

Integrated Approach to Plant Conservation for People in the Moroccan High Atlas

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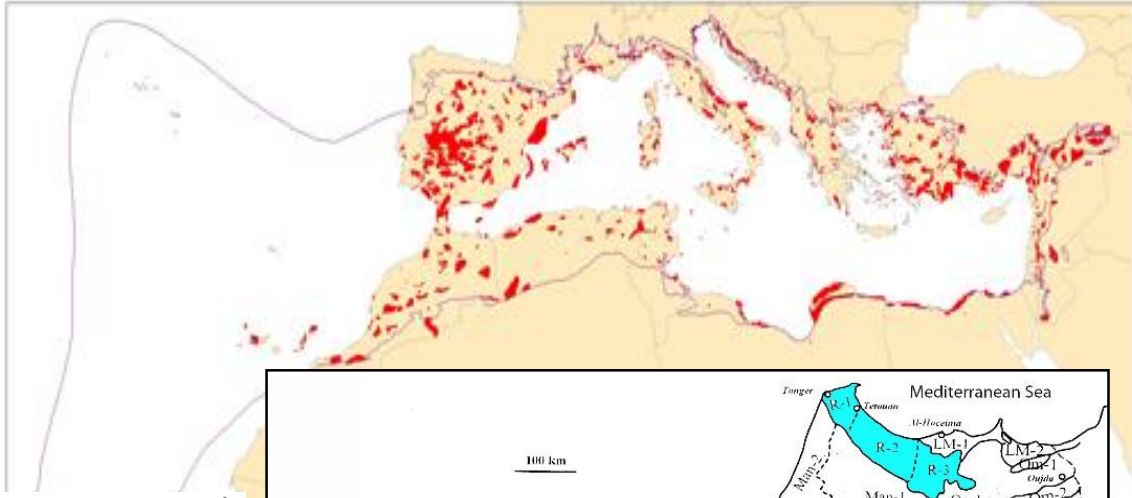
²Moroccan Biodiversity and Livelihoods Association (MBLA), Marrakech



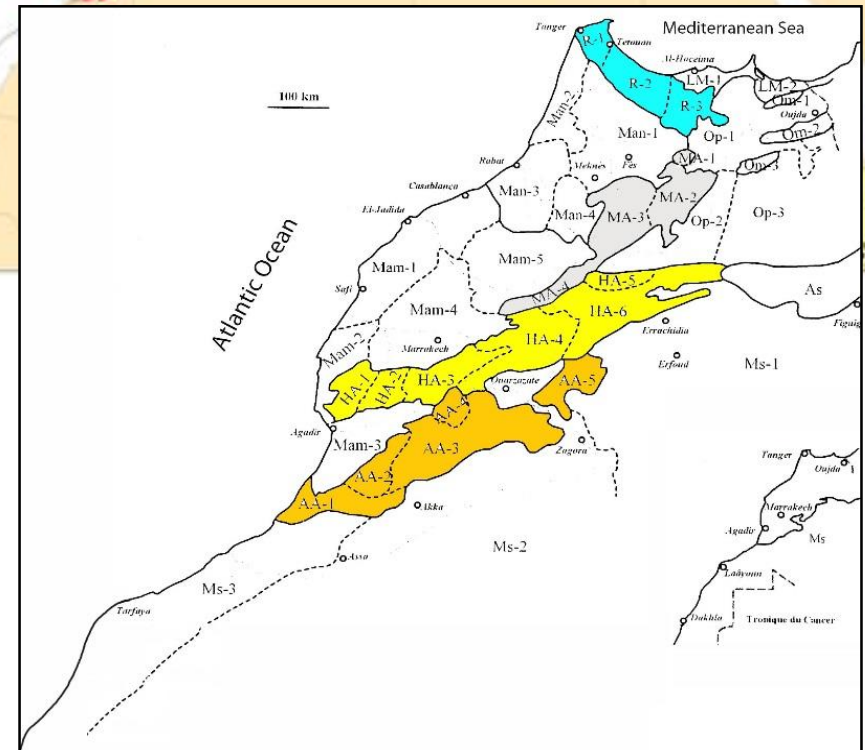
MOROCCAN BIODIVERSITY
& LIVELIHOODS ASSOCIATION



HA Biodiversity Richness



#	Country	# of key biodiversity areas	#	Country	# of key biodiversity areas
1	Albania	16	17	Lebanon	29
2	Algeria	40	18	Libya	19
3	Bosnia and Herzegovina	9	19	Malta	0
4	Bulgaria	0	20	Monaco	0
5	Cape Verde	19	21	Montenegro	11
6	Croatia	37	22	Morocco	68
7	Cyprus	1	23	Palestinian territories	10
8	Egypt	12	24	Portugal*	55
9	France	33	25	San Marino	0
10	FYROM	14	26	Serbia	0
11	Gibraltar	1	27	Slovenia	0
12	Greece	103	28	Spain*	221
13	Israel	10	29	Syria	30
14	Iraq	0	30	Tunisia	62
15	Italy	156	31	Turkey	140
16	Jordan	14	32	Vatican City	0



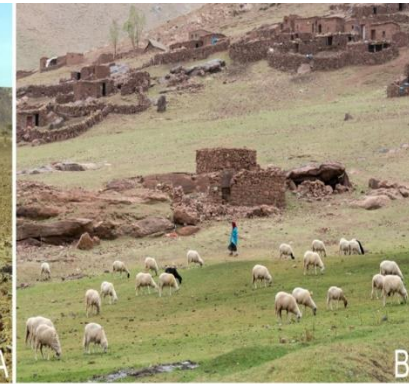
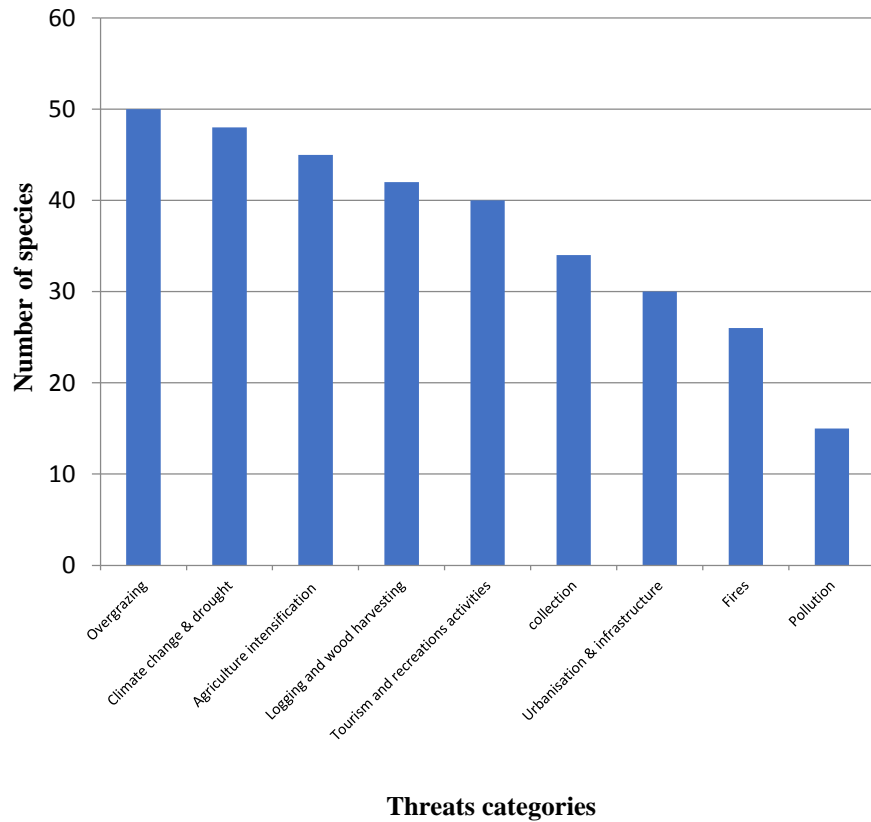
HA Biodiversity Richness



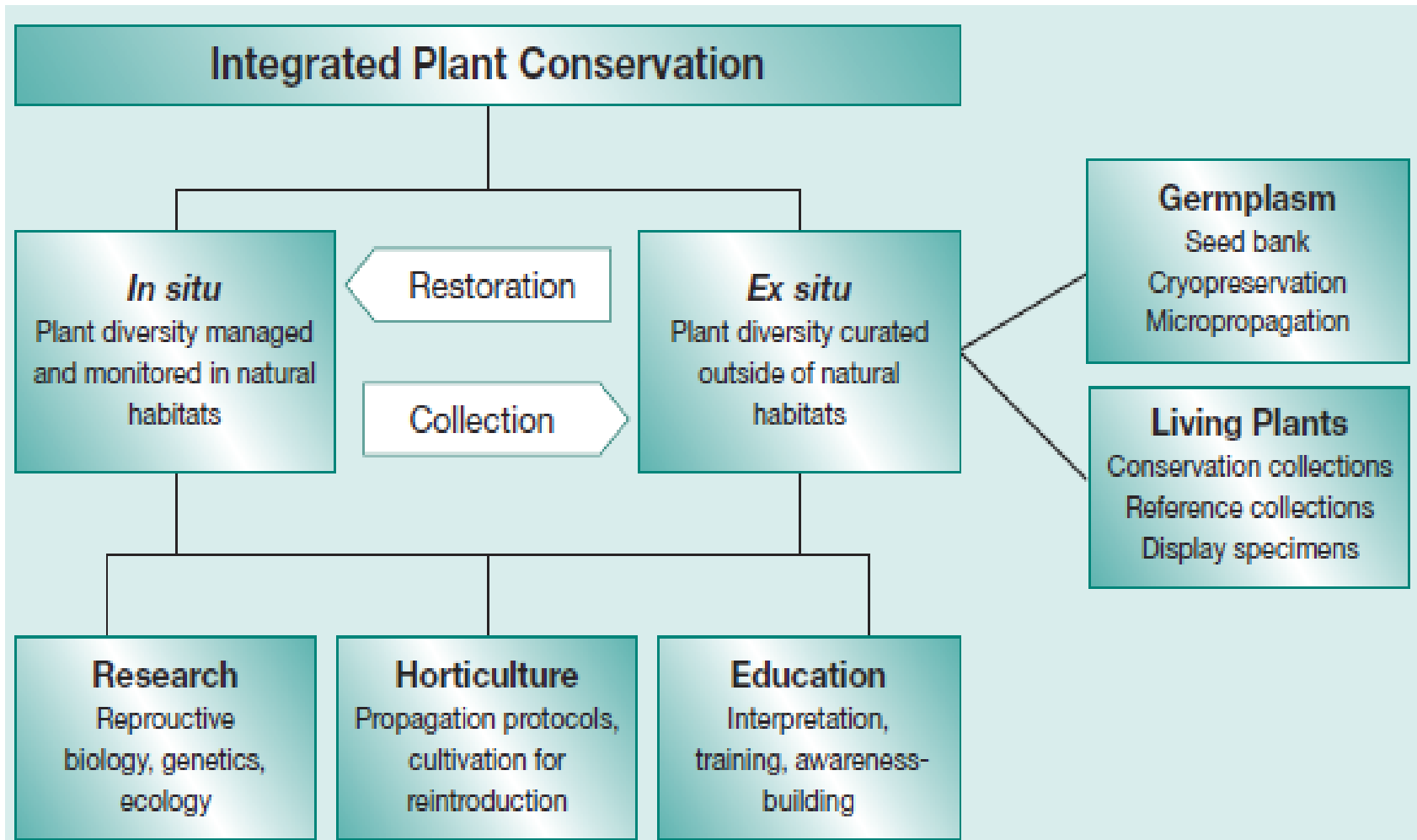
HA Cultural Landscapes Richness



Extinction Risks & Threats



Integrated Approach to Plant Conservation in the Moroccan High Atlas.



Integrated Approach to Plant Conservation in the Moroccan High Atlas.

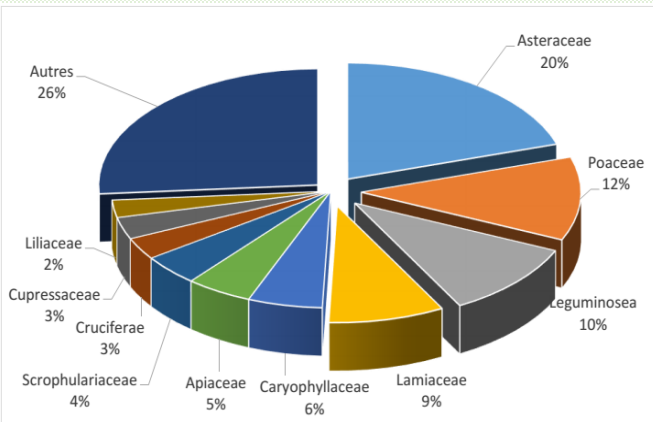


Strategy I. Documentation of biodiversity richness & threats

❖ *Floristic studies*

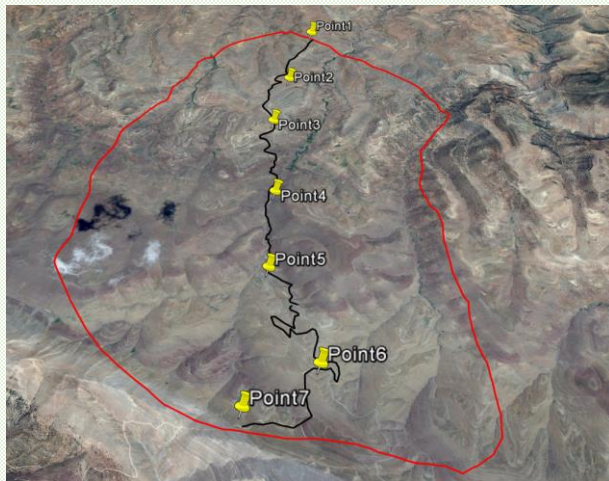
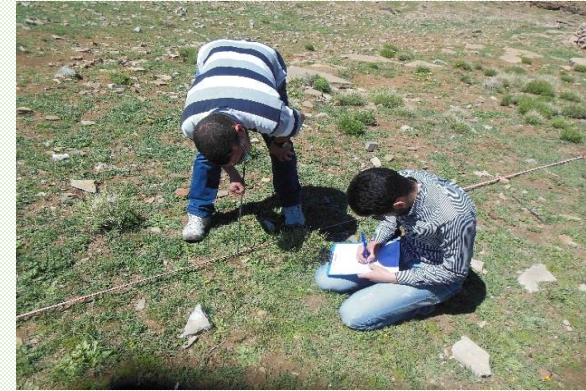
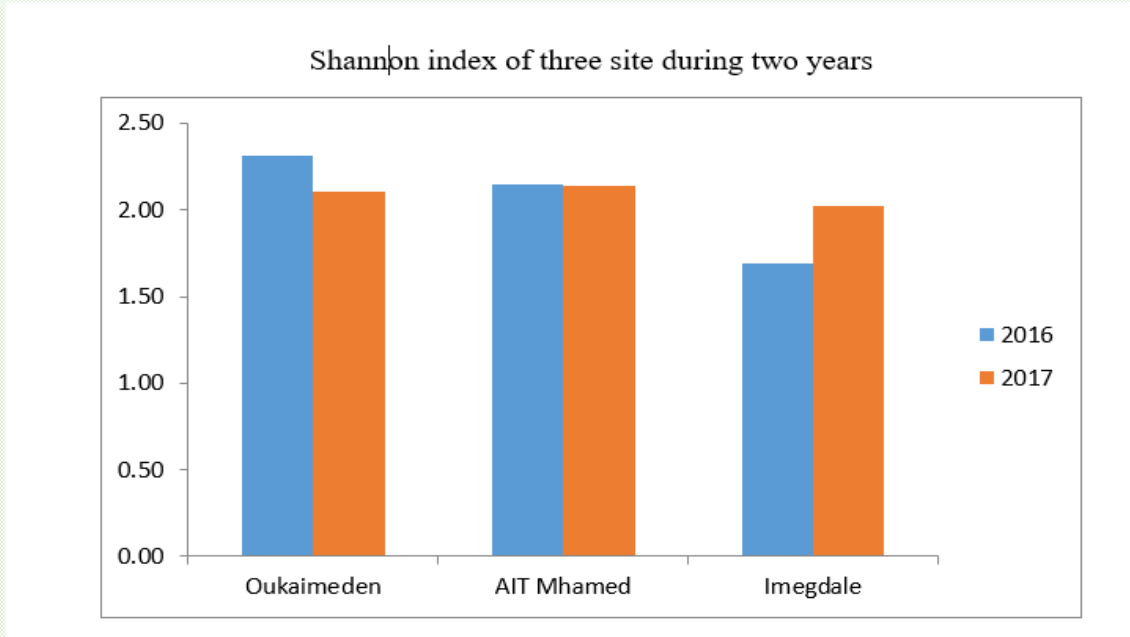


no	merg	date	local	site	collected	year	month	day	hour	min	sec	alt	lat	lon	collected	family	genus	species
161		18				18	1	7:20:14							Chenopodiaceae	Chenopodium		
162		18				18	1	7:20:14							Umbelliferae	Pimpinella		
163		18				18	1	7:20:14							Umbelliferae	Pimpinella		
164		18				18	1	7:20:14							Fragariaceae	Fragaria		
165		18				18	1	7:20:14							Umbelliferae	Umbellifera		
166		18				18	1	7:20:14										
167		18				18	1	7:20:14										
168		18				18	1	7:20:14										
169		18				18	1	7:20:14										
170		18				18	1	7:20:14										
171		18				18	1	7:20:14										
172		18				18	1	7:20:14										
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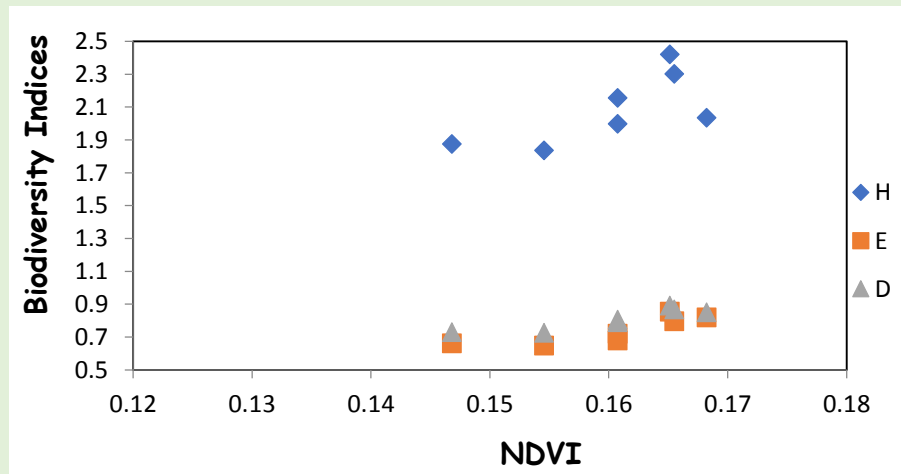
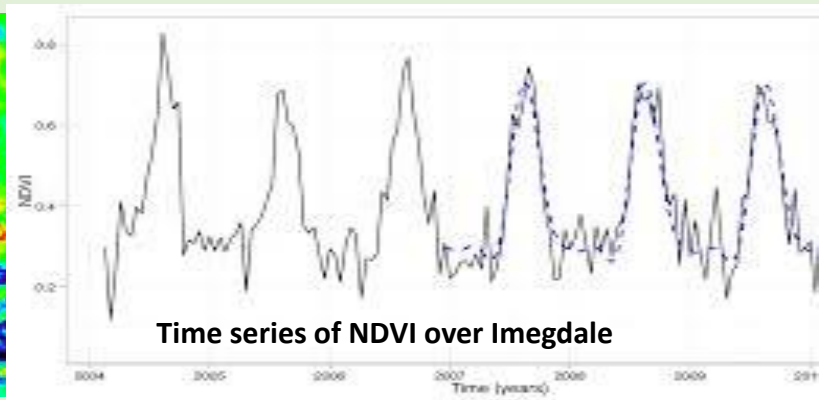
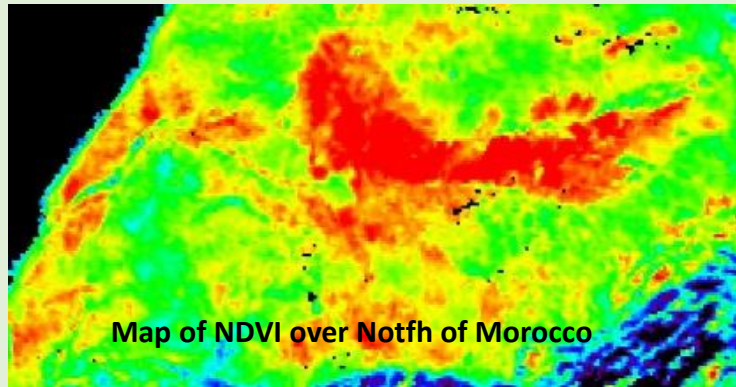
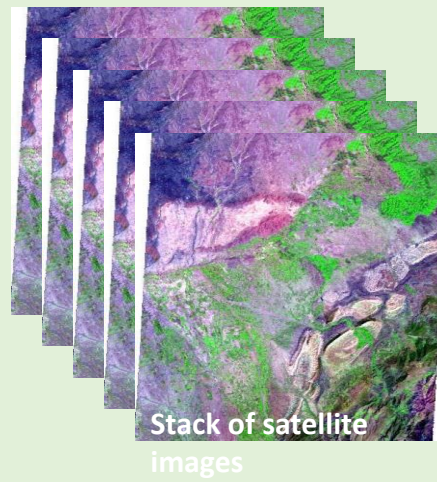


Strategy I.

❖ *Ecological studies*

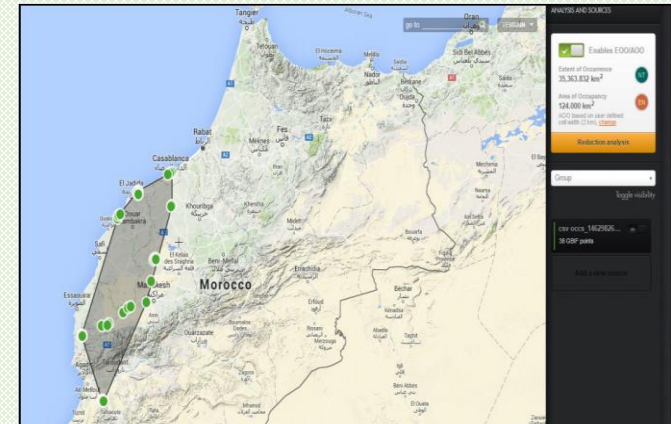
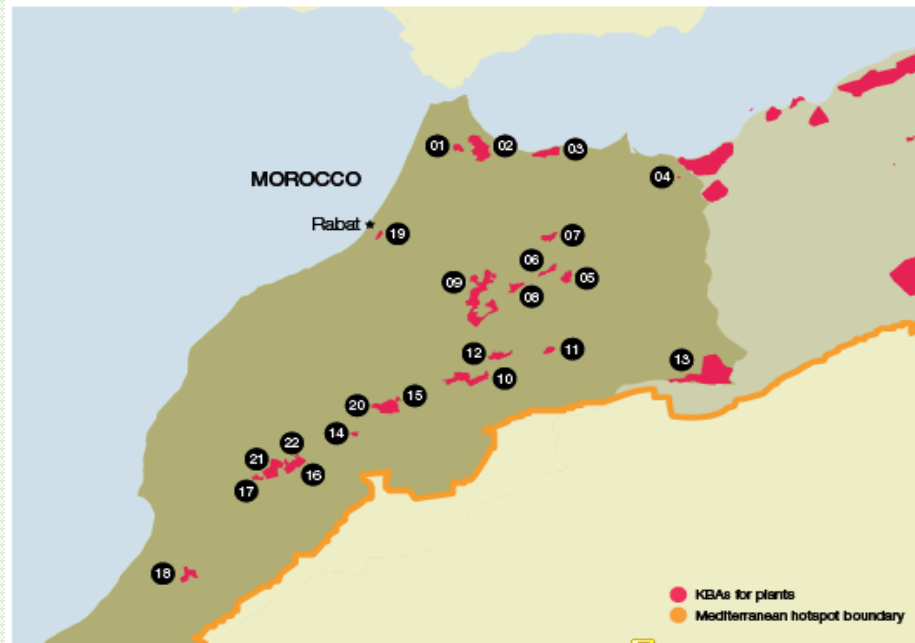


❖ *Remote sensing*



Strategy I.

❖ Conservation Assessment studies



SIS Species Information System

Species: Anacyclops gynostoma (Wied. 1842)

Mediterranean Region	Local Distribution	Global Distribution	Conservation Status	Population Size	Population Trend	Population Viability	Population Resilience
Endangered	Endangered	Endangered	Endangered	Small	Decreasing	Low	Low



2.3 Red Lists and threats by country MOROCCO

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Contributors
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IUCN/SSC/Mediterranean Plant Specialist Group



The IUCN Red List of Threatened Species™
ISSN 2307-8235 (online)
IUCN 2008: T109366166A109366170
Scope: Global
Language: English

Fraxinus dimorpha, Wild Ash

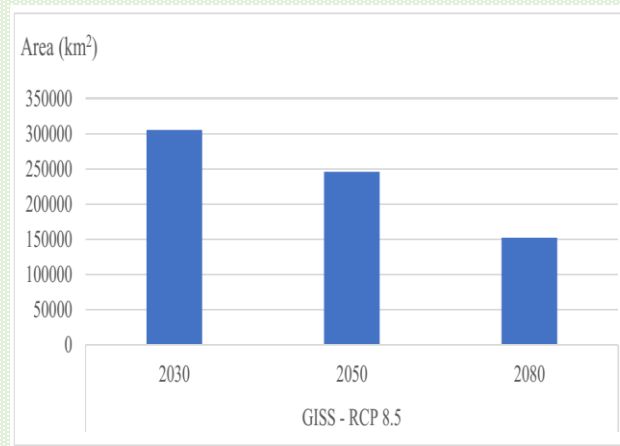
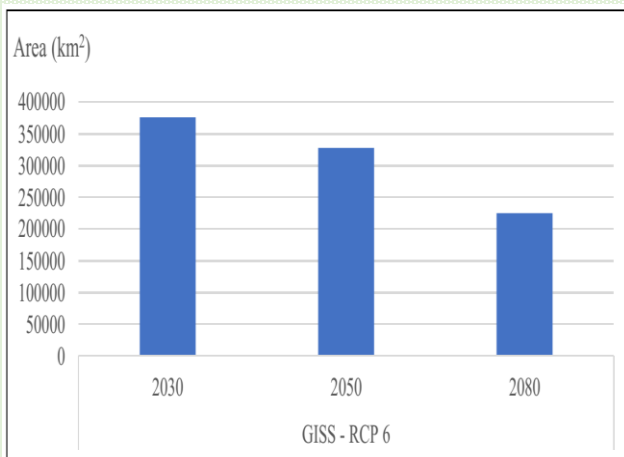
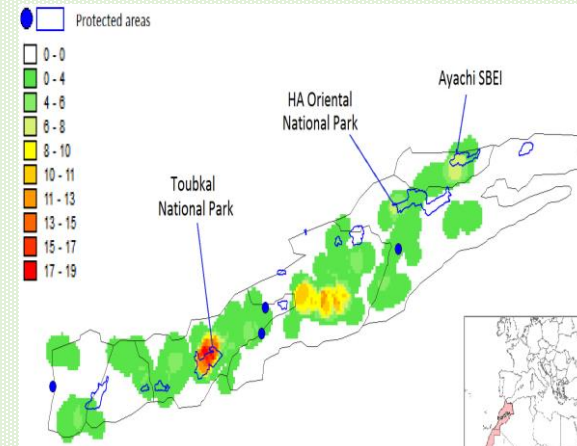
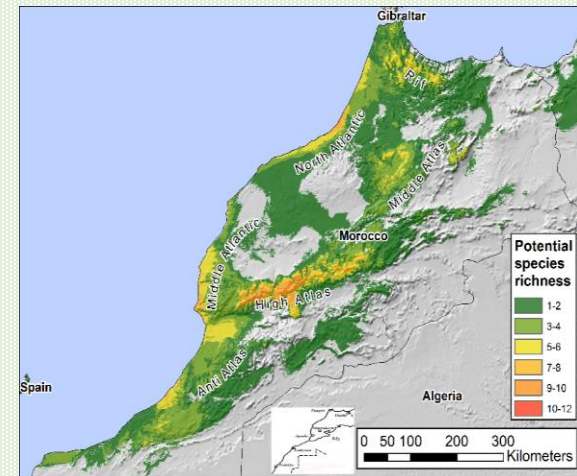
Assessment by: Rankou, H., M'SOU, S., Alifriqui, M. & Martin, G.



Strategy I.

❖ *Climate change studies*

1. Ecological Niche Modelling approach "BIOCLIM2.
2. BIOCLIM2 planned areas for ecological niches suitable for future climate model and scenarios: GISS - RCP6 & RCP 8.5 calculated.
3. Mapping the current and future predicted distribution of the High Atlas flora and producing the current and future alpha diversity maps
4. The refugia areas were identified and the surface of the new suitable distribution areas were calculated and mapped.



Strategy I.

❖ *Biodiversity monitoring*



Strategy II. Implementation of actions to halt loss of biodiversity

➤ *Seed Banking*



Strategy II.

➤ *Community plant nurseries*



❖ *Chemical analyses and biological activities :*

Salvia taraxacifolia

Nursery

IC50 = 0,36w5 mg/ml



Wild

IC50 = 0,35 mg/ml



Lavandula maroccana

IC50 = 0,688 mg/ml



IC50 = 0,686 mg/ml



We are producing good quality plants



wild ash
(*Fraxinus dimorpha* -
Coss. & Durieu)



**Green oak (*Quercus ilex*
L.)**



Carob (*Ceratonia siliqua* L.)



Strategy II.

➤ *Plant distribution*



Strategy II.

➤ *Species recovery plans*



Strategy II.

❖ *Water Project*

	sept.	oct.	nov.	déc.	jan.	fév.	mar.	avr.	mai	juin	juillet	août	TOTAL
Apports moyens	876	905	876	905	905	818	905	876	905	876	905	905	10 658
Besoins totaux	429	226	113	85	75	33	93	156	253	551	703	670	3 387
ECART	447	679	763	820	830	785	812	720	652	325	202	236	7272



Strategy III. Capacity building & networking

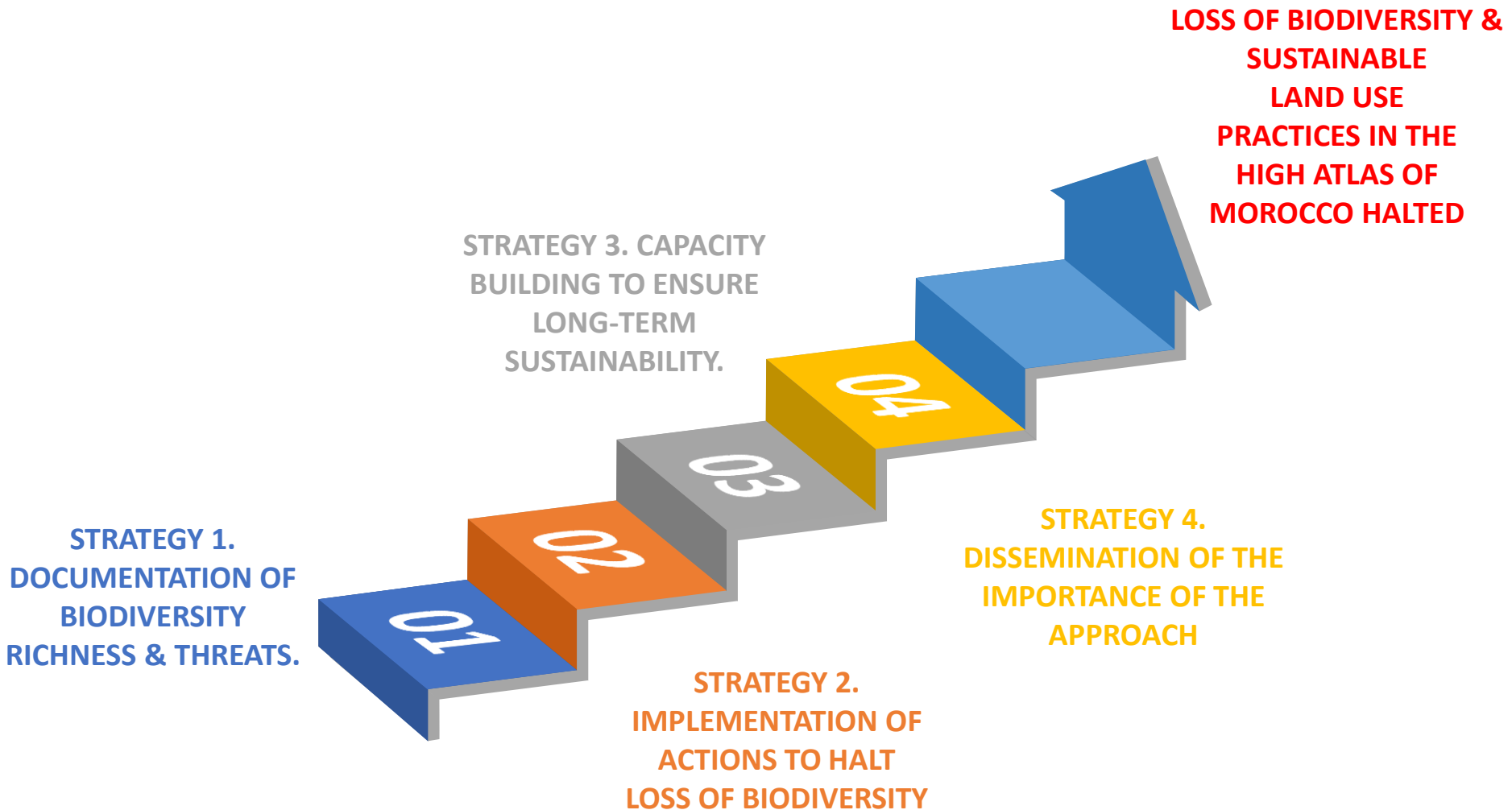


Strategy IV. Dissemination



FESTIVAL
BIOCULTURAL

Integrated Approach to Plant Conservation in the Moroccan High Atlas.



Partners:

1. Moroccan Biodiversity and Livelihoods Association
2. Amazigh community associations and cooperatives
3. Marrakech Regional Directorate of Water and Forests
4. Ministry of Water and the Environment
5. Cadi Ayyad University
6. Institut Scientifique, Mohamed V University
7. Institut Agronomique et Vétérinaire Hassan II
8. Friends of the University Hospital Center
9. Radiant Design
10. High Atlas Foundation
11. Marrakech Organics
12. Terre D'Eveil
13. International Center for Agricultural Research in the Dry Areas
14. Agropolis Resource Center for Crop Conservation, Adaptation and Diversity
15. University of Cagliari Botanical Garden
16. TRAFFIC
17. IUCN/SSC Mediterranean Plant Specialist Group
18. Beya Capital
19. RESING
20. University of Kent



High Atlas Cultural Landscapes programme GDF & MBLA



Global
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