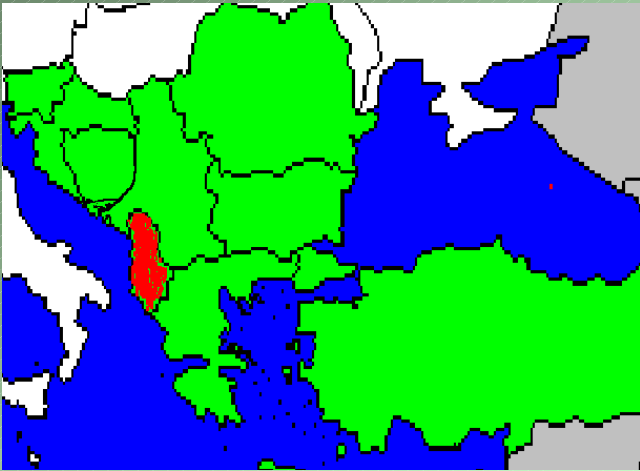


# Data on Albanian Biodiversity and Mapping

- Petrit Hoda  
University of Tirana, Botanical Garden
- Albana Zotaj  
Academy of Sciences  
Institute of Geographical Studies

# Country profile



- Area 28748 km<sup>2</sup>
- Population 3.2 million
- Coastal area 7000 km<sup>2</sup>, 25% of the national territory
- Coastline length, 476 km 70% sandy, 30% rocky
- Total prot. Area: 164 111 ha, 5.8% of the national territory
- Density 120,7 Hab/km<sup>2</sup>

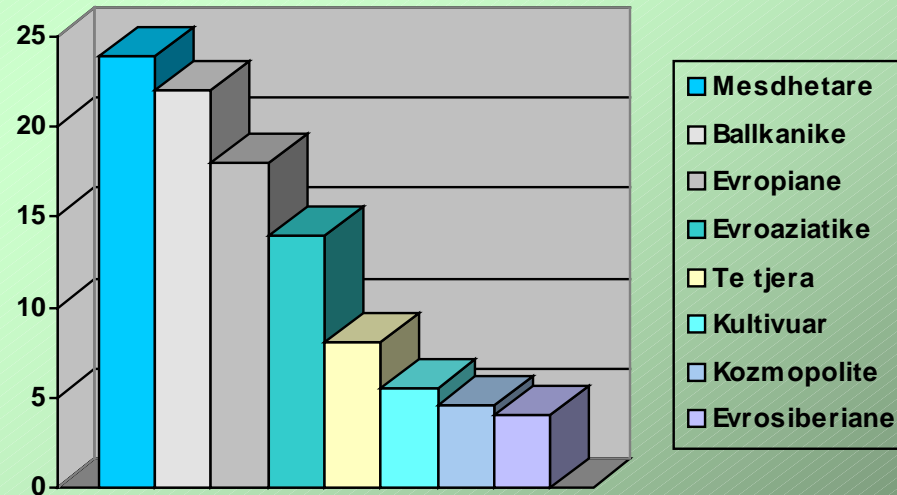


# THE NUMBER OF SPECIES IN ALBANIA

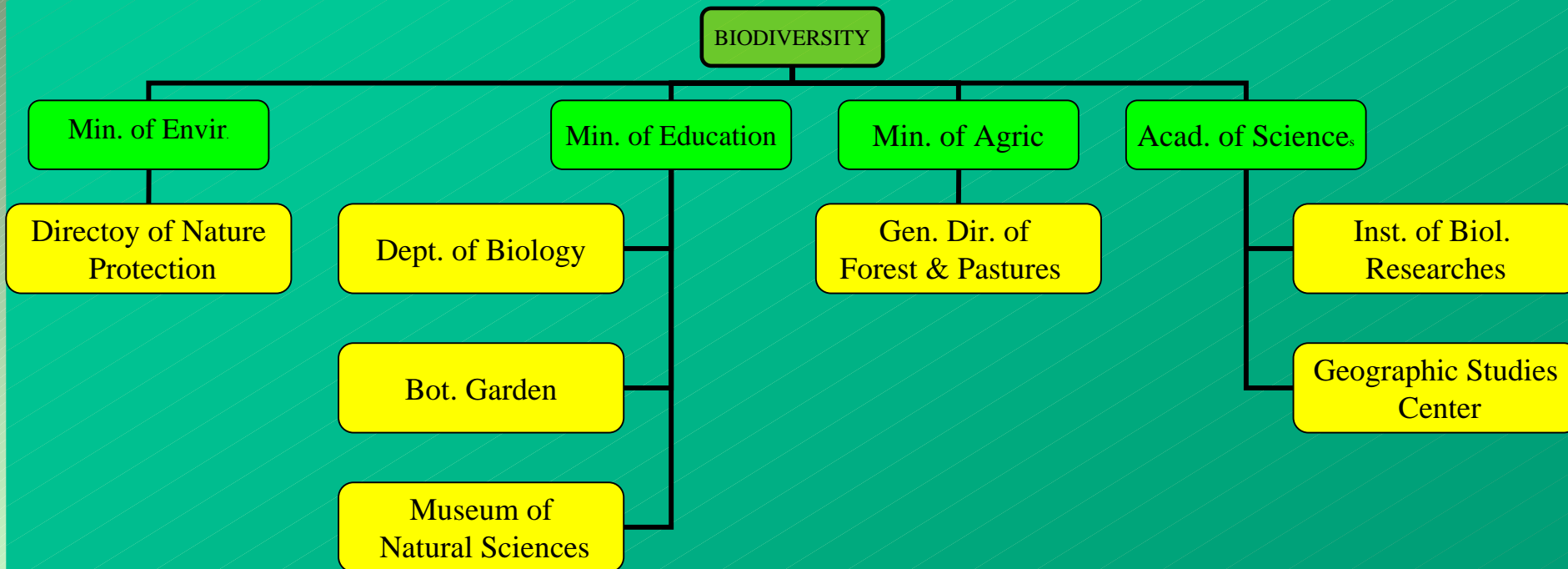
<b>Algae</b>	<b>600</b>
<b>Fungi</b>	<b>800</b>
<b>Ferns</b>	<b>45</b>
<b>Lichens</b>	<b>400</b>
<b>Flowering plants</b>	<b>3200</b>
<b>Mollusca</b>	<b>520</b>
<b>Insects</b>	<b>4000</b>
<b>Crustaceans</b>	<b>115</b>
<b>Echinodermata</b>	<b>46</b>
<b>Marine fish</b>	<b>249</b>
<b>Freshwater fish</b>	<b>64</b>
<b>Amphibians</b>	<b>15</b>
<b>Reptiles</b>	<b>36</b>
<b>Birds</b>	<b>323</b>
<b>Mammals</b>	<b>70</b>

# Data on Biodiversity ( *Plants* )

- 3200 plant species = 1/3 of Flora Europaea
- = 11 sp. / ha ( Germany : 0.91 sp. / ha )
- - 165 families,
- - > 900 genera,
- - 800 sp. baltic,
- - 30 endemics taxons
- - 120 s/endemics



# Main Institutions



**Several NGo**

*Some goals:*  
*Implementation of Strategy and Action Plan of Biodiversity (1999)*  
*To prepare a national legislation for protection of Biodiversity (*  
*Law Protected areas and of Biodiversity)*

# LEGISLATION FRAMEWORK

- **Law on the Land and Its Distribution (no. 7491 and no. 7501, 1991)**
- **Law on the Forests and the Forest Service Police (no. 7623, 1992)**
- **Law on Environmental Protection (no. 7664, 1993)**
- **Law on Plant Protection Service (no.7662, 1993)**
- **Law on Protection of Medicinal and Taniferous Plants (no. 7722, 1993)**
- **Law on Hunting and Wildlife Protection (no. 7875, 1994)**
- **Law on Fishing and Aquaculture (no.7908, 1995)**
- **Law on Pastures and Meadows (no.7917, 1995)**
- **Law on Water Resources (no. 8093, 1996)**
- **Law on Environment(nr. 8934, dt. 5.09.2002)**
- **Law on Protected areas(nr. 8906. dt 6.06.2002)**
- **Law on Protection of sea-water habitats from pollution and demages (nr. 8905 dt. 6.06.2003)**
- **Law on assessment of the impact on environment (nr. 8909, dt. 23.01.2003)**
- **Law on the Protection of Air from pollution (nr. 8897, dt. 16.05.2002)**
- **Law on the Protected Areas**
- **Draft for the protection of Biodiversity**

# *Conventions*

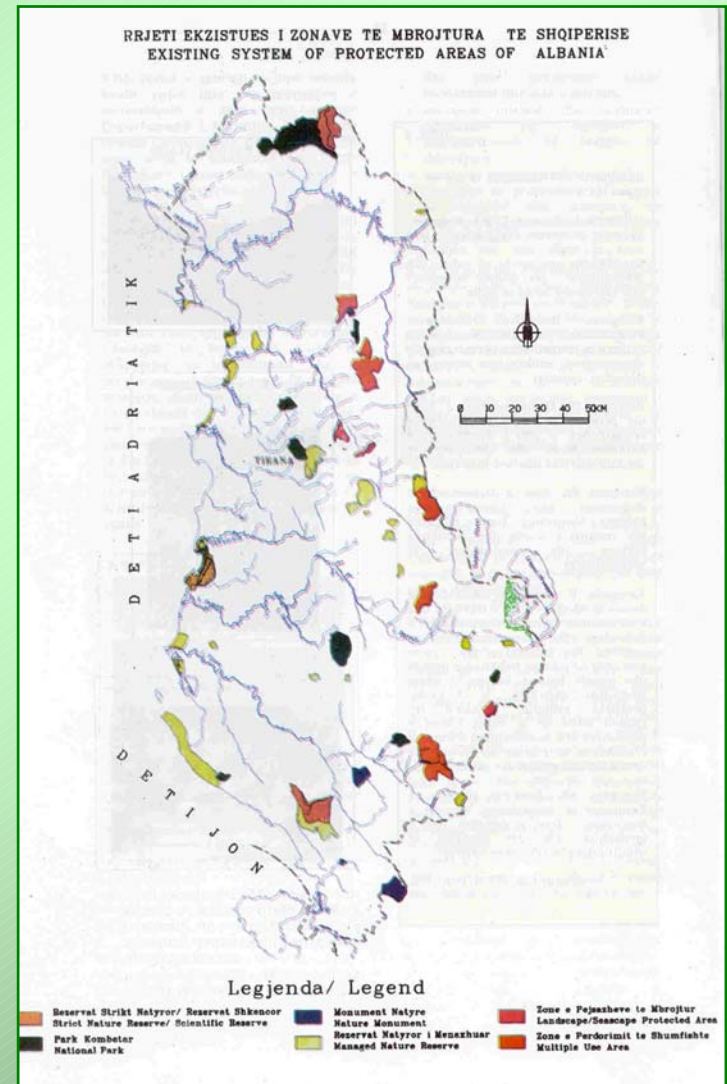
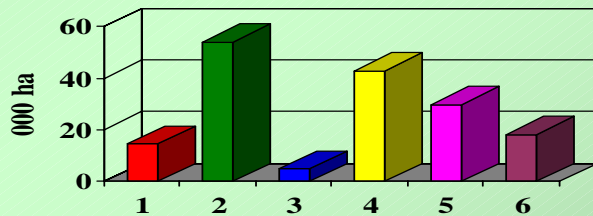
- **Barcelona Convention** "*For the Protection of the Mediterranean Sea against Pollution*"
- **ESPOO Convention (Finland)** "*On Environmental Impact Assessment in a Transboundary Context.*"
- "*On the Protection and Use of Transboundary Watercourses and International Lakes*" (Helsinki March 17, 1992).
- **Ramsar Convention** (Ramsar, 1971) or the "*Convention on Wetlands of International Importance especially as Waterfowl Habitat*".
- **Bern Convention** (September 19, 1979) "*For the Protection of Flora and Wildlife Fauna of the Natural Environment in Europe,*"

# *Conventions*

- Convention on *Climate Change*. (New York, May 9, 1992).
- Convention "*On Biological Diversity*"
- *The Convention on Combat Desertification* (December 4, 1996),.
- *Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters* (Aarhus-Denmark, June 25, 1998)
- **Bonn Convention** (Bonn, on June 23, 1979). *The Convention on Protection of Migratory Species of Wildlife.*
- *The Convention on International Trade in Endangered Species of Wild Fauna and Flora* (Washington, D.C., on 3 March 1973, amended at Bonn, on 22 June 1979).

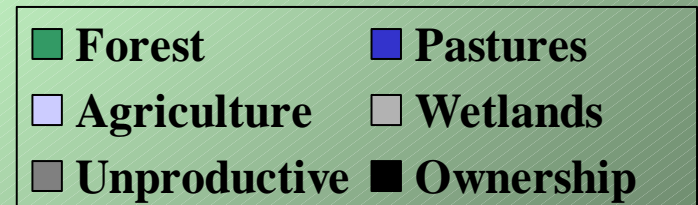
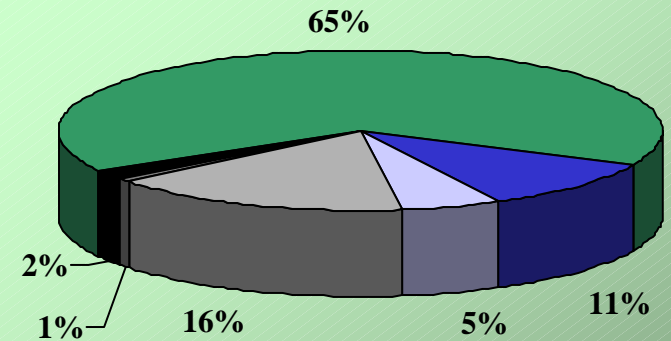
# Actual Protected Areas Network

- **I Category : Strict Nature Reserve/Scientific Reserve**
- **II Category : National Park**
- **III Category: Nature Monument**
- **IV Category: Managed Nature Reserve/Species and Habitat Management Area**
- **V Category: Landscape Protected Area**
- **VI Category: Protected Area of Multiple Use**

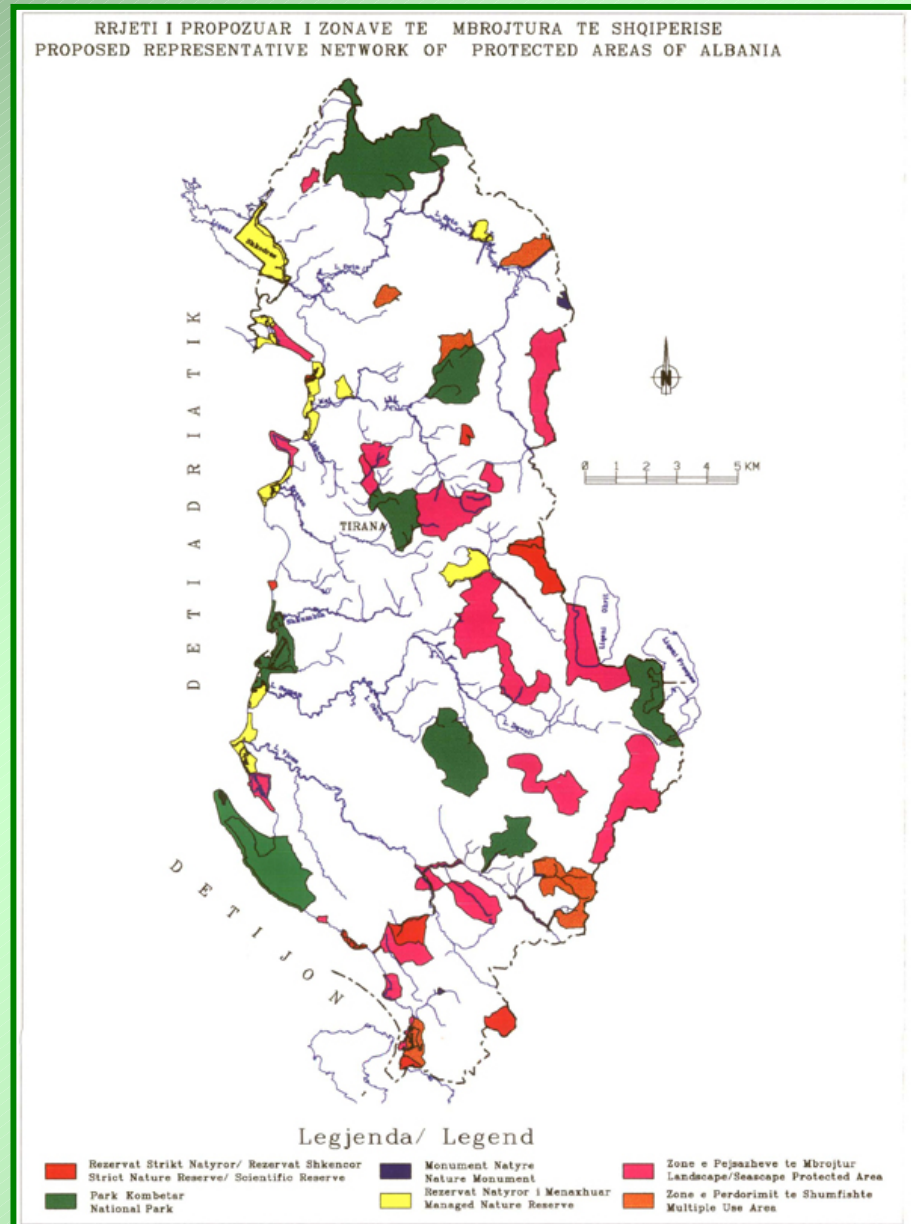


# Classification of Protected Areas by Ecosystems

- Forest and forest plants  
100100ha
- Pastures and meadows 16273  
ha
- Agriculture land  
8157 ha
- Wetlands  
24700 ha
- Unproductive land  
1479 ha
- Ownership  
2800 ha

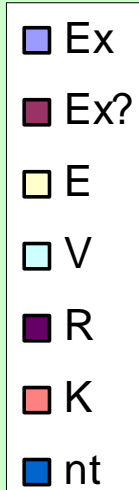
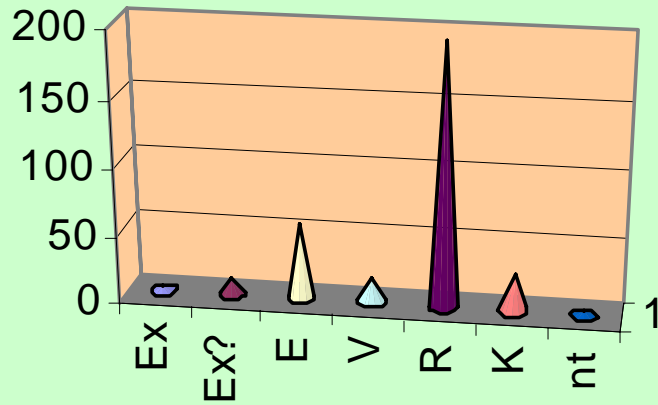


# Proposed Network of the Protected Areas



# Red Books / Lists

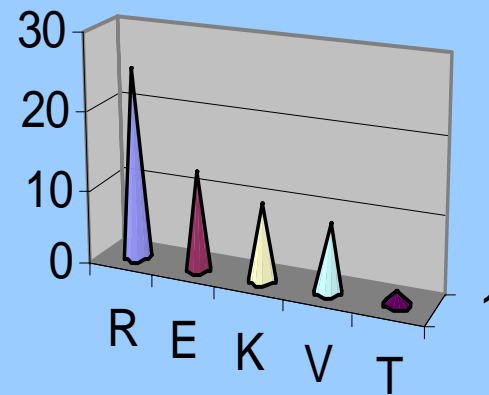
## Plants



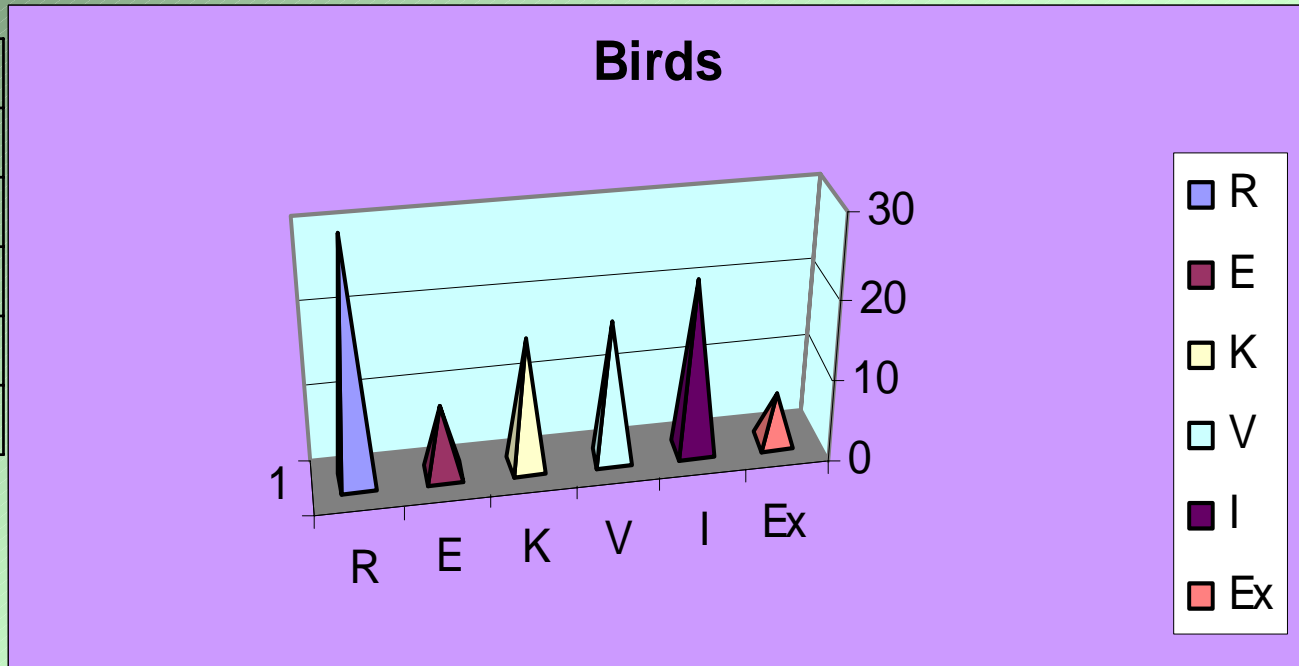
Ex	4
Ex?	12
E	58
V	20
R	194
K	29
nt	3

R	25
E	13
K	10
V	9
T	2

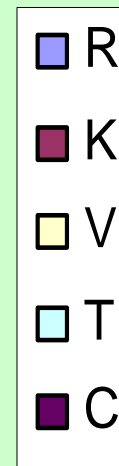
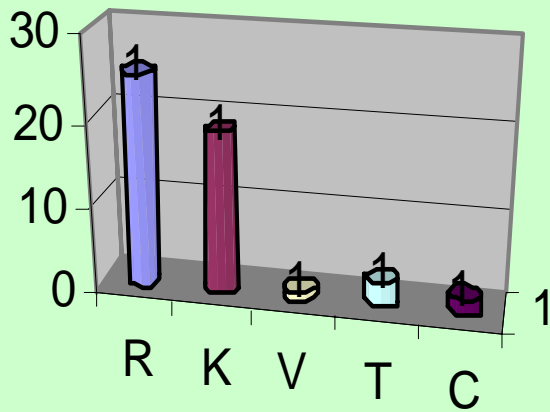
## Fish



R	30
E	9
K	16
V	17
I	21
Ex	6

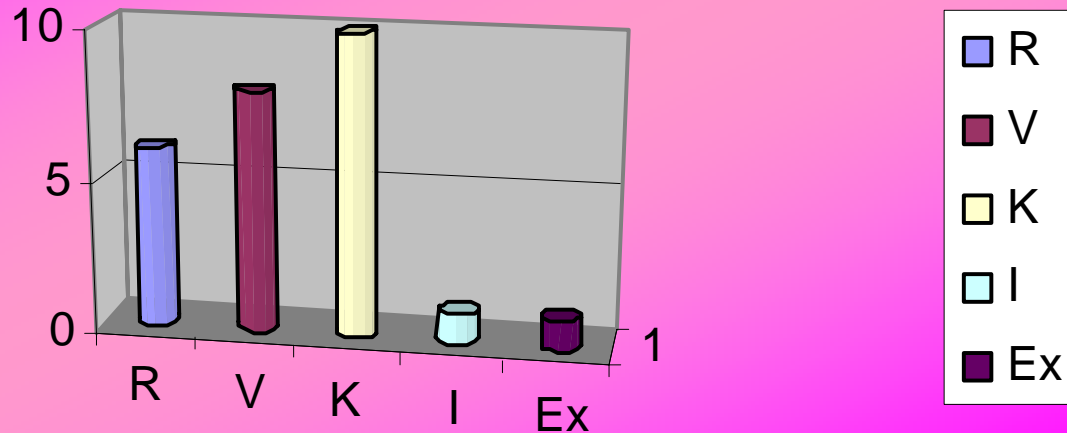


### Amph. + Reptiles



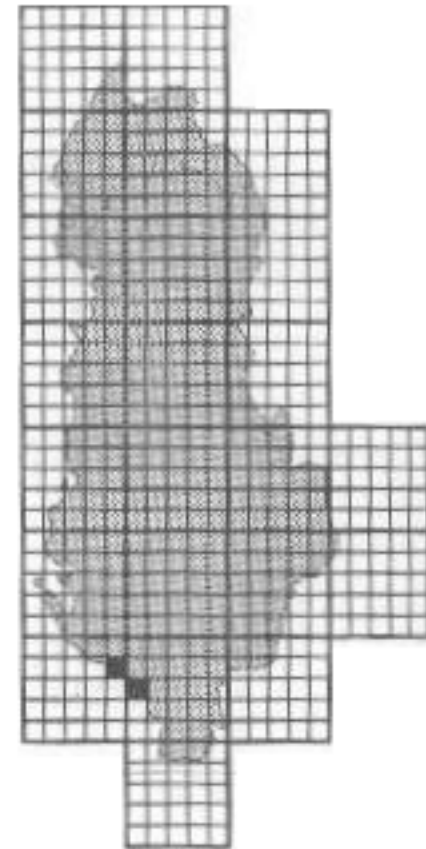
R	25
K	19
V	1
T	3
C	2

# Mammals



R	6
V	8
K	10
I	1
Ex	1

*Nerium oleander* L. / Red book



**P.S. :Different categories : Need for upgraded / unified categories**

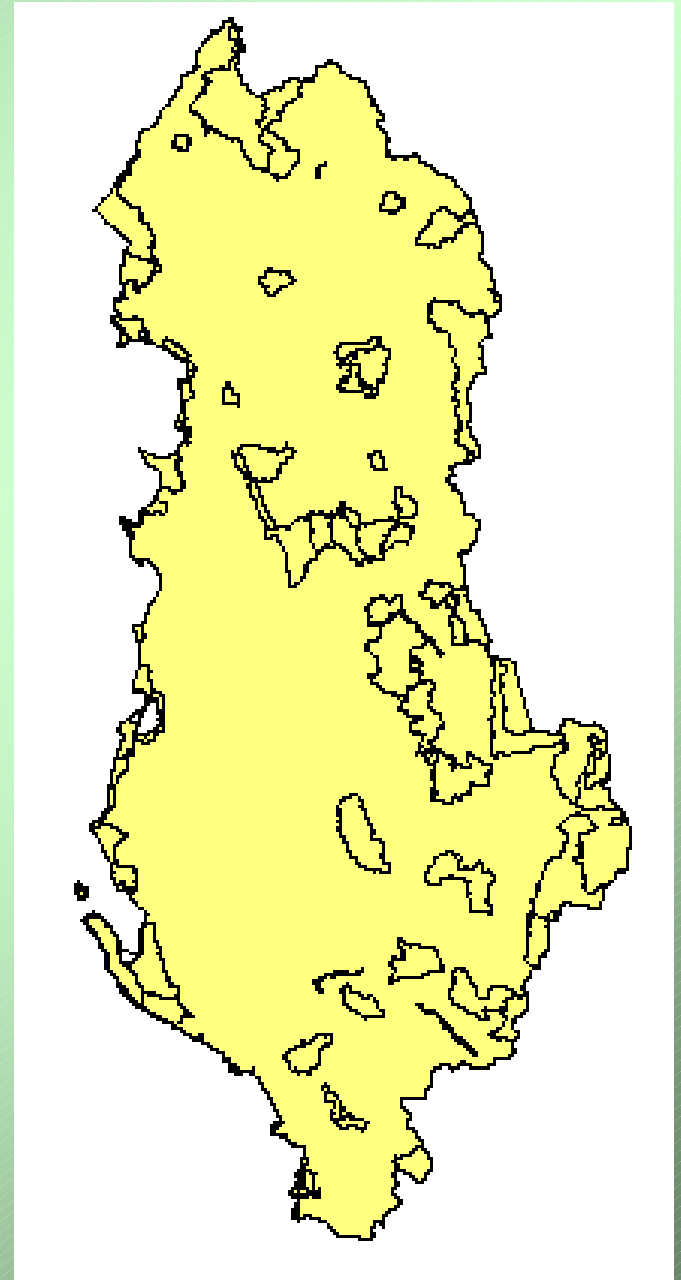
**A new project:**

- **Data on ecology**
- **Habitat**
- **Human impact**
- **Action to improve / conserve**
- **Digitized maps**
- **Pictures**

# **CORINE Biotopes Project**

Mapping and data for 79  
biotope-sites and site-complex

Datebase related



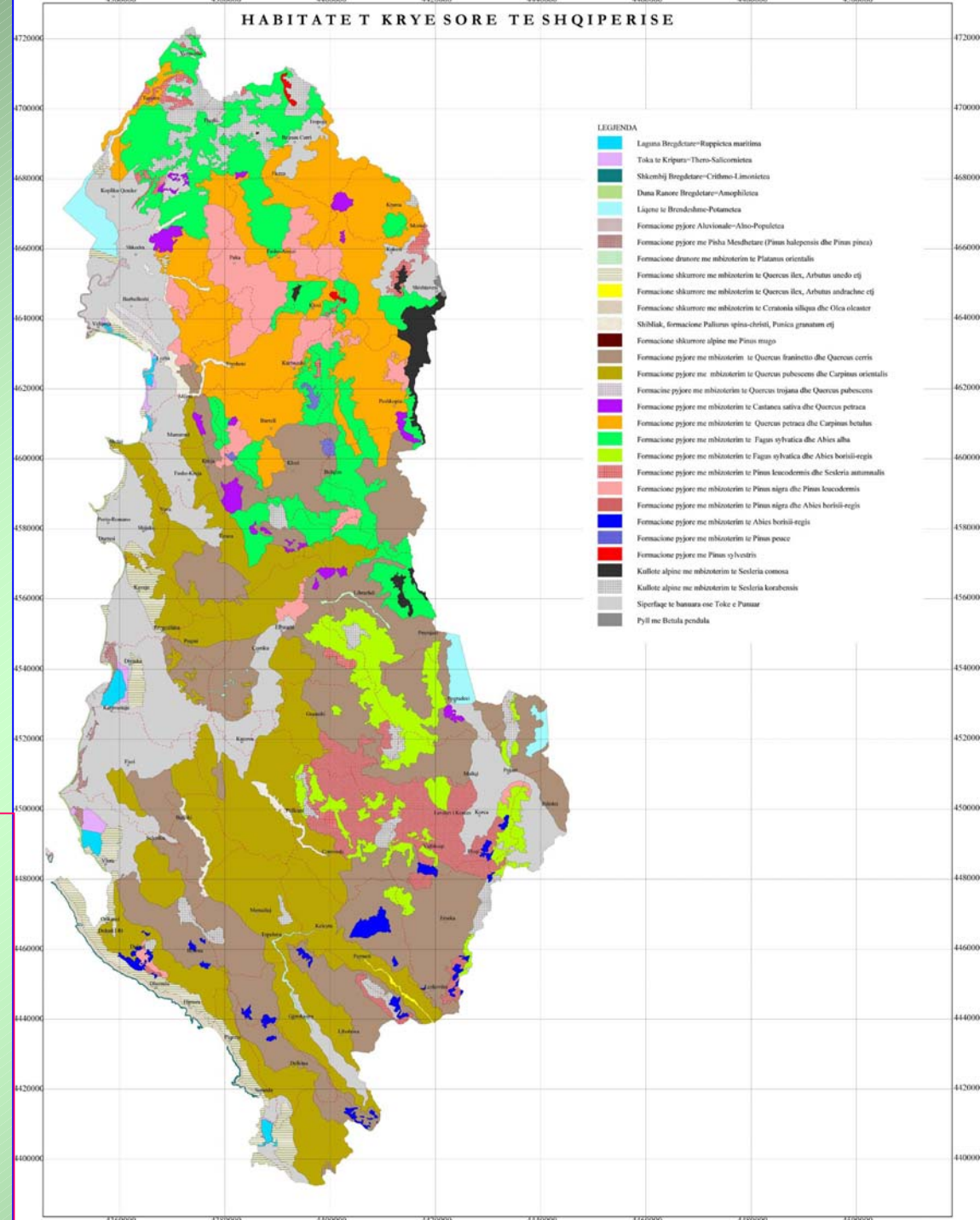


# Main Vegetation types in Albania (1:200 000)

Digitized Database-related

## Maps on local areas

- - *Prespa*
- - *Butrinti*
- - *Divjaka*



# THREATS / NEEDS

- **Damages, pollution, erosion, fire, overgrazing, uncontrolled and illegal hunting;**
- **Lack of legal enforcement;**
- **The ownership of the land;**
- **Lack of coordination between the institutions;**
- **Lack of financial resources especially for effective administration of the protected areas**
- **Not effective management of Natural ecosystems and of the Protected Areas;**
- **...**

# GIS PROFILE

## *Projects where GIS is integrated.*

1. Strategy of the environmental protection in Albania financed by World Bank
2. Geologo-Engineeric map of Albania scale 1:200000 financed by the Ministry of Education and sciences
3. Administrative organization of Albania map scale 1:200000 financed by Central and local administration of the Secretary of the local authority close to the Council of Ministers
4. Administrative organization of Albania, map of the local units scale 1:50000
5. SYNERGY project, collaborator CRES-Athens, financed by European Community
6. Integration of the ecological values for the region Tirana-Durres-Elbasan

- 7.** Corine-Land Cover PROJECT: Corine-Land Cover Unit Brussels; National Aerospace Laboratory, The Netherlands financed by the EU CEC/Phare
- 8.** Space of the high tension 220kv Banje-Korce-Tirana financed by Energetic Corporate.
- 9.** The region of Durres-Vlore coastal zone management plan
- 10.** Albania-Coastal zone management plan The World Bank
- 11.** Water Resources Studies of the Rivers of Erzen and Ishmi, PAP/MAR, Regional Activity Center Split
- 12.** Study on Sewerage System in Metropolitan Tirana PHARE environmental program Tirana

# Scientific Research

- A historic – urbanistik view of Elbasan city
- National Standardization and toponymy of geographic names
- Pollution – a serious problem for the environment and public health
- Modelation from the road distances
- Geologic-digital map
- Extraction of viewshed by using digital elevation models
- Creation of digital elevation model of Albania
- Using the algorithms and GIS functions for extracting of geomorphologic and hydrologic elements
- GIS application for Land use policy
- A database creation for the forestal coverage of Vora- Kepi i Rodonit zone
- Soil erosion risk Assessment

Thank You

