

An update on aegis

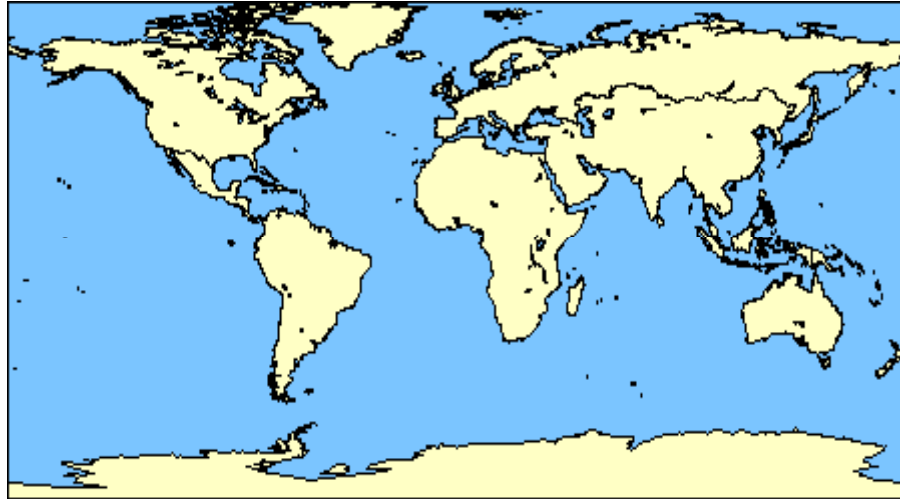
<http://www.aegis.cgiar.org/>

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Second Meeting of the Working Group on Cucurbits
8-10 November 2010, Tbilisi, Georgia

Background

Worldwide



- 1,750 genebanks/collections
- Approx. 7 million accessions
- Estimated 2 million unique
- Example: approx. 148,000 *Avena* accessions (Source: SoW Report II)

Europe



- App. 625 genebanks/germplasm coll.
- > 2 million accessions
- 30-40% unique (estimate)
- Example: approx. 34,000 *Avena* accessions; held in 45 genebanks in 31 countries (Source: EURISCO, Oct. 2010)

Historical background

- Reported **difficulties in PGR maintenance**:
 - lack of long-term conservation facilities
 - insufficient safety-duplication
 - regeneration backlogs
 - inhomogeneous quality of material
- Discussed options for sharing conservation responsibilities in Europe already in 1998
- SC decided in 2003 to initiate an integrated European genebank system feasibility study (4 model crops) in 2004
- SC decided in 2006 to establish AEGIS

Selection of Model Crops

- **Seed propagated** material – annual
- **Annex I crops** of ITPGRFA

- ***Avena***

selfing



- ***Brassica***

outcrossing



-
- **Vegetatively propagated** material – biennial and perennial
 - **Non Annex I** of ITPGRFA

- ***Allium***
(*Veg. propag.*)



- ***Prunus***



AEGIS Objectives

To create A European Genebank Integrated System for plant genetic resources for food and agriculture, aimed at **conserving the genetically unique and important accessions for Europe** and **making them available** for breeding and research. Such material will be safely conserved under conditions that **ensure genetic integrity and viability in the long term.**

Perceived Benefits of AEGIS

- Improved **security of germplasm** through long-term commitment and systematic safety-duplication
- Facilitated access to and **availability** of germplasm
- Improved **quality standards** of conserved material
- **Cost efficient** conservation activities
- **Reduced duplication** of germplasm material
- Improved **sharing of knowledge** and information

Establishment and milestones of AEGIS

1. ECPGR **SC decision** to initiate establishment of AEGIS in 2006
2. ECPGR **Secretariat to coordinate**; an AEGIS Coordinator appointed
3. **Feasibility studies** for 4 model crops conducted (2004-2008)
4. **Strategic framework** policy guide agreed (2008)
5. **Memorandum of Understanding** (MOU) developed and sent for signature to all ECPGR member countries in 1st half of 2009
6. Currently **23** countries have signed MOU



A European Genebank Integrated System



AEGIS > Membership > Member countries

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- Structure
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- Documents

AEGIS Member Countries

The following countries have signed the MoU:

1. **Albania** (6 May 2009)
2. **Azerbaijan** (16 July 2009) - Associate Members
3. **Bosnia and Herzegovina** (19 May 2010)
4. **Bulgaria** (2 December 2009) - Associate Members
5. **Croatia** (2 December 2009) - Associate Member
6. **Cyprus** (15 September 2009) - Associate Member
7. **Czech Republic** (23 July 2009)
8. **Denmark** (22 February 2010)
9. **Estonia** (22 May 2009) - Associate Members
10. **Finland** (2 December 2009)
11. **Georgia** (18 May 2009) - Associate Member
12. **Germany** (9 September 2009) - Associate Members
13. **Iceland** (22 February 2010)
14. **Ireland** (22 July 2009)
15. **Lithuania** (12 October 2010)
16. **The Netherlands** (28 May 2009) - Associate Members
17. **Norway** (17 August 2009)
18. **Poland** (17 May 2010)
19. **Portugal** (20 November 2009)
20. **Romania** (14 April 2010)
21. **Slovakia** (16 June 2009)
22. **Slovenia** (21 September 2009) - Associate Members
23. **Switzerland** (27 May 2009) - Associate Member
24. **Ukraine** (30 April 2009)
25. **United Kingdom** (18 June 2010)

RELATED INFORMATION



The International Treaty

Highlights

Second Call for Proposals - AEGIS Competitive Grant

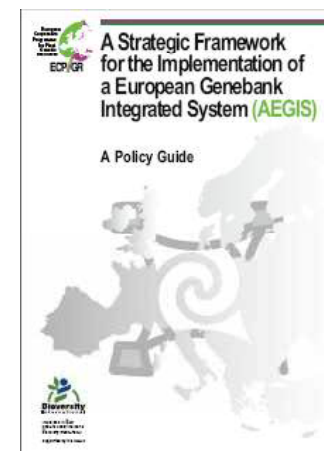


Establishment and milestones of AEGIS

7. Agreement on development of a Quality System (AQUAS); discussion paper
8. Agreement on requirements and criteria to select Most Appropriate Accessions (MAAs)
9. Competitive Small Grant Scheme launched (to facilitate establishment/operation process); 3 proposals awarded in 2010. New Call published on AEGIS Web site (deadline 31 December 2010)
10. EUROGENEBANK proposal submitted to FP7 Research Infrastructure Call; met threshold but not selected for funding

Key components of AEGIS

1. A **Strategic Framework** for the Implementation of a European Genebank Integrated System - A Policy Guide
2. Formal **agreement** with countries (**MOU**) and institutions within countries (Associate Membership)
3. **European Collection**
4. **Quality System** (generic and crop specific standards; reporting; monitoring; capacity building)



Key components of AEGIS

- **EURISCO** as information portal for European Collection



35*. AEGIS Status

(AEGISSTAT)

The coded status of an accession with regard to the European Genebank Integrated System (AEGIS).

Provides the information, whether the accession is conserved for AEGIS.

0 – not part of AEGIS

1 – part of AEGIS

If the AEGIS status is unknown, the field stays empty

- Dedicated **AEGIS website**: <http://www.aegis.cgiar.org/>

The European Collection

- The European Collection will consist of **dispersed accessions (MAAs)**, i.e. a virtual European genebank
- Through signing the **MOU** countries accept responsibilities for **long-term conservation** and **availability of EA**, and to
- Conserve/manage according to **quality standards**
- **Conservation/management strategies** for each crop needs to be prepared by respective Crop WG/NCG and approved by SC

European collection - current status

- Main players are Crop Working Groups and Countries
- No precise definition of MAA exists (result of a process!)
- Proposed simplified procedure to select MAAs (see handout)
- Selection requirements have been approved by the Steering Committee
- The Selection criteria have been discussed by the model crop groups, without much divergence of opinion
- A WG agreement on selection criteria will be required for each crop or crop group

AEGIS Quality System (AQUAS)

Proposed next steps

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AQUAS - Principles

Quality system to be based on the principles:

Quality assurance

- **Plan:** Say what you do
- **Do:** Do what you say
- **Check:** Let an independent body check that you do what you say
- **Act:** Correct and improve what you say you do

Decisions by **consensus**

Agreed minimum standards – involve partners; get “buy-in”

Capacity building plays a key role

Avoid unnecessary **bureaucracy** (pragmatic; not doctrinaire)

Effective **guidance** and **advisory approach** as **monitoring**

Technical elements

Elements to be established:

Operational genebank manual – all AEGIS Associate Members;
based on genebank template (**advanced draft available, version 9**)

Generic operational standards – Secretariat (based on manuals and
suggestions by **WGs**; cooperation with FAO)

Agreed **minimum crop specific technical standards** – all **WGs**
(complementing generic standards)

Quality management system procedures – Secretariat; all **WGs**;
Associate Members:

- a. **record keeping**
- b. **reporting**
- c. **monitoring (not policing, but guiding and advisory approach)**



Capacity building and oversight

Capacity building:

If standards are not met -> capacity building
(national funds or through projects)

Oversight:

First level monitoring of implementation of AQUAS by WGs
Second level monitoring across WGs by AEGIS Advisory
Committee

The way forward AQUAS -

- Adopt and use the final template for a genebank manual (Associate members)
- Comment on **generic technical standards** (Autumn/Winter 2010)
- Initiation of process to develop **crop specific technical minimum standards**:
 - a. **Collecting / Acquisition**
 - b. **Regeneration / Propagation**
 - c. **Drying and other preparatory steps**
 - d. **Storage / field genebank maintenance**
 - e. **Seed quality and viability monitoring**
 - f. **Distribution**
 - g. **Characterization**

Revision of FAO-IPGRI Genebank Standards

- FAO Commission on Genetic Resources for Food and Agriculture requested at its 12th meeting a revision of the Genebank Standards
- Genebank Standards were published in 1994
- A number of technical and political changes require a revision
- State of the World report II highlights these changes
- An agreed process for updating the standards

Table of contents of revised Genebank Standards

- Preamble
- Introduction
- Underlying principles
- Standards for:
 - Acquisition
 - Viability monitoring
 - Storage conditions
 - Regeneration
 - Characterization
 - Documentation
 - Distribution
 - Safety duplication
- Annexes



Genebank Standards - Agreed principles

- No distinction between “preferred” and “acceptable” standards
- One set of overall standards, defined as “targets”, and voluntary in nature



Thank you
for your
attention!

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