

Introduction to the concept and preliminary results of an economic analysis of the indicator based biodiversity monitoring programmes

Total Bio workshop

Kristina Veidemane & Kristine Pakalniete

Tallinn, 2 April, 2014

Content of the presentation

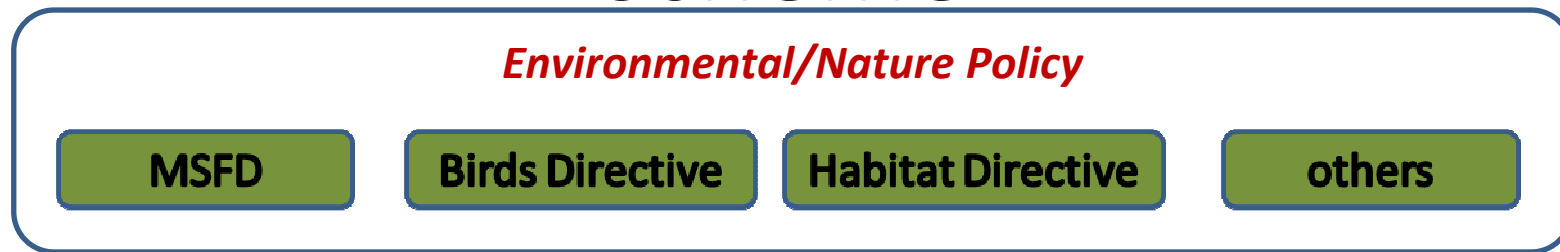
- Aim of the task, concept and approach
- Introduction to the methodology for cost efficiency calculations
- Preliminary results from selected evaluation of indicators related to pelagic (zooplankton) and birds (wintering birds) and groups
- First findings



Objectives of the economic analysis

- to evaluate and demonstrate **cost implications** of building policy (e.g. MSFD) compliant national **monitoring programme/s**, including the introduction of new monitoring methods for the marine biodiversity monitoring;
- to identify **other relevant aspects** of introducing new monitoring methods for marine biodiversity monitoring (e.g. “better” information for assessing the state of biodiversity).

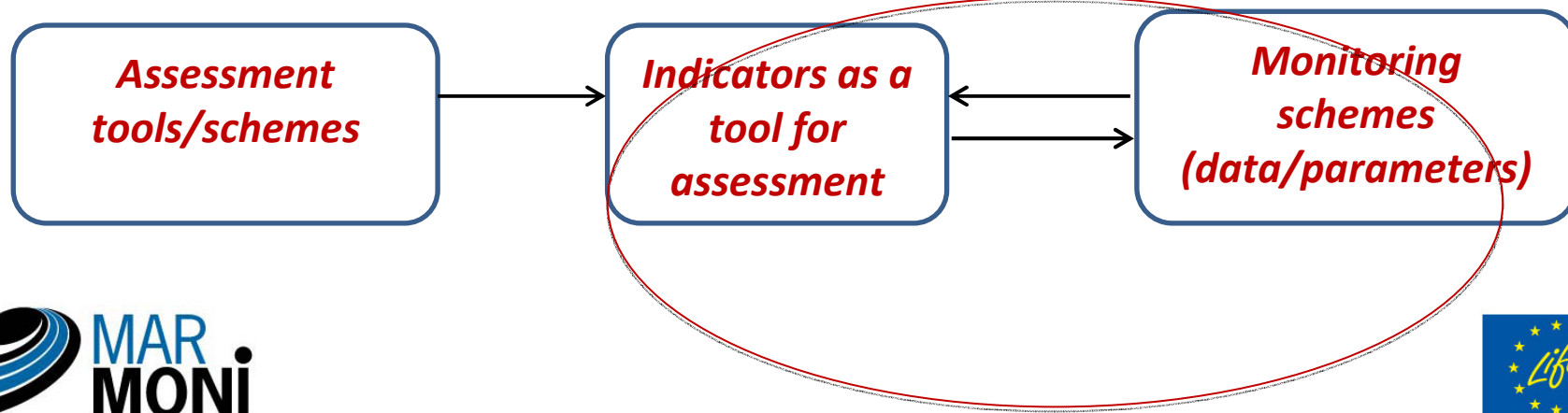
Concept: biodiversity assessment scheme



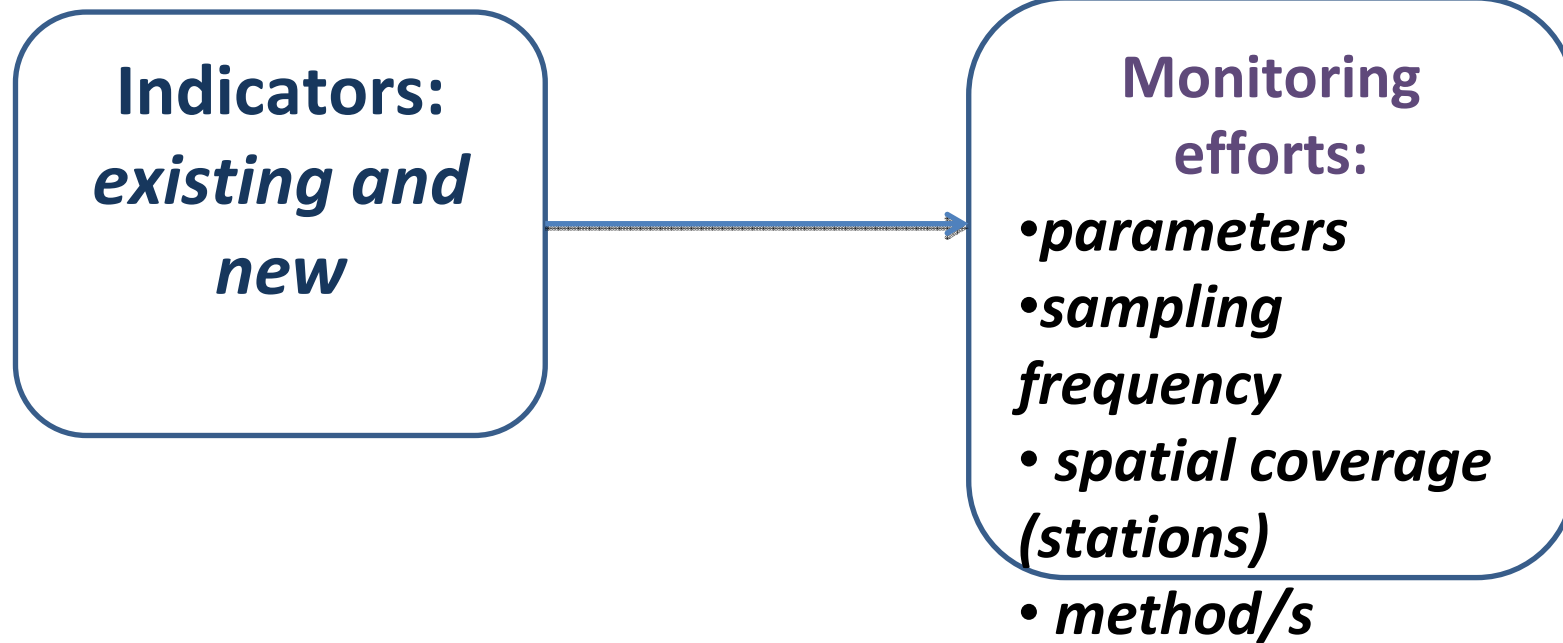
What has to be achieved in BD (species, habitats, ecosystem status)?



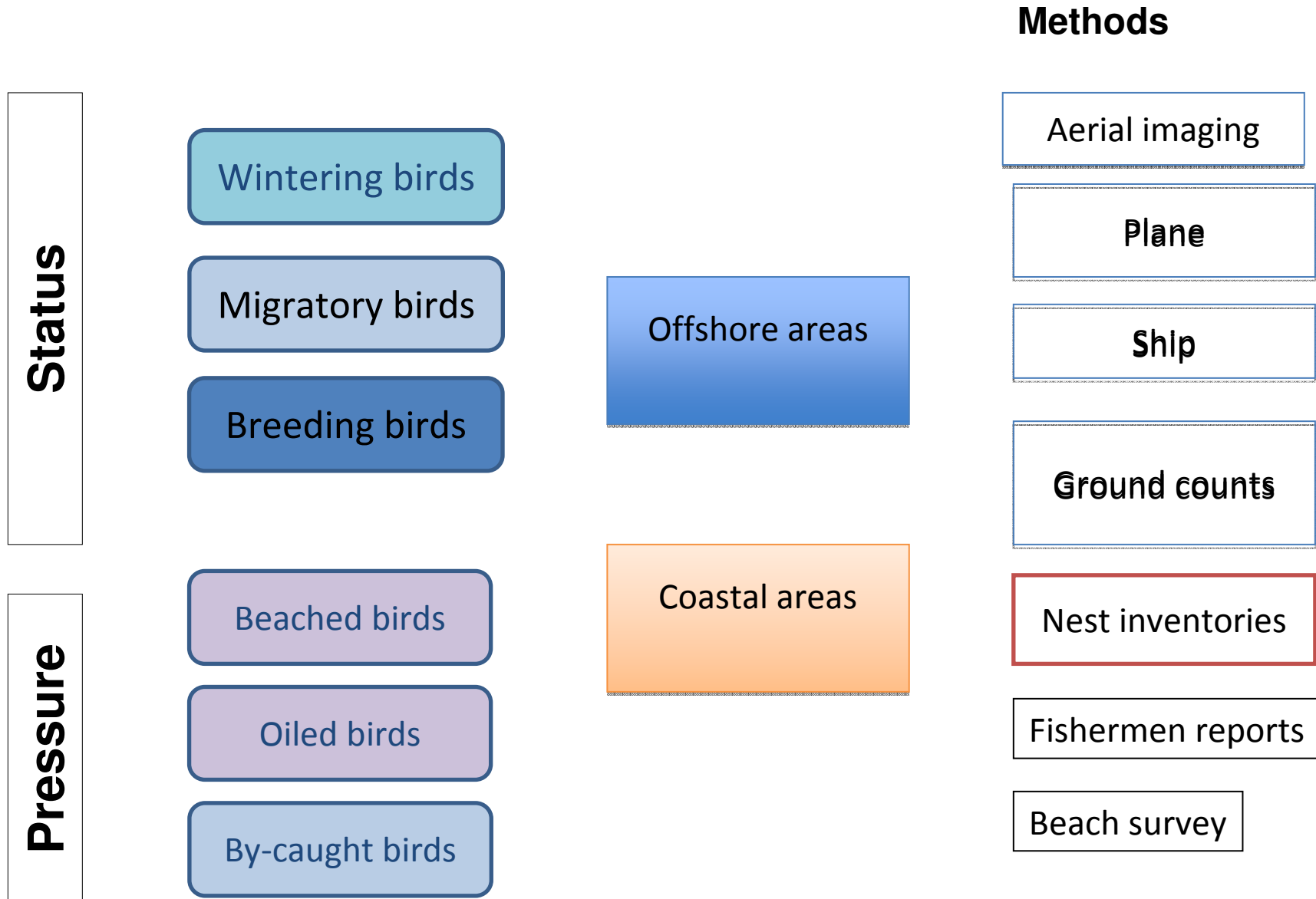
How to assess the BD status to follow the progress?



Concept



Bird indicators



Wintering birds

Indicators for assessment

- 4.1. **Abundance** index of wintering waterbird species (*single sp.*)
- 4.2. Wintering waterbird index (WWBI)
- 4.3. Wintering indices for waterbirds of different feeding guilds (WWBIFG)
- 4.6. **Distribution** of wintering waterbird species (*single sp.*)
- 4.7. Distribution of wintering waterbird species (multi-species)
- 4.8. Distribution of wintering waterbirds of different feeding guilds (multi-species)

Monitored parameters

Number of birds per site of selected wintering waterbird species

Coastal areas

Offshore areas

Offshore areas

Wintering birds

Monitored parameters

Number of birds per site of selected wintering waterbird species

Methods

Aerial imaging

Plane

~~Ship~~

Ground counts

Monitoring design variables

Preliminary cost estimations per year (EUR):

		Field work	Data analysis (Lab)	GIS / Modelling	Data management	Fixed	Total
4.1.	Coastal ground count	13 628	3 063	6 480	1 525	4 959	29 655
4.1.	Ship count	13 643	214	3 240	763	1 791	19 651
4.1.	Plane count	12 618	3 676	3 240	763	2 035	22 331
4.1.	Aerial imaging	11 128	2 138	3 240	763	1 929	19 197
4.2.	The same method as 4.1.			450	675	225	1 350
4.3.				450	675	225	1 350
4.6.				2 250	375	525	3 150
4.7.				150	225	75	450
4.8.				150	225	75	450