecosystems and flows of natural resources that sustain human needs and aspirations. Other features are equally important. For example, the establishment of a sound information and knowledge base—i.e. stakeholders and ICZM practitioners understand the linkages between the coastal ecosystem, environmental processes and human social and economic welfare. Other key features include institutional and human capacity, government commitment, other stakeholder interest, and financial support for recurrent costs. We are still in the process of developing relevant indicators and methods to evaluate these key features that help to assess the sustainability of ICZM processes and outcomes. An important measure of support for ICZM lies in the perceptions of a wide range of stakeholders from politicians, to people whose livelihoods depend on continuity in the supply of coastal resources and groups who may not depend directly upon coastal systems but have an interest in a specific feature of the coastal system, such as scenic landscape quality or nature conservation. The Balance Score Card methodologies and other means of determining stakeholder satisfaction with the outcomes of ICZM can contribute to such analyses.

6.2 ICZM Progress to date in the Baltic

Based on the author's direct experience in the Baltic and professional judgement, major progress has been made in initiating a wide variety of ICZM pilot projects. The analyses of Strengths and Weaknesses of ICZM initiatives contained in the State of the Art Reviews by PROCOAST, the EUCC, WWF, etc. appear to be accurate. However, these reports tend to give greater emphasis to what may be missing or is yet to be put into place based on a cook book approach as to what should be incorporated into an ideal ICZM project or programme. Outcomes are not effectively dealt with in these reports. This is not a criticism of the very genuine efforts that have been made by all parties in promoting and supporting ICZM. It is perhaps too early to be able to attempt to accurately measure the long-term effectiveness of outcomes or the sustainability of ICZM projects and programmes.

It is very important to remember is that there is no Holy Grail, or Sacrosanct Rules, Essential Components, or Ideal Way to develop ICZM. Many different approaches have been applied in many different political, economic and social contexts and progress has been made in developing more integrated, and effective means of planning for and managing human development in coastal systems which may well prove to be environmentally sustainable, equitable, and economically efficient. A key criterion to use in assessing the progress of these different ICZM initiatives is whether the sophistication and effectiveness of the ICZM process can continue to develop and adapt plans and management strategies to accommodate global change, including the changing needs and demands of our individual societies. Again we must emphasize that ICZM is a process and not an end product, such as a paper plan or set of idealised "guidelines".

In assessing the progress towards the development of a robust ICZM process in the Baltic it is also important to recognise that different interest groups have different perspectives on what are the key features of ICZM. In this context, it is very interesting to note the shift in emphasis from nature conservation and towards spatial planning that incorporates ecological concerns over the past 7 years in marine and coastal projects and programmes in the Baltic. For example look at the priorities expressed in the HELCOM-WWF supported project to improve the conservation of marine lagoons where the main focus was on nature conservation. Contrast this with the PROCOAST project, which sought to translate environmental concerns into practical planning and management solutions for the coastal zones in the Baltic Sea Region. This is an illustration of the development of a robust ICZM process where nature conservation and the maintenance of the functional integrity of coastal systems and processes are integrated as fundamental considerations in the formulation of development strategies, coastal land water use plans, sectoral management plans and corresponding public and private investment.

International experience in developing ICZM initiatives has shown that the following features signify progress towards achieving both a robust ICZM process and outcomes that are effective:

1. A sufficient level of **AWARENESS** of coastal and marine management problems and issues has been achieved at both a national and international level to facilitate concerted action to resolve common issues. It is recognised that different Baltic States may have different priorities for action. However, there appears to be a genuine **political will** to address issues and problems at both a regional and individual Baltic State level. This is illustrated by establishment of the Helsinki Commission, the development of common principles for promoting sustainable marine and coastal development, the securing of international investment to support ICZM initiatives, and the **spirit of cooperation** among the various Baltic State ministers to work together in developing ICZM as a means of meeting their shared responsibilities for coastal and marine systems and human development activities;
2. Development of a **shared Vision** of how people wish to see the Baltic Sea Region evolve and serve their needs and aspirations as well as those of succeeding generations;
3. **Continuity of political support** from HELCOM and Inter-ministerial working parties in working towards that Vision;
4. Establishment of **common Guidelines** for the development of ICZM that can be shared

5. The **establishment of pilot ICZM programmes** in all of the Baltic States and exchanges of information, experience and lessons learned between the pilot projects;
6. Implementation of **human resources development** programmes that have been effective in helping practitioners from the Baltic States gain new knowledge, skills and experience in using ICZM concepts, principles and proven management techniques;
7. **Institutional development** where staff resources have been strengthened, operating budgets have been enhanced to support additional work associated with developing ICZM, and the development of inter-sectoral coordination bodies. It is realised that this varies from country to country, however, it is happening and is a strong indication that the ICZM process is being strengthened and ICZM is being viewed as an effective development tool;
8. Increasing **sophistication in the application of ICZM** from a focus on nature protection, to nature conservation, to conservation of coastal process, to the integration of terrestrial and marine interests, and more recently- the integration of spatial and economic development planning into ICZM and visa-versa;
9. The principle of **active public participation** is being implemented and is helping to build public support for ICZM initiatives;
10. Applied **research to generate information that will be of use in formulating effective ICZM plans** and implementation arrangements in order to achieve effective outcomes;
11. **Sharing of information and experience** among Baltic Sea States
12. **Formulation of ICZM policies and supporting measures** such as inter-sectoral coordination bodies;
13. Emerging interest in **meeting the spirit of the EU Recommendation on ICZM** among Baltic States seeking entry into the EU;
14. **Application of the EU Water Framework Directive** as a tool to link terrestrial and marine management;
15. There is evidence of **increasing confidence in ICZM as an effective tool for sustainable development**;
16. **Instrumental Outcomes have been achieved**- examples include the Principles and guidelines created and applied with support for HELCOM and Inter-ministerial working parties;

There are weaknesses that detract from the potential effectiveness of ICZM. Examples include:

1. Low levels of involvement of the Private Sector in ICZM processes;
2. Weak integration of spatial, economic and environmental planning between the terrestrial and marine components of the Baltic coastal system;
3. Tools for effective implementation of coastal plans are still be weak in several countries;
4. There is often a gap between the expertise developed through ICZM initiatives formulated at a local or site-specific level and acceptance by and support from district or provincial levels of government. The reverse can be true where district or provincial authorities have stronger technical and financial capabilities and local authorities are sometimes weak and not familiar with ICZM concepts and practices;
5. Poor cooperation and weak coordination between sectoral agencies can inhibit vertical and horizontal integration of policies, plans and management strategies affecting coastal areas;
6. Lack of understanding of natural and man-induced hazards in coastal areas and how these might increase as a result of global change.

Rather than treating these as obstacles to ICZM, we should treat these as challenges where effective management outputs can create positive outcomes that strengthen ICZM processes and help to secure effective solutions of development problems and issues.

Based upon these observations, the author suggests that major progress has been made in a relatively short period and under often very difficult conditions. Main elements of good ICZM practice are

available, however there are varying levels of progress in putting these into practice and creating sustainable outcomes.

The challenge we face now is to capitalise on what has been achieved by providing positive encouragement, and working together to determine what forms of political, technical or financial support would be most useful to individual Baltic States. This would help create a stronger enabling environment to help the Baltic States to use ICZM as a development tool to help them achieve their respective sustainable development objectives.

No doubt the participants in the Baltic Coast meetings will wish to add to the list above, or suggest qualifications to the assessment. This is welcomed and many participants will have far greater working knowledge of how individual ICZM initiatives are working.

7 Do We Need a Common Approach to ICZM or A Common Methodology to Promote Learning from ICM Experience

The EUCC State of the Art Report on ICZM in the Baltic (EUCC 2003a) and their proposals for a Common Approach to the Implementation of ICZM in the Baltic Region (EUCC 2003b). Both are very interesting documents that address most of the elements raised in the preceding paragraphs. However, this author hopes that this conference will undertake an active debate about whether a Common Approach to ICZM is the right thing to emphasise at this critical point in time when there may be more to be gained by reinforcing the progress that has been made by the individual Baltic States through their adaptation of basic ICZM principles and elements of good practice in accordance with their own social and economic development priorities. By all means reinforce the Visions and Strategies expressed by the Ministers from the Baltic States in the VASAB 2010 reports, Seek to develop greater regional dialogue, cooperation, and coordination among the Baltic States in addressing common problems and issues. However, caution should be exercised in being too prescriptive in insisting on a “common approach to ICZM” as this may give too great an emphasis to what may be undeveloped in respect to an idealised profile of an ICZM programme and give too little recognition to what may have been achieved under extremely difficult political, economic, institutional, human resources and/or environmental conditions.

A last point I would like to raise is- *Do we Need a Common Methodology to Promote Learning from ICM Experience?*

One of the conclusions of the thematic studies conducted as part of the EU ICZM Demonstration programme was the need for a common methodology to promote learning from ICZM experience (Humphrey & Burbridge 1998). This conclusion is also reflected in a major international study of ICZM programmes conducted for the United Nations development programme (see Olsen et al, 1998). In a recent survey of agencies and practitioners involved in ICZM in Europe by Humphrey and Burbridge (1997) a question was asked “what areas would you like to see addressed by a common methodology”. The responses reflected a primary concern with assessing the outcomes of the ICZM initiatives - both instrumental outcomes and environmental/ socio-economic outcomes.

This survey also indicated that practitioners identified a need to take a longer term view of ICZM initiatives than may be needed in more typical projects, recognising that ICZM is a process without a definite end-point (Humphrey 2003). This study and those by Humphrey & Burbridge (1998) and Olsen et al. (1998) indicate a growing concern on the part of donor agencies and national governments that greater efforts are required to ensure the sustainability of the ICM process upon termination of outside financial and technical support.

This suggests that a common methodology should provide mechanisms and approaches to assess and compare progress in three areas:

1. Outcomes and impacts of project or programme activities on the coastal system;
 2. Instrumental outcomes or enabling mechanisms/ environment for achievement of ICZM goals;
- and

3. Sustainability of the ICZM process. (Based on Humphrey 2003)

1. Outcomes and Impacts

Two prerequisites for evaluation on the basis of outcomes are:

- Clear objectives which incorporate measurable targets, and
- Establishment of baseline information by which to measure progress towards these targets, in the context of ongoing and probably contrary trends (See Burbridge 1998 & Humphrey 2003).

The justification for a common methodology assumes a common overall goal or at least direction for ICZM. Most coastal management projects are concerned with sustainability - a term which may be interpreted differently according to the values of different groups and communities but which is concerned with three issues, equity, economics and environment.

- While considerable progress has been made in developing indicators for sustainability, much work is still required to establish acceptable and meaningful targets or standards at different scales to guide management for sustainability in coastal areas.
- Target values may be expected to vary according to the carrying capacity (or assimilative capacity) of a particular environment for a particular activity (or substance) - thresholds which all too often are not determined until after they have been crossed.
- Target values will also vary according to the values, choices and acceptable trade-offs of communities.

The development of a stronger methodology for assessing progress towards developing a robust and very effective ICZM process would help us to make greater use of available technical and financial resources.

References

- Burbridge, P.R. (1997): Indicators for assessing the success of integrated coastal management and fisheries initiatives, 13th Annual Meeting of the European Fisheries Advisors, Kuopio, Finland, September 10-12 1997.
- Burbridge, P.R. (1997): Monitoring for Sustainability - A Review of European Approaches Relevant to Integrated Coastal Management (ICM), SARCS/WOTRO/LOICZ Workshop on Integrated Modelling Guidelines, Kuala Lumpur, Malaysia, 20-30 July 1997, LOICZ Meeting Report No. 24.
- Burbridge, P.R. (1997): Interdisciplinary Science for Integrated Coastal Management, LOICZ Workshop on Integrated Modelling Guidelines, Norwich, 17-19 March 1997, LOICZ Meeting, Report No 22.
- Burbridge, P.R. (1998): A Generic Framework for Measuring Success in Coastal Management, *Journal of Ocean and Coastal Management* Vol 37, No. 2, pp. 175-189.
- Burbridge, P.R. (1999): The Challenge of Integrating Coastal Management within the European Union, Keynote Address, European Union International Seminar on the EU Integrated Coastal Zone Management Programme, Brussels, 2 July 1999.
- Burbridge, P.R. (1999): The European Union Demonstration Programme - Sectoral and Territorial Integration in Coastal Management. Keynote Address, German National Seminar on Coastal Management, Kiel, 23 August 1999.
- Burbridge, P.R. and S.L. Humphrey (1999): Sustainable Use of Our Coastal Zones: The Role of City and Regional Planning in Integrated Coastal Management, European Symposium, Keynote Address, "Regional Cornerstones for Sustainable Development" Sustain Programme, Joensuu, Finland 12-14 September 1999.
- Burbridge, P.R. and S.L. Humphrey (2003): Introduction to the Special Theme Issue of the Coastal Management Journal on The European Demonstration Programme on Integrated Coastal Management, Volume 31 Number 2, pp. 121-126.

- CEC (2000): Communication from the Commission to the Council and the European Parliament on Integrated Coastal Zone Management: a Strategy for Europe (COM/2000/547), adopted 27 September.
- EUCC (2003a): ICZM in the Baltic States-: State of the Art Report, A. Pickaver (ed.), EUCC, Leiden.
- EUCC (2003b): A Common Approach to the Implementation of ICZM in the Baltic Region, A. Pickaver (ed.), EUCC, Leiden.
- Humphrey, S.L. (2003): Analysis of Approaches for Evaluating the Success of Coastal Management in Europe, PhD thesis, School of Marine Science and Technology, University of Newcastle, upon Tyne, Newcastle.
- Humphrey, S.L. & P.R. Burbridge (1997): Survey of Existing Integrated Coastal Management Monitoring and Evaluation Methodologies, Indicators and Instruments, United Nations Development Programme, New York.
- Humphrey, S.L. & P.R. Burbridge (1998): Thematic Study D: Planning and Management Processes: Sectoral and Territorial Cooperation, European Demonstration Programme on Integrated Coastal Zone Management, EC, Brussels.
- Humphrey, S.L. & P.R. Burbridge (2003): Sectoral and Territorial Cooperation in the European Demonstration Programme on ICZM, Special Theme Issue of the Coastal Management Journal on The European Demonstration Programme on Integrated Coastal Zone Management, Volume 31 Number 2, pp. 155-162.
- OECD (1994): Environmental Indicators: OECD Core Set, OECD Paris
- Olsen, S., K. Lowry, J. Tobey, P.R. Burbridge, & S. Humphrey (1998): Current Purposes and Methods for Evaluating Coastal Management Projects and Programs Funded by International Donors, Coastal Management Report No. 2200, Coastal Resource Center, University of Rhode Island.
- PROCOAST (2000): State of the Art Report, PROCOAST Project Secretariat, Schleswig-Holstein State Ministry for The Rural Areas, Kiel.
- Turner, R.K. (2004): Integrated environmental assessment and coastal futures. In J. Vermaat et al. (eds.) *Managing European Coasts: Past, Present and Future*, Springer, Berlin, forthcoming.
- WWF (1999): Progress Report 4th Quarter, HELCOM-WWF project on Management Plans for Coastal lagoons and Wetlands, Baltic Sea, WWF, Copenhagen Address.

Address

Peter R Burbridge
Professor Emeritus for Coastal Management
University of Newcastle upon Tyne
School of Marine Science and Technology
Ridley Building Room 260
University of Newcastle upon Tyne
Newcastle NE1 7RU
United Kingdom

E-mail: p.r.burbridge@ncl.ac.uk