

**European Biodiversity Observation Network:
a project to design and test a biodiversity observing system,
integrated in time and space**

Intercalibration
Species – Habitat - EO



Area Under Recording Sheet

Shower Bath Area (Square Feet) (Total Plots)

Jen. 19/01/2017		Jen. 19/01/2017		Jen. 19/01/2017		Jen. 19/01/2017		Jen. 19/01/2017	
Plot No.	Area (sq. ft.)	Plot No.	Area (sq. ft.)	Plot No.	Area (sq. ft.)	Plot No.	Area (sq. ft.)	Plot No.	Area (sq. ft.)
1	1000	2	1000	3	1000	4	1000	5	1000
6	1000	7	1000	8	1000	9	1000	10	1000
11	1000	12	1000	13	1000	14	1000	15	1000
16	1000	17	1000	18	1000	19	1000	20	1000
21	1000	22	1000	23	1000	24	1000	25	1000
26	1000	27	1000	28	1000	29	1000	30	1000
31	1000	32	1000	33	1000	34	1000	35	1000
36	1000	37	1000	38	1000	39	1000	40	1000
41	1000	42	1000	43	1000	44	1000	45	1000
46	1000	47	1000	48	1000	49	1000	50	1000
51	1000	52	1000	53	1000	54	1000	55	1000
56	1000	57	1000	58	1000	59	1000	60	1000
61	1000	62	1000	63	1000	64	1000	65	1000
66	1000	67	1000	68	1000	69	1000	70	1000
71	1000	72	1000	73	1000	74	1000	75	1000
76	1000	77	1000	78	1000	79	1000	80	1000
81	1000	82	1000	83	1000	84	1000	85	1000
86	1000	87	1000	88	1000	89	1000	90	1000
91	1000	92	1000	93	1000	94	1000	95	1000
96	1000	97	1000	98	1000	99	1000	100	1000

Test of normality data

1. Normality test (Shapiro-Wilk's test)

2. Normality test (Kolmogorov-Smirnov test)

3. Normality test (Lilliefors test)

4. Normality test (Anderson-Darling test)

5. Normality test (Bartlett's test)

6. Normality test (Levene's test)

7. Normality test (Mann-Whitney U test)

8. Normality test (Wilcoxon signed-rank test)

9. Normality test (Z-test)

10. Normality test (t-test)

11. Normality test (F-test)

12. Normality test (Chi-square test)

13. Normality test (K-S test)

14. Normality test (Lilliefors test)

15. Normality test (Anderson-Darling test)

16. Normality test (Bartlett's test)

17. Normality test (Levene's test)

18. Normality test (Mann-Whitney U test)

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33. Normality test (F-test)

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92. Normality test (Anderson-Darling test)

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94. Normality test (Levene's test)

95. Normality test (Mann-Whitney U test)

96. Normality test (Wilcoxon signed-rank test)

97. Normality test (Z-test)

98. Normality test (t-test)

99. Normality test (F-test)

100. Normality test (Chi-square test)

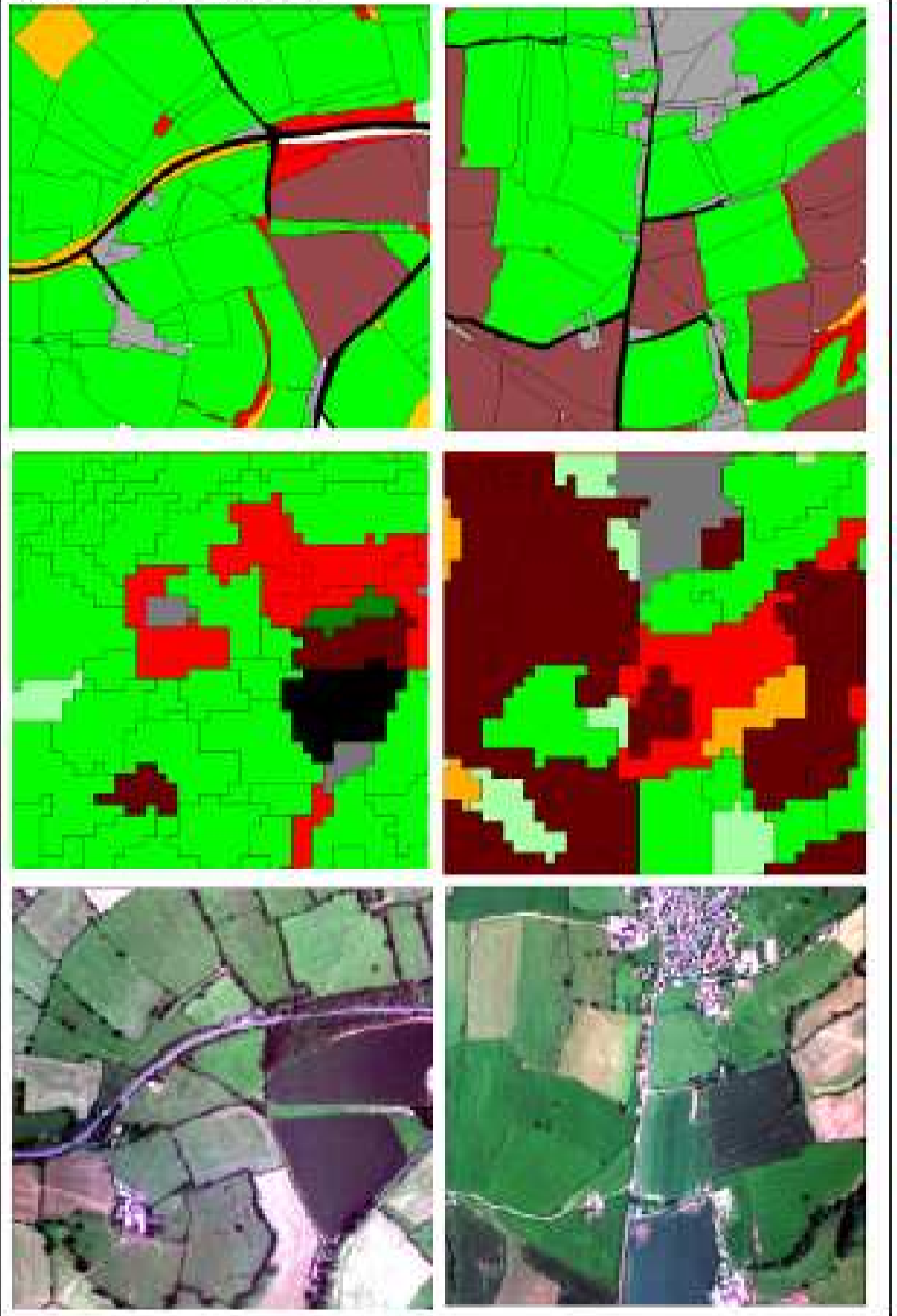
101. Normality test (K-S test)

102. Normality test (Lilliefors test)

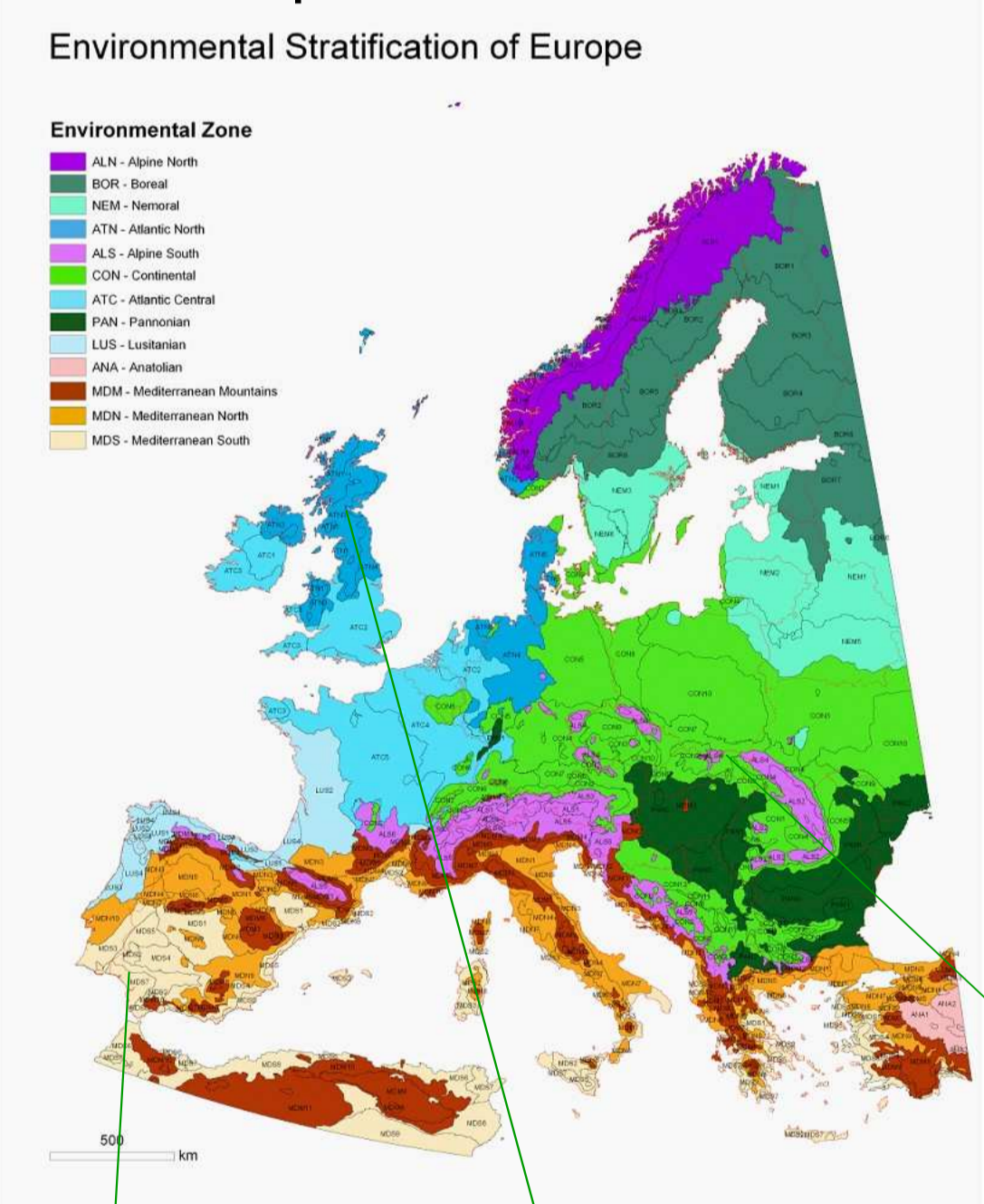
103. Normality test (Anderson-Darling test)

104. Normality

Sample Pastural squares



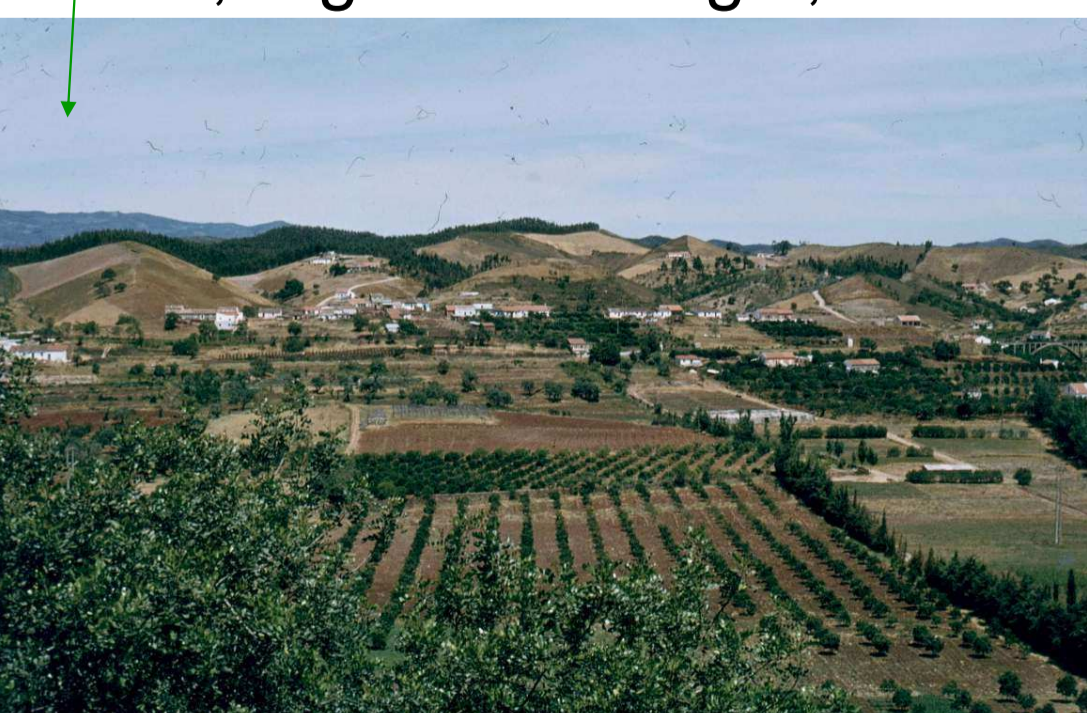
In space and time



Lake district, UK, 1997



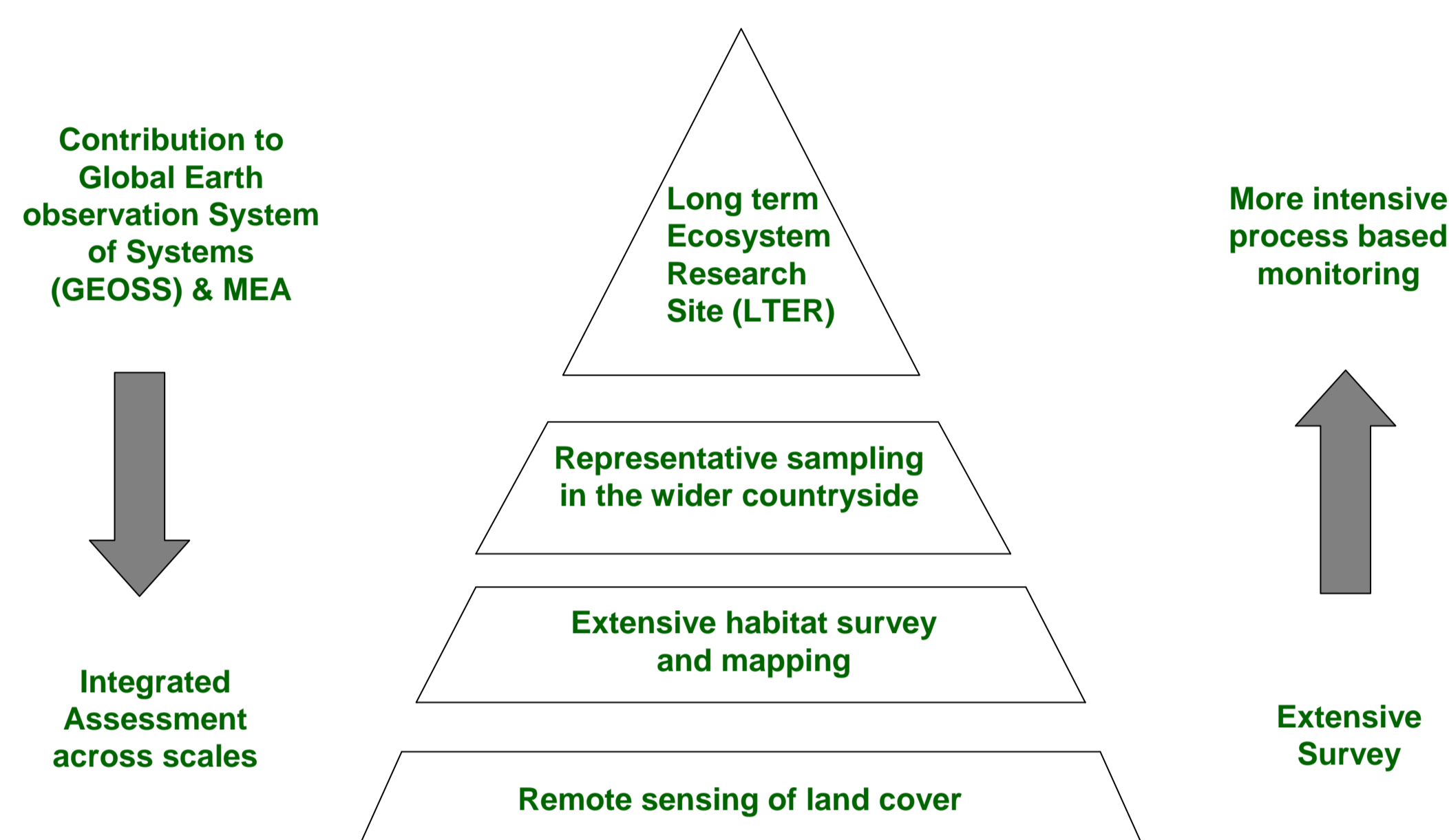
Alves, Algarve Portugal, 1979



The objective of the EU FP7 project EBONE project is to develop and implement a terrestrial biodiversity observation network that is spatially and topically prioritized and a structure for an institutional framework allowing European and world wide terrestrial monitoring and projections on trends based on reliable data and indicators.

This objective has been elaborated in seven steps:

1. Design a biodiversity observation hierarchy based predominantly on existing capability.
2. Develop techniques for upscaling between site, networks of sites, habitats and remotely sensed data for detecting and interpreting changes in key indicators and ecosystems.
3. Validate the observation hierarchy by testing the system with field and earth observation (EO) data.
4. Recommend refinements to the observation system.
5. Make recommendations for the implementation of the system in Europe .
6. Propose how data can be integrated in existing structures and data management systems.
7. Develop and test the world wide compatibility of the system in Mediterranean regions outside Europe.



The EBONE project intends to be the basis of a cost effective data collection system for biodiversity including extant data, both past and present, at national, regional and European level. It will form the basis for the continued development of a European Biodiversity Observation System and in this way provide a common European basis or reporting on biodiversity, and access to indicator data for CBD reporting against the 2010 target. The system contributes to the GEOSS 10 year implementation plan, especially EBONE to the GEOSS tasks EC-07-02 and BI-07-01.

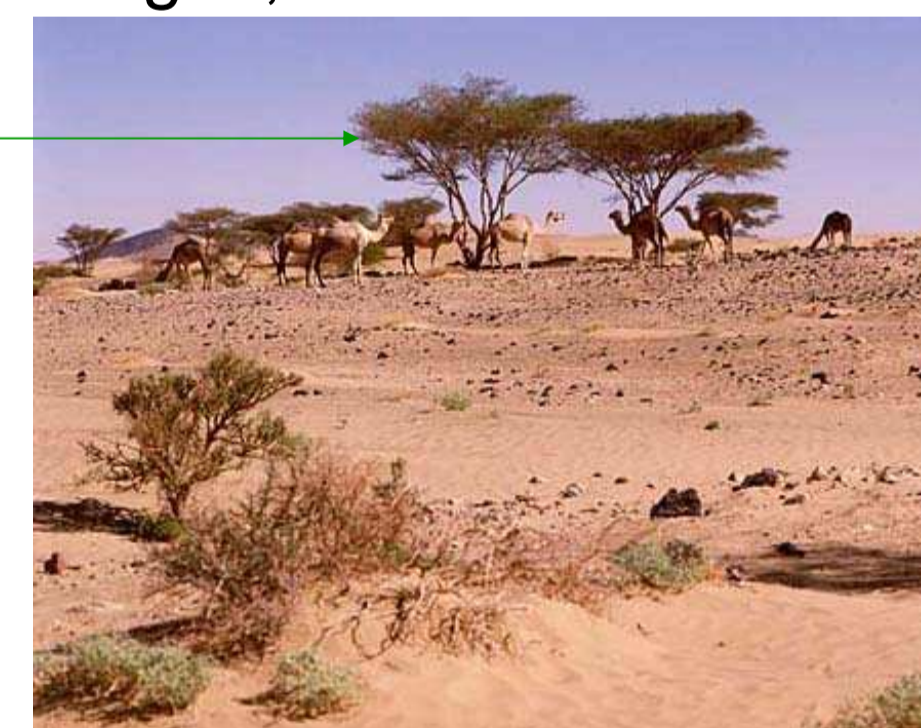
The project will deliver a European contribution to the development of a global biodiversity observation system that is spatially and topically prioritised. It will build on existing information and intercalibrate species, habitat and EO-data. Therefore a link will be made between the methods, data and observation sites available in different countries and regions including the Mediterranean regions and its gradient into the desert in Israel, Northern Africa and South Africa . A link will be made with various ongoing projects and available databases as well as observation and monitoring systems.



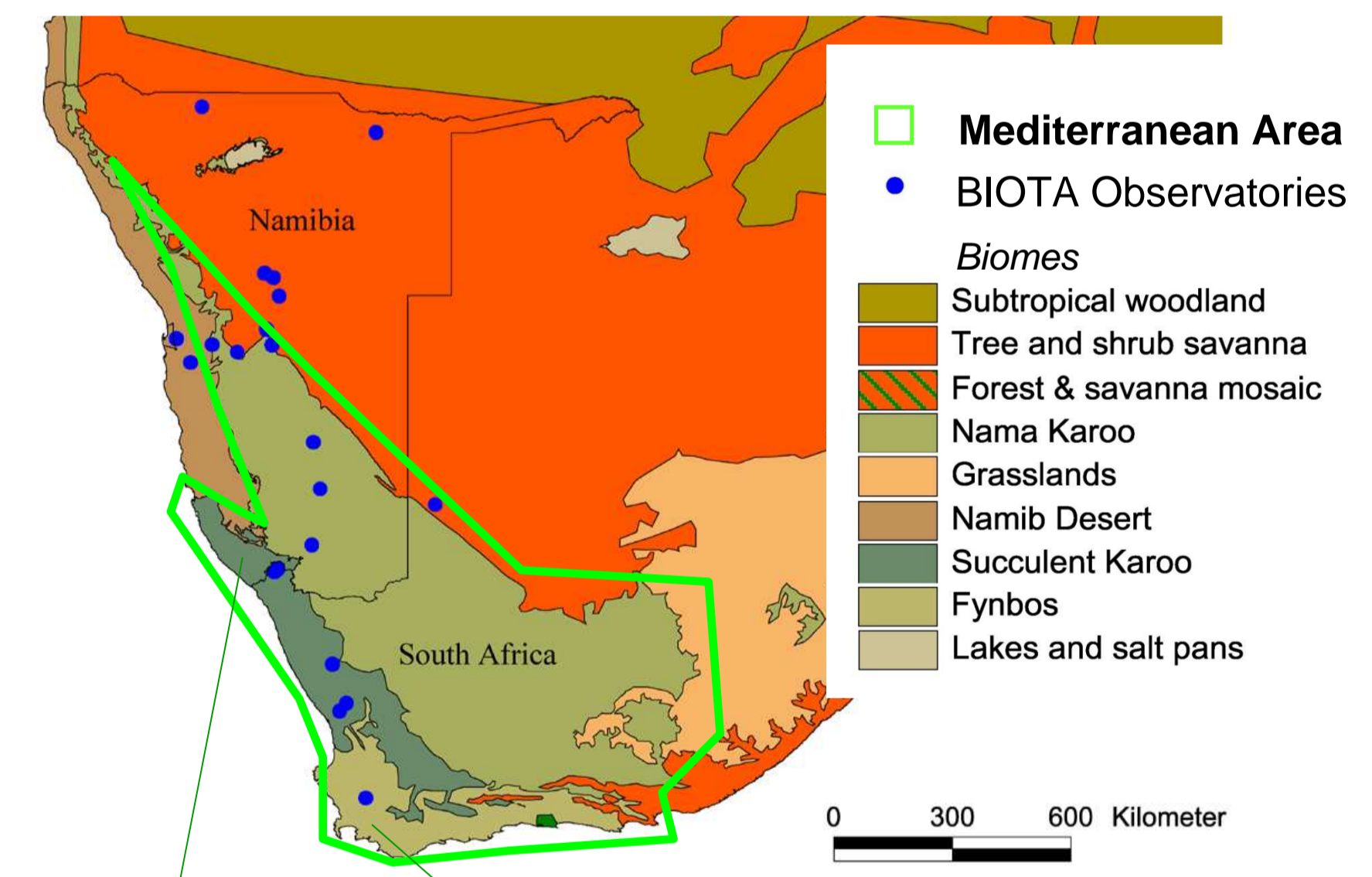
Mount Carmel, Israel 2008



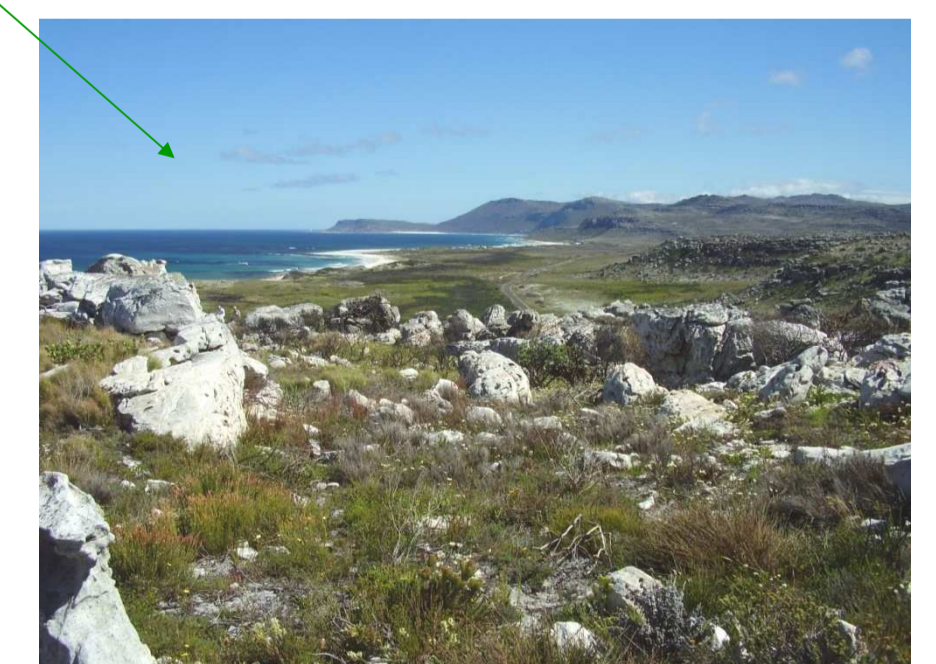
Negev, Israel 2008



Namaqualand,
South Africa



Cape Peninsula,
South Africa



Data that will be included are from representative LTER (Long-term Ecosystem Research) sites, BIOTA-Southern Africa sites and Natura 2000 sites. These will be linked to data from nation-wide habitat monitoring and EO monitoring programmes. Power analysis at different levels (species, habitat, ecosystems) are carried out to test the representativeness and in this way the usefulness of sampling schemes and data sets.

The approach builds on recent European research projects and networks such as AlterNet, BioHab, BioPress and EuMon assessing representativeness of sites and integrating national monitoring systems. Its final product will be a proposal for a cost effective procedure for biodiversity monitoring.

Coordinator: Dr Rob Jongman
Alterra, Wageningen UR
PO Box 47
6700AA Wageningen
The Netherlands
E-mail: rob.jongman@wur.nl
<http://www.ebone.wur.nl>
FP7-Collaborative Project
Theme 6, Environment
project nr 21322

EBONE Partners:

Alterra, Wageningen UR (the Netherlands)
Centre for Ecology and Hydrology, NERC-CEH (UK)
Helmholtz Centre for Environmental Research, UFZ (Germany)
EC-Joint Research Centre, JRC, Ispra (Italy)
Umweltbundesamt (Austria)
University of Bucharest (Romania)
CEMAGREF (France)
Instituut voor Natuur en Bosonderzoek, INBO, Belgium)
University of Edinburgh (UK)

Israel Nature and Parks Authority, INPA (Israel)
 Stiftelsen norsk institutt for naturforskning, NINA (Norway),
 Institute for landscape ecology, ILE SAS (Slovakia),
 Aristotle University of Thessaloniki (Greece)
 Estonian University of Life Sciences(Estonia)
 Universidad Politecnica Madrid (Spain)
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 Council for Scientific and Industrial Research, CSIR (South Africa)
 University Vienna, Dept Conservation Biology, Vegetation Science
 and Landscape Ecology (Vienna)