

Nordic wild plant genetic resources – a policy brief



What?

Crop wild relatives (CWR) are species or subspecies of plants that are closely related to our cultivated crops. As such, they have the potential to contribute beneficial properties to crops. They are genetically diverse, locally adapted and represent a potential source of valuable traits for adapting crops to changing environmental conditions and human needs.

Why?

By 2050, global food production will need to have doubled compared to the turn of the millennium^[1]. Accelerating climate change and continuing alarming loss of biodiversity and habitats emphasize the acute need to adopt and implement effective policy measures to prevent further loss of valuable genetic diversity. In addition, safeguarding and properly utilizing these wild genetic resources may contribute to strengthening Nordic plant breeding and, consequently, its competitiveness.

All Nordic countries are Parties to the Convention on Biological Diversity and thereby bound by decisions taken by the Conference. One decisive policy instrument is the Kunming-Montreal Global Biodiversity Framework^[2] adopted in 2022. With respect to wild genetic diversity, the framework both sets a global goal for 2050 and a specific target for 2030. It is now time for the Nordic countries to implement these policies at the national level.

How?

The following set of recommendations – addressing the joint Nordic and the national level, respectively – is the result of a project within the Nordic Council of Ministers Nature-Based Solutions programme^[3]. In addition, essential recommendations from the joint Nordic project Access and Rights to Genetic Resources: A Nordic Approach (II), have also been considered.

1. <https://www.fao.org/4/k6021e/k6021e.pdf>

2. <https://www.cbd.int/gbf>

3. Nordic Crop Wild Relative (CWR) Conservation for a more Resilient Agriculture (2021-2024)

A. Actions at the Nordic level

1. **Evaluate and promote the complementarity of proposed sites for *in situ* conservation**, aiming at optimizing conservation of Nordic genetic diversity.
2. **Collect seed for *ex situ* conservation on a case-by-case basis, prioritizing** from species with predicted range reductions, to preserve genetic diversity from their entire current distribution.
3. **Develop species-specific conservation recommendations** for those prioritized CWR predicted to be severely affected by climate change.
4. **Establish joint Nordic monitoring of potentially invasive CWR.**
5. **Secure facilitated access** to CWR genetic resources conserved *ex situ* in accordance with agreed international benefit-sharing instruments.
6. **Provide EURISCO with relevant and updated documentation** of Nordic CWR conserved *in situ*, as appropriate.
7. **Facilitate access to documentation and associated Digital Sequence Information (DSI)** of wild genetic resources for food and agriculture conserved *ex situ* by NordGen, in accordance with agreed international benefit-sharing instruments.
8. **Establish and maintain a joint Nordic network dedicated to CWR** involving a broad range of stakeholders engaged in genetic resources conservation and use, incl. relevant authorities, conservation managers, botanic gardens and arboreta, NordGen and plant breeders.
9. **Continue to collaborate at the Nordic level** regarding exchanging experiences on access and rights to wild genetic resources.
10. **Further expand the knowledge** about CWR prevalence, diversity, threats and characteristics **through scientific projects.**

B. Actions at both Nordic and national levels

1. **Identify areas or sites that can serve as climate refugia** for potentially affected CWR and **continue to inventory areas** of particular interest for *in situ* conservation, including areas not formally protected.
2. **Expand the collection of high-quality occurrence observations** from underrepresented areas and make these publicly available.
3. **Prioritize conserving natural ecosystems and ecological processes** to allow for genetic diversity to develop over time.
4. Aim at **conserving as wide a range as possible of intraspecific genetic diversity**.
5. **Establish and implement long-term monitoring** of prioritised CWR taxa conserved *in situ*, preferably both on population and genetic levels.
6. **Deepen the understanding of other threats** to CWR, incl. habitat fragmentation, over-exploitation and biotic/abiotic factors related to climate change.
7. **Continue to widen the knowledge base** on CWR in the Nordic region through mapping, inventorying, and analysis of genetic diversity.
8. **Develop scientifically based management recommendations** for selected CWR *in situ* conservation sites, targeting locally occurring populations.
9. **Increase the public awareness** on CWR conservation and use through collaboration with botanic gardens, arboreta, conservation areas and relevant museums.
10. **Provide joint awareness raising** for Nordic providers and users of genetic resources of international policy development with particular focus on CWR, including access and benefit sharing obligations and objectives.
11. **Consider a cross-sectoral review** of funding mechanisms to genetic resources conservation and, as appropriate, **dedicated financing** to CWR conservation and use.

C. Actions at the national level

1. **Complete the development of national strategies for *in situ* conservation of CWR.** National strategies should be complementary to Nordic, European and global strategies. Development of conservation measures should preferentially be based on FAO Voluntary Guidelines^[4].
2. **Consider registering the existence of *in situ* conserved populations** and providing access to this information and assistance regarding local access through NordGen.
3. **Carry out cross-sectoral reviews** regarding considerations and measures related to CWR conservation and use in national policy and in local management plans.
4. **Promote policy measures beneficial** for CWR conservation and use **and remove those detrimental** for the same purpose.
5. **Clarify the legal status** of access to wild genetic resources conserved *in situ*.
6. **Reach out to local authorities and protected area managers** with information about CWR aiming at establishing collaborative projects and activities.

For any questions, please contact NordGen at info@nordgen.org.



4. <https://openknowledge.fao.org/server/api/core/bitstreams/7329d2d1-cb38-49c7-bf1b-e422c1871593/content>

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NordGen

The Nordic Genetic Resource Centre (NordGen) is the Nordic countries' gene bank and knowledge center for genetic resources. NordGen is an organisation under the Nordic Council of Minister and works with the mission of conserving and facilitating the sustainable use of genetic resources linked to food, agriculture and forestry.

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