

# Global

**Environmental Goal:** To facilitate the restoration of ecosystems, improve coastal zone management and reduce agricultural non-point source pollution through the introduction of ecosystem-based approaches in selected localities for land, coastal and open sea environmental management in five recipient countries.

## 3 phases

**Phase 1**, (*The current Project*). Introduction of the Ecosystem Approach (2003-2006(7)). US\$5.5 (C1-US\$2.7).

The **development objective** of the Baltic Sea Regional Project - **Phase 1** is to **create some preconditions** for application of the ecosystem approach in managing the Baltic Sea large Marine ecosystem in order to achieve and maintain sustainable biological productivity of the Baltic sea.

- Establishment of the regional framework for introduction of the ecosystem approach in managing the Baltic Sea Large Marine Ecosystem (BSLME);
- Mobilization of partners in management of coastal and open sea marine resources;
- initial activities for land and coastal management and initial investment to mitigate agricultural run-off.

**Phase 2**. *Demonstration of the Ecosystem Approach (2007-200?)*. US\$9.0 million.

- **Phase 3**. *Expanding Application of the Ecosystem Approach (2007-2008)*. US\$3.5

# ***COMPONENT 1:***

## ***Baltic LME Activities***

The component's primary objective is to introduce the principles and demonstrate the application of the LME concept for Baltic Sea coastal and open sea resources.

Component activities will be used jointly to overcome short-term sector-by sector attempts to manage resources and environments.

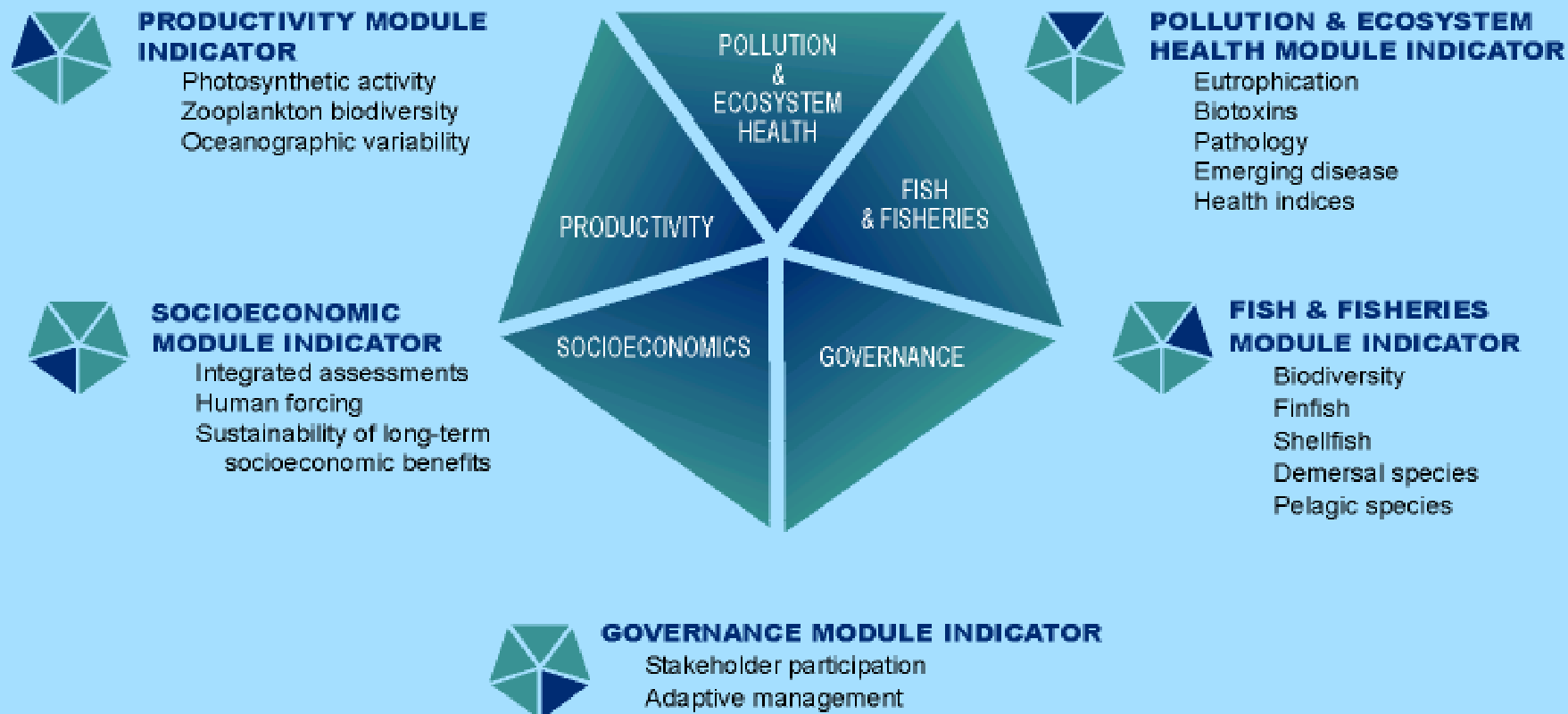
Component 1 will introduce jointly planned and implemented multi-national monitoring surveys that facilitate local cooperation and coordination and use of innovative methodologies for assessing the changing state of the ecosystem and development of effective strategies for the management of these shared resources.

Component 1 will:

- (i) establish local and regional administrative and organizational mechanisms, through the Coordination Centers, for cooperative monitoring and assessment activities,
- (ii) develop management tools through modeling and assessment to provide proposals for ecosystem-based management of land, coastal zones and open sea waters,
- (iii) support cooperating countries to move toward compliance with international agreements, regional priorities and national policies.

# Modular Assessments

Support LME Restoration and Sustainable Development

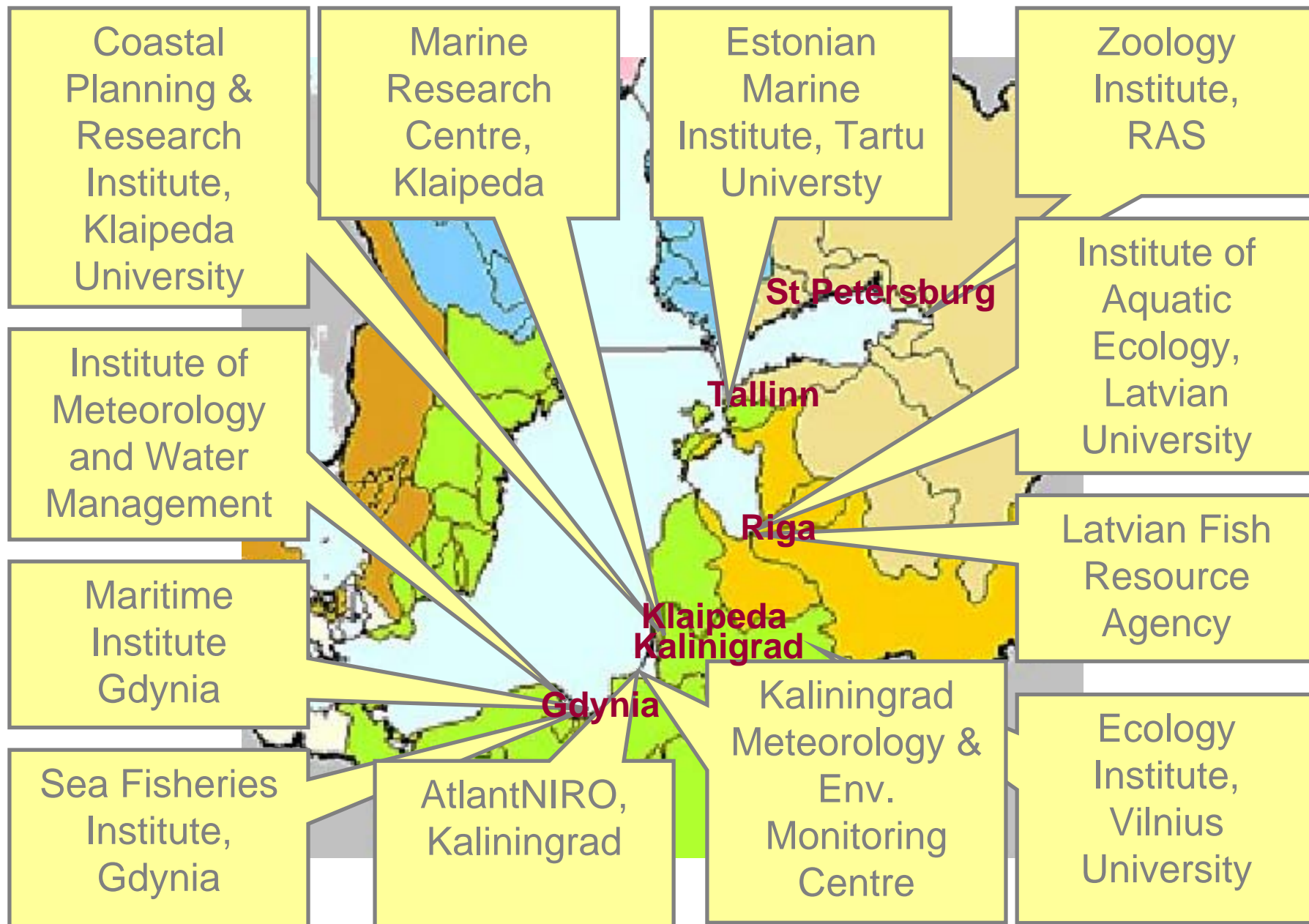


# ***Phase 1 outcomes***

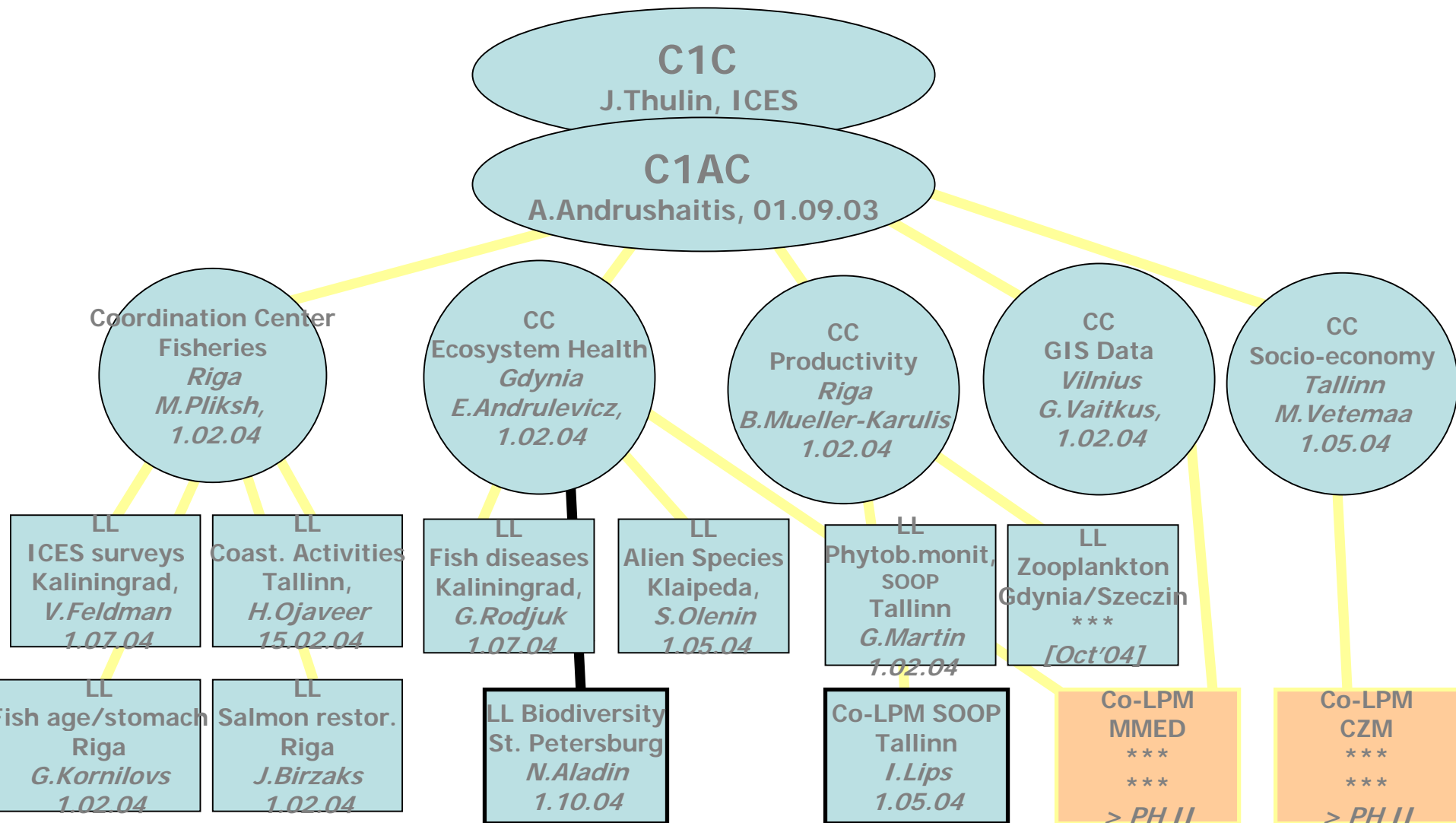
- Joint network of institutes involved in resource surveys and environmental monitoring established;
- Coordination Centres & 11 Lead Labs supervising main directions of activities established;
- Disciplinary networks created by each of CC & LL (level of activity varies);
- Ca 160 kUSD spent to support for networking, participation at SGs/WGs/WKs, and training;
- Ca 1 M USD spent for priority equipment for institutes involved in the assessment.

**More detailed: Selection of BSRP C1 reports [CD](#)**

# Component's 12 Partner Institutes



# WORKING STRUCTURE



BSRP Partner Institutes & National Laboratories

# ***Phase 2 focuses***

## **Productivity.**

- Continue to improve temporal and spatial resolution and operativeness of the Baltic data collection system by fuller access to contemporary **cost-effective monitoring methods** (ship of opportunity sampling, moored, towed and autonomous instrument platforms, remote observations).
- Contribute to re-establishment of **lower trophic level productivity assessment**, including pelagic autotrophs, phytobenthos and zooplankton.
- Demonstrate advantages of further **cohesion of fish stock assessment and productivity monitoring** by regular joint cruises.

# ***Phase 2 focuses*** *ctd*

## **Fish and fisheries.**

- Re-focus **upgrading of the landing statistics** on improvement of the biological data collection from commercial catches.
- Contribute to **upgrading of International Fisheries Databases.**
- Support further development of **coastal fish monitoring** by testing and suggesting comprehensive fish monitoring and stock assessment methodologies and guidelines in coastal areas.
- Improve Baltic commercial fish stock assessment by **extension of survey areas** into northern and coastal parts.
- Improve quality of fish stock assessment source data by **coupling bottom trawling with pelagic acoustic surveys** of the stocks and by enhanced and harmonized fish **growth and feeding analysis methods**. Upgrade specific methodological aspects of the Baltic International Acoustic Surveys (BIAS).

# ***Phase 2 focuses*** *ctd*

## **Ecosystem health.**

- Contribute to further development of Baltic sea ecosystem **health assessment strategy** with particular focus on priorities outlined by HELCOM: eutrophication and hazardous substances, biological diversity , and shipping.
- Make operational the application of methodologies allowing to assess **multiple marine ecological disturbances** in the Baltic Sea. With this purpose establish dedicated expertise centre and network of national experts.
- Support involvement of **biological effects monitoring** and fish pathology into Baltic Sea environmental monitoring programme and development of associated generic early warning and substance-specific indicators. Establish dedicated expertise centre and network of national experts focusing on biological effects of environmental pollution.

# ***INDICATOR SELECTION CRITERIA***

- **Regionally Responsive** – The indicator must reflect changes in ecosystem condition and respond to stressors (pressures) of concern across most resource classes and habitats within the monitored region
- **Unambiguously Interpretable** – Indicator must be related unambiguously to an assessment endpoint (relevant exposure/stressor/habitat variable) that forms part of the ecosystem's overall conceptual model of ecological structure and function.
- **Simply Quantifiable** – Indicator can be quantified by synoptic monitoring or by cost-effective automated monitoring that can be adopted by all participants in the monitoring survey.
- **Stable over the Sampling Period** – Indicator exhibits low measurement error and stability of regional cumulative frequency distribution during the sampling period (low temporal variation during the sampling period in regional statistics)
- **Low Year-to-Year Variability** – Indicator must have sufficiently low natural year-to-year variation to detect ecologically significant changes within a reasonable time frame
- **Environmental Impact** – Sampling for the indicator should have minimal environmental impact.

# ***Phase 2 focuses*** *ctd*

## **Biological diversity.**

Support development of conceptual model and related **indicators for biodiversity assessment**.

Support development of **integrated models** as tools for assessing the impact of human activities, including fisheries, on Baltic Sea biological diversity.

Initiate well focused pilot activity to accomplish marine **habitat mapping**, including both collecting of field data and application of model-based forecasts.

Continue development of cost-effective system to **prevent introductions of harmful alien species** by: (i) support to research and administrative network on biological invasions, (ii) further development of the related information system, (iii) support to transfer of knowledge elaborated by international and regional organizations.

# ***Phase 2 focuses*** *ctd*

## **Socio – economy.**

Contribute to development and testing of **socioeconomic indicators** regarding effects of eutrophication and hazardous substances, impacts of fisheries and biodiversity loss and valuating direct and indirect effects related to ecological goods and services.

Contribute to testing of methods by practical estimating the possible **socioeconomic effects of restoring good ecological quality** in demonstration areas.

Develop methods for **valuation of environmental goods and services**, costs of management measures, and socioeconomic projections.

Continue to collect regional data on **fisheries socioeconomic**. *In view of its importance for implementation of the ecosystem approach it is necessary to modify C1 PIP Sub-activity 3(c) “Economic Evaluation of Component 1 Activities” to fully include socioeconomic aspects.*

# ***Phase 2 focuses*** *ctd*

## **Data management.**

Elaborate an integrated approach to spatial data management by unifying spatial reference systems, database models, data exchange and processing techniques. Propose technological solutions and data transformation routines to ensure spatial data reference.

Produce a set of standardized GIS/satellite base-maps to ensure unified thematic mapping of field information.

Establish technological base for collection, assessment and visualization via on-line interface of the information on multiple marine ecological disturbances

# ***Phase 2 focuses*** *ctd*

## **Capacity building.**

**Knowledge: continue training workshops and other activities, continue to support travels of beneficiary country experts to participate at GS, WGs, seminars and training events initiated by Project, ICES, HELCOM and third parties e.g. LME Learn, IOC, EU JRC.**

**Technical: continue to implement adaptive procurement scheme to enhance data collection ability and quality and optimize the expenses.**

**To better manage and coordinate Project's capacity building activities we propose to elaborate specific capacity building scheme and establish it as an integrated part of the Project.**

# ***Phase 2 focuses*** *ctd*

## **Coordination of C1 and C2 activities.**

Demonstrate practical assessment tools elaborated by the Project in limited number of medium size (possibly, trans-boundary) 'catchment-river-coastal sea' systems during the second phase. There the expert groups of both components will establish proper monitoring and test integrated assessment approaches including those required by EU Water Framework Directive.

Collaboration between marine and drainage basin components will be needed to establish necessary monitoring and produce technical river restoration plans.

Set of thematic base maps developed by C1 GIS/data coordination centre include both marine and catchment areas of the region, therefore both components will benefit from this information service.

## ***PHASE 2: PROPOSED GLOBAL RE-ARRANGEMENTS***

- 1) strengthen Balic Sea Steering Group .*
- 2) Establish LOCAL ECOSYSTEM MANAGERS in each of beneficiary countries*
- 3) Support Establishment of Interministerial BS LME Committees in each of beneficiary countries*
- 4) Improve outreach*

## ***PHASE2: PROPOSED ADMINISTRATIVE RE-ARRANGEMENTS WITHIN THE C 1***

### *1) Biodiversity:*

ZIN RAS > Taxonomy expertise centre;  
open competition for location of Biodiversity CC.

### *2) Socio-economics:*

*Present Socioeconomy CC to focus on Fisheries socioeconomy, open competition for 2 other positions:*

- Regional scale analysis of goods & services and management impact;
- management of local level socioeconomic analysis in coastal demonstration sites

### *3) Coastal activities:*

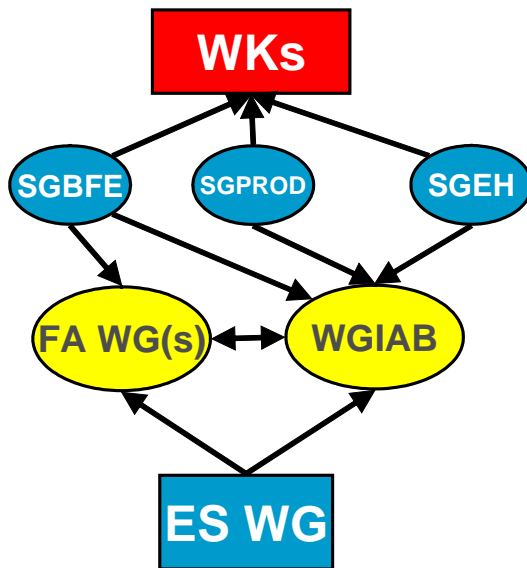
Create a coastal fisheries LL (EMI, EE), select an Ecosystem manager to supervise integrated assessment in coastal demonstration sites.

### *4) SOOP/Phytobenthos:*

Split Phytobenthos from SOOP, place independent SOOP LL at Inst. Marine Systems, Tallinn University

# WK IAB

- the need for advancing towards an Integrated Assessment (IA) of the Baltic Sea ecosystem similar as initiated for the North Sea (i.e. REGNS), as a basis for implementing the Ecosystem Approach to Fisheries Management (EAF);
- the need for an improvement of co-ordination of the WG/SG-work with other regional initiatives (e.g. HELCOM, EU Marine Strategy);



- The center of this structure is the established of a “Working Group on Integrated Assessments of the Baltic Sea” [WGIAB], which will be the counterpart to the present fisheries assessment groups [FAWGs, i.e. WGBFAS and WGBAST].

- Both groups should be supported by observational data from an “Ecosystem Survey Working Group” [ESWG].

- The work of the assessment groups should be scientifically supported by 3 SGs, the SG for Baltic Fish Ecology (SGBFE), the SG on Baltic Productivity (SGPROD), and the SG on Baltic Ecosystem Health (SGEH).

- SGBFE will be the result of merging the present groups SGMAB, SGBFFI and SGABC. SGBFE should deal with all issues related to commercially important Baltic fish species, but especially (i) conduct bi-annual multispecies assessments providing natural mortality rates of cod, herring and sprat for WGBFAS, and (ii) coordinate issues related to age-reading problems of cod and sprat.

## ***LOG-FRAME WORKSHOP 7,8,9 June, 2006, Tallinn***

- Review the logframe for Phase 1 of the project to refine the indicators and elicit lessons learned from implementation so far to provide input to the Implementation Completion Report (draft of ICR needs to be ready by end August 2006);
- Carry-out participatory logframe exercise for design of Phase 2 of BSRP, including incorporation of the new GEF International Waters monitoring and evaluation indicators framework with “catalytic impact indicators”;
- Build consensus on an overall vision for the objectives of Phase 2, including increased integration of Components 1 and 2 (i.e., marine and land management);
- Provide work plan for distribution of tasks for the preparation of Phase 2 (including preparation of Project Implementation Plan (PIP)).