

2021 Report

IUCN SSC Crop Wild Relative Specialist Group

CWRSG
CROP WILD RELATIVE SPECIALIST GROUP



CO-CHAIR

Nigel Maxted

School of Biosciences,
University of Birmingham,
Edgbaston,
Birmingham B15 2TT,
UK



CO-CHAIR

Mariana Yazbek

Manager at
International Center
for Agricultural
Research in the Dry
Areas (ICARDA),
Lebanon

**RED LIST AUTHORITY
COORDINATOR**

Serene Hargreaves

Royal Botanic
Gardens, Kew, UK

NUMBER OF MEMBERS

57

Mission statement

The vision of the Crop Wild Relative Specialist Group (CWRSG) is the effective conservation and use of crop wild relatives (CWR) and their increased availability for crop improvement, for the benefit of the environment and human society worldwide.

Projected impact 2021–2025

By the end of 2025, we hope to have established two regional networks of in situ conservation sites for active conservation of CWR to complement current ex situ conservation activities. Our vision is a developing world in which the full potential of CWR diversity is used to maximise the development of healthy, resilient food systems, where rural communities/family farmers are recognised for their sustaining of vital conservation action, and where nutritional security is not limited by climate change or breeders' access to CWR diversity.

Targets 2021–2025

ASSESS

T-006 Implement research projects on CWR conservation and sustainable use.

T-007 Complete threat assessment of around 1,400 global priority CWR taxa.

PLAN

T-008 Plan a European regional network of CWR in situ conservation.

T-009 Plan regional networks of CWR in situ conservation outside Europe.

T-010 Plan national networks of CWR in situ conservation.

T-011 Improve CWR conservation policy context at global and regional levels.

T-012 Improve CWR conservation policy context at national level.

ACT

T-013 Develop tools and guidelines to help CWR conservation planning or to guide the implementation of in situ and ex situ conservation actions targeting CWR.

T-014 Establish a global network of CWR in situ conservation.

T-015 Establish a European regional network of CWR in situ conservation.

T-016 Establish regional networks of CWR in situ conservation outside Europe.

T-017 Establish national networks of CWR in situ conservation.

T-018 Advance ex situ conservation of representative genetic diversity of the global priority CWR diversity in genebanks.

T-019 Advance ex situ conservation of national priority CWR.

NETWORK

T-001 Establish effective links among various stakeholders for the implementation of CWR conservation actions.

T-002 Review membership and expand the taxonomic and geographic representation for the group by inviting new experts from Africa, Central/South America, Asia, Middle East and Oceania.

T-003 Build capacity in CWR conservation planning.

T-004 Build capacity in Red Listing.

COMMUNICATE

T-020 Publish papers on CWR conservation and use.

T-021 Maintain and update CWR related websites.

T-022 Organise webinars on CWR conservation.

Activities and results 2021

PLAN

Planning

T-008 (KSR 8)

Number of conservation plans/strategies developed: 1

Result description: Within the context of the Farmer's Pride project (<http://www.farmer-pride.eu/>), a European analysis of priority CWR distribution and identification of



Allium altaicum Pall., in Tien Shan (China) in 2009; it is a Tertiary wild relative of common onion and primary wild relative of branching onion, it is also a taxon group 3 relative of Chinese onion and of chives
Photo: Vojtech Holubec

use and access and benefit sharing of CWR in the Southern African Development Community (SADC) was also released in 2021 (http://www.cropwildrelatives.org/fileadmin/bioversity/publications/PB_49___Crop_Wild_Relatives_in_the_South_African_Development_Community.pdf). A policy roundtable on the establishment of a European network for in situ conservation and sustainable use of plant genetic resources was held as part of Session 4 of the Farmer's Pride final dissemination conference (<https://farmersprideconference.org/>) that took place between 28 June and 1 July 2021. The proposal to promote and embed the European network for in situ conservation of plant genetic resources within a European policy framework for genetic resources conservation and sustainable use was discussed. Additionally, the roundtable aimed to provide the conference participants with a clear view of prospects for the network in terms of its long-term recognition in policy and legislation, from local to global levels (Kell, S., Dulloo, E. and Maxted, N. (2021). *Policy roundtable on the establishment of a European network for in situ conservation and sustainable use of plant genetic resources*. Birmingham, UK: Farmer's Pride, University of Birmingham. Available at: [D3.6_Policy_dialogue_workshop_to_enhance_in_situ_maintenance.pdf](https://www.farmersprideconference.org/files/D3.6_Policy_dialogue_workshop_to_enhance_in_situ_maintenance.pdf)).

T-012 (KSR 9)

Number of policies where SSC members provided technical input: 3

Result description: Within the SADC-CWR Network project, both Malawi and Tanzania prepared their National Strategic Action Plans (NSAP) for the conservation and use of CWR, while Zambia revised their existing NSAP.

ACT

Conservation actions

T-013 (KSR 10)

Number of technical documents provided to support conservation actions: 3

candidate locations for the establishment of genetic reserves for the active in situ conservation of populations was finalised in 2021 (Rubio Teso, M.L., Álvarez Muñoz, C., Gaisberger, H., Kell, S.P., Lara-Romero, C., Magos Brehm, J., Maxted, N., Philips, J. and Iriondo, J.M. (2021). *European crop wild relative diversity: towards the development of a complementary conservation strategy*. Birmingham, UK: Farmer's Pride, University of Birmingham. Available at: [D4.3_CWR_network_design.pdf](https://www.farmersprideconference.org/files/D4.3_CWR_network_design.pdf)). In Southern Africa, a paper with the results of the in situ and ex situ conservation planning of regional priority CWR was submitted to a peer-reviewed journal.

T-009 (KSR 8)

Number of conservation plans/strategies developed: 2

Result description: Conservation planning of CWR in East and West Africa is currently being carried out.

T-010 (KSR 8)

Number of conservation plans/strategies developed: 0

Result description: Conservation planning of priority CWR in Canada and Iran was initiated in 2021.

Policy

T-011 (KSR 9)

Number of policies where SSC members provided technical input: 1

Result description: Within the SADC-CWR Network project: (i) a harmonisation paper on Access and Benefit Sharing (ABS) policies of in situ genetic resources within CWR networks was prepared involving a task force that included two key international stakeholders [Nagoya Protocol unit of the United Nations Convention on Biological Diversity (CBD) and International Treaty Plant Genetic Resource for Food and Agriculture (ITPGRFA)]; (ii) a policy brief regarding the need to establish a regional network for conservation, sustainable

Result description: The tool 'Crop wild relatives in European protected areas: A tool for protected area managers' (<https://www.ecpgr.cgiar.org/crop-wild-relatives-in-natura-2000>) was developed to help protected area managers identify which CWR are likely to occur in the protected areas they manage. The 'Web Tool for CWR Population Management' (<https://cwrpopulation-toolkit.cropwildrelatives.org/>) was prepared to provide practical guidelines for the management of CWR populations in situ and the sites in which they are being conserved. The final version of the *Descriptors for Crop Wild Relatives conserved in situ (CWRI v.1)* (<https://www.fao.org/documents/card/en/c/cb3256en/>) was prepared and published in 2021 by the International Treaty of the Food and Agriculture Organization of the United Nations. These descriptors form an international standard to ensure consistency in the way data about CWR are documented and exchanged, namely via the Global Information System. They were the result of the work of the Treaty's staff, worldwide experts, technical staff and national focal points of the Treaty which were involved in various consultations and discussions; they were tested in several countries across the world, namely in Africa, Asia, Europe and the Group of Latin America and the Caribbean, and refined based on the feedback obtained from the various national experts contacted.

T-014 (KSR 10)

Number of areas under management for the species or group of species: 0

Result description: The global network of genetic reserves for globally important CWR has been designed and published in 2019 but not yet implemented.

T-015 (KSR 10)

Number of areas under management for the species or group of species: 0

Result description: The foundations for the establishment of the European network for In Situ Conservation and Sustainable Use of Plant Genetic Resources have been laid and we are now building a coalition of support for its establishment.

T-016 (KSR 10)

Number of areas under management for the species or group of species: 9

Result description: The SADC Network for In Situ Conservation of CWR was approved by the SADC Ministers responsible for agriculture, food security, fisheries and aquaculture and is expected to be implemented very soon. Nine sites in Malawi, Tanzania

and Zambia were nominated as genetic reserves to conserve in situ national priority CWR; these sites will integrate the SADC Network for In Situ Conservation of CWR.

T-017 (KSR 10)

Number of areas under management for the species or group of species: 3

Result description: Malawi, Tanzania and Zambia have worked closely with national parks, wildlife or forestry departments to revise the management plans of the protected areas identified in their conservation planning towards the establishment of the national network of CWR in situ conservation (SADC-CWR Network project). Three sites (Nyika National Park, Zomba, and Mulanje Mountain Forest Reserve) were nominated in Malawi as genetic reserves for active in situ conservation of CWR; three sites (Uzungwa Scarp Forest Reserve, Kyejo Forest Reserve, and Minziro Forest Reserve) were nominated in Tanzania; while Zambia nominated three national parks (Kafue, Kasanka and South Luangwa) as the key sites of national importance for in situ conservation of CWR.

T-019 (KSR 10)

Number of threatened species benefiting from ex situ conservation action: 2

Result description: Within the context of the SADC-CWR Network project, Malawi, Tanzania and Zambia collected 63, 70 and 21 ex situ accessions, respectively, of national priority wild relatives of rice and sorghum, amongst others.

NETWORK

Capacity building

T-003 (KSR 2)

Number of people trained in conservation planning: 31

Result description: With the Training Programme on CWR Conservation Planning prepared within the context of the Darwin Initiative-funded project 'Bridging Agriculture and Environment: Southern African Crop Wild Relative Regional Network' (SADC CWR Network for short, <http://www.cropwildrelatives.org/sadc-cwr-net/>), a total of 31 people were trained: 22 from amongst 12 Southern African countries, seven from outside Southern Africa (Nigeria, Peru, Saudi Arabia, Sudan and UK), and two from the SADC Plant Genetic Resources Centre.

T-004 (KSR 2)

Number of people trained in assessment tools: 1

Result description: One person was trained in using the Categories and Criteria for Red List assessment.

Membership

T-002 (KSR 2)

Number of SSC members recruited: 1

Result description: One expert from Africa was invited to join the CWRSRG, and others from the target regions will be invited very soon.

Synergy

T-001 (KSR 1)

Number of in kind partnerships established and maintained: 1

Result description: The SADC Network for In Situ Conservation of CWR was approved by the SADC Ministers responsible for agriculture, food security, fisheries and aquaculture and is expected to be implemented very soon. The foundations for the establishment of the European network for In Situ Conservation and Sustainable Use of Plant Genetic Resources have been laid and we are now building a coalition of support for its establishment.

COMMUNICATE

Communication

T-020 (KSR 13)

Number of published papers: 18

Result description: (1) *Crop Wild Relative Newsletter* – Issue 13 (http://www.cropwildrelatives.org/fileadmin/templates/cropwildrelatives.org/upload/images/pdf/CWR_Newsletter_issue_13.pdf); (2) Álvarez-Muñiz, C., Rubio Teso, M.L., Magos Brehm, J., et al. (2021). 'Crop wild relative network showcases'. *Crop Wild Relative* 13:16–18; (3) Drucker, A.G., Tyack, N., Bartha, B., et al. (2021). 'Getting incentives right? Public willingness to pay for support mechanisms for effective conservation and use of landraces in Europe'. *Crop Wild Relative* 13:27–28; (4) Dulloo, M.E., Shava, J.G. and Bissessur, P. (2021). 'The establishment of the first southern African regional network for crop wild relative conservation and sustainable use: lessons learnt'. *Crop Wild Relative* 13:9–10; (5) Goettsch, B., Urquiza-Haas, T., Koleff, P., et al. (2021). 'Extinction risk of Mesoamerican crop wild relatives'. *Plants, People, Planet* 3(6):775–795. <https://doi.org/10.1002/ppp3.10225>; (6) Magos Brehm, J., Gaisberger, H., Kell, S., et al. (2021). 'Summary of the *in situ* and *ex situ* conservation priorities for the SADC region'. *Crop Wild Relative* 13:6–8; (7) Maxted, N. (2021). 'The conservation and use of CWR: the *in situ* perspective'. *Crop Wild Relative* 13:32–35; (8) Maxted, N. and Kell, S. (2021). 'Establish a European *in situ* conservation network of sites and stakeholders'. *Crop Wild Relative* 13:36–38; (9) Maxted,



N. and Kell, S. (2021). 'In situ plant genetic resources conservation information management tools'. *Crop Wild Relative* 13:25–26; (10) Maxted, N. and Vincent, H. (2021). 'Review of congruence between global crop wild relative hotspots and centres of crop origin/diversity'. *Genetic Resources and Crop Evolution* 68:1283–1297. <https://doi.org/10.1007/s10722-021-01114-7>; (11) Molina, A., Álvarez-Muñoz, C., Iriondo, J.M., et al. (2021). 'Crop wild relative population management guidelines'. *Crop Wild Relative* 13:23–24; (12) Mponya, N.K., Chanyenga, T., Magos Brehm, J. and Maxted, N. (2021). 'In situ and ex situ conservation gap analyses of crop wild relatives from Malawi'. *Genetic Resources and Crop Evolution* 68:759–771. <https://doi.org/10.1007/s10722-020-01021-3>; (13) Müller, J.V., Cockel, C.P., Gianella, M. and Guzzon, F. (2021). 'Treasuring crop wild relative diversity: analysis of success from the seed collecting phase of the 'Adapting Agriculture to Climate Change' project'. *Genetic Resources and Crop Evolution* 68:2749–2756. <https://doi.org/10.1007/s10722-021-01229-x>; (14) Nduche, M., Magos Brehm, J., Abberton, M., et al. (2021). 'West African Crop Wild Relative Checklist, Prioritization and Inventory'. *Genetic Resources* 2(4):55–65. <https://doi.org/10.46265/genresj.EIFL1323>; (15) Palmé, A., Lund, B., Kiviharju, E., et al. (2021). 'Recent progress on crop wild relative conservation in the Nordic region'. *Crop Wild Relative* 13:11–15; (16) Rahman, W., Magos Brehm, J., Maxted, N., et al. (2021). 'Gap analyses of priority wild relatives of food crop in current ex situ and in situ conservation in Indonesia'. *Biodiversity and Conservation* 30:2827–2855. <https://doi.org/10.1007/s10531-021-02225-4>; (17) Rubio Teso, M.L., Álvarez-Muñoz, C., Gaisberger, H., et al. (2021). 'Crop wild relative conservation in the Natura 2000 network'. *Crop Wild Relative* 13:19–22; (18) Zair, W., Maxted, N., Magos Brehm, J. and Amri, A. (2021). 'Ex situ and in situ conservation gap analysis of crop wild relative diversity in the Fertile Crescent of the Middle East'. *Genetic Resources and Crop Evolution* 68:693–709. <https://doi.org/10.1007/s10722-020-01017-z>.

T-021 (KSR 12)

Number of CWR-related websites maintained and updated: 5

Result description: Websites developed within the context of the Farmer's Pride project (<http://www.farmerspride.eu/>), the SADC-CWR Network project (<http://www.cropwildrelatives.org/sadc-cwr-net/>), the GenRes Bridge project (<http://www.genresbridge.eu/>), the 'Adapting Agriculture

to Climate Change: Collecting, Protecting and Preparing Crop Wild Relatives' project (<https://www.cwrdiversity.org/>), as well as the CWR Global Portal (<http://www.cropwildrelatives.org/>), were maintained and updated.

Scientific meetings

T-022 (KSR 12)

Number of scientific events organised: 4

Result description: (1) 'Crop wild relative conservation in protected areas in the SADC region' (<http://www.cropwildrelatives.org/resources/webinars/>): a two-day webinar held 8–9 February 2021, organised by the Alliance of Biodiversity and International Center for Tropical Agriculture (CIAT), Biodiversity and Protected Areas Management Programme (BIOPAMA) and the University of Birmingham, addressed the importance of CWR for food security and climate change resilience and how can they be conserved; (2) International Conference 'Ensuring Diversity for Food and Agriculture: Plant Genetic resources – in nature and on-farm' (<http://www.farmerspride.eu/>): this international conference was held 28 June–1 July 2021, organised within the context of the Farmer's Pride project, in association with the Genetic Resources section of the European Association for Research on Plant Breeding (EUCARPIA) and the European Cooperative Programme for Plant Genetic Resources (ECPGR); it addressed several aspects related to global in situ (including on-farm) conservation and sustainable use of plant genetic resources, and had a session dedicated to the establishment of a European network for in situ conservation and sustainable use of plant genetic resources, including a roundtable with key policymakers and stakeholder discussions; (3) Preview of the 'Genetic Resources Strategy for Europe' (<https://www.youtube.com/watch?v=OA1M2G0d-nqA>): held 12 November 2021, organised within the context of the GenRes Bridge project (<http://www.genresbridge.eu/>), this webinar gave the opportunity to present the Genetic Resources Strategy for Europe (where CWR are also referred to); (4) Second International Agrobiodiversity Congress Side Event 'Conserving Crop Wild Relatives (CWR) to support sustainable agriculture in Southern Africa' (<https://www.eatgrowsave.org/>): this two-hour webinar was held on 18 November 2021, organised within the SADC-CWR Network project, and aimed to present the key results of the project and the key lessons learnt in the establishment of the SADC Network for In Situ Conservation of CWR.

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Summary of achievements

Total number of targets 2021–2025: 21

Geographic regions: 14 Global, 3 Africa, 6 Europe

Actions during 2021:

Plan: 5 (KSR 8, 9)

Act: 6 (KSR 10)

Network: 4 (KSR 1, 2)

Communicate: 3 (KSR 12, 13)

Overall achievement 2021–2025:

