Status of MAP conservation in Lithuania

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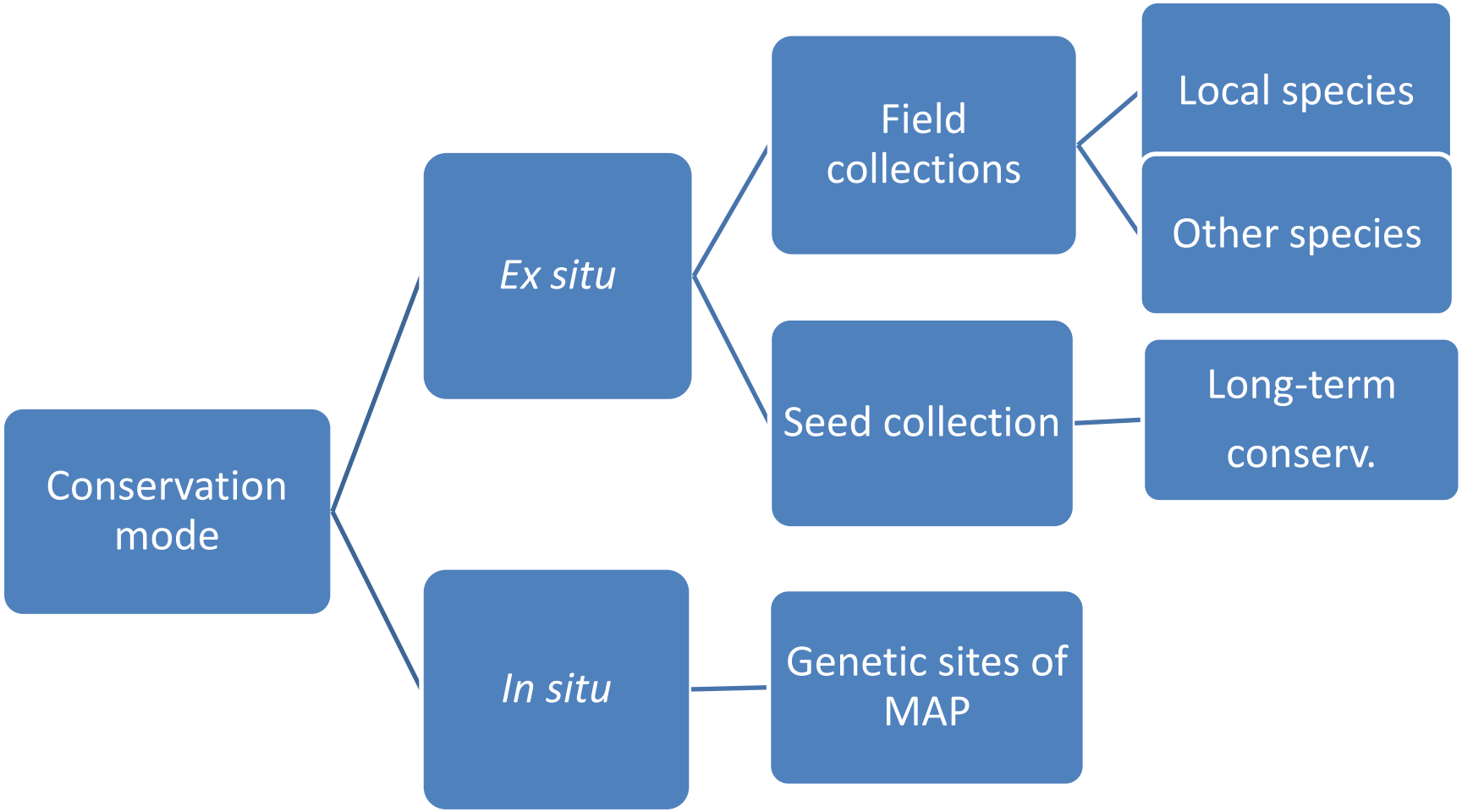
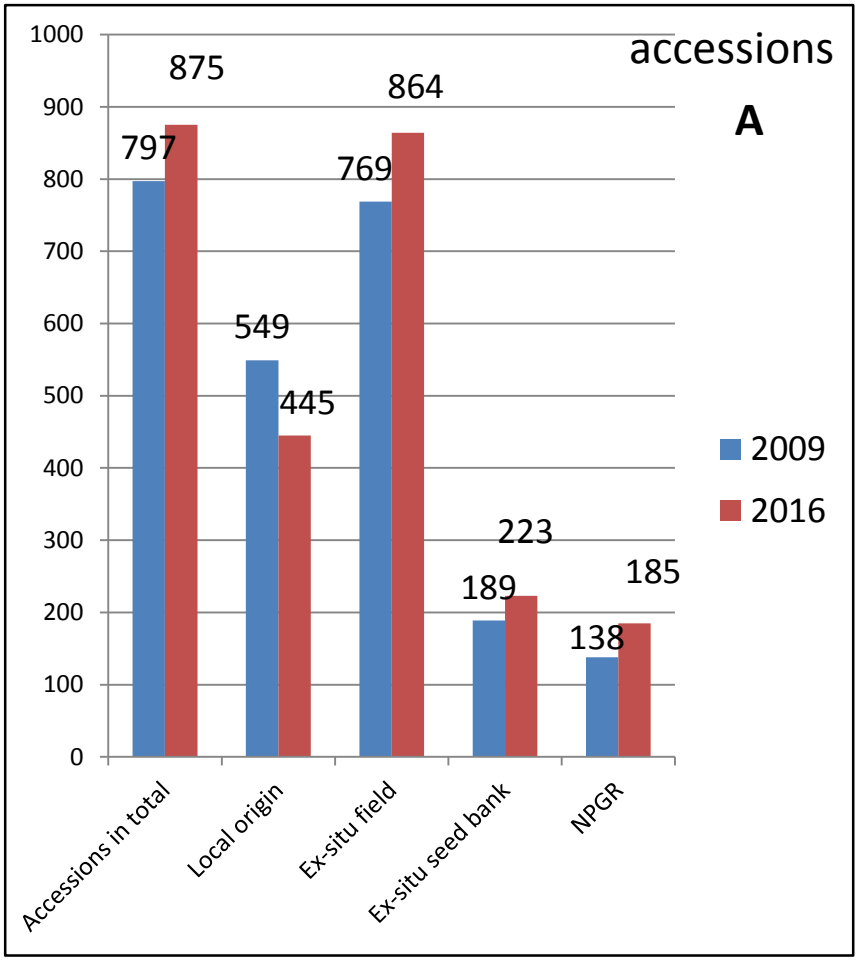
Authorities and stakeholders involved in the MAP conservation activities

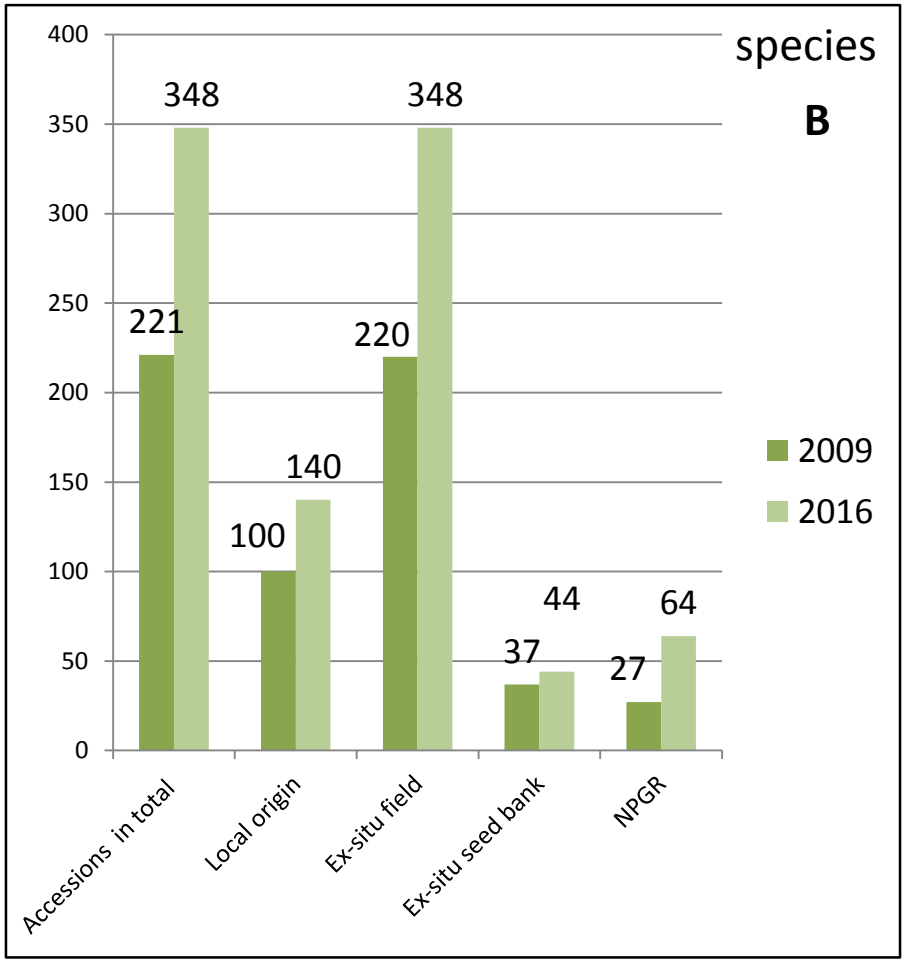
- Nature Research Centre,
- Kaunas Botanical Garden of the Vytautas Magnus University,
- Plant Gene Bank,
- Ministry of Environment,
- Protected areas authorities

Conservation modes of MAP



Survey of collections status





Changes in number of accessions (**A**) and species (**B**) in the collections of MAPs from 2009 to 2016

Prioritization of MAP‘s for *ex situ* conservation

Selection criteria for MAPs genetic resources:

- Origin (spontaneous, locally planted, adventive, acclimated)
- Phenotypic diversity
- Ecological amplitude
- Abundance
- Adaptability
- Composition of basic bioactive compounds
- Productivity
- Resistance: pests, fungal, viral diseases and low temperatures
- Resources: in nature and cultivation
- Economic and social (cultural, historical, educational) value

Species	Origin
Adonis vernalis L.	1925
Aconitum napellus L.	1928
Angelica archangelica L.	1924
Colchicum autumnale L.	1927
Dictamnus albus L.	1927
Digitalis grandiflora Mill.	1926
Glycyrrhiza glabra L.	1928
Hydrastis canadensis L.	1928
Mellisa officinalis L.	1924
Lavandula angustifolia Mill.	1924
Rhus radicans L.	1924
Rheum palmatum L.	1924
Salvia officinalis L.	1924
Scopolia carniolica Jacq.	1925
*Thymus vul*garis L.	1924
Verbascum densiflorum Bertol.	1929

Highly adaptive and resistance foreign species of MAP‘s saved in field collection for several decades.

Priority MAP species selected on the basis of socio-economic value

- *Achillea spp.*
- *Acorus calamus*
- *Arnica montana*
- *Allium* spp.
- *Crataegus* spp.
- *Humulus lupulus*
- *Origanum* spp.
- *Hypericum* spp.
- *Helichrysum arenarium*
- *Salvia* spp.
- *Thymus* spp.
- *Vaccinium* spp.

Field collection of MAP at Nature Research Centre, 2012

Field collection of MAP at Nature Research Centre, 2016

Field collection of MAP at Nature Research Centre, 2016

Ex situ conservation

55 accessions of *Origanum vulgare* are nominated as NPGR and saved in the field collection.

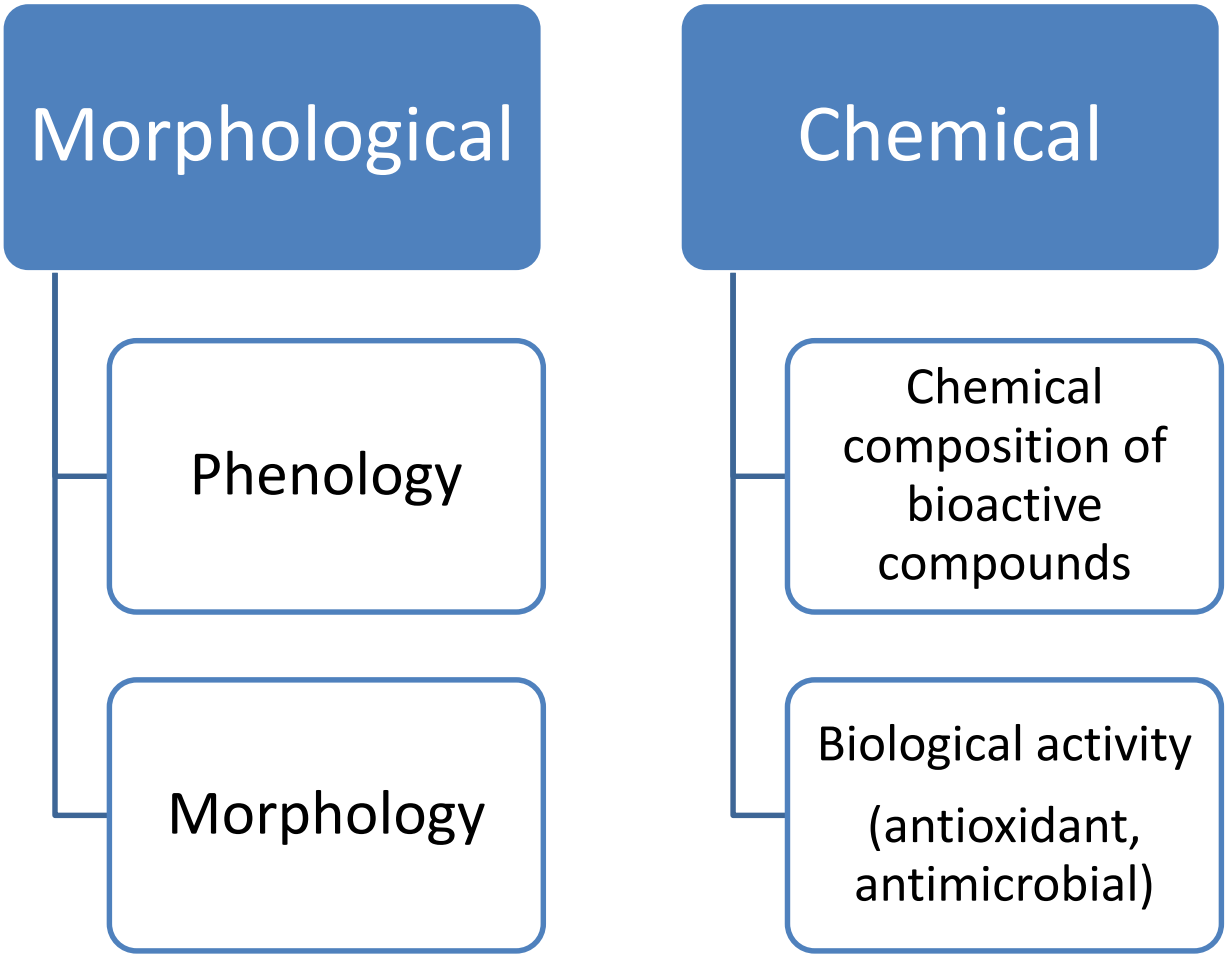
Ex situ conservation

20 accessions of *Acorus calamus* are nominated as NPGR and saved in the field collection.

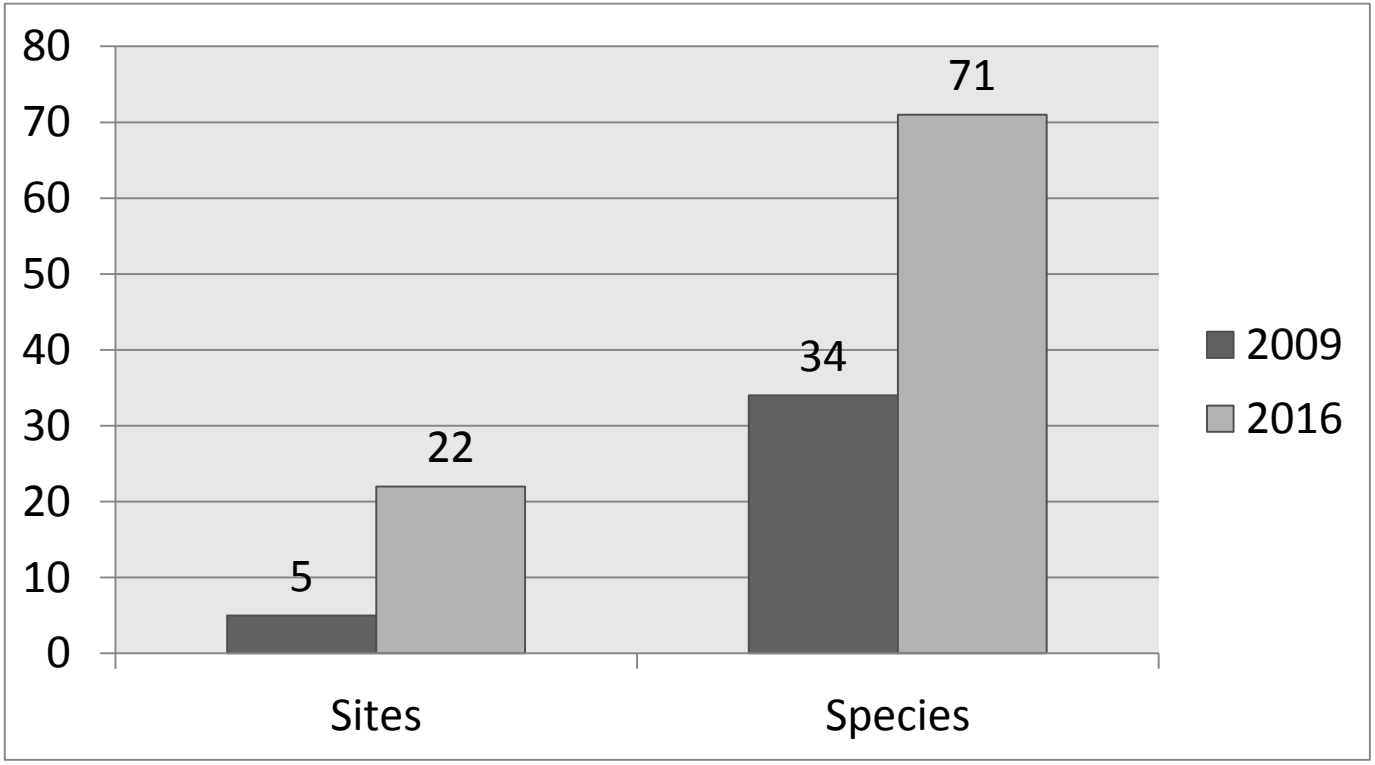
Ex situ conservation

51 accessions of *Humulus lupulus* are nominated as NPGR and saved in field collection.

Evaluation and characterization



In situ conservation



In 2009 were registered 5 genetic sites for *in situ* conservation of MAP with 34 species of MAPs. Presently there are 22 sites for *in situ* conservation in which 71 species of MAP were registered .

Criteria for *in situ* conservation

In the selection of the sites for *in situ* conservation of MAPs the following criteria were considered:

- ecological heterogeneity of the site,
- phenotypic diversity and abundance of the target species,
- the possibilities of the site control,
- the location of the site with regard to protected areas.

The selection of sites for *in situ* conservation of MAP is combined with local Protected areas authorities.

The success of conservation highly depends on the local population approach and understanding.

In situ conservation

Kernavė genetic site of MAPs: area 1.5 ha (Neris riverside).
Angelica archangelica, Hypericum perforatum, *Origanum vulgare*, *Filipendula* spp., *Thymus* spp. – in total 16 MAPs species.

In situ conservation

Prienai pinewood genetic site of *Allium ursinum*: area 19 ha (photo by Birutė Karpavičienė)

In situ conservation

Veliuona genetic site of MAP‘s: area 0.9 ha (Nemunas riverside). *Allium oleraceum, Gentiana cruciata, Origanum vulgare, Juniperus communis*, – tot. 19 MAP‘s species.

Photo by L. Šveistytė, J. Radušienė

In situ conservation

Priekulė genetic site of *Myrica gale*:
area 38 ha, 2016.

Photo by Laima Šveistytė

Thank you for your attention!