



LRTAP

Longrange Transboundary Air Pollution



***ICP Forests Expert Panel meeting
Biodiversity and ground vegetation***

SEBI2010 & political background

Bruno Petriccione, Ph.D.

ITALIAN FOREST SERVICE - CONECONFOR BOARD
***Co-chairman of ICP Forests Expert Panel on Biodiversity
and ground vegetation***

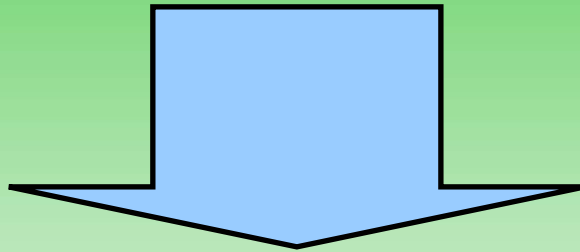




UN Convention on
Biological
Diversity



Halt the loss of biodiversity



EEA/UNEP/ECNC *SEBI2010 initiative*
(Streamlining European 2010 Biodiversity Indicators)

ICP Forests represented by the Italian Forest Service

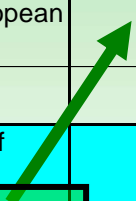


SEBI2010 deliverables - indicators

CBD focal	EU Headline Indicators	Specific indicator proposed	Category	Delivery of indicator		Delivery of documentation		
			A,B,C	2005	2006	2005	ASAP/2006	2006/7
Trends in the abundance and distribution of selected species		Pan-European Common Bird Index	A	Available		Available		
		European Butterflies	A	Grasslands available		Available		
		Freshwater fish and lampreys	C		Develop	Draft		X
		Seabirds	C		Develop	Draft		X
		Waterbirds	B		Finalise	Draft	X	
		Marine fish						
		Dragonflies						
		Cetaceans, seals						
		Large carnivores						
		Large herbivores						
		Bats						
		Amphibians						
		Plants						
		Change in status of threatened and/or protected species		IUCN Red List Index for E				
Pan-European Threatened								
Change in status of species of European interest	C				Develop	Draft		X
		Endemic species	C		Develop			X
Trends in extent of selected biomes, ecosystems and habitats		Trends in extent and composition of selected ecosystems in Europe	B	Available		Draft		
		Status and trends of forest ecosystems	C		Develop	Draft	X	
		Trends in extent of wetlands	C	Draft	Develop			X
		Trends in extent and integrity of peatland	C	Draft	Develop			X
		Trends in extent of tundra habitats (Shrub, freshwater, tree- line)	C	Draft	Develop	Draft		X
		Dynamic of glaciers	C	Draft	Finalise	Draft		X
		Sea-Ice extent in Arctic	C	Available	Finalise	Draft		X
		Change in area of snowbed communities in mountain alpine zone	C	Draft	Finalise	Draft		X
		Position of tree-line	C		Develop			X
								X

SUB-INDICATORS (REAL DATA):

- ✓ Tree condition
- ✓ Plant species composition and coverage
- ✓ Deadwood amount and type
- ✓ Forest structure
- ✓ Naturalness level
- ✓ Conservation status of forests in Natura2000 sites



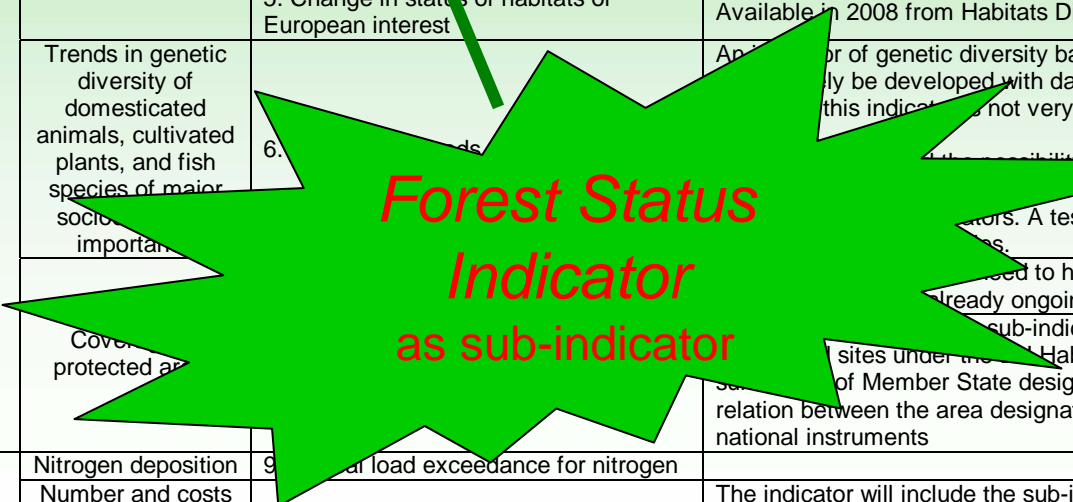
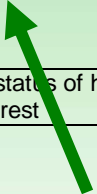
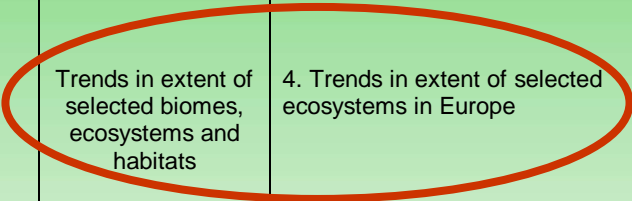
CURRENT RESULTS:

- *pan-European Co-ordination Team (EEA, UNEP, ECNC)*
established, July 2004
- *scientific support by six ad hoc Expert Groups*
established, May 2005
- *publishing of final version of indicators set and adoption by the Council of EU*
first draft expected by 04-2007
- *establishment of a co-operative monitoring network at pan-European level*
expected by 2008



INDICATORS TO BE INCLUDED IN THE FIRST SET

CBD focal area	EU Headline	Indicator proposed for inclusion	Comment	
Status and trends of the components of biological diversity	Trends in the abundance and distribution of selected species	1. Trends in the abundance and distribution of selected species: a) Common birds (PECBI) b) European butterflies	Need to check whether combination in one graph is possible.	
	Change in status of threatened and/or protected species	2. IUCN Red List Index for European species	Communication and clarification need to be considered further, to make sure it is easy to understand and interpret by policy makers.	
		3. Change in status of species of European interest	Available in 2008 from Habitats Directive reporting	
	Trends in extent of selected biomes, ecosystems and habitats	4. Trends in extent of selected ecosystems in Europe	This is a CLC based indicator containing all major ecosystem types of Europe (wall to wall) which will be supplemented where appropriate by additional detail on the following sub-ecosystems and habitats, drawing from other datasets: glaciers sea-ice cropland wetlands sagebrush	Concerning the major ecosystem type forests - EG2 and EG6 have the task to come up with one single appropriate forest extent definition. Naturalness will be a subdivision of this indicator, dividing the forest ecosystems in "undisturbed by man, semi-natural and plantations."
			5. Change in status of habitats of European interest	Available in 2008 from Habitats Directive reporting
	Trends in genetic diversity of domesticated animals, cultivated plants, and fish species of major socio-economic importance	6. Genetic diversity of domesticated animals, cultivated plants, and fish species of major socio-economic importance	An indicator of genetic diversity based on number of breeds can likely be developed with data available for 50 countries. This indicator is not very relevant to the 2010 target.	
Coverage of protected areas	7. Coverage of protected areas	Feasibility of an indicator to describe the status of wild biodiversity such as the number of protected areas. A test will be made with data from a number of countries. Used to harmonize forest PAs in the entire PA network. Already ongoing activities. Sub-indicators on Trends in proposals for protected sites under the Habitats and Birds Directives and on the relation between the area designated under the Directives and national instruments		
Nitrogen deposition	9. Nitrogen load exceedance for nitrogen			
Number and costs of invasive alien species	10. Invasive alien species in Europe		The indicator will include the sub-indicators "Cumulative number of alien species in Europe since 1900" and the information from the "Worst invasive alien species threatening biodiversity in Europe"	



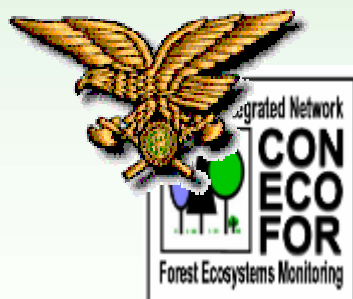
*Expert Groups
on biodiversity indicators
(review/test/document/help implement
the set of biodiversity indicators):*

- ♥ Trends in abundance/distribution of selected species
- ♥ Trends in extent of selected ecosystems/habitats
- ♥ Trends in genetic diversity
- ♥ Nitrogen deposition
- ♥ Number and costs of invasive
- ♥ Area of forest/agricultural ecosystems under sustainable



Development of a Forest Status Indicator (status and trend of forest ecosystem)

A pilot project under the responsibility of the Italian Forest Service,
with the collaboration of PCC of ICP Forests,
funded by EEA, in the SEBI2010 framework
Final Report expected by April 2007



Development of a Forest Status Indicator (status and trend of forest ecosystem)

- ✓ Tree condition
- ✓ Plant species composition and coverage
- ✓ Deadwood amount and type
- ✓ Forest structure
- ✓ Naturalness level
- ✓ Protected forests
- ✓ Conservation status of forests in Natura 2000 sites

**Forest Focus,
ForestBIOTA &
BioSoil data**



MAIN SUB-INDICATORS TO BE ASSESSED (1)

- **Tree condition**: % of trees considered as “damaged” (damage classes 2-4).
- **Forest structure**: values of indices of structural diversity (grouped in horizontal, vertical, size and complexity types).
- **Deadwood amount and type**: volume and decay state of dead downed trees, lying coarse and fine wood pieces, stumps and standing deadwood.



MAIN SUB-INDICATORS TO BE ASSESSED (2)

- **Vascular plant species composition:** total no. of vascular plant species (community level) and related biodiversity indices.
- **Tree species composition:** total no. of tree species (stand level).
- **Conservation status of forests included into Natura2000 sites:** according to the EU classification system (EEC Directive no. 92/43).



MAIN SUB-INDICATORS TO BE ASSESSED (3)

- **Protected forests**: % in relation to the total forest area, according to the MCPFE classification system.
- **Naturalness**: level, as distance between current and potential level (reference stand)

Plantations of not-native species: min value

Old-growth forests: max value



WORK PLAN

- Detailed collection of available meta-data and harmonised methods (EU Forest F..., ECE ICPs, National Forest Inventories, National Reports, MCPFE Reports, etc.);

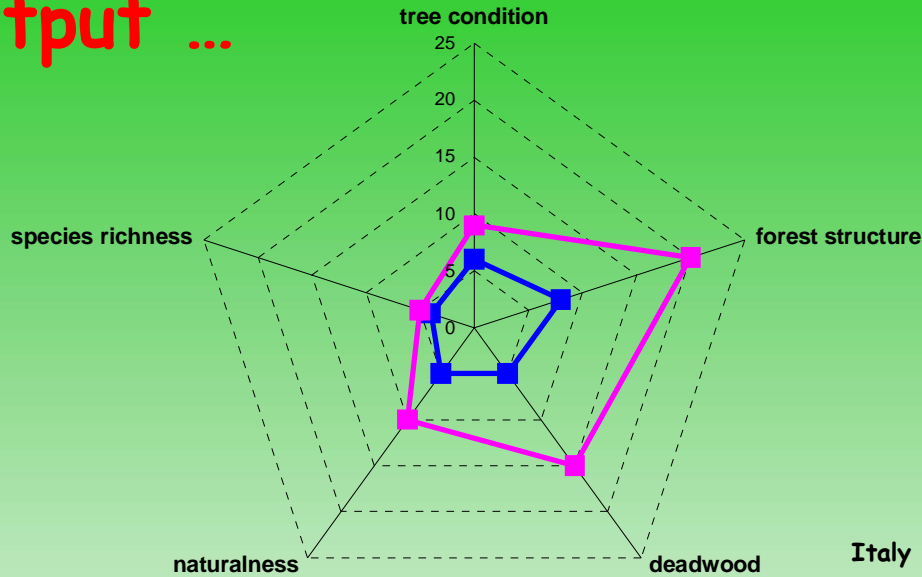
DONE
- Co-ordination of FSI sub-indicators with similar sub-indicators in progress development by SEBI2010 EG6 (...): naturalness, deadwood, forest health, etc.

DONE
- Synthesis and interpretation of the FSI sub-indicators.
- Combination of FSI with headline indicator *Trend in extent and composition of selected ecosystems.*



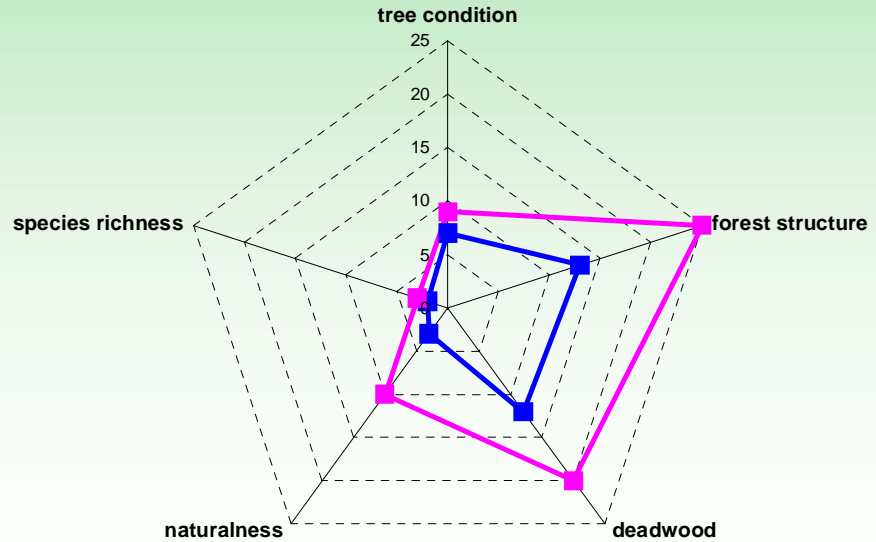
A possible output ...

Italy - beech forests



■ 2005
■ target

Italy - spruce forests



■ 2005
■ target

