

Work Package 3

Lead: WWF-Sweden (17)

Partners: SNS, NERI, DIFRES, WWF-DK, 7,
EMI, CORPI, SYKE, WWF-FIN,
SEPA, NBFR, TMBL



Strategic Focus of WP3

1. Development and demonstration of the “blue corridor” concept

Lead: EMI (TMBL/NERI)

2. Evaluation of representativity of landscapes & habitats in the Natura 2000 network and other MPA networks in the Baltic Sea.

Lead: WWF-Sweden

3. Evaluation of coherence between sites in the Natura 2000 network and other MPA networks in the Baltic Sea.

Lead: SYKE / WWF-Finland

There is a strong link between the three parts of WP3!

Planned results

1. Blue corridors

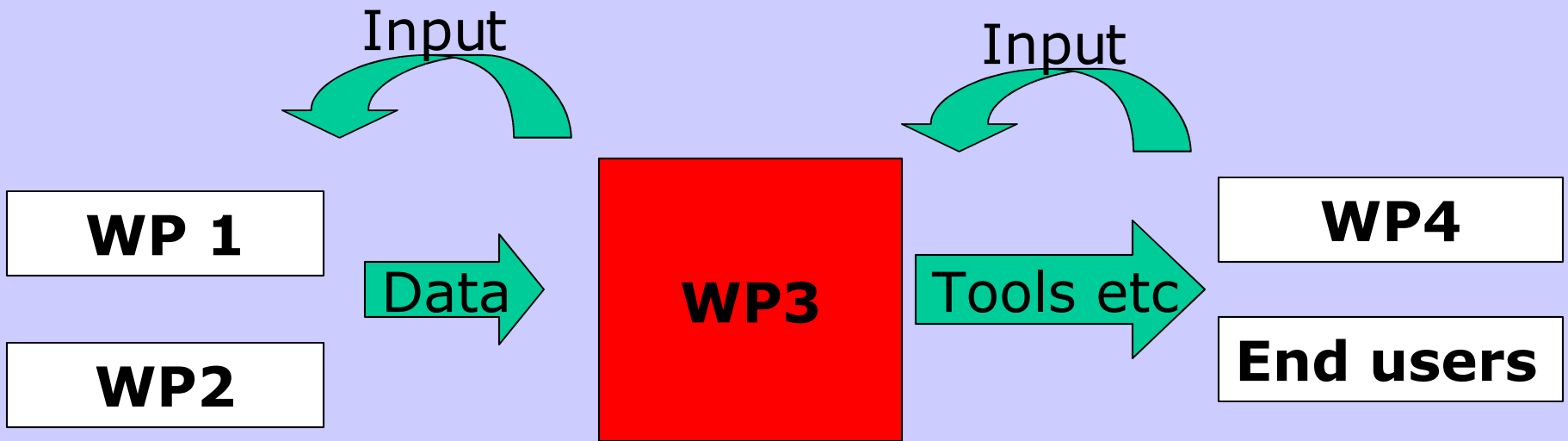
- Development and demonstration/promotion of the “blue corridor” concept
- Recommendations

2. Representativity

- Tools / methodology for evaluation and establishment of representative MPA networks
- Evaluation of representativity of landscapes & habitats in the Natura 2000 network and other MPA networks in the Baltic Sea.
- Gaps identified (landscapes, habitats & species not sufficiently covered)
- Suggestions on how to improve representativity in existing MPA network

3. Coherence

- Tools / methodology for assessing ecological coherence
- Evaluation of coherence between sites in Natura 2000 and other MPAs networks in the Baltic Sea.
- Gaps identified (on landscapes and habitat level)
- Suggestions on how to improve coherence in existing MPA networks



Part 1: Blue Corridors

Connectivity among marine protected areas



Why connectivity?

- Coherent networks of MPAs
- Insurance against failure of individual MPAs
- MPAs for species with long-ranging life cycles

Also important to consider..

- International examples
- Terrestrial examples
- NATURA 2000
- Technical aspects
- Alternatives to MPAs

Data for connectivity

- Life history of species (fish and others)
- Genetic data
- Biogeographic regions
- Current patterns
- Interdependence among habitats

Milestone 1

Purpose: To review and develop the blue corridor concept

Outcome: Report/article

Mode of work: Literature review of subjects. Each partner contribute to one or several subjects. One or several partners act as "coordinators" and "editors".

Milestone 2

Purpose: To further develop the concept and produce a "manual" with recommendations

Outcome: Report/manual including Baltic examples

Mode of work: Modelling and analysis, using Baltic data. Data collection.

Milestone 3

Purpose: Evaluation of the “blue corridor” concept in the management of living resources (fisheries)

Outcome: Report on the applicability of blue corridor concept in relation to fisheries , in combination with habitat maps

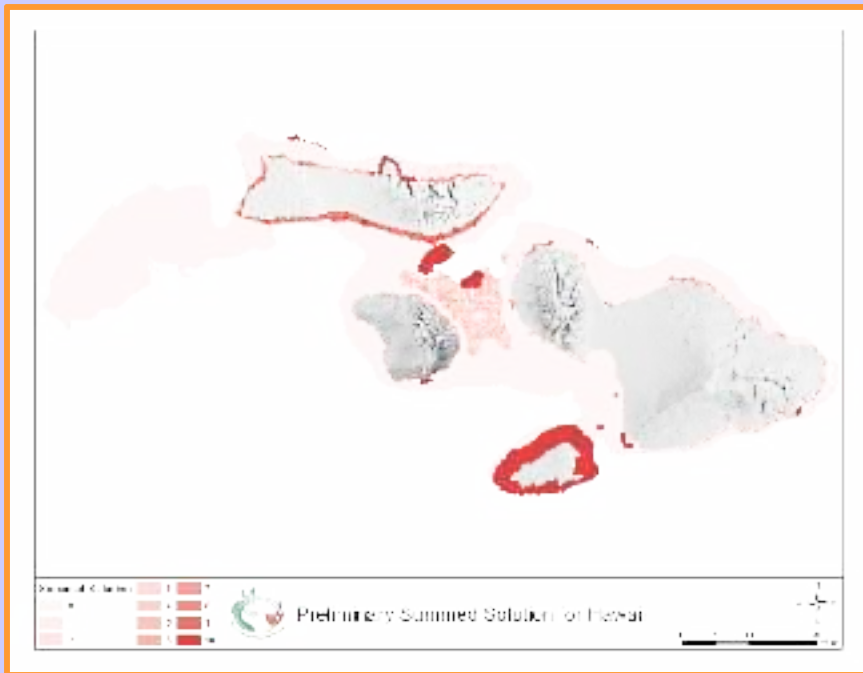
Mode of work: Modelling and analysis, using Baltic data. Data collection.

Part 2: Representativity

Objectives

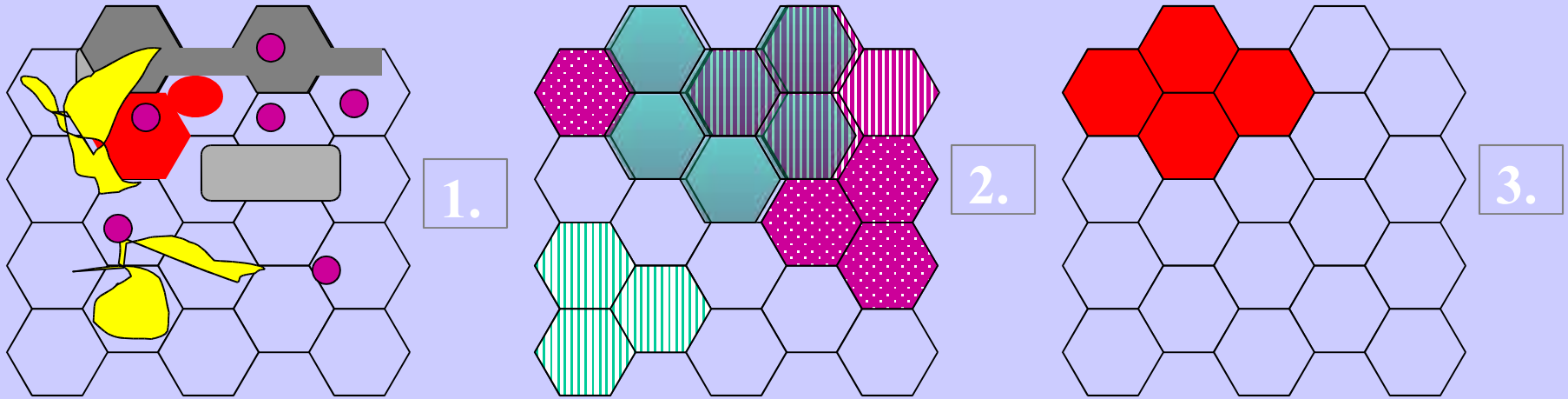
- To develop **tools/methodology** for:
 - selecting a representative MPA network in the Baltic Sea
 - evaluation of representativity in the existing Baltic Sea MPA network.
- To evaluate the representativity in existing Baltic Sea MPA network and identify gaps.

MARXAN - site selection software



- e.g. Great Barrier Reef, Hawaii
- Site selection
- Zoning
- Identify landscapes, habitats, species not sufficiently protected
- etc...

MARXAN



3. $A - B = C$ End result

- And,
 1. Must be grouped
 2. Minimize the total area
 3. Include all existing protected areas
- Assign a cost if the goal is not met

Milestone 1

- Research and development of the **methodology**
- Develop **criteria** - What? How much? **Input from end users!**
- Identify **data requirements** and **data needed** - **Input to WP1, 2 & 4!**
 - Literature review
 - Review of experiences from other projects
 - Workshop
 - Questionnaire to key authorities

OUTPUT - A strategy/methodology including criteria and data needs.

Workshop (15-16 September):

- Develop the methodology, MARXAN
- Identify selection criteria
- Identify data needs

- Experts/facilitators: The Nature Conservancy
- Participants: Key BALANCE partners, ~15 pers.

Milestone 2

- Collection of data, supplementing data collected and compiled by WP1, 2 & 4.
- Further develop the methodology and criteria.

OUTPUT - Data collected. Methodology developed.

Milestone 3

LANDSCAPE LEVEL (entire Baltic Sea)

- **Analyse** the **marine landscape maps and other data (WP2)** to identify sets of sites which represents the full spectrum of marine landscapes in the Baltic Sea. MARXAN!
- **Identify gaps** in the existing MPA-networks.

OUTPUT - Sets of selected sites. Gaps identified.



Milestone 4

LANDSCAPE LEVEL (entire Baltic Sea)

- **Workshop** to discuss identified sets of representative sites and gaps in existing networks
- Adjust analysis based on workshop results
- **Interim report**

OUTPUT - Interim report on representativity of marine landscapes in the BS

HABITAT LEVEL (pilot areas)

- **Analyse** the **marine habitat maps and other data (WP2)** to identify sets of sites which represents the full spectrum of marine habitats in the pilot sites. MARXAN!
- Identify **gaps** in the existing MPA-networks.

OUTPUT - Sets of selected sites. Gaps identified.



Milestone 5

HABITAT LEVEL (pilot areas)

- **Workshop** to discuss identified sets of representative sites and gaps in existing networks.
- Adjust analysis based on workshop results.

HABITAT & LANDSCAPE LEVEL

- **Final report** (co-ordinated with part 1 & 3):
 - conclusions on the evaluation of representativity
 - recommendations for improvements
 - description and recommendations regarding the tool/methodology used
- A draft report will be sent out to stakeholders for comments

OUTPUT - Final report!



Part 3: Ecological Coherence

Objectives

- 1) To come up with a definition of ecological coherence
- 2) To develop a collection of tools for assessing ecological coherence in the Baltic Sea
- 3) To assess the ecological coherence of the current Baltic Sea MPA network



Definition of ecological coherence

Refers to the **inter-connectedness** and **ecological functionality** of an MPA network

Includes many elements, such as:

- Are all the important habitats protected in each distinct geographical area (representativity)
- Is the cover of protected habitats adequate to support habitats/species
- Is there adequate replication of protected habitats
- Is there exchange of larvae and adult individuals between the sites (replacement of stock, gene flow)

There is a strong link to both representativity and blue corridors!

Milestone 3

Developing **the concept of ecological coherence** – literature review and contact with other projects

Workshop 1. How to assess the ecological coherence of the MPA network on the scale of the whole Baltic Sea using the marine landscape maps.

Collection of **additional data**

OUTPUT

-science-based criteria to evaluate ecological coherence at the landscape level

Milestone 4

Landscape level assessment using criteria and methods agreed in previous Milestone

Workshop 2. How to assess ecological coherence in the pilot areas using the habitat maps

Interim report on ecological coherence at the landscape level

OUTPUT

- **science-based criteria to evaluate ecological coherence at the habitat level**
- **Interim report**

Milestone 5

Habitat level assessment using criteria and methods agreed in previous Milestone

Final report on the ecological coherence of the Baltic Sea MPA networks – the report is prepared together with representativity and blue corridors to produce one final report

OUTPUT

- **final report**

Discussion /Links to other WPs

- Data needed from WP 1, 2, 4
- Developed tools should be used by WP 4
 - ⇒ e.g. for zoning plans - blue corridors concept, representativity (Marxan), coherence criteria etc.
- MARXAN can support assessment of coherence
- Definitions - common understanding is important
- Time schedule for Coherence (It doesn't start until M3!)
 - How to achieve communication between coherence and WP2, on the landscape and habitat maps
 - Coherence WS earlier?
 - What can coherence give other WPs – results are out in Milestones 4 & 5