

Medicinal and Aromatic Plants Working Group:

Progress made during the first part of Phase IX (2014-2015)

Working Group Members

The Working Group presently consists of the **77 members** as listed:

Ana Maria Barata (Chair) – Portugal; Albania - Mr Alban Ibraliu, **Armenia** - Ms Margarita Harutyunyan, **Austria** - Mr Wolfgang Kainz, Ms Sylvia Vogl; Mr Paul Freudenthaler, **Azerbaijan** - Mr Aydin Asgarov, **Belarus** - Ms Anna Vasko; Mr Stanislau Grib, - **Bosnia and Herzegovina** - Ms Dragana Pećanac, Ms Marina Antić, Ms Danijela Petrović, **Bulgaria** - Ms Katya Uzundjalieva, **Croatia** - Mr Zlatko Šatović, Ms Martina Grdiša, Ms Klaudija Carovic-Stanko, **Cyprus** - Mr Efstathios Evangelides, Mr Angelos Kyratzis, Ms Constantina Stavridou, **Czech Republic** - Mr Karel Dušek, **Estonia** - Ms Olesja Korotkova, Mr Jüri Sild, **Finland** - Mr Henri Vanhanen, Mr Reiner Peltola, **Georgia** - Ms Tamar Kacharava, **Germany** - Mr Frank Marthe, Ms Ulrike Lohwasser, Mr Wolfgang Friedt, **Hungary** - Ms Beáta Gosztola, Ms Krisztina Szabó, Nóra Pap, Ms Éva Zámboriné Németh, Zsuzsanna Pluhár, Mr Péter Rajhárt, **Israel** - Mr Nativ Dudai, **Italy** - Mr Pietro Fusani, **Latvia** - Ms Irina Sivicka, **Lithuania** - Ms Jolita Radušienė, Laima Šveistytė, Ms Birutė Karpavičienė, Mr Juozas Labokas, **Macedonia FYR** - Mr Gjoshe Stefkov, **Malta** - Mr Everaldo Attard, **Montenegro** - Ms Danijela Stesevic, **Norway** - Mette Thomsen, **Poland** - Mr Waldemar Buchwald, Ms Katarzyna Baczek, Ms Katarzyna Seidler-Łozykowska, Mr Marcin Zaczyński, **Portugal** - Ms Violeta Lopes, Orlanda Póvoa, Ms Maria do Carmo Serrano, Ms Noémia Farinha, Mr Benvindo Martins Maçãs, Ms Ana Cristina Figueiredo, **Romania** - Ms Diana Batir Rusu, Ms Creola Brezeanu, Ms Silvia Străjeru, Ms Petronela Comanescu, **Serbia** - Mr Dušan Adamović, Ms Milka Brdar-Jokanović, **Slovakia** - Ms Iveta Cicová, **Slovenia** - Ms Dea Baričević, Ms Nataša Ferant, **Spain** - Mr Marcelino de los Mozos Pascual, **Sweden** - Ms Ulrika Carlson-Nilsson, Mr Kjell-Åke Lundblad, Mr Jens Weibull, **Switzerland** - Mr Christian Eigenmann, Mr Markus Hardegger, Ms Christina Kägi, Mr José Vouillamoz, **Turkey** - Mr Ali Osman Sari, Mr Unal Karik, **Ukraine** - Ms Tetyana Platonova, **United Kingdom** - Mr Nigel Maxted, Ms Lydia Smith.

These **77 members** have different expertise, with major representativeness in genebank curators (21), crop specialists (30) and documentation and information specialists (17).

Achievements in the field of MAP conservation in the period 2014-2015

Participation in conferences

(MAP WG activities were announced)

- Participation in the Final dissemination conference and proceedings of *PGR Secure project*

The PGR Secure conference '*ENHANCED GENEPOOL UTILIZATION – Capturing wild relative and landrace diversity for crop improvement*' proceedings containing summaries of the presented papers will be published in the spring of 2016.

(Citation: Maxted, N., Dulloo, M.E. and Ford-Lloyd, B.V. (eds.) (2016). *Enhancing Crop Genepool Use: Capturing Wild Relative and Landrace Diversity for Crop Improvement*. CAB International, Wallingford, UK. ISBN-13: 978-1-78064-613-8).

- Participation in The 2nd Mediterranean Symposium on Medicinal and Aromatic Plants (MESMAP-2) April, 2015 in Antalya-TURKEY

Ana Maria Barata, Filomena Rocha, Violeta Lopes, Ana Maria Carvalho. 2015. **Conservation and sustainable uses of Medicinal and Aromatic Plants genetic resources on the worldwide for human welfare**. MESMAP-2. Abstract Book, Invited lecture –IX, pp. 69-70, Antalya, Turquia (Elsevier Editorial System for Industrial Crops and Products) in publication.

- Presentation of the National Programme for the Conservation and Sustainable Use of Plant Genetic Resources for Food and Agriculture – Portugal (2015). Available in: <http://www.iniav.pt/gca/?id=1600>

Initiate and coordinate the preparation of project ideas and proposals for funding from the competitive ECPGR funding scheme and/or from other sources

ECPGR Activity Grant Scheme

First call - 2014

Title of the proposal: Documentation of European *Carum carvi* accessions for long term conservation. Not successful.

Objective

This project aims at providing preliminary results and the background information for the establishment of future regional collection(s) (according to the AEGIS concept) of *Carum carvi* L. in Europe.

Partners

Name and Surname	Country
Alban Ibraliu	ALBANIA
Sayara Ibadullayera	AZERBEIJAN
Katty Uzundzhalieva	BULGARIA
Karel Dusek	CHECK REPUBLIC
Pietro Fusani	ITALY
Asmund Asdal	NORWAY
Diana Batir Rasu	ROMENIA
Ana Maria Barata	PORTUGAL
Dea Baricevic	SLOVENIA

Second Call -2015

Title of the proposal: "Inventory and update Documentation system for MAP European Conservation-MAPDOC". Not Successful.

Objective

To develop and agree on the standards for an inventory and survey the distribution pattern of the indigenous populations of the MAP priority species.

Harmonization of methodologies for the evaluation of natural plant populations and their habitats, based on the principle of a descriptor system.

Upgrade of an existing information system (MEDPLANT) that will enable implementation and monitoring of ex-situ and/or in-situ conservation strategies for MAP species. The update of MAP's in ex situ and in situ conservation and the upgrade with harmonization of methodologies and concepts will have impact on the Conservation Action plans, national and regional level, in the quantity and quality of the data uploaded to EURISCO.

Partners

Name and Surname	Country
Alban Ibraliu	ALBANIA
Kattya Uzundzhaliyeva	BULGARIA
Tamar Kacharava	Georgia
Pietro Fusani	ITALY
Laima Šveistytė	LITHUANIA
Mette Thomsen	NORWAY
Dea Baričević	SLOVENIA
Marcelino de los Mozos Pascual	SPAIN
Ana Maria Barata	PORTUGAL
Nigel Maxted	UNITED KINGDOM

Projects submitted that considered MAP research and involved WG members

HORIZON 20-20 A Comprehensive Approach for the Management and Sustainable Exploitation of European Medicinal and Aromatic Plants (**Acronym: SEE-MAP**); Twenty seven partners were involved in this proposal and some of them are from the MAPWG.

Proposal Coordinator: Sotirios Kampranis, from the University of Crete – Project not successful.

Support given to other projects

DG AGRI of the European Commission funded the "Preparatory action on EU plant and animal genetic resources" which was coordinated by consultants with the help of experts. The project started in July 2014 and aimed to create an overview of actors, networks, activities and issues regarding conservation and sustainable use of Genetic Resources in Europe.

Several workshops are planned during the period June 2015 – March 2016. Each workshop is dedicated to specific topics/issues linked to a specific regional context and/or covering sectorial or methodological issues in the field of genetic resources. The outcomes of the workshops should provide recommendations concerning approaches and solutions applicable for the conservation and sustainable use of GR, reflecting the objectives and themes of the preparatory action.

WG members were asked to give advices and support to the study launched by DG AGRI and participated in the last workshop that took place in January 2016, in Brussels addressing “Genetic resources for value chain development”, where several experiences from different countries were presented.

The project will culminate in a large conference in Brussels in June 2016. More information on the objectives of the study can be found on the study website:

<http://www.geneticresources.eu>.

Fulfillment of the ECPGR Phase IX modus operandi requests

In previous years most of the objectives of the MAP WG were accomplished, according to the activities that have been planned, (http://archive-ecpgr.cgiar.org/publications/publication/issue/report_of_a_working_group_on_medicinal_and_aromatic_plants.html)

- Development of a proposal for a MAP descriptor list, including Passport descriptors (accession descriptors and collecting descriptors), Management descriptors (management descriptors and multiplication/regeneration descriptors), Environment and Site descriptors ;
- Selection of a group of priority species, after consultation to WG members;

<i>Achillea millefolium</i> agg.	<i>Artemisia absinthium</i>
<i>Carum carvi</i>	<i>Gentiana lutea</i>
<i>Hypericum perforatum</i>	<i>Mentha piperita</i> and <i>M. spicata</i>
<i>Melissa officinalis</i>	<i>Origanum</i> spp.
<i>Salvia officinalis</i>	<i>Thymus vulgaris</i> and <i>T. serpyllum</i>

- Elaboration of crop-specific characterization descriptors for the priority species;
- Implementation of the project “Conservation and characterization of oregano (*Origanum vulgare* L.) wild populations in Europe”, with the participation of 19 countries and 51 wild populations samples. The data collected contributed to the selection of oregano accessions to be included in a European Collection according to the AEGIS concept (http://archive-ecpgr.cgiar.org/archive_up_to_phase_viii/sugar_starch_fibre_crops/medicinal_plants/oregano_project.html).

Next steps:

The Food and Agriculture Organization of the United Nations (FAO) in its Second Report on the State of the World's Plant Genetic Resources for Food and Agriculture, on what global germplasm holdings is concerned, show that a **total of 160,050 accessions** of medicinal, aromatic, spice and stimulant crops are maintained in genebanks worldwide, while botanical gardens, globally, have about **1,800 medicinal plant taxa** represented in their collections. As for the group of medicinal plants alone, 65% is morphologically characterized, while 64% and 24% are, respectively, agronomical and biochemical evaluated.

In Europe, at least 2,000 MAP plant *taxa* are used in commercial basis, of which, two thirds, 1,200-1,300 species are native to Europe.

Towards to MAP Genetic Resources Conservation:

- ***A compilation of a European inventory of MAP species in Europe***, their degree of endangerment and their conservation status, would support the proposal of a **Strategy for European MAP Conservation**.
- ***Expand the original "priority list" of MAP species, identified by the WG members***: the list needs to be expanded, to show the existence of some common regional strategies and priorities. This expanded priority list will be used to produce a document showing the level of threat and the Red List status for MAP species in Europe and give support to the Strategy for European MAP Conservation.
- Implementation of the ***"A European Genebank Integrated System" (AEGIS), for the priority species***: selection of accessions for the European Collection, adoption of AEGIS quality standards for conservation of accessions in *ex situ* genebanks, has to be put in place.
- Compile ***systematic information that contents 'key aspects' of the MAP species*** [e.g. annual or perennial sp; type of seed (orthodox, intermediate, recalcitrant); optimum germination conditions; optimum storage conditions; in- or out breeding; the most appropriated technique of propagation and key aspects to field collection conservation.
- ***Systematic actions for Documentation of ex situ collections and in situ populations***: information organized according to EURISCO (to be forward to the NFPs to upload), need to be considered in this phase.

Other opportunities for cooperation integration between WG members and other WGs:

- Increase on the focus of *in situ* conservation;
- Potential of *in vitro* or cryopreservation methods to improve the status of conservation and safety-duplication of MAP species;

Development of a Workplan for each new Phase in line with the ECPGR objectives for the respective theme, in consultation with WG members

Provide information to the WG members on ECPGR events and mode of operation on a need or request basis.

Contributions were given through private and global MAPWG correspondence when requested.

Provide advice and collaboration with other WGs

The coordinator of in situ WG provided advice and collaboration when applying for the funding opportunity - ***ECPGR Activity Grant Scheme*** 2nd call. Contacts were established with the *in situ* Working Group for a tentative common approach with both Working Groups, as a great deal of MAP species, have similar conservation, evaluation and documentation criteria.

Orchestrate the know-how available in the respective pool of expert to resolve specific technical issues that might evolve as part of the operation of the WG

The WG members have given Support to AEGIS Secretariat on the development of one of the last outstanding elements of the AEGIS Quality Management System (AQUAS), i.e. the technical standards for the conservation, management and use of plant genetic resources. The implementation of AQUAS foresees the agreement on “generic” standards and the development by each Working Group of crop-specific standards, as relevant. So, proposals with MAP specific standards for in vitro culture and cryopreservation, specific standards for field genebank conservation and specific standards for orthodox seeds conservation, are being outlined to endorse to ECPGR Secretariat.

Coordinate ECPGR related activities that fall under the responsibility of the WG

The goal was achieved through the correspondence between members.

Contribute to the relevant sections of the ECPGR annual reports and reports of the Steering Committee when prompted by the Secretariat, providing accounts on progress made, including an assessment of what has and has not been achieved, identifying the constraints in reaching the planned objectives.

Contributions were made as they were requested.