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European *in situ* and on farm information management – vision and options

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on behalf of

ECPGR Documentation and Information Network

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European in situ and on farm information management – vision and options

Outline

- Current state of European PGRFA *ex situ* documentation
- Vision for a coherent documentation for PGRFA (*ex situ* & *in situ*/on farm)
- Starting point: *in situ* / on farm activities
- How to achieve the vision

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Current state of European PGRFA documentation – *ex situ*

European Plant Genetic Resources Search Catalogue

EURISCO (http://eurisco.ecpgr.org)

- web-based catalogue, provides information about *ex situ* plant collections maintained in Europe
- current content: passport data on approx. 1.1 million samples

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Current state of European PGRFA documentation – *ex situ*

key elements

EURISCO (http://eurisco.ecpgr.org)

- based on a European network of *ex situ* National Inventories (NIs) / National Focal Points (NFPs)
- Bottom up approach (data provider-NI/NFP-EURISCO)
- standards for data exchange (EURISCO Descriptor List)

EURISCO DESCRIPTORS	
0. National Inventory code	**(NICODE)**
Code identifying the National Inventory; the code of the country preparing the National Inventory. Exceptions are possible, if agreed with EURISCO such as NGB.	
Example: NLD	
1. Institute code	**(INSTCODE)**
FAO Institute Code of the institute where the accession is maintained.	
Example: NLD037	
2. Accession number	**(ACCENUMB)**
This number serves as a unique identifier for accessions within a genebank collection, and is assigned when a sample is entered into the genebank collection.	
Example: CGN00254	
3. Collecting number	**(COLLNUMB)**
Original number assigned by the collector(s) of the sample, normally composed of the name or initials of the collector(s) followed by a number. This number is essential for identifying duplicates held in different collections.	
Example: FA90-110	
4. Collecting institute code	**(COLLCODE)**
Code of the Institute collecting the sample. If the holding institute has collected the material, the collecting institute code (COLLCODE) should be the same as the holding institute code (INSTCODE).	
Example: NLD037	
5. Genus	**(GENUS)**
Genus name for taxon, in latin. Initial uppercase letter required.	
Example: Allium	
6. Species	**(SPECIES)**
Specific epithet portion of the scientific name, in latin, in lowercase letters. Following abbreviation is allowed: 'sp.'	
Example: paniculatun	

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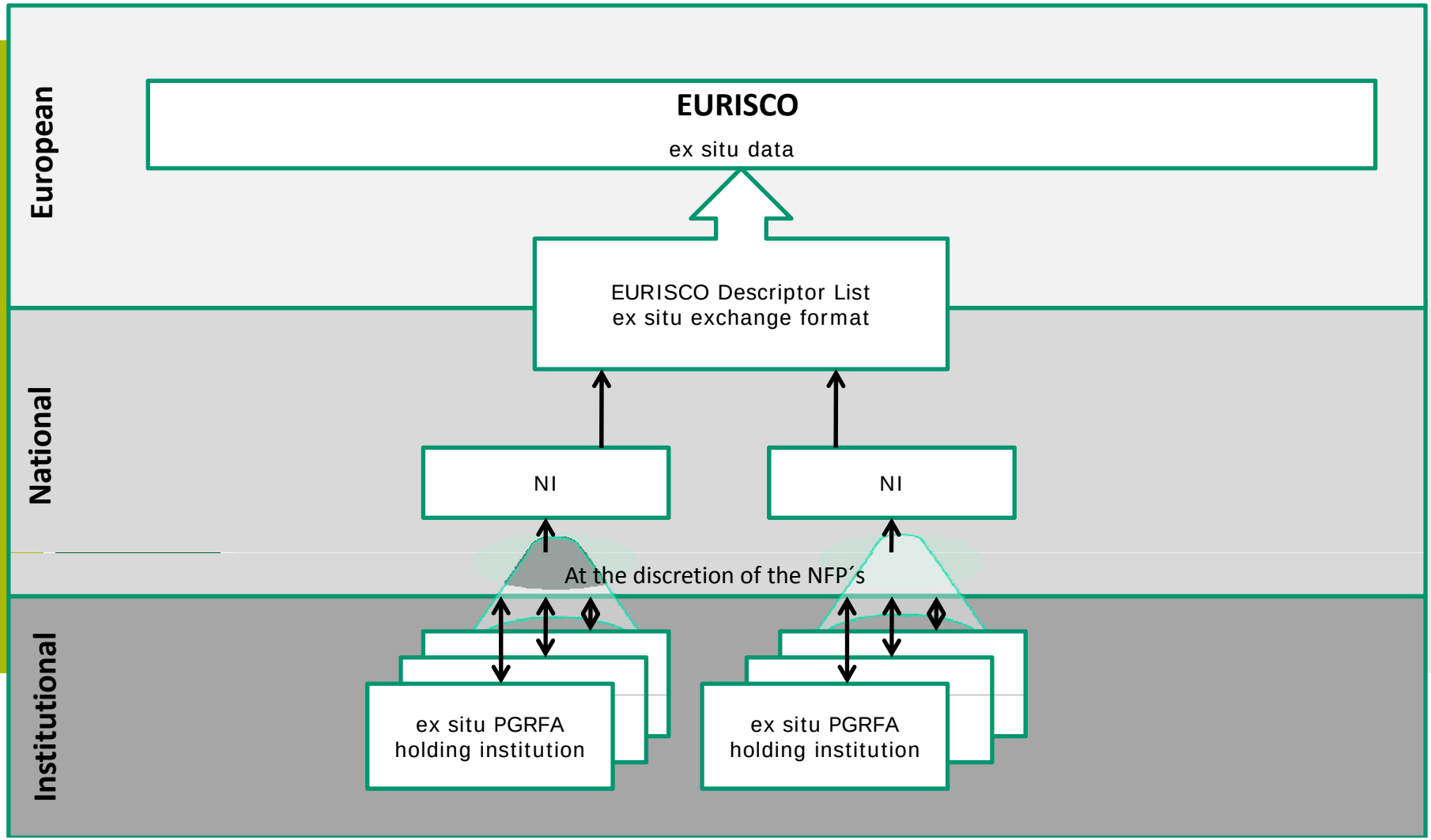
Current state of European pgrfa documentation – *ex situ*



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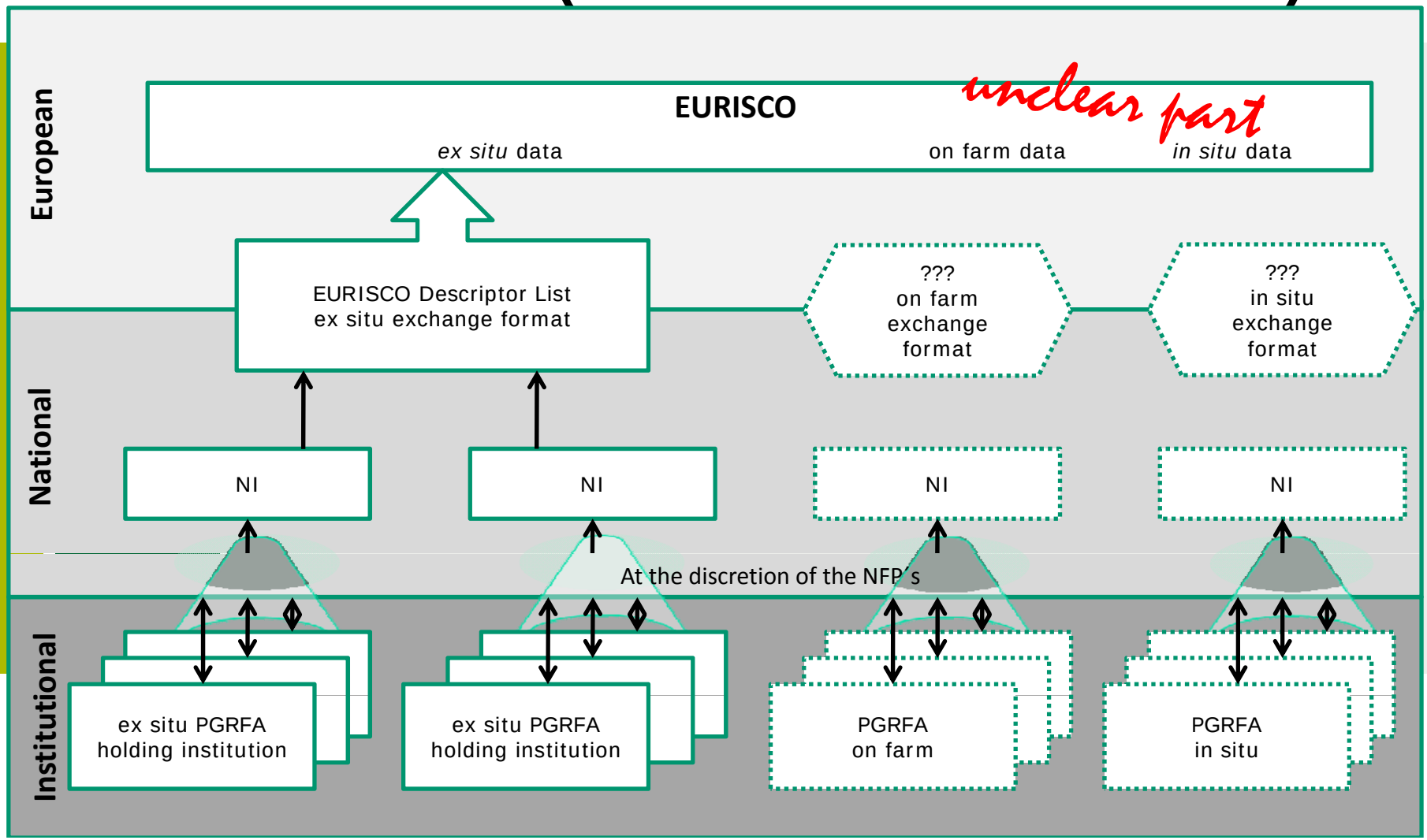
Vision for a coherent documentation for PGRFA (*ex situ* & *in situ* / on farm)



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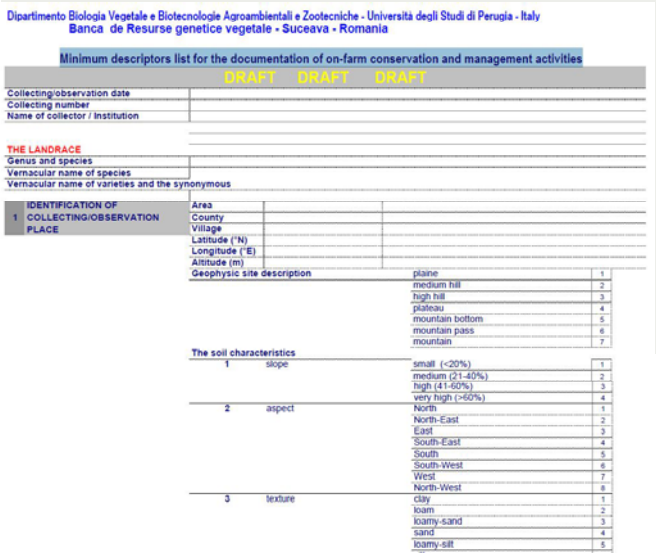
Starting point: *in situ* / on farm activities

- ECPGR On farm Conservation and Management Working Group
  - ….
  - **Minimum descriptors list** for the documentation of on farm conservation and management activities (38 descriptors)



Dipartimento Biologia Vegetale e Biotecnologie Agroambientali e Zootecniche - Università degli Studi di Perugia - Italy
Banca de Resurse genetice vegetale - Suceava - Romania

Minimum descriptors list for the documentation of on-farm conservation and management activities

DRAFT DRAFT DRAFT

Collecting/observation date				
Collecting number				
Name of collector / Institution				
THE LANDRACE				
Genus and species				
Vernacular name of species				
Vernacular name of varieties and the synonymous				
1 IDENTIFICATION OF COLLECTING/OBSERVATION PLACE	Area			
	County			
	Village			
	Latitude (°N)			
	Longitude (°E)			
	Altitude (m)			
	Geophysic site description		plaine	1
			medium hill	2
			high hill	3
			plateau	4
			mountain bottom	5
			mountain pass	6
			mountain	7
	The soil characteristics			
	1	slope	small (<20%)	1
			medium (21-40%)	2
			high (41-60%)	3
			very high (>60%)	4
	2	aspect	North	1
			North-East	2
			East	3
			South-East	4
			South	5
			South-West	6
			West	7
			North-West	8
	3	texture	clay	1
			loam	2
			loamy-sand	3
			sand	4
			loamy-silt	5

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Starting point: *in situ* / on farm activities

ECPGR Documentation and information Network

- Network of **32 ECPGR *in situ* National Inventory Focal Points** nominated by National Coordinators
- Network of **34 ECPGR on farm National Inventory Focal Points**

nominated by National Coordinators

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Starting point: *in situ* / on farm activities

PGR Forum (European Crop Wild Relative Diversity Assessment and Conservation Forum)

- Crop Wild Relative Information System (CWRIS)
- Methodologies for management of CWR data, with a particular emphasis on site and population data

An Integrated European In Situ Management Work Plan: Implementing Genetic Reserves and On Farm Concepts (AEGRO)

- Within the AEGRO project four independent modules collectively called "Population Level Information System" (PLIS) are being developed for *Avena*, *Beta*, *Brassica* and *Prunus* allowing the search for occurrence within a specific species. PLIS exemplarily extends CWRIS.

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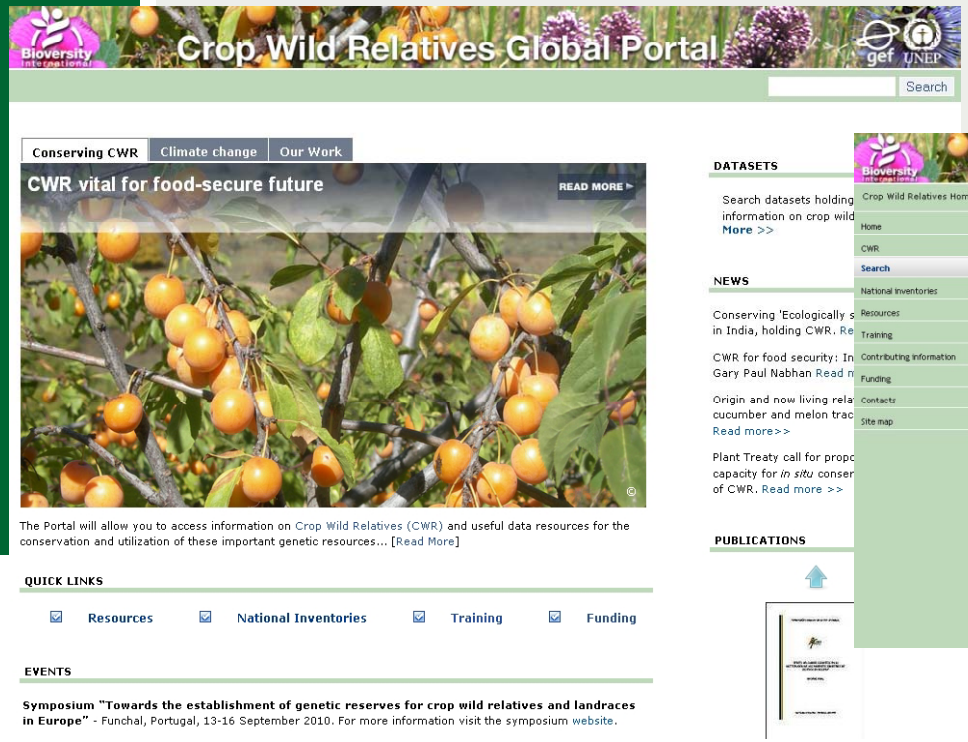
Starting point: *in situ* / on farm activities

Crop Wild Relatives Global Portal

www.cropwildrelatives.org

- …..descriptors for CWR data…



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What is already available? (I)

- Networks
  - ECPGR In situ and On-farm Conservation Network
    -> knowledge on needs for documentation
  - ECPGR Documentation and Information Network
    -> experience in *ex situ* documentation
    - Network of 32 *in situ* / on farm 34 NFPs
      -> link to the national/institutional level in each country
- Data standards
  - Some draft standards for exchange of *in situ* / on farm data (incl. e.g. Bioversity Descriptors for Traditional Knowledge)
    -> need for harmonisation

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What is already available? (II)

- Information systems (but data?)
  - CWRIS PGR Forum Crop Wild Relative Information System (taxon level) + PLIS (occurrence level, but only data for 4 model crops)
  - Crop Wild Relatives Global Portal (data run through a national authorization process)
  - EURISCO (accession level, but no *in situ* / on farm data yet)

    -> system could be easily adapted / expanded for occurrence level data (relevant for *in situ* / on farm data)

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How to achieve the vision? (I)

- Development and agreement of one standard for exchange of *in situ* and on farm data
  - draft developed by ECPGR (both networks) involving other relevant institutions
  - agreement sought between ECPGR, Bioversity and FAO on these minimum standards
- Development of NIs for *in situ* / on farm
  - organize required support for NFPs to create NIs (if not existing) and compile data and create incentives accordingly
  - create interface for data exchange from NIs to EURISCO according to agreed standard

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How to achieve the vision? (II)

- Expand data structure of EURISCO for inclusion of *in situ* / on farm data into EURISCO
- Develop transfer mechanism for data from NIs to EURISCO (jointly by Bioversity on behalf of ECPGR and the network of the NFPs)
- Provide capacity building and training (ECPGR and its networks)

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...to sum up

- It will be feasible to use the EURISCO and its approach also for *in situ* / on farm data
- Some prerequisites have been met already
- There is still a long way to go before an efficient and effective documentation landscape for PGRFA will be fully established

BUT: A journey of a thousand miles begins with a single step

(Lao-tzu, Chinese philosopher 604 BC - 531 BC)

be assumed you know where you are going !!