Focus Group ‘Local plant genetic resources in view of climate change and biodiversity loss’

Chania, Greece
20-21 May 2025

Innovative & appropriate management practices

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Focus Group ‘Local perennial plant genetic resources in view of climate change and biodiversity loss’ 2nd meeting | Chania, Greece
20 May 2025

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- **Selection of management practices appearing in:**

i) **starting paper & 1st part of final report,**

ii) **Posters**

iii) **Mini Papers**

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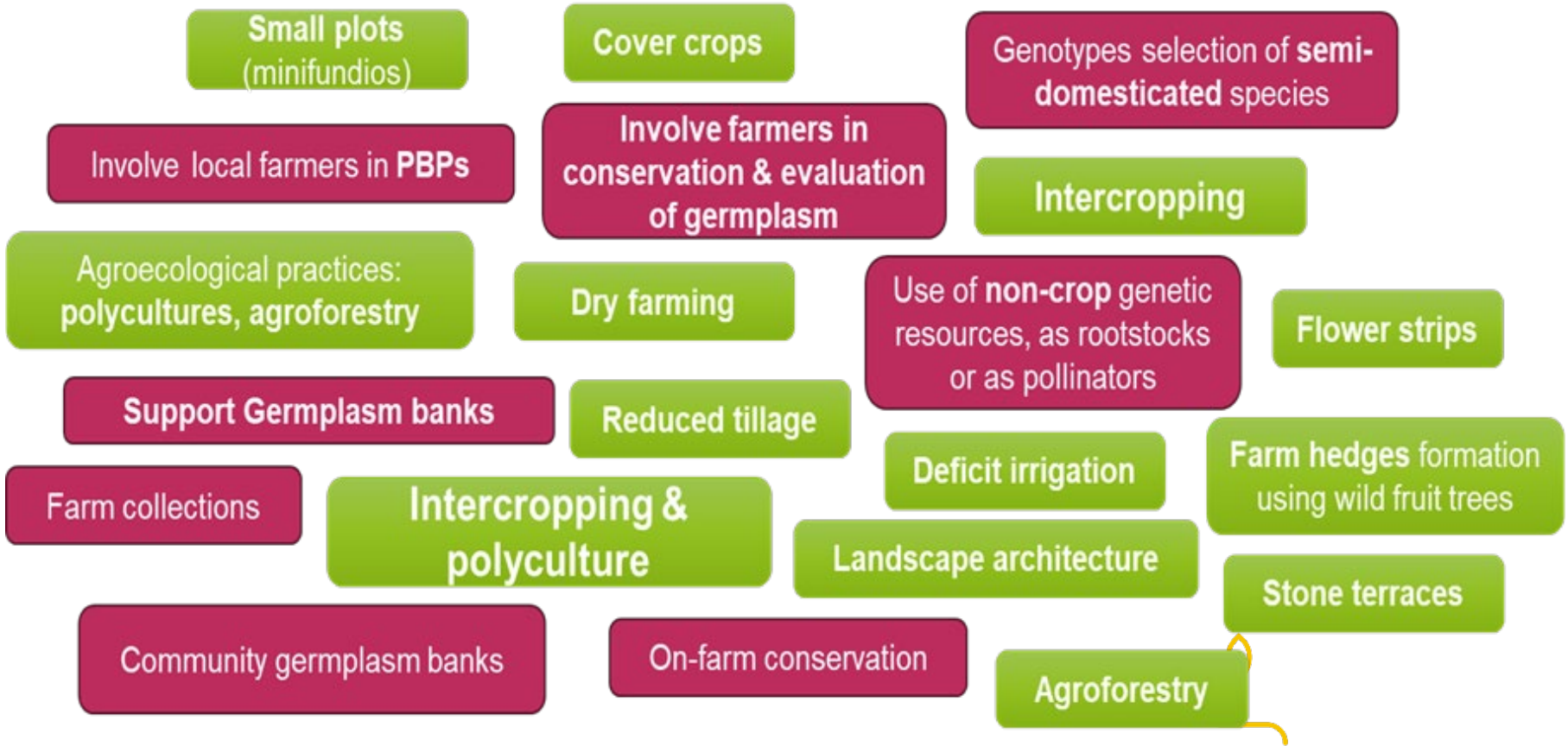
- Main highlighted practices in 1st meeting (questionnaire) and posters involved several approaches which are recognized to deliver farming benefits, that can be clustered in i) agroecological & ii) breeding & propagation-related practices



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Agroecological practices

Polyculture

Cultivation of a multitude of perennial crops mimics natural ecosystems and can help reduce pest pressures, improve soil health, and increase biodiversity. Polyculture can be applied in perennial farming systems of different pedo-climatic conditions.

Box 1: São Miguel island Apple varieties – Conservation & Cultivation (Portugal)

The Furnas LandLab project, located at San Miguel Island of Azores, aims to preserve and enhance the site's agronomic, environmental, and socio-economic values. Besides the cultivation of traditional apple varieties, emphasis is given promoting sustainable agriculture. **Mixed cultures** is one these aspects which is promoted by **incorporates smaller crops, like legumes between apple trees**, which act as green manure, delivering several ecosystems like enhancing soil fertility. *More information: Link*

Box 1 presents the example of São Miguel Island (Portugal) for apple varieties, where polyculture is considered in the conservation efforts.

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Agroecological practices

Intercropping

Local perennial crops with annuals or other perennials optimize land use & provide multiple harvests while they provide important agroecosystem services, such as conserving the soil & reducing the needs for synthetic inputs.

Agroforestry systems

Referring to the systemic integration of trees with annual crops to increase crop biodiversity at farm level, soil structure, and enhance water retention. Local under-utilized perennial crops are considered most appropriate for the development of such an agroecological farming system, due to specific traits.

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Agroecological practices

Ecological infrastructure

Local under-utilised perennial crops appear to be suitable for formulating agroecological infrastructures in agroecosystems supporting biodiversity enhancement and reducing erosion. Main examples of such performance of landscape modification include the formation of field margins with wild fruit trees & flower strips, as well as stone terraces and others.

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Breeding & propagation-related practices

Participatory Plant Breeding

Collaborative relationship between professional plant breeders or researchers, farmer-breeders and other stakeholders to share and leverage knowledge, decision making and resources in breeding efforts. This can relate to the farmers community-supported germplasm collections and banks, as a main starting point for involving farmers at conservation and evaluation efforts.

Box 2: Heritage repository of local fruit and berry crops (Latvia)

The LatHort genetic resource collection is a national gene bank for fruit, berry and vegetatively propagated vegetable crops with hundreds of samples of national genetic resources. The institute carries a full range of germplasm activities such as collection, preservation, research & use. Among other activities, the initiative foresees the direct involvement of farmers to activities, such as germplasm identification and others.

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Breeding & propagation-related practices

Rootstock and grafting purposes

By possessing traits of resistance and tolerance especially with regards to important diseases, these varieties hold a potential of use as rootstocks or for grafting purposes.

Box 3: Local Action Group "Bura" (Croatia)

An initiative on restoring a very old olive grove in the island of Ugljan, Zadar County, Croatia with the autochthonous varieties "Oblica" and "Drobnica". The olive grove's regeneration gives emphasis to "restoring instead of replanting". Therefore, the method promoted is **grafting** which allows the farmer to manage growth while maintaining the tree roots. As such, the younger tree provides more yield in shorter time than the planting of new tree would provide.

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Breeding & propagation-related practices

Involvement of regional/local governments

Common practice of municipalities: Annual distribution of fruit trees to promote agricultural production at local scale. If used correctly could bring local unde-rutilised crops in the spotlight, as a tool to promote their use.

Community germplasm banks

Creation of germplasm banks/collections at community level, applied by farmers and respective groups & networks

Box 4: "Biofru" organic farm (Greece)

"Biofru" organic farm in Kastoria, Greece, being part of the "Aegilops" network (working on conservation of plant genetic resources), and conserving more than 100 hundred local and underutilised varieties of apples and 60 pear varieties, most of them endangered due to abandonment by commercial farmers.

Practice		Description	Easiness of implementation (1: very easy – 5:Very difficult)	Short-Mid-Long (S-M-L) term	Required investment	Source	Example
Type	Name						
Agroecological	Polyculture	Cultivation of a multitude of perennial crops mimics natural ecosystems whle helping reduce pest pressures, improve soil health & biodiversity. Can be applied in different pedo-climatic conditions.	3	L	Agronomic knowledge, financial, market aspects	Expert survey, Poster	São Miguel island Apple varieties – Conservation & Cultivation (Portugal)
	Intercropping	Local perennial crops with annuals or other perennials optimize land use & provide multiple harvests & important agroecosystem services, like soil conservation & reducing synthetic inputs' use.	3	M	Agronomic knowledge, financial, market aspects	Expert survey	
	Agroforestry	systemic integration of trees with annual crops to increase crop biodiversity at farm level, soil structure, and enhance water retention. Local under-utilized perennial crops appropriate for the development of such an agroecological farming system, due to specific traits	3	L	Agronomic knowledge, spatial (farm level) financial, market aspects	Expert survey	
	Ecological infrastructure	Infrastructures supporting biodiversity enhancement & reducing erosion. Main examples of such landscape modification are field margins with wild fruit trees & flower strips, stone terraces etc	2	S	spatial (farm level) financial,	Expert survey	

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Practice		Description	Easiness of implementation (1: very easy – 5:Very difficult)	Short-Mid-Long (S-M-L) term	Investment needed	Source	Example
Type	Name						
Agroecological	Other?						

Practice		Description	Easiness of implementation (1: very easy – 5:Very difficult)	Short-Mid-Long (S-M-L) term	Investment needed	Source	Example
Type	Name						
Breeding & propagation-related	Participatory Plant Breeding (PPB)	Collaborative relationship between professional plant breeders or researchers, farmer-breeders and other stakeholders to share & leverage knowledge, decision making and resources in breeding efforts. Can relate to farmers community-supported collections & banks, as a main starting point for involving farmers	3	L	Temporal, financial	Expert survey, starting paper, poster	(LatHort) Heritage repository of local fruit and berry crops (Latvia)
	Rootstock & grafting purposes	By possessing traits of resistance & tolerance with regards to important diseases, local underutilized perennial varieties hold a potential of use as rootstocks or for grafting.	2	S	Knowledge, financial	Poster	Local Action Group “Bura” (Croatia)
	Regional/local governments role	Common municipal practice: Annual distribution of fruit trees to promote agricultural production at local scale. If used correctly could bring local unde-rutilised crops in the spotlight, as a tool to promote their use.	3	L	Financial	MP	
	Community germplasm banks	Creation of germplasm banks/collections at community level, applied by farmers and respective groups & networks	3	L	Knowledge, temporal, financial	Starting paper	“Biofru” organic farm (Greece)

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Breeding & propagation-related	Other?					

EU CAP Network Focus Group
‘Local plant genetic resources in view of climate change and biodiversity loss’

2nd meeting | 20-21 May 2025 | **Chania, Greece**

All information on the Focus Group is available on the webpage:
https://eu-cap-network.ec.europa.eu/focus-group-local-perennial-plant-genetic-resources-view-climate-change-and-biodiversity-loss