

ECPGR Activity Grant Scheme Proposal Form

Second Call

Activity Proposal

Activity	
Full title	Increasing the efficiency of conservation of wild grapevine genetic resources in Europe
Acronym (or short title)	InWiGrape
Duration of Activity (in months)	12
Starting date	01 January 2016

Applying Working Group(s)

Working Group	Indicate name and surname of Working Group Chair
1. Vitis	Thierry Lacombe
2.	
3.	
4.	

Activity Coordinator

Activity Coordinator	
Name and Surname	Goran Zdunic
Nationality	Croatian
Current position	Senior Scientist
Institute	Institute for Adriatic Crops and Karst Reclamation, Split
Country	Croatia
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Activity Partners

Please note that each partner needs to be a member of a Working Group's Pool of Experts to be eligible.

A maximum of 12 funded partners can be listed. For self-funded partners please use the separate box below.

Partner ID No.	Name and Surname	Institute	Country
1	Goran Zdunic	Institute for Adriatic Crops and Karst Reclamation	Croatia
2	Frida Carka	Gene Bank of Albania Agricultural University of Tirana Koder-Kamez	Albania
3	Dragoslav Ivanisevic	University of Novi Sad, Faculty of Agriculture Institute for Fruit Growing & Viticulture	Serbia
4	Erika Maul	Julius Kühn-Institut (JKI) - Federal Research Centre for Cultivated Plants Institute for Grapevine Breeding Geilweilerhof	Germany
5	Jose Eduardo Jorge Eiras Dias	Instituto Nacional de Investigação Agrária e Veterinária	Portugal
6	Edi Maletic	Faculty of Agriculture University of Zagreb	Croatia
7	Gregorio Munoz Organero	Instituto Madrileño de Investigación y Desarrollo Rural, Agrario y Alimentario (IMIDRA)	Spain
8	Savvas Savvides	Agricultural Research Institute, Fruit trees/Viticulture Section Ministry of Agriculture, Natural Resources and Environment	Cyprus
9	Vesna Maras	"13 Jul Plantaže"	Montenegro
10	Klime Beleski	Dept for Vitis and Winery Institute of Agriculture	Macedonia
11	Dragan Nikolic	Faculty of Agriculture University of Belgrade	Serbia
12	Thierry Lacombe	INRA – UMR AGAP, Equipe – Diversité, Adaptation et Amélioration de la Vigne, Montpellier	France

Self-funded partners

Partner No.	Name and Surname	Institute	Country
1	Gagik Melyan	Scientific Center of Viticulture Fruit-Growing and Wine-Making	Armenia
2	Gizella Gyorffyne Jahnke	National Agricultural Research and Innovation Center, Research Institute for Viticulture and Enology	Hungary
3	Zora Annamaria Nagy	National Agricultural Research and Innovation Center, Research Institute for Viticulture and Enology	Hungary

Description of Activity

Please address the following aspects: Background – Justification – Methodology or Approach – Expected impact.

Describe the Activity (max. 500 words):

Background

The wild grapevine (WG) (*Vitis vinifera* subsp. *sylvestris* Gmel.) is a very rare and endangered plant subspecies. It is the wild relative (ancestor) of the cultivated grapevine. Characterization, evaluation and conservation of WG resources is a process that is carried out in different ways and with varying intensity in European countries. However, there are WG habitats that have not been recorded and investigated at all. Therefore, there is necessity for joint action of ECPGR Vitis group to raise and harmonize the efforts for conservation of WG populations.

Justification

Task 1 Review of existing EU bibliography of wild grapevine

An inventory of available bibliography of WG natural habitats will be done as a first step in situation assessment. Other available information of WG populations in Europe will be collected within the ECPGR partners. Historical data about the presence of WG populations (reported in less accessible literature) will be specifically investigated and compared with the present knowledge about these populations in order to assess the level of threat.

Task 2 *In situ* and *ex situ* protection

Project partners will define the indicators of vulnerability for WG populations. From past experience it is evident that it is not possible to deposit each individual into *ex situ* collection. Additional protective measures on natural habitats must be undertaken, especially for particularly sensitive and vulnerable populations. We will consider how to involve other stakeholders in *in situ* conservation (e.g. National parks, Botanical gardens, etc.). Propagation of WG individuals into *ex situ* germplasm collection is very delicate work. Protocols for propagation and ways how to preserve maximum genetic variation in *ex situ* collections will be discussed within the group.

Task 3 Characterization and evaluation data on wild grapevine

Within the framework of past EU projects (GenRes081, GrapeGen06, COST FA1003) descriptors and protocols of grapevine evaluation were adopted. However, WG populations are very specific for a series of reasons (such as natural growth without human impact) and require special attention in evaluation of morphological characters. Morphological similarity with cultivated grapes and some rootstocks is quite large. In some cases there is a possibility of error / replacement in identification. We will select most suitable (the most discriminate) descriptors for WG identification and evaluation. At the level of genotype available data at nine SSR markers (standard set for identification, agreed within GrapeGene06 project) will be compared in order to detect specific (unique) alleles in WG populations.

Expected impact

- (1) Map of WG distribution in Europe will facilitate visibility of biodiversity hot spots which would be essential for further conservation strategy and ECPGR work.
- (2) The report on indicators of vulnerability for WG population will provide a realistic assessment of threat for each particular population defining optimal conservation actions at national and European level. Report on recommended methods of WG propagation will facilitate the preservation of WG accessions in *ex situ* collections.
- (3) The report on recommended set of descriptors for evaluation of WG populations will facilitate and simplify evaluation (both *in situ* and *ex situ*), and inclusion of data into European Vitis Database.

ECPGR Objective(s)

Objectives must be feasible and achievable within the project timeline. Please list here the corresponding number(s) of the ECPGR Outcome(s) and/or Output(s) and/or Activities to which your proposed Activity will contribute. The logframe describing ECPGR objectives is available from the website.

List ECPGR outcomes, outputs, activities to which this Activity contributes:
Outcome 3; Output 3.1 National CWR conservation strategies produced; Activity 3.1.1 Generation of national CWR checklists
Outcome 3; Output 3.2 Regional (European) CWR conservation strategies produced; Activity 3.2.3 Production of regional (European) CWR inventories
Outcome 3; Output 3.3 Integrated European strategy for CWR conservation produced; Activity 3.3.2 Agreement on regional (European) and national MAWPs (Most Appropriate crop Wild relative Population) to form European in situ network
Outcome 3; Output 3.6 MAWP network germplasm effectively utilized; Activities: 3.6.1 Germplasm samples collected and actively managed ex situ; 3.6.4 MAWP germplasm evaluated
Outcome 2; Output 2.3 Inclusion of relevant in situ/on-farm data in EURISCO realized; Activity 2.3.2 Development of a standard for exchange of in situ and on-farm data

Expected products

List concrete products and results that are obtained by the Activity

Expected products/results
Distribution map of WG habitats
Report of vulnerability indicators for WG populations
Report of recommended descriptor list for WG populations identification and evaluation
Report of propagation methods for inclusion into <i>ex situ</i> of WG populations
Update and complete the European Vitis Database

Workplan for the proposed period of the Activity

Brief description of meetings and/or main actions of the Activity.

Type of Action (indicate if "meeting" or "other action")	Description
1 Other action	<u>Month 1 to 4</u> : Preparatory work, partners within this project and other ECPGR Vitis members will be requested for bibliographical data about WG populations in survey form
2 Other action	<u>Month 4 to 6</u> : Preparatory work, collecting data from partners, ECPGR members and other available literature about WG population status (number of male and female individuals in observed population, distance from cultivated grapevine, plant communities and possible neighbouring invasive species, possible threats and pollution, level of current protection, and other data necessary for conservation)
3 Meeting	<u>Month 7</u> : Presentation and evaluation of survey data Discussion of descriptor list for WG population's identification and evaluation. A recommended list will be drafted Discussion of propagation methods for inclusion into <i>ex situ</i> of WG populations (vegetative vs. generative). Recommended methods will be drafted. The list of WG data will be defined for inclusion into European Vitis Database
4 Other action	<u>Month 8 to 12</u> : Post meeting evaluation of results and preparation of reports

