

# State of National Inventories on *in situ*/ *on farm in Armenia*

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# *In situ* conservation of crop wild relatives in Armenia

**Armenia is one of the centers of the origin of wild and cultivated plants. The flora of Armenia is extremely rich and includes the species with big theoretical and practical value. There are more than 3,500 species, out of which 180 endemics. More than 400 rare and disappeared species are included in the Red Book of Armenia.**





# Why *in situ* conservation and national inventory is important for Armenia?

- High level of polymorphism, including CWR
- Interactions between different species is in place
- Needs for phylogenic and genetic studies
- Different seed species can be conserved (orthodox, recalcitrant, vegetatively propagated) and data on them can be used in breeding and studies
- An essential source for adaptation to forecasted climate changes



# Why *in situ* conservation and national inventory is important for Armenia?

A great number of crop wild relatives, e.g. “Erebuni” Ste Reserve



*T. boeoticum* Boiss.  
*T. araraticum* Jakubz.  
*T. urartu* Thum. ex Gandil.



*S. vavilovii* Grossh.  
*S. montanum* Coss.



*H. spontaneum* C.Koch  
*H. bulbosum* L.  
*H. glaucum* Steud.  
*H. murinum* L.

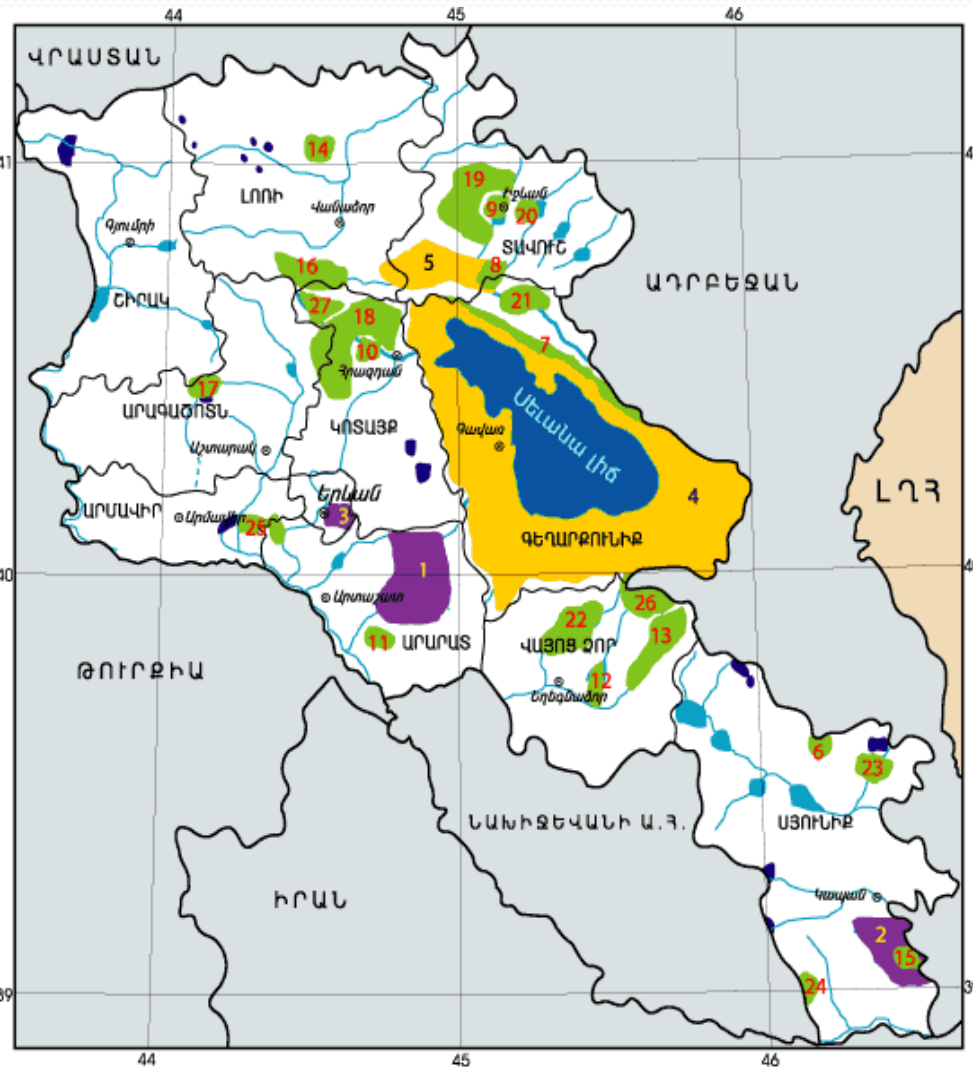
*H. maritimum* Huds.  
*H. geniculatum* All.  
*H. hrasdanicum* Gandil.



*A. taushii* Coss.  
*A. cylindrica* Host  
*A. triuncialis* L.

*A. columnaris* Zhuk.  
*A. trivialis* Zhuk.  
*A. mutica* Boiss.

# CWR in protected areas



## State Reserve

1. „Khosrov Forest,,
2. „Shikakhogh,,
3. „Erebuni,,

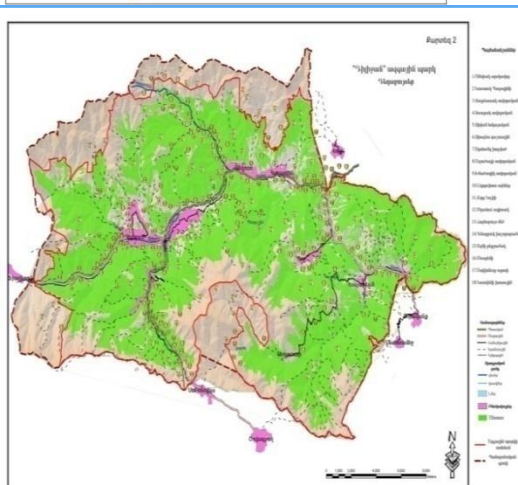
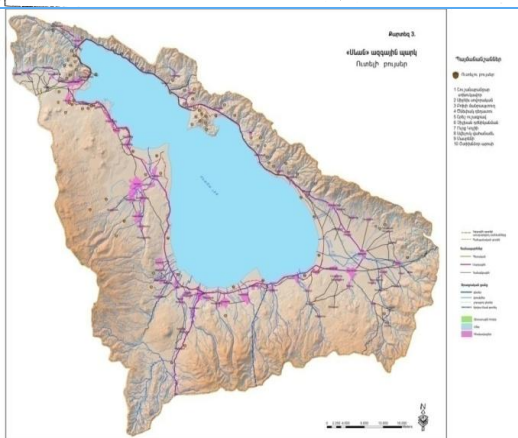
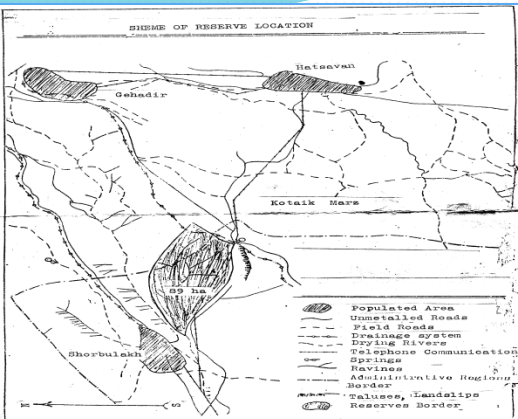
## National park

1. „Dilijan,,
2. „Sevan,,

## 4-10 Sanctuaries

## 11-12 Nature parks

# Recent achievements



- Development and adoption of the «Strategy on the development of Natural Specially Protected Areas in Armenia and Action Plan» (2003-2010)
- Development and approval by the Government of the management plans for “Sevan” and “Dilijan” National Parks
- Development of digital maps and inventory of biodiversity for two national parks
- Updated Armenian Red Data Book (2011)





# Armenia CWR Information System is available

UNEP/GEF “*In situ* Conservation of Crop Wild Relatives through Enhanced Information Management and Field Application” Project in Armenia has been spent in 2004-2009

- List of CWR species, wild edible plants
- Management plan for Erebuni State Reserve
- Public awareness
- Armenian CWR Information system

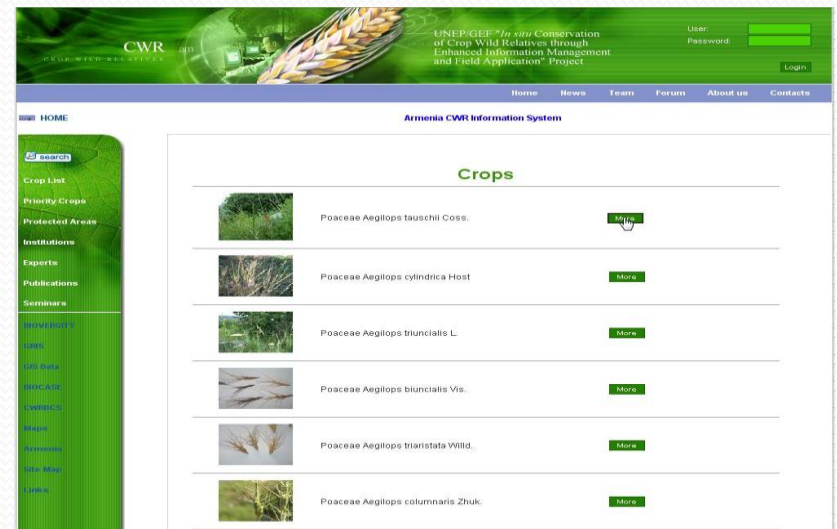
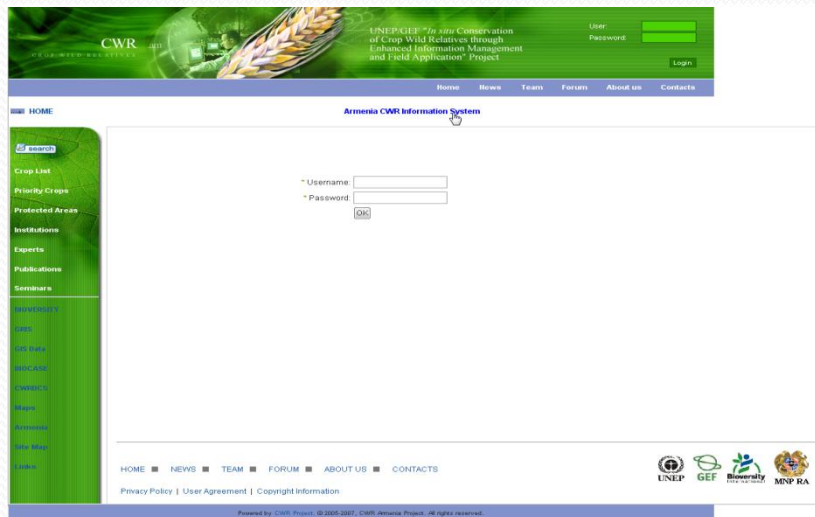
# Armenian CWR Information system

- **Includes:** Name, common name, synonyms, distribution, digital map, Red List assessment, current population trend, threats, conservation actions, utilization
- **For collecting data base:** locality (administrative, latitude, longitude, elevation), biological elements (sex, life state, etc), collecting event elements (collecting date, collector name, collecting method), record level elements (catalog number, remarks)





# Armenian CWR Information system



www.cwr.am

# Armenian CWR Information system

Armenian CWR Information System

**Poaceae *Aegilops tauschii* Coss.**



**Scientific Name:** *Ae. squarrosa* auct. non L. pro parte, *Triticum tauschii* (Coss.) Schmalz, *Triticum aegilops* P. Beauv. ex Roem. & Schult.

**English Common Name:** Tausch's goatgrass, Rough-spiked hard-grass

**Armenian Common Name:** Aghsakh Tauschi

**Russian Common Name:** Egllops Tauschi

**Order:** POALES (CYPERALES) **Family:** GRAMINEAE (POACEAE)

**Distribution:** According to the flora of Armenia (2009, in press), *Aegilops tauschii* Coss. occurs in Yerevan city and the following marzes (regions): Tavush, Shirak, Lori, Kotayk, Ararat, Aragatsotn, Vayots dzor, Armavir and Syunik.

**Interesting Information:** Three subspecies are known: ssp. *mayan* (Griseb) Tazelov, ssp. *tauschii* has stender spikes and ssp. *stragulata* (Fig.) Tazelov, with more robust spikes.

**Literature Reference:** Handuyanyan M.G. – Biological-ecological characteristics of *Aegilops* genus in the Republic of Armenia – PhD thesis, Yerevan, 1991. 162 p. (in Russian); van Slageren M.W. – Wild wheats: a monograph of *Aegilops* L. and *Amphipogonum* (Dau & Spack) Big (Poaceae), Wageningen, 1994. 512p.; Gaudillère, P.-A.; Hatzinave, E.A. – *Aegilops*, *Amphipogonum* (in: A. Tikhonov (Ed.) Flora of Armenia, v. 11, (in Russian) in press; Gabrielyan D., Zohary D. 2004. Wild relatives of food crops native to Armenia and Nabkhichevan // R. Nakh. 14: 6-80.

**Red listing**

**Red List Assessment (Red List assessment using IUCN Red List Categories and Criteria, version 3.1. (IUCN 2001):** Least Concern (LC)

**Current Population Trend:** ☒ Increasing ☐ Decreasing ☐ Stable ☐ Unknown

**Threats:** Urbanization, construction of roads, agricultural expansion, uncontrolled grazing. A site was identified near Erebuni State Reserve which has served as a site for disposal of chemical wastes.

**Conservation Actions:** Part of one subpopulation is protected at Erebuni State Reserve for wild cereals. Ex situ conservation of the seed collection under short-term storage at Armenian State Agrarian University.

**Utilization:** As a genetic material in breeding. E.g. *A. tauschii* x *Triticum aestivum* s.v. Voskhehask a new cultivar of soft wheat, cultivated from 1990.

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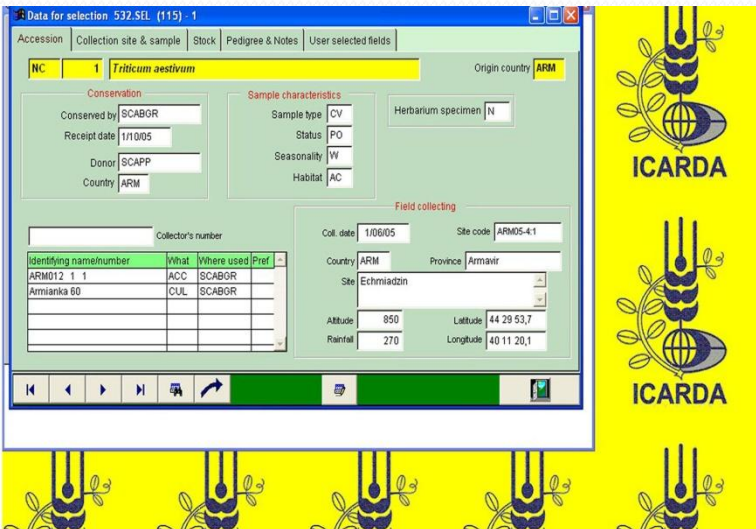


Location:Field Survey Data

Region	Marz	Village	Protected area	Altitude	Latitude	Longitude
Armenia	Vaghgachapat		866	44.40	40.16	
Armenia	Vaghgachapat		876	44.42	40.15	
Ararat	Marz	Aynap	866	44.44	40.10	
Ararat	Marz	Sayt Nova	833	44.40	40.07	
Ararat	Artsakh	Lanjast	1087	44.59	40.07	
Ararat	Artsakh	Lanjast	1175	44.64	40.09	
Ararat	Ararat		888	44.78	39.79	
Ararat	Ararat		859	44.82	39.76	
Ararat	Ararat	Amash	804	44.82	39.74	
Ararat	Ararat		806	44.83	39.73	
Ararat	Ararat		982	44.87	39.75	
Tavush	Tavush	Nerdin Kamirghapour	876	45.43	40.53	
Lori	Toumanyan	Chochkan	566	44.87	41.18	
Ararat	Ararat	Shaghvop	1309	44.86	39.89	
Ararat	Ararat	Shaghvop	1542	44.81	39.88	
Ararat	Ararat	Shaghvop	1346	44.88	39.89	
Syunik	Kapan	Kajaran	1935	46.11	39.15	
Syunik	Kapan		1836	46.14	39.15	
Vayots Dzor	Vayotsdzor	Aghajastor	1800	45.34	39.91	

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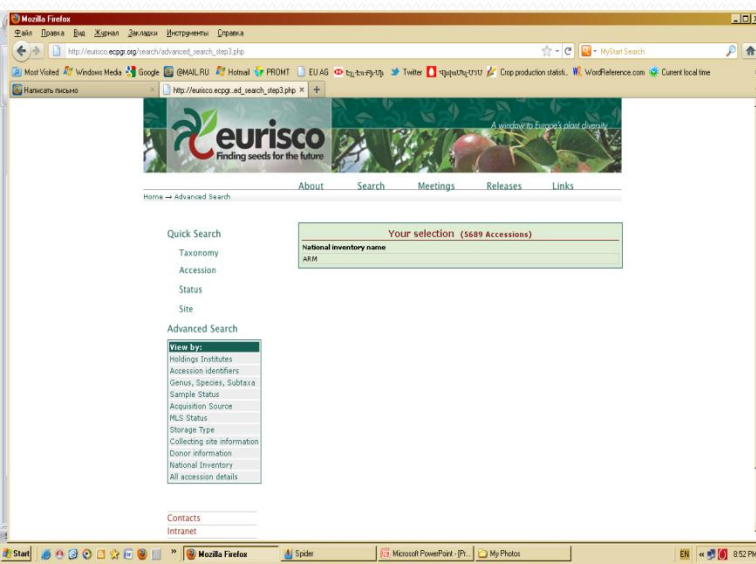
# National Inventory in Armenia



The screenshot shows a software window titled "Data for selection 532.SEL (115) 1". It contains various fields for accession information, sample characteristics, and field collecting data. The accession is identified as *Triticum aestivum* from Armenia. The form is divided into sections: Conservation, Sample characteristics, Field collecting, and a table for identifying name/number.

Identifying name/number	What	Where used	Pre
ARM012 1 1	ACC	SCABOR	
Armianika 60	CUL	SCABOR	

- Passport data of 6337 accessions are included at present in the National Inventory



The screenshot shows the EURISCO website interface. The header includes the EURISCO logo and navigation links. The main content area displays search results for "Your selection (5689 Accessions)" with the "national inventory name" set to "ARM". A sidebar on the left provides options for "Quick Search" and "Advanced Search".

- Passport data of 5780 accessions are included at present in the EURISCO



# Accessions number by type in EURISCO

N	Name	Code	Quantity
1	Wild	WI	4538
2	Landraces	LA	866
3	Cultivated	CV	287
4	Weeds	WE	89

# State of the NI on farm

On-farm management related activities are limited because of the lack of stakeholders' awareness concerning on-farm, no any step toward on farm inventory is undertaken



# Needs and Priorities

- Establishment of data base for *in situ*
- Data base for landraces and old traditional varieties of crops including some information on traditional knowledge
- Information exchange, technology transfer and capacity-building
- Managing and conserving plant genetic resources on farm
- The sustainable use of plant genetic resources and landraces and old traditional varieties on farm



A photograph of a fruit stand or market display. The image shows several wooden crates filled with fresh produce. In the upper section, there are stacks of green apples, yellow pears, and red apples. Below these, there are large piles of bright orange oranges and clusters of red pomegranates. The lower section of the image features large bunches of green and purple grapes. The text "THANK YOU" is overlaid in the center in a white, serif font.

THANK YOU