Creating a Network of Knowledge for biodiversity and ecosystem services

www.biodiversityknowledge.eu

Agriculture case
Coordinating knowledge on natural pest control

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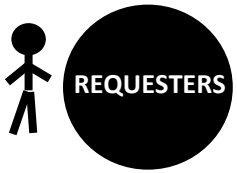
SEVENTH FRAMEWORK PROGRAMME

The players



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CAB Abstract, Web of Science

PRELIMINARY ASSESSMENT
OF AVAIL. KNOWLEDGE

Biodiversity
Knowledge

Question from the "requesters"

Within the context of the reduction of the use of pesticides, we expect a positive feedback on return on biological control of pests resulting from a better preservation of functional biodiversity.

Is there any landscape management interventions that could sustain or improve this ecosystem service provided to agriculture?

Lack of availability of « requesters »
prevented us from narrowing the scope and
clarifying jargon (lost time/scoping)

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Action plan out of the request // Scoping

FINALISED REQUEST

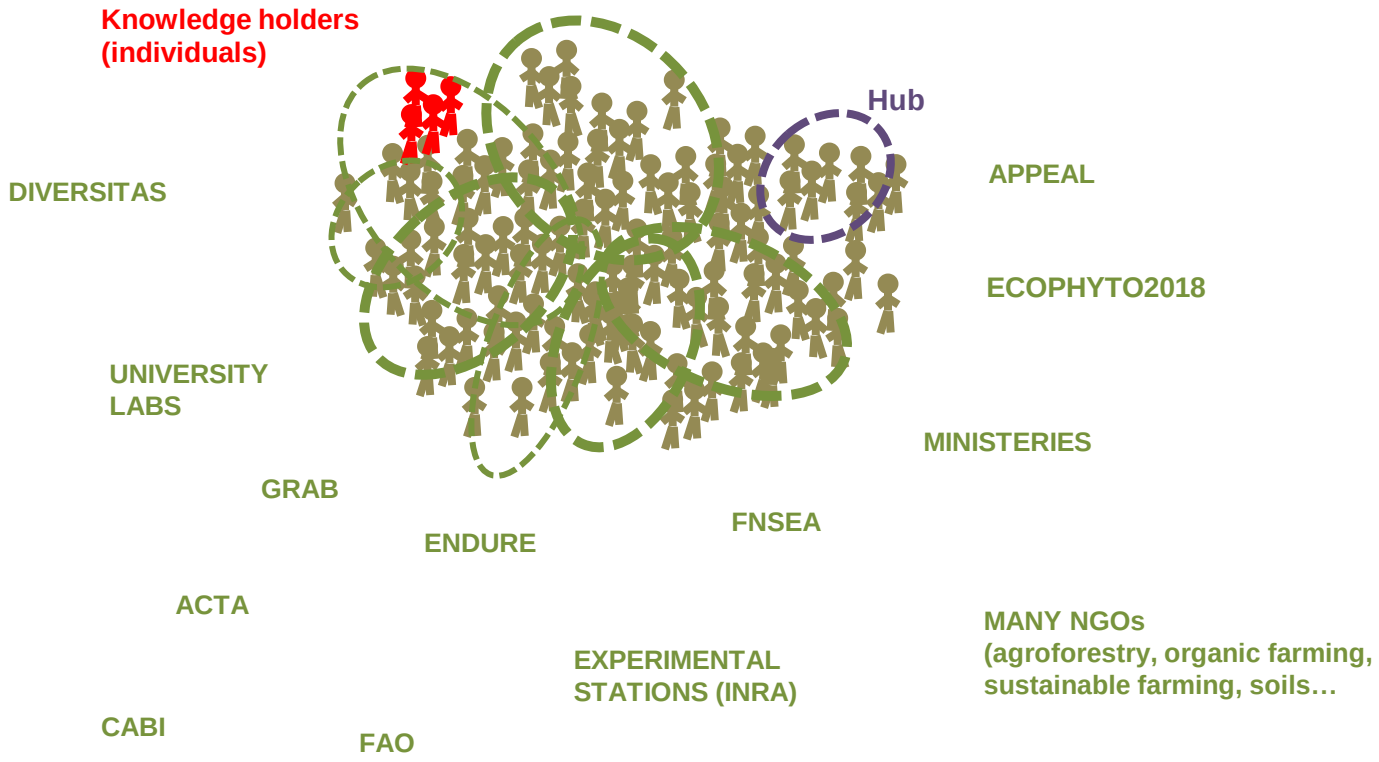
Which types of landscape management are effective at maintaining or increasing natural pest regulation in a context of decreased pesticides?

2 actions:

- List of all interventions (types of landscape/habitat management)
- Assessment of their effectiveness on natural pest control

LESSON LEARNT 1

So many knowledge holders, hubs and projects!



► WHERE and HOW TO START?

LESSON LEARNT 2

Mobilizing the community of knowledge holders… has been "difficult"

E·L·N F·A·B
European Learning Network on Functional AgroBiodiversity

ALTER-Net

Call to the NoK *2 positive answers /1000*

Call to experts (individual experts) *better*

Flyer, survey, Linkedin… *?*

Need a « lighthouse effect »
Need strong incentives and rewards
Scientists like meta-analyses but not synthesis

LESSON LEARNT 3

Ongoing programmes…. have not been foreseen

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Articulate with them: dialogue
They had their own fixed standardised evidence-based approach
They had more resources (person/month; tools) than us

Collaboration on
- Bibliography (from FRB-INRA-EAA: 39000 ► 3939++)
- Prioritisation (Workshop Agri case study, Paris, 2013)
- Mapping (start)

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LESSON LEARNT 4

Some fast methodology are good for prelim. scoping…

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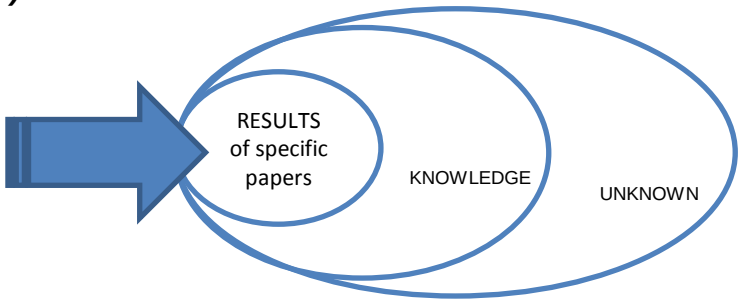
- Stakeholder's consultation to get a preliminary list of interventions of interest
- Target results from highly cited papers by perusing titles of a few selected journals
- Select causal relationship between driver and response (correlative results are kept aside)



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LESSON LEARNT 4

Interests vary…

Great interest for the topic

- decision-makers: want to have the whole range of options
- farmers: want to learn about interventions they do not know yet

LESSON LEARNT 5

Grey literature and local/technical knowledge…

- Difficult to collect because no (systematic) methodology
- And no easy access, low visibility
- Some knowledge holders afraid of responsability endorsed when communicating their experience to others

Where are we now?

- Protocol reviewed
- List of interventions completed (92+)
- Relevant scientific references sorted out by intervention (3939+)
- Extraction of basic information for a subset of papers for prioritized interventions
- Synopsis of evidence ongoing (« map »)

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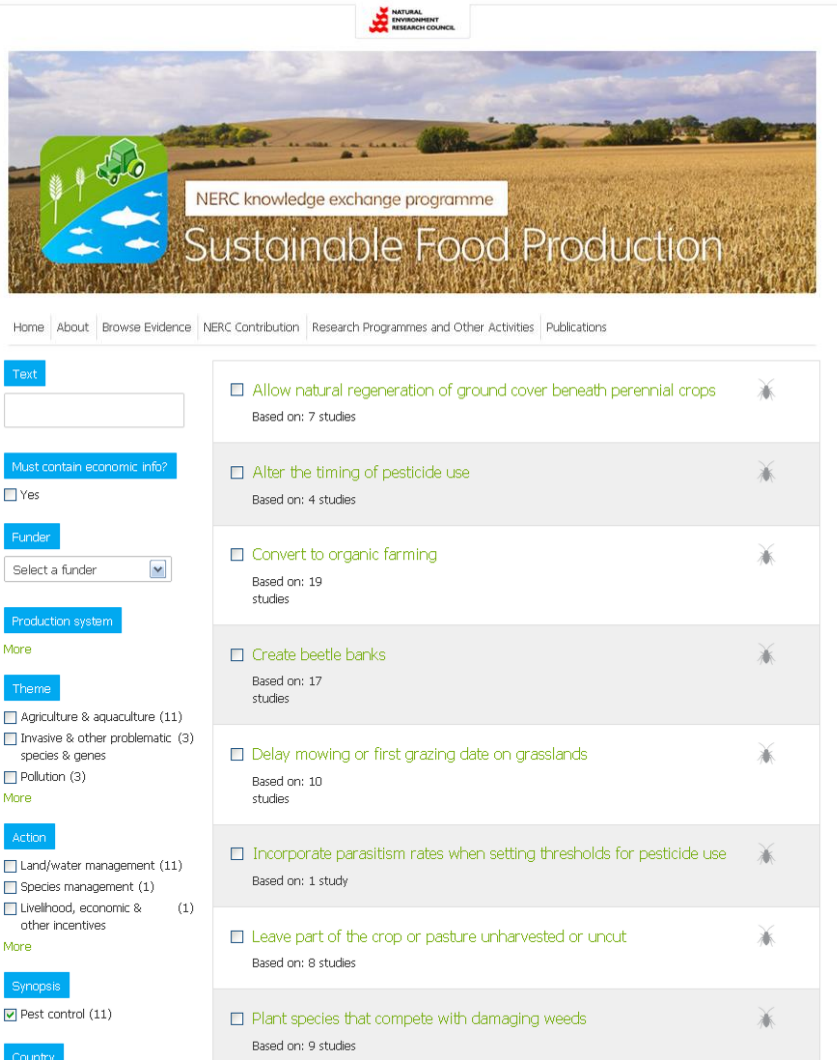
online at http://nercsustainablefood.com

covers 22 of the 92 interventions we identified, including actions relating to reducing agri pollution, arable farming, perennial farming, livestock farming and farming systems in general.

covers so far 174 studies

exploring options to extend the work to cover more interventions and papers



What should be done?

- Complement searches (comprehensiveness)
- Examine strength of evidence based on methodology
- Complete the SR for each intervention (narrative + quantitative)
- Gather evidence accross interventions (catalogue?)
- Highlight knowledge gaps and inform relevant bodies
- Consult holders of technical and local knowledge to see if agree or not with the outputs.

NEED A PROPER WORKING GROUP

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What are the effect of methods to enhance natural pest control services in perennial tree crops?	
Beneficial	• Change the timing of pesticide use
Likely to be beneficial	• Allow naturally regenerated ground cover • Beetle banks
Tradeoffs between benefits and harms	• Organic farming

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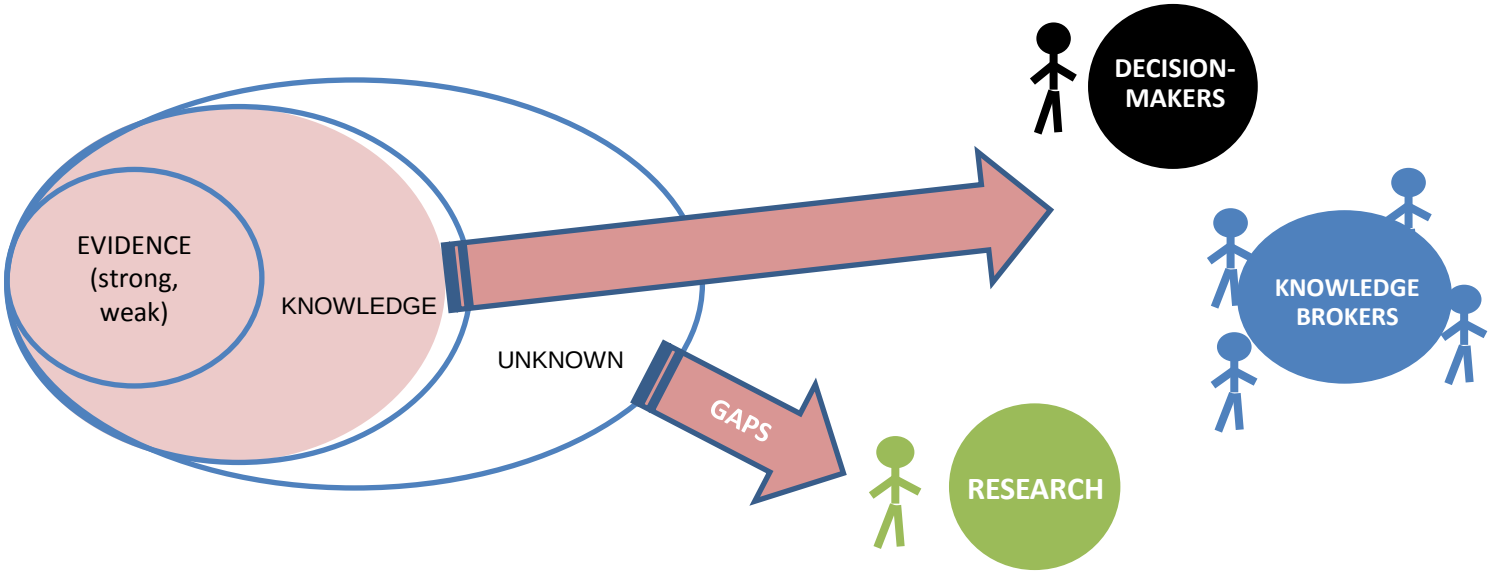
DECISION-
MAKERS
EVIDENCE
(strong,
weak)
KNOWLEDGE
UNKNOWN
GAPS
KNOWLEDGE
BROKERS
RESEARCH


THANK YOU FOR YOUR ATTENTION…