AEGIS PLUS

Reinforcing European plant genetic resources *ex situ* conservation through AEGIS implementation and capacity building

Background

Genebanks across Europe safeguard more than 2 million accessions of plant genetic resources, providing breeders, farmers and researchers with access to germplasm essential for developing resilient crops in the face of climate change. In 2009, the European Cooperative Programme for Plant Genetic Resources (ECPGR) established AEGIS (A European Genebank Integrated System) to coordinate conservation of unique European germplasm across a decentralized European Collection maintained with agreed quality standards. Today, AEGIS counts 35 member countries and 69 Associate Member institutions, with around 120,000 accessions flagged in the EURISCO database.

Despite this progress, significant gaps remain: conservation protocols, documentation systems and distribution policies vary widely, and only 54% of AEGIS accessions have been safety-duplicated. Funded by the German Federal Ministry for Agriculture, Food and Regional Identity (BMLEH), the predecessor project 'New AEGIS' (2024–2025) laid crucial groundwork for enhancing capacity and transparency through operational manuals, Standard Operating Procedures, a genebank metrics system, and reciprocal peer visits. AEGIS PLUS builds on these achievements to address the persistent gaps identified.

The project

AEGIS PLUS is a focused capacity-building initiative running from November 2025, funded by BMLEH. The project aims to enhance genebanks' operational quality and capacity, and ensure accessibility and use of the collections through a diverse range of activities:

Documentation & monitoring: A 2-day workshop will support up to ten genebanks in integrating the Genebank Metrics Tool into their documentation systems, enabling real-time operational monitoring. An expert group will simultaneously revise the genebank operational manual template to make it more user-friendly.

European Cooperative Programme for Plant Genetic Resources
ECP/GR

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Technical capacity: Two 'hackathon' workshops (up to 10 curators per event) will help share knowledge and enable hands-on practice on key genebank operations, such as germination testing, viability monitoring and drying protocols.

Safety duplication: Direct support will facilitate the safety duplication of up to 700 AEGIS accessions in partner genebanks, directly expanding the European Collection and its security.

Peer learning: Twelve reciprocal peer review visits will be organized, including field orchards for the first time, sharing knowledge and best practices across the network.

Accessibility study: A desk study led by the Centre for Genetic Resources (CGN), The Netherlands, will survey AEGIS genebanks on distribution requests and accessibility levels over the past five years, identify bottlenecks and propose corrective measures.

Impact

AEGIS PLUS will deliver tangible improvements across the European genebank network. Up to **10 genebanks** will adopt real-time **monitoring tools**; up to **20 curators** will gain **new technical skills**; **12 peer reviews** will expose institutions to a future certification framework; and up to **700 accessions** will be newly **safety-duplicated**. An **improved manual template** will ease compliance for all Associate Members, and the **accessibility study** will provide a baseline to measure and enforce improvement over time.

Beyond these direct outputs, the project will also **strengthen trust** across the entire AEGIS system. Together, these outcomes will demonstrate that coordinated investment in European genebank efficiency can deliver cost-effective improvements and significantly strengthen their reliability and capacity to conserve and provide access to plant genetic resources.

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€175,076

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