



The current situation of CWR in Albania

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Albania represents a very rich country in PGR in Europe

- It is estimated that more than 800 species are considered as plant genetic resources (PGR) for food and agriculture.

Currently, **about 15 arable species, 15 forage species, 35 vegetable species, and more than 20 fruit-tree species are cultivated in the country. Rough estimations indicate that there are a total around 500 CWR species in Albania.**



Genetic Erosion in Albania

- Based on observations carried out by agriculture research institutes, and according to the data collected during some collection missions carried out during 1941 (H. Stube) and after 1990 (K. Hammer, L. Xhuveli, D. Pignone, etc), the result indicates that during the last fifty years, the genetic erosion of some species was estimated
- about 94% for *Triticum aestivum*;
- 100% for *Triticum durum*;
- 100% for *Triticum turgidum*;
- 83% for *Triticum monococcum*;
- 76% for *Avena* spp.;
- 59% for *Hordeum vulgare*;
- 78% for *Vicia ervila*
- 42% for *Vicia sativa*.

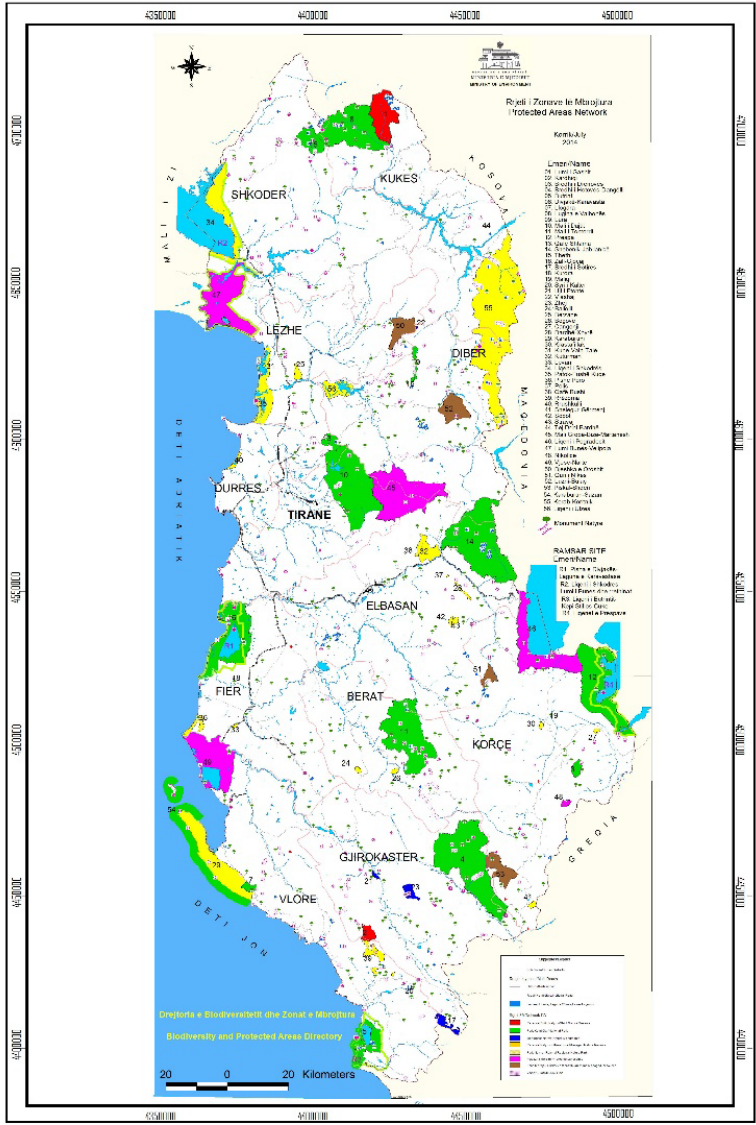
Status of *In-Situ* Conservation and Management

Protected Areas in Albania

Category	No of Protected area	Area in ha
I (Strict Nature Reserves/Scientific reserves)	2	4,800.0
II (National Parks)	14	230,707.2
III (Natural Monuments)	718	1,970.0
IV(Regional Natural Park)	24	151,770.4
V (Protected Landscape)	6	97,333.6
VI (Protected Area of Managed Natural Resources)	4	18,245.0
Total Protected Areas	768	504,826.3

Territory of Albania Albania has recently made significant progress in expanding the network of protected areas from 5.2% of the country's territory in 2005 to 17.56 % in 2021

<http://www.natura.al/page.php?lang=en§ion=albaniapas>



Promoting *in-situ* conservation of CWR

Protected areas have strongly increased over the last decades in Albania

In-situ conservation in Albania is undertaken in national parks and protected areas, which in total amounts more than 90 thousand hectares.

The main function of these parks and protected areas is the preservation of flora and fauna in general, especially the forest flora (trees and shrub species).



List of 86 Genus of CWR and WFP in Albania

1	Abelmoschus	29	Crepis	58	Opuntia
2	Abies	30	Dactylis	59	Phalaris
3	Aegilops	31	Daucus	60	Phleum
4	Agrostis	32	Dioscorea	61	Pimpinella
5	Allium	33	Diospyros	62	Pistacia
6	Amelanchier	34	Diplotaxis	63	Pisum
7	Arbutus	35	Festuca	64	Poa
8	Arctostaphylos	36	Ficus	65	Prunus
9	Asparagus	37	Foeniculum	66	<u>Punica</u>
10	Astragalus	38	Fragaria	67	Pyrus
11	Atriplex	39	Hordeum	68	Raphanus
12	Avena	40	Juglans	69	Ribes
13	Barbarea	41	Juniperus	70	Rosa
14	Bellis	42	Lactuca	71	Rorippa
15	Berberis	43	Laurus	72	Rorippa
16	Beta	44	Lathyrus	73	Rubus
17	Brassica	45	Lens	74	Rumex
18	Carum	46	Lepidium	75	Sambucus
19	Castanea	47	Linum	76	Salsola
20	Celtis	48	Lolium	77	Sinapis
21	Ceratonia	49	Lotus	78	Solanum
22	Cichorium	50	Lupinus	79	Sorbus
23	Citrullus	51	Malus	80	Trifolium
24	Colchicum	52	Medicago	81	Trisetum
25	Coriandrum	53	Melilotus	82	Triticum
26	Cornus	54	Mespilus	83	Tilia
27	Coryllus	55	Myrtus	84	Vaccinium
28	Crataegus	56	Olea	85	Vicia
		57	Onobrychis	86	Vitis



CWR species or WFP in Albania



A total of around 500 taxa were selected through objective and subjective reasoning to arrive at a list of priority CWRs for Albania that are most likely to meet a future requirement for genetic resources based on the production of crops within both Albania and Europe

Gaps and needs

Needs:

- National Inventory that addresses CWR
- Monitoring of genetic erosion
- Monitoring of the species part of Red Book
- Research and Collection
- Strategies



Status of *Ex-situ* Conservation of CWR

- In Albania, an overall national strategy for collecting and conserving plant genetic resources is currently missing.

Nevertheless, a comparison of stored material against the mandate of the National Genebank, as well as historical and geographical references, is periodically carried out for the identification of gaps in the genebank holdings and for undertaking targeted collecting missions to fill the identified gaps that, otherwise, could not be filled by accessing other regional or international Genebanks.

Albanian Gen Bank *Network*

- **Albanian Gen Bank at Agricultural University of Tirana, established in 1996, is National Coordinator Institutions for PGR.**
- Gene bank of Albania provides and practises realization of the tasks resulting from National Programme on Conservation of Plant Genetic Resources for Food and Agriculture and Regulation No. /2008 with co-operation ***ATTC centres and local focal points*** where represented



Agricultural University of Tirana (AUT)

Albanian Gene Bank (AGB)

Gene bank *ex situ*
Conservation

Gen Bank of Fruit
Trees

Documentation

European
Cooperative
Programme
for Plant
Genetic
Resources

ECP/GR



eurisco
Finding seeds for the future

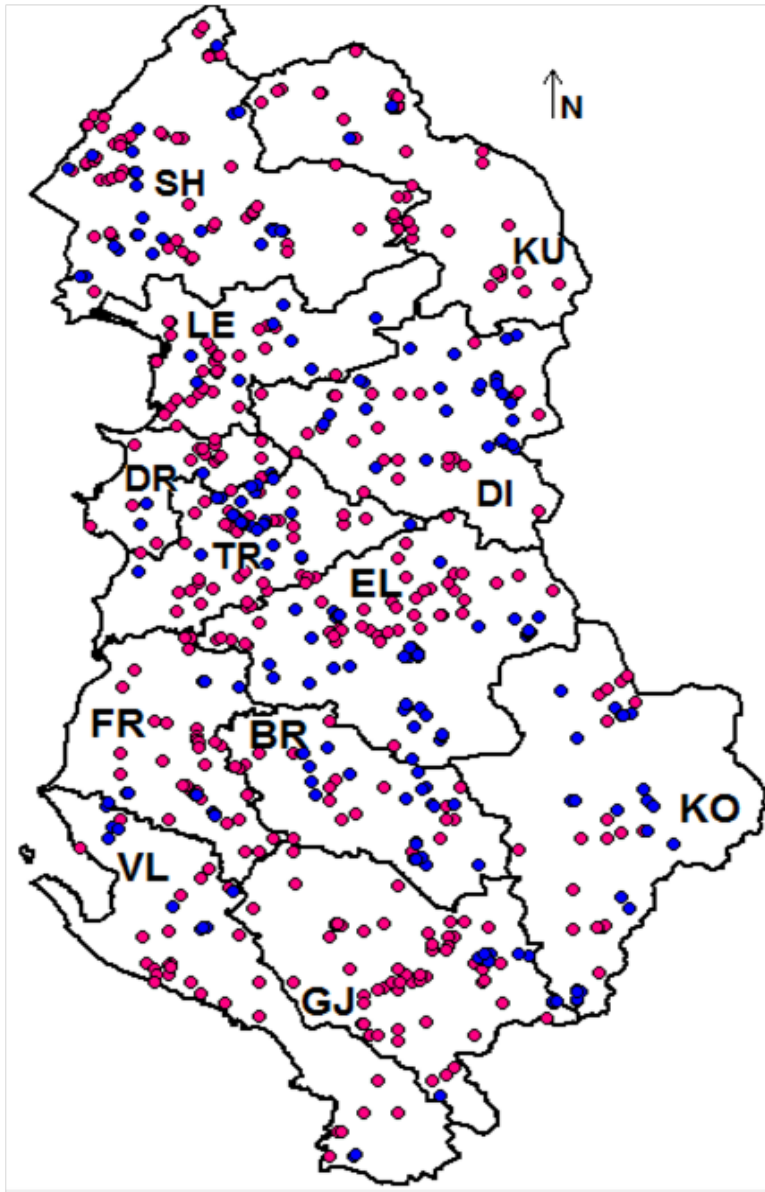


Inventory of Gene Bank

- **ex-situ** conservation over 4570 accessions of different species.
- https://eurisco.ipk-gatersleben.de/apex/eurisco_ws/r/eurisco/eurisco-download-by-ni
- **Accepted** in years: 1998, 2003-2005, 2008-2010, 2013- 2020
- **Storage:** in 10 standard equipments (freezers). at -18°C (3–7 % seed moisture content). all accessions are stored as = **base collection**.



Geographic distribution of PGR (AGB ex situ data)



- *Achillea millefolium*
- *Aegilops ovata*
- *Amygdalus communis*
- *Avena sativa*
- *Brassica sp*
- *Cannabis sativa*
- *Cornus mas*
- *Corylus avellana*
- *Corylus colurna*
- *Cucurbita pepo*
- *Cydonia oblonga*
- *Ficus carica*
- *Helianthus annuus*
- *Hordeum sp*
- *Hordeum vulgare*
- *Hypericum perforatum*
- *Juglans regia*
- *Juniperus communis*
- *Linum usitatissimum*
- *Malus domestica*
- *Malus sylvestris*
- *Matricaria chamomilla*
- *Mentha piperita*
- *Morus alba*
- *Nicotiana tabacum*
- *Ocimum basilicum*
- *Origanum vulgare*



ALBANIA NATIONAL INVENTORY (NI)

Collections ex situ conservation of CWR in Albanian GenBank

ALBANIA NATIONAL INVENTORY (EURISCO)
for MAP and CWR: Accessions summary by
genus:

Nr	Genus	Accessions
1	<i>Aegilops</i>	<u>34</u>
2	<i>Corylus</i>	<u>5</u>
3	<i>Hordeum</i>	<u>5</u>
4	<i>Sideritis</i>	<u>4</u>
5	<i>Juniperus</i>	<u>5</u>
6	<i>Malus</i>	<u>6</u>
7	<i>Mentha</i>	<u>7</u>
8	<i>Matricaria</i>	<u>9</u>
9	<i>Ocimum</i>	<u>8</u>
10	<i>Origanum</i>	<u>78</u>
11	<i>Prunus</i>	<u>66</u>
12	<i>Punica</i>	<u>13</u>
13	<i>Vaccinium</i>	<u>10</u>
14	<i>Rubus</i>	<u>1</u>
15	<i>Salvia</i>	<u>116</u>
16	<i>Satureja</i>	<u>86</u>
17	<i>Thymus</i>	<u>44</u>
	Total	497

12/19/2022

Alban Ibraliu



Identify Priority List of CWR in *Albania* *included the species of red list*

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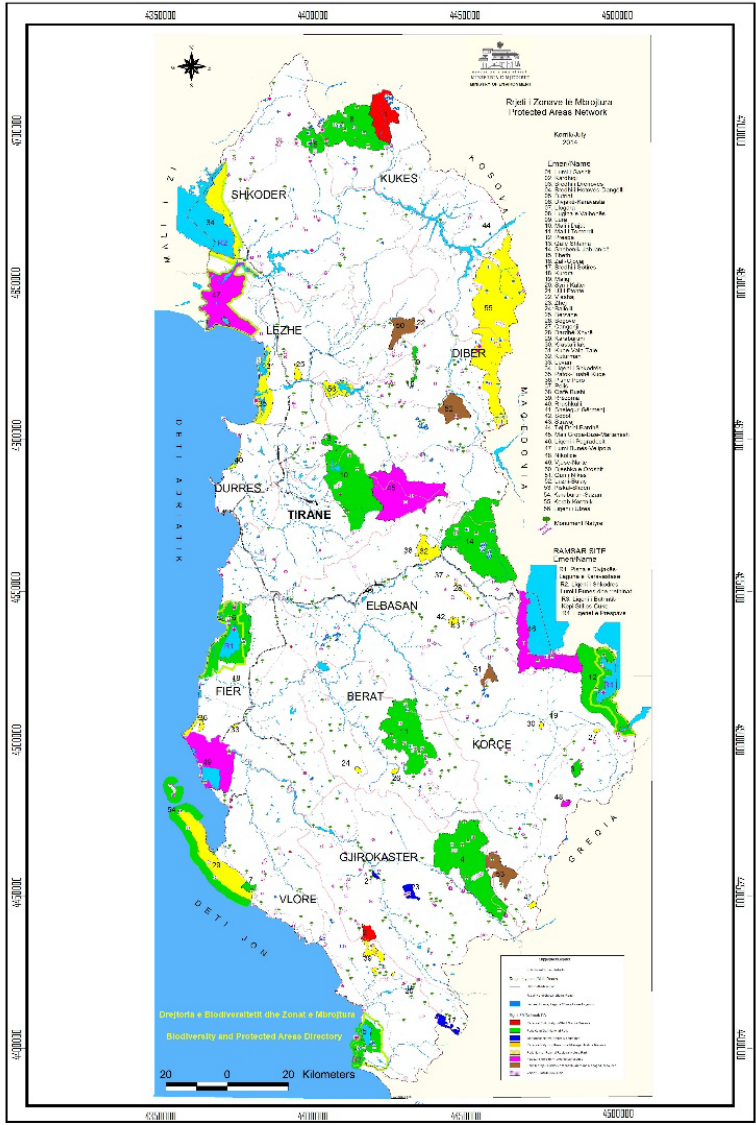
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- **Descriptors recommended for the generation of a National Data**
- **Identify key public and private institutions for the organization of a national network of data providers-*The possibility partners***
- **Identified the data provider – (*Eurisco Albanian focal point*)**
- **Prepare a draft of the national database structure–*will be ready soon***

Albania towards NATURA 2000

- The project NaturAL will invest in protected areas and initiate the process of establishment of Natura 2000 network.
- Strengthening the national capacity in biodiversity conservation, the project NaturAL will improve the knowledge and experience in protected areas planning and management, promote partnerships among national, regional and international organizations, build linkages among research institutions, share experience and promote education and awareness raising of the general public, eco-tourism development, and branding of local products.





Thank you for your attention !

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