

# IUCN SSC Macaronesian Islands Plant Specialist Group



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**NUMBER OF MEMBERS**

14

## Mission statement

The IUCN SSC Macaronesian Islands Plant Specialist Group (MIPSG) will act as a mechanism for driving and implementing urgent conservation actions across the region, supported by solid and updated scientific evidence, in a collaborative framework that encompasses regional Universities, Botanic Gardens and Administrations.

## Projected impact 2021–2025

The targets for the 2021-2025 period clearly address several of the major knowledge problems faced by the insular floras of Macaronesia and worldwide. The application of the multidisciplinary data from projects led by the participating researchers to both widespread and narrowly distributed endemics will help unveil overlooked taxa and upscale the scientific background of the existing conservation strategies, with positive impacts on the red list assessments of the most endangered taxa.

Furthermore, we expect that the existing collaborative international research setting created throughout the last decades by the different participants in the specialist group will help build the needed political context to influence properly funded conservation decisions, and provide the citizenship with informed guidelines to help preserve the great natural heritage of Macaronesia.

## Targets 2021–2025

### ASSESS

**T-001** Complete and publish new Red List assessments on Macaronesian plants on the IUCN Red List of Threatened Species website.

**T-007** Monitor populations of Critically Endangered and Endangered taxa and diagnose their current threat status.

### PLAN

**T-009** Ensure upscaling the application of multi-disciplinary research results in the planning of reinforcements, reintroductions and/or assisted migrations of plant endemics.

### ACT

**T-002** Population-level Monitoring and Analysis: Establish monitoring programmes for selected species and groups of species targeting the monitoring of populations of Critically Endangered and Endangered taxa.

**T-003** Special initiatives to tackle major conservation crises: Bring focused attention to resolving major crises in biodiversity conservation – target species *Musschia isambertoii*.

**T-004** Special initiatives to tackle major conservation crises: Bring focused attention to resolving major crises in biodiversity conservation, ensuring upscaling the application of multi-disciplinary research results in the planning of reinforcements, reintroductions and/or assisted migrations of endemics.

**T-006** Conduct in situ and ex situ conservation (seeds, herbarium and living collections) of Critically Endangered and Endangered plants and preventive sampling of seeds of more widely distributed plant taxa.

**T-012** Carry out DNA banking and analyses of Critically Endangered and Endangered plants for inclusion in conservation planning and institutional information systems.



Azores landscape  
Photo: Mónica Moura

## NETWORK

**T-010** Network with research institutions and political actors related to the conservation of insular floras.

**T-011** Organise capacity building workshops and courses for staff, and attract Master's and Doctoral students to collaborate with other teams in the Specialist Group.

## COMMUNICATE

**T-008** Develop different outreach programmes aimed at stimulating actions and social awareness about the importance and degree of threat of insular floras.

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## Activities and results 2021

### PLAN

#### Planning

**T-009** (KSR 8)

**Number of conservation plans/strategies developed:** 15

**Result description:** In Gran Canaria, the teams of projects NEXTGENDEM (MAC2/4.6d/236, <https://www.nextgendem.eu/es/>), MACFLOR (MAC2/4.6d/190, MAC2/4.6d/386; <https://macflor.com/>) and NEXTPOL advanced in the construction of web pages with databases and information systems aimed at multi-disciplinary

research and conservation of the Macaronesian flora. Many results were presented at the X Congress of the Spanish Society for Plant Conservation (SEBiCoP, <https://www.sebot.org/congresos/>).

### ACT

#### Conservation actions

**T-002** (KSR 10)

**Number of species with increased or prevented decrease in population or range size, as a result of conservation actions:** 1

**Result description:** The Madeira group developed an internal IUCN grant to monitor the population of *Musschia isambertoii* (Campanulaceae), complemented with seed collection from as many plants as possible and propagation, using either seeds from the natural habitat or from the Madeira Botanical Garden Seed Bank.

**T-006** (KSR 10)

**Number of seed accessions collected and preserved in the seed bank:** 311

**Result description:** A total of 135 seed accessions of 26 Canarian endemic taxa from Gran Canaria and 124 accessions of 25 Cape Verdean endemic taxa from Santiago were deposited in the seed bank of the Botanic Garden "Viera y

Clavijo"—Unidad Asociada al CSIC (JBCVC-UACSIC) under the project NEXTGENDEM. Vouchers of most populations were deposited in the Santiago and LPA Herbaria. The usefulness of Rasazurin to assess seed viability was tested in Pimentero de Temisas (*Solanum lidii*; Solanaceae), and the viability of seeds of Crestagallo de Pinar (*Isoplexis isabelliana*; Plantaginaceae) was successfully checked after more than 30 years of storage at the facilities of the JBCVC-UACSIC. In the Azores Seed Bank, a yearly ex situ seed banking campaign was implemented, with 52 taxa added to the facilities, including three Endangered taxa and one Vulnerable taxon. Fifteen taxa were subjected to germination trials, including one Critically Endangered and one Endangered taxon, which resulted in dozens of individuals being returned to their natural populations.

**T-012** (KSR 10)

**Number of threatened species benefiting from ex situ conservation action:** 211

**Result description:** A total of 2,291 individuals of 174 Canarian endemic taxa from Gran Canaria and 1,143 individuals of 27 Cape Verdean endemic taxa from Santiago were sampled and deposited in the Canarian Flora DNA Bank at the Botanic Garden

*Geranium maderense*  
Photo: Projeto REGIS



*Helianthemum bystropogophyllum* (Cistaceae)  
a CR endemic from Gran Canaria sampled  
for NEXTGENDEM project  
Photo: Marco Díaz-Bertrana

*Andryala crithmifolia*  
Photo: Projeto REGIS





*Umbilicus schmidtii* in Serra Malagueta (Santiago, Cabo Verde)  
Photo: David Padilla



Sampling for NEXTGENDEM project in Cabo Verde  
Photo: David Padilla

“Viera y Clavijo”–Unidad Asociada al CSIC (project NEXTGENDEM, MAC2/4.6d/236). Vouchers of most populations were deposited in the Santiago and LPA Herbaria. Also under the NEXTGENDEM MAC2/4.6d/236 project, amplification and sequencing of 943 *rbcl* and 805 *matK* sequences from Cape Verdean and Canarian endemics was carried out, for deposit and analyses in the NEXTGENDEM information systems operated by the Cabildo de Gran Canaria. Collaborations were conducted with other members of the group and external institutions to investigate the biogeography of several Macaronesian endemics, especially within *Lotus* (Fabaceae) and *Aeonium* (Crassulaceae).

## NETWORK

### Synergy

T-010 (KSR 1)

**Number of in kind partnerships established and maintained:** 7

**Result description:** In Gran Canaria, the group of the JBCVC-UACSIC reinforced the need to sign an official convention with the Canarian Government to support and provide funding to continue and to enhance the missions of the Seed Bank, DNA Bank, Herbarium and Ethnobotany bank (submitted in 2013, pending since that year). Furthermore, several meetings were held between the teams of the NEXTGENDEM project (MAC2/4.6d/236, <https://www.nextgendem.eu/es/>) and the Biodiversity Data Bank of the Canary Islands (BIOTA, <https://www.biodiversidadcanarias.es/biota/>) to improve knowledge of distribution of the endemic Canarian flora, link

databases of BIOTA and NEXTGENDEM, and pave the way for further collaborations in scientific publications and projects. Other efforts involved meetings of JBCVC-UACSIC and Cape Verde National Agricultural Research and Development Institute (INIDA) officials with different institutions based in Cape Verde, and participation in the HEXAGONE structural project in Sao Miguel (Açores).

## COMMUNICATE

### Communication

T-008 (KSR 13)

**Number of communication products using innovative tools:** 20

**Result description:** In Gran Canaria, the Botanic Garden “Viera y Clavijo”–Unidad Asociada al CSIC organised its ‘month of science’ in November, with a series of lectures offered by its scientific staff in universities, schools and institutes across the island. This programme was complemented with activities in the Botanic Garden led by the staff in the Environmental Education department, aimed at children and families. Several articles and interviews with relevant conservation actors were published in the online biodiversity forum Greentank (<https://www.greentank.es/>) as well as on the Facebook page (<https://www.facebook.com/JardinBotanicoCanarioVierayClavijo/>) and in the social media of project NEXTGENDEM (<https://twitter.com/NextgendemTech>; <https://www.instagram.com/nextgendem/>).

## Acknowledgements

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## Summary of achievements

**Total number of targets 2021–2025:** 11

**Geographic regions:** 5 Africa, 10 Europe

**Actions during 2021:**

Plan: 1 (KSR 8)

Act: 3 (KSR 10)

Network: 1 (KSR 1)

Communicate: 1 (KSR 13)

**Overall achievement 2021–2025:**

