Biodiversity Knowledge

Bridging the communication gap between biodiversity knowledge and decision making:

The Network of Knowledge Approach for Europe

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Helmholtz-Centre for Environmental Research
UFZ

Photo: E. C. Hammer

Talk overview

Biodiversity Knowledge

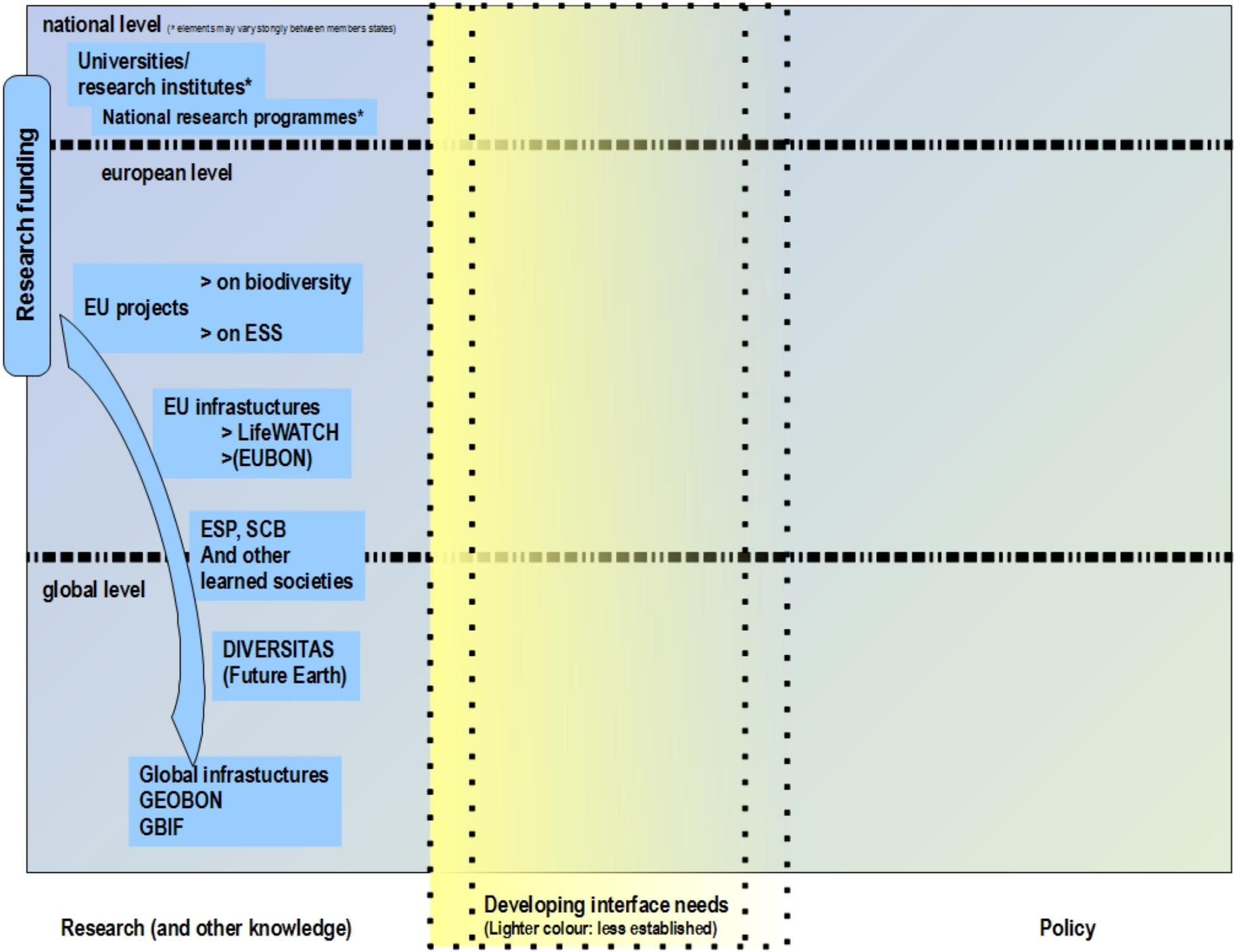
1. Context
2. Project and Objectives
3. First steps and challenges
   - Mapping the Biodiversity landscape in Europe and visualizing the knowledge flow,
   - Developing a prototype for a network of Knowledge
   - Testing the prototype
4. Get involved!

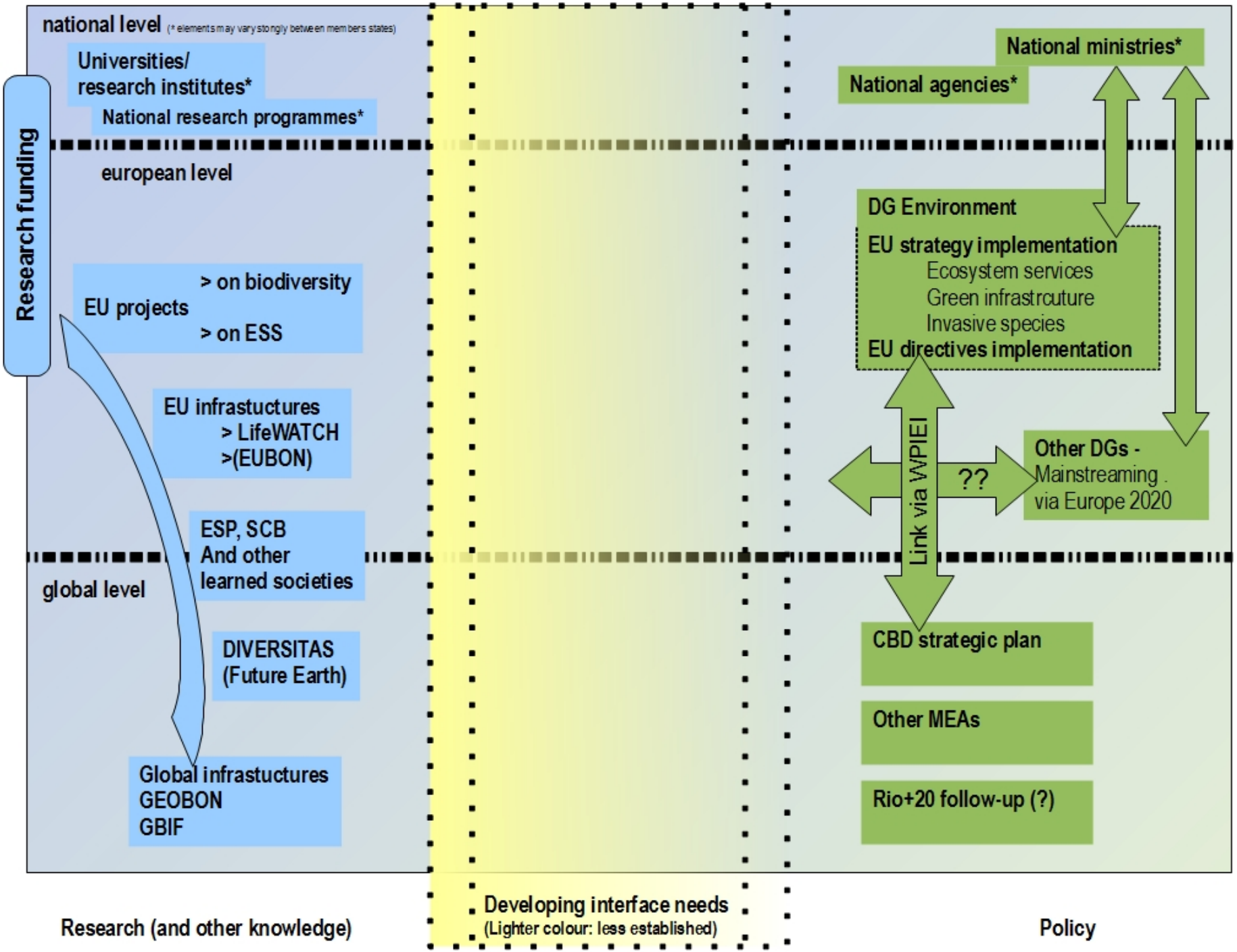
"Biodiversity is still being lost as fast as ever, and we have made little headway in reducing the pressures on species, habitats and ecosystems."

- UNEP chief scientist Joseph Alcamo -

"Global and regional discussions have shown that much of the available science and experience is not being effectively used, and that interfaces between science and policy must be significantly improved."

EPBRS, 2009


national level (* elements may vary stongly between members states)
Universities/
research institutes*
National research programmes*
european level
Research funding
EU projects
> on biodiversity
> on ESS
EU infrastuctures
> LifeWATCH
>(EUBON)
ESP, SCB
And other
learned societies
global level
DIVERSITAS
(Future Earth)
Global infrastuctures
GEOBON
GBIF
Research (and other knowledge)
Developing interface needs
(Lighter colour: less established)
Policy
Drafted by UFZ Science-Policy Expert Group, 27/04/2012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global level
DIVERSITAS (Future Earth)
Global infrastuctures
GEOBON
GBIF
National ministries*
National agencies*
DG Environment
EU strategy implementation
Ecosystem services
Green infrastrcuture
Invasive species
EU directives implementation
Link via WPIEI
??
Other DGs - Mainstreaming . via Europe 2020
CBD strategic plan
Other MEAs
Rio+20 follow-up (?)
Developing interface needs
(Lighter colour: less established)
Research (and other knowledge)
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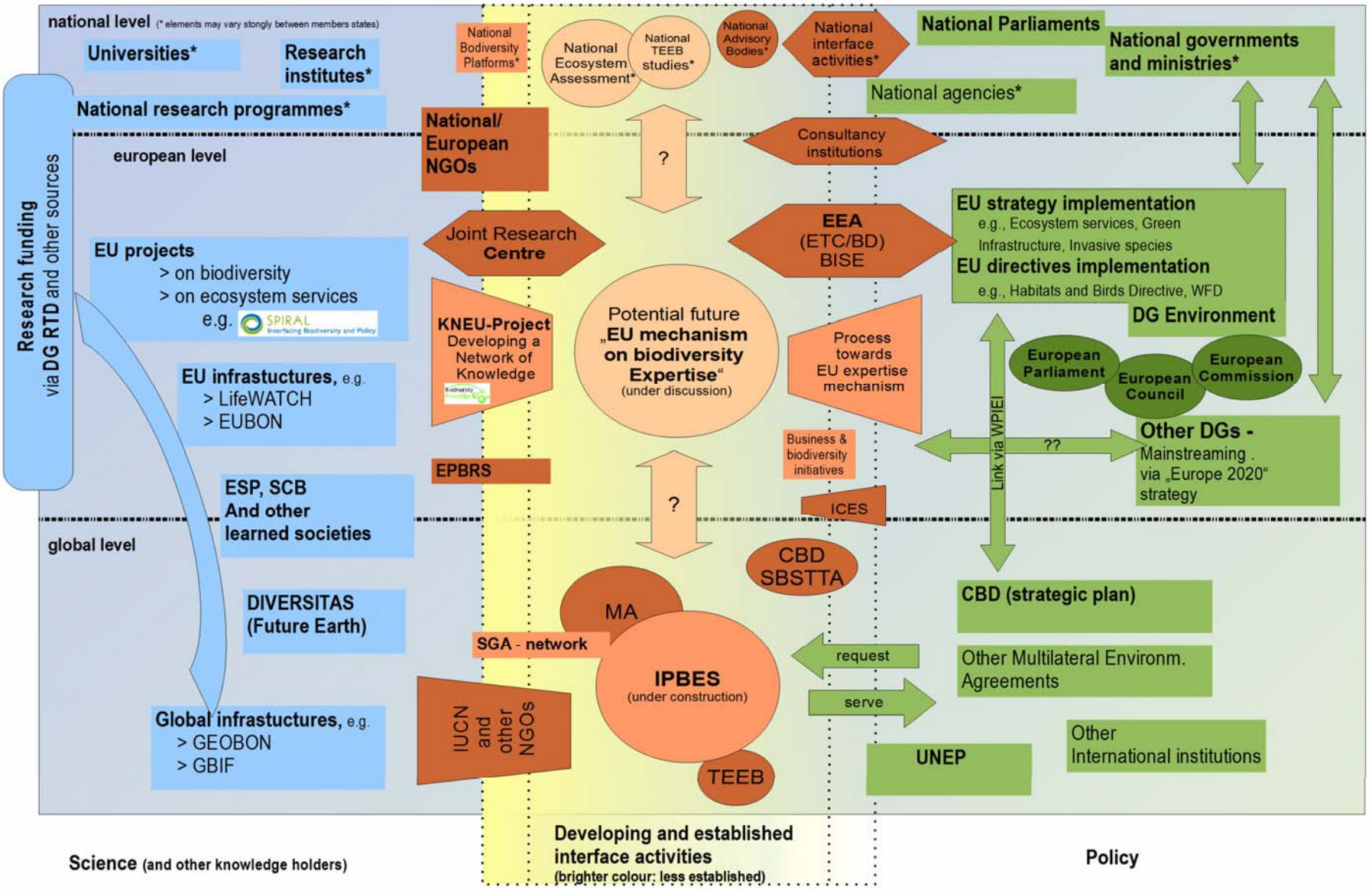
Drafted by UFZ Science-Policy Expert Group, 27/04/2012



Sketch of the “landscape” of science-policy interface work in Europe, with links to the national (upper part) and global (lower part) level. While many time-restricted or permanent institutions (outlined by dark orange colours) exist, some explicit links are only coming into existence now (IPBES, national ecosystem assessments) or are still under discussion (like the EU mechanism)

Overarching policy needs

- **Joint formulation of questions and challenges between requesters and knowledge holders**: Often, the process of jointly formulating questions between decision makers and knowledge holders may be the most important part of science-policy interactions
- **Focus on knowledge for implementation support (policy design, policy revision, policy monitoring)**: Often, scientific outputs aiming at supporting policies remain at a more overarching and strategic level, not taking into account the explicit needs and views of policy design and revision
- **Production of concerted views from the knowledge community (cross- and inner-disciplinary)**
- **Horizon scanning, foresight**

» **Source: EUBES-contract**

Potential functions for an EU mechanism

1. Network-function: Building a community of Interest on BES
2. Implementation support function
3. Research strategy function (>> EPBRS)
4. Mechanism for a European regional support to IPBES (?)

Potential functions for an EU mechanism

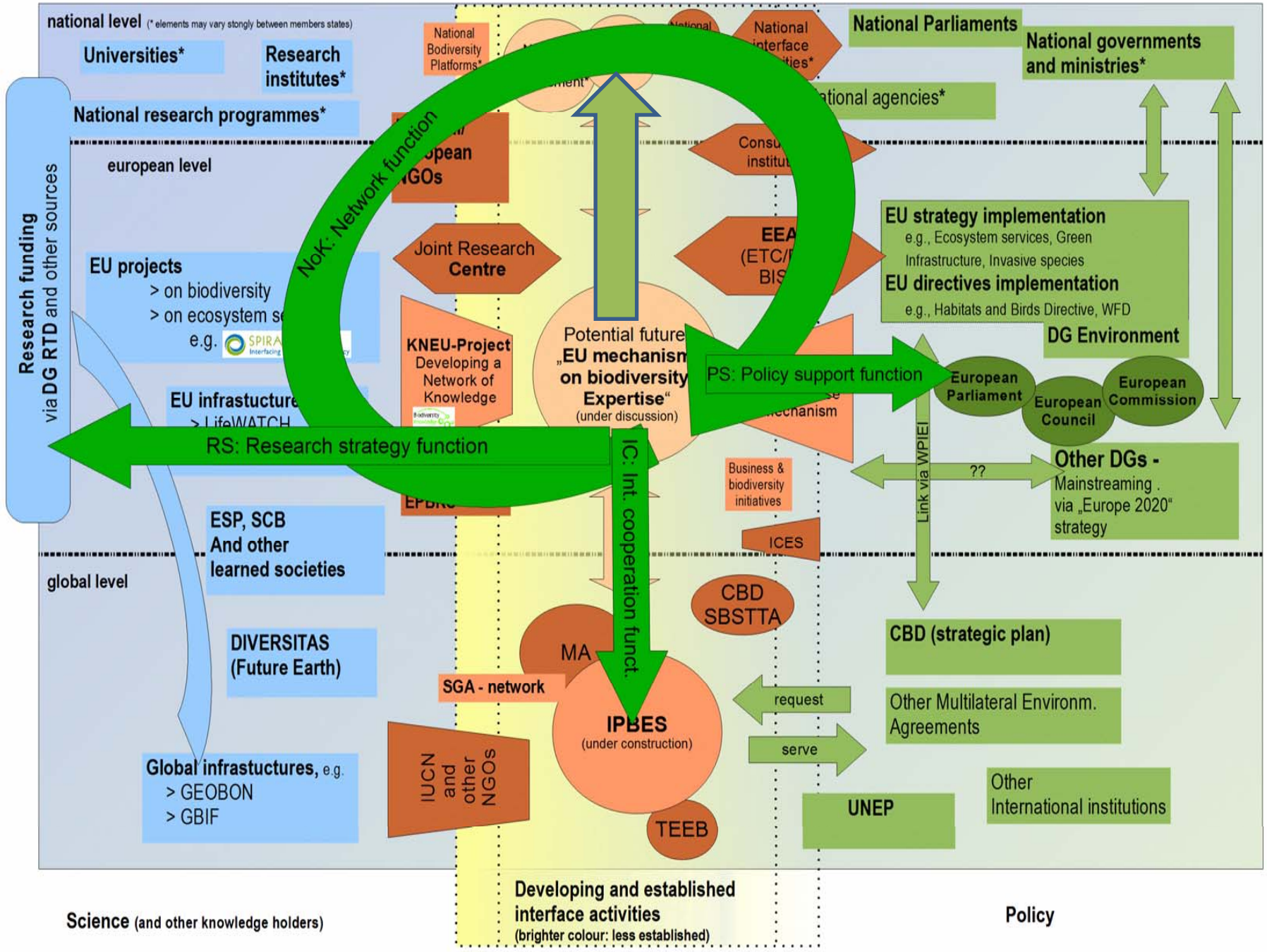
1. Network-function: Building a community of Interest on BES "Capacity Building"
2. Implementation support function
3. Research strategy function (>> EPBRS)
4. Mechanism for a European regional support to IPBES (?)

Potential functions for an EU mechanism

1. Network-function: Building a community of Interest on BES "Capacity Building"
2. Implementation support function "Assessment"
3. Research strategy function (>> EPBRS)
4. Mechanism for a European regional support to IPBES (?)

Potential functions for an EU mechanism

1. Network-function: Building a community of Interest on BES "Capacity Building"
2. Implementation support function "Assessment"
3. Research strategy function (>> EPBRS) "Knowledge generation"
4. Mechanism for a European regional support to IPBES (?)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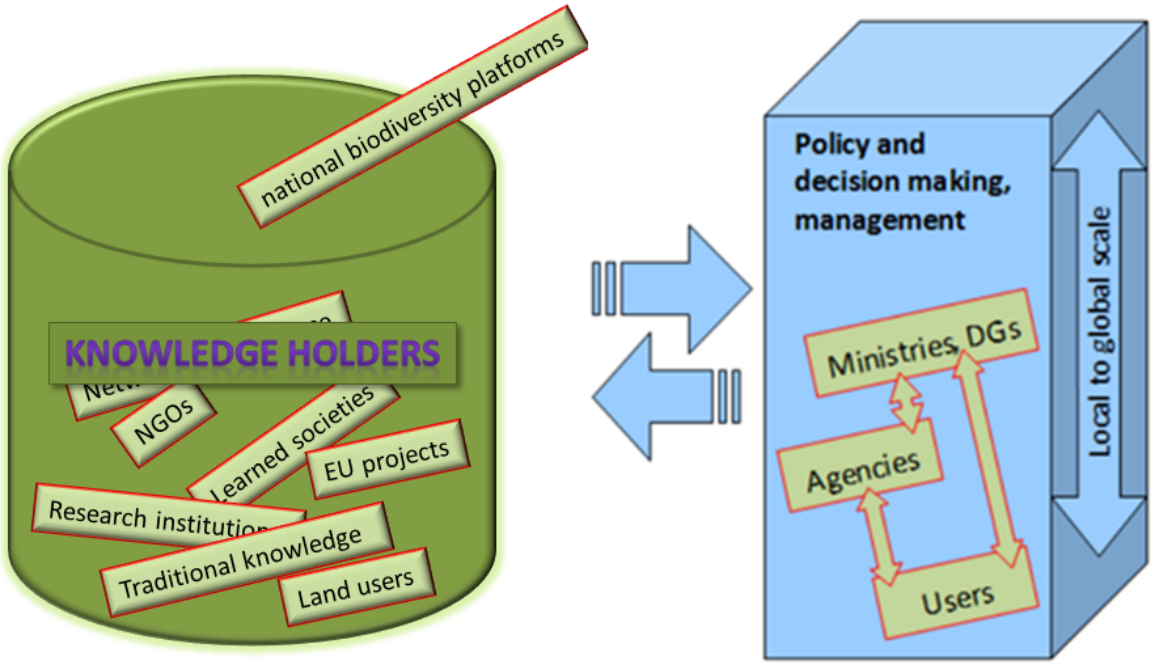
ESP, SCB And other learned societies
global level
DIVERSITAS (Future Earth)
Global infrastuctures, e.g.
> GEOBON
> GBIF
National Bodiversity Platforms*
National interface
National Parliaments
National governments and ministries*
ational agencies*
Joint Research Centre
EEA
(ETC/
BIS
EU strategy implementation
e.g., Ecosystem services, Green Infrastructure, Invasive species
EU directives implementation
e.g., Habitats and Birds Directive, WFD
DG Environment
NoK: Network function
KNEU-Project
Developing a Network of Knowledge
Potential future
„EU mechanism
on biodiversity
Expertise“
(under discussion)
echanism
PS: Policy support function
European Parliament
European Council
European Commission
RS: Research strategy function
IC: Int. cooperation funct.
Business & biodiversity initiatives
??
Link via WPIEI
Other DGs -
Mainstreaming .
via „Europe 2020“
strategy
ICES
CBD SBSTTA
CBD (strategic plan)
MA
SGA - network
IPBES
(under construction)
request
serve
Other Multilateral Environm. Agreements
IUCN and other NGOs
TEEB
UNEP
Other International institutions
Science (and other knowledge holders)
Developing and established interface activities
(brighter colour: less established)
Policy
Drafted by UFZ Science-Policy Expert Group, 2nd revision, 1.8.2012

Biodiversity Knowledge

?

General AIM:

To better link our biodiversity and ES knowledge landscape with biodiversity governance across Europe



THE virtual Biodiversity Knowledge bowl – In Europe!

Facts about the KNEU project

- Coordination and support action 
- November 2010 → April 2014 (42 months)
- Coordinated by UFZ, Leipzig, Germany
- A consortium of 18 leading institutions in Europe on biodiversity and ecosystem services research and governance – ***but open to everybody***

Objectives of KNEU

1. **Gain a broad overview of existing knowledge holders in biodiversity issues** in Europe and on potential measures to link them for the NoK approach
2. **Develop a mechanism to identify and access expertise ready to answer a wide range of policy-relevant questions on biodiversity and ecosystem services** (the NoK), and use that mechanism to develop a flexible and appropriate network of knowledge holders
3. **Develop sets of rights, roles, rules and procedures** to identify, access, assemble and synthesize information relevant to questions posed to the network
4. **Test the procedures in practical cases**
5. **Implement a process of learning by doing to permit an iterative improvement** of the rights, roles, rules and procedures to achieve more effective responses of the network
6. **Distil and communicate a set of lessons learned** and best practice from the prototype and develop a recommended design of a Network of Knowledge on biodiversity and ecosystem services in Europe.

KNEU FP7 project's aim:

To develop and test a prototype of **Network of Knowledge** to inform policy-making and economic actors in the field of biodiversity and ecosystem services

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To develop and test a prototype of **Network of Knowledge** to inform policy-making and economic actors in the field of biodiversity and ecosystem services

?

Network of Knowledge (NoK)?

- EPBRS (2009)
- bring together **existing** **organizations** and processes
- **improve the science-policy interface** by helping to focus the support of science and scientists on the needs of those **setting policy** and taking decisions.

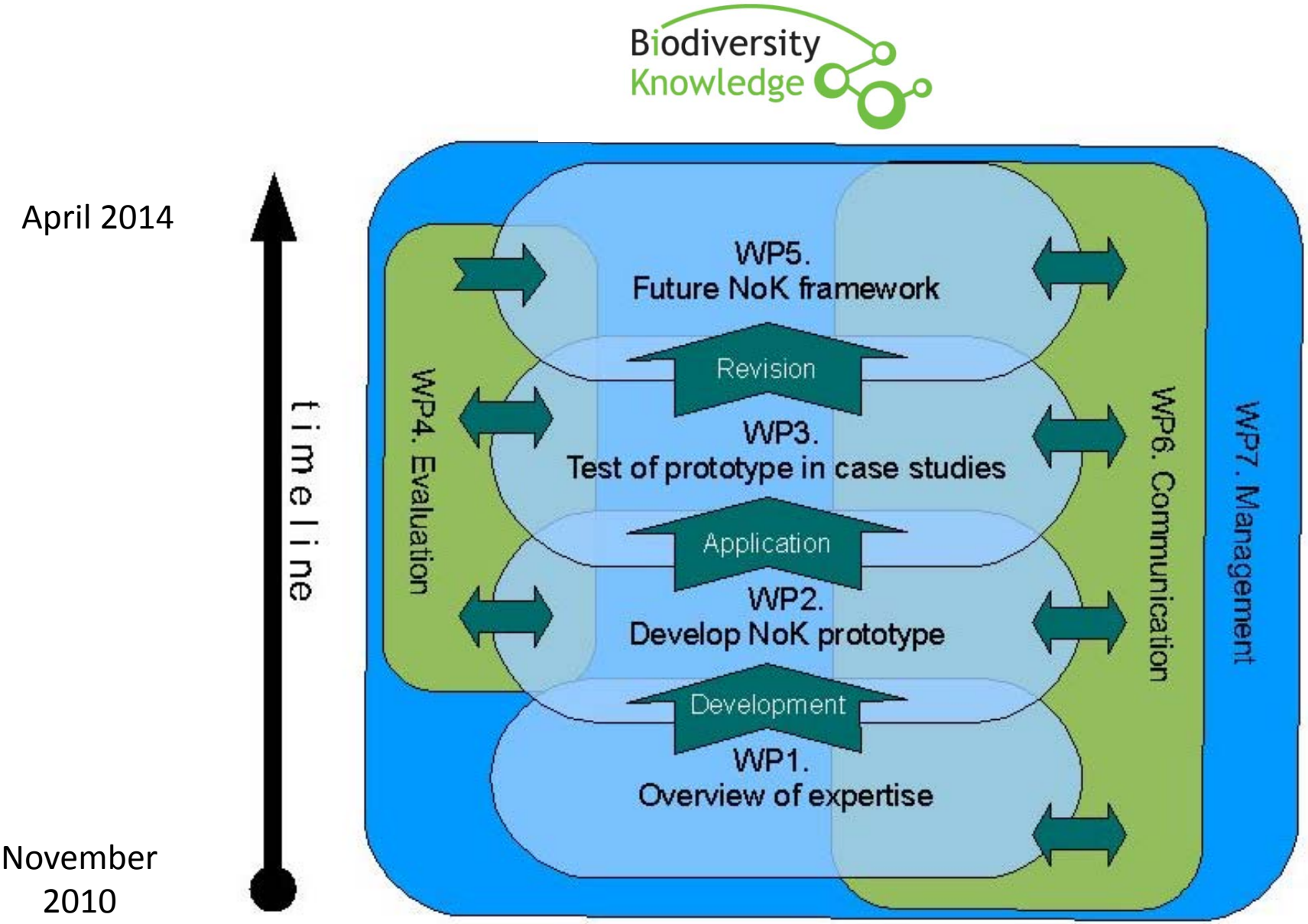
Potential functions for an EU mechanism

1. Network-function: Building a community of Interest on BES
2. Implementation support function
3. Research strategy function (>> EPBRS)
4. Mechanism for a European regional support to IPBES (?)

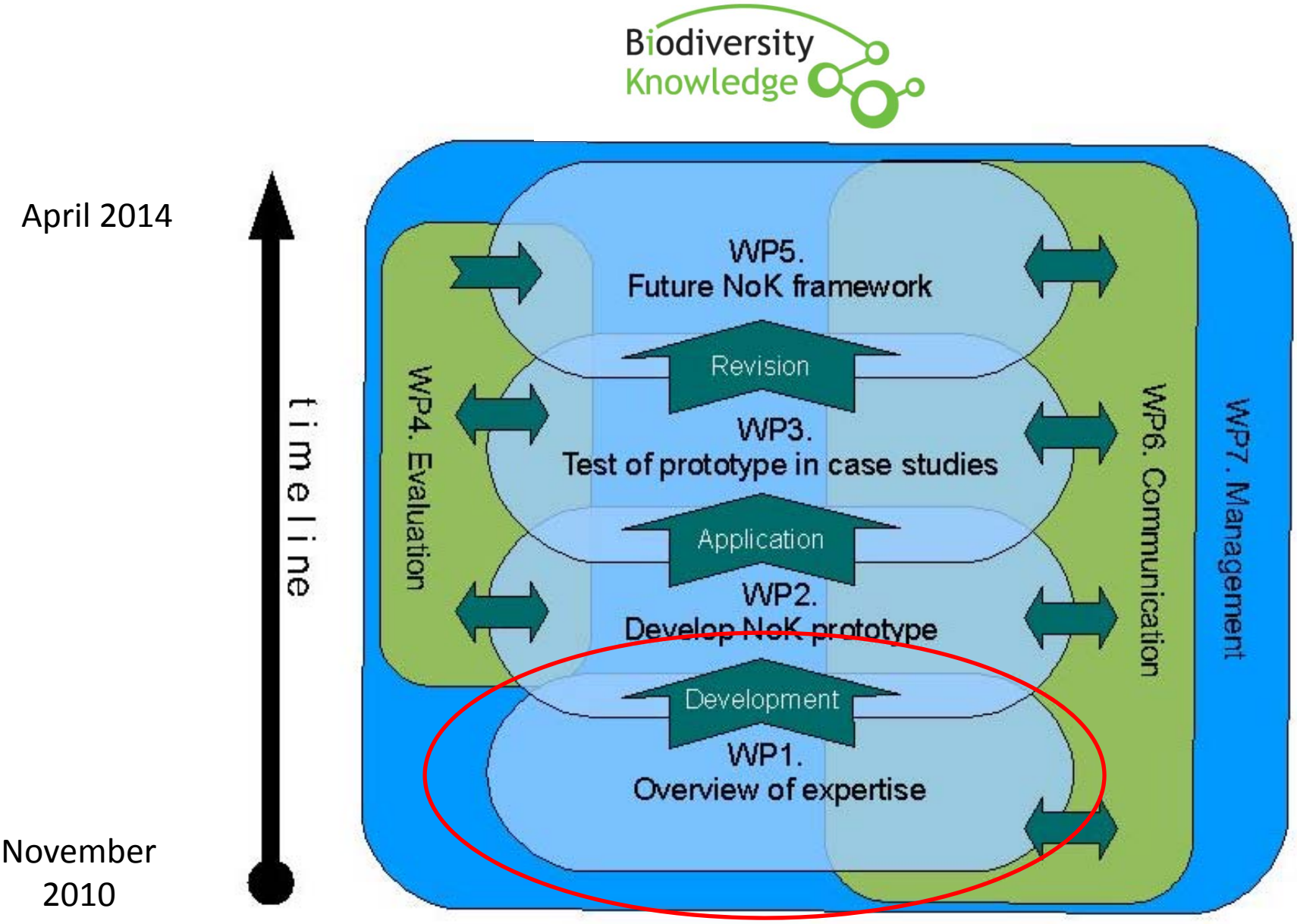
Potential functions as basis for options

1. Network-function: Building a community of Interest on BES
2. Implementation support function (>> PROTOTYPE)
3. Research strategy function (>> EPBRS)
4. Mechanism for a European regional support to IPBES (?)

Design of the project: Overall project through WPs, links and goals



Design of the project: Overall project through WPs, links and goals



- Task 1: Who are the experts and the knowledge holders? How is the knowledge flowing in Europe?
- Task 2: Who are the clients/requesters?
- Task 3: What are the barriers to knowledge flow?

Objectives

- Overview of the complex and diverse landscape of organisations/initiatives…
- Identify the most influential Knowledge Hubs in Europe

2 complementary approaches:

1/ Approach 1: Mapping of the knowledge landscape on biodiversity in Europe

1/ Approach 2: Visualizing the flows of knowledge within Europe

Biodiversity Knowledge

Approach 1: Who are the knowledge hubs?

a- Identify national, European and international organizations (including Research Institutions, Projects, CSOs, etc.) working on biodiversity as either **knowledge holders** or **knowledge users**

First database compiling K. holders and users

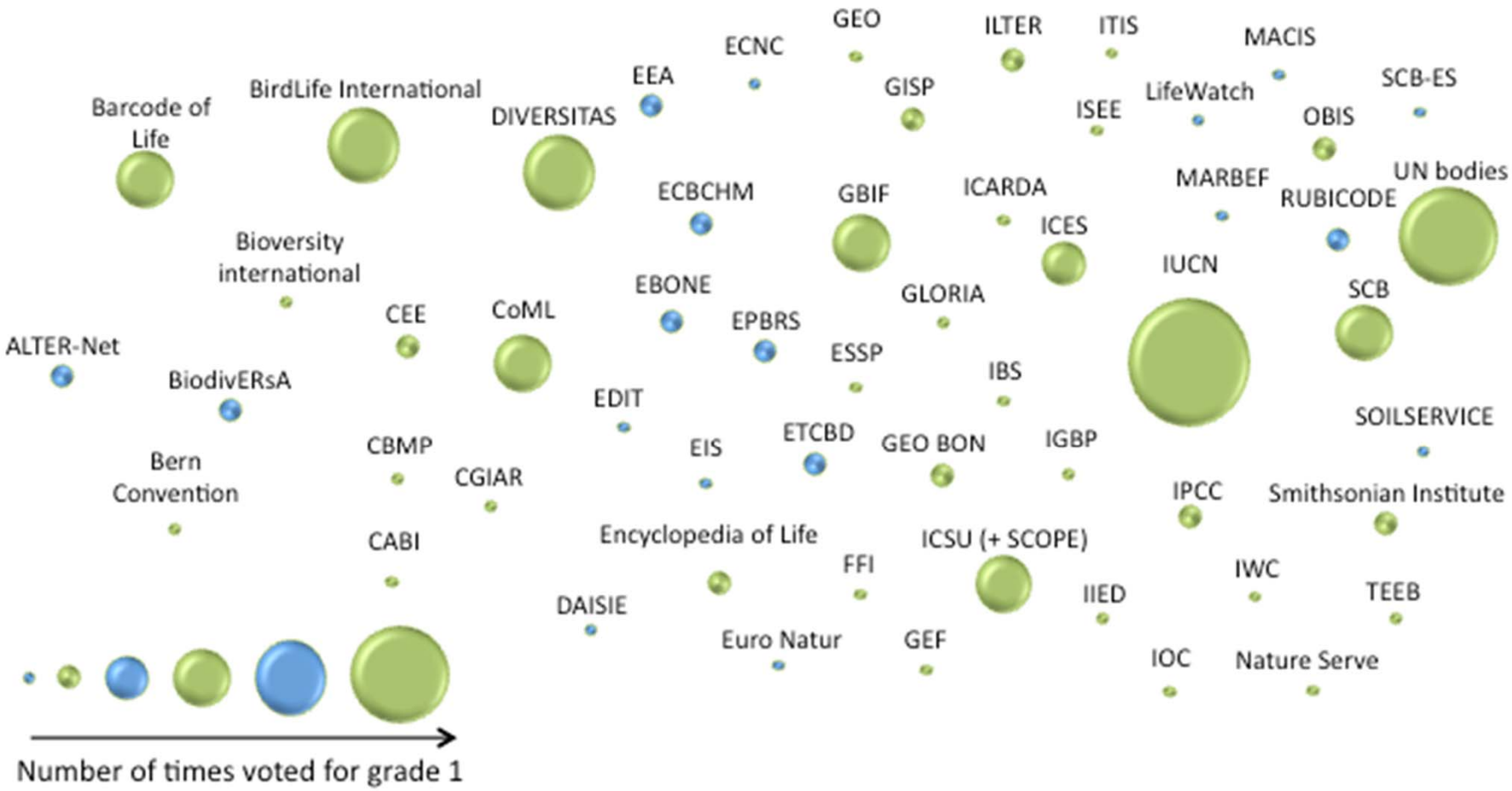
b- Prioritize the most "influential" hubs on biodiversity knowledge flow or on policy: partners were asked to select the 10 EU and Global hubs that they think were most influential and grade them:

1= I am sure it is influential, I have experienced it
2= I am sure it is influential, but I have not experienced it
3= I suppose it is influential, but I have not experienced it

Prioritization based on partners experience

Biodiversity Knowledge

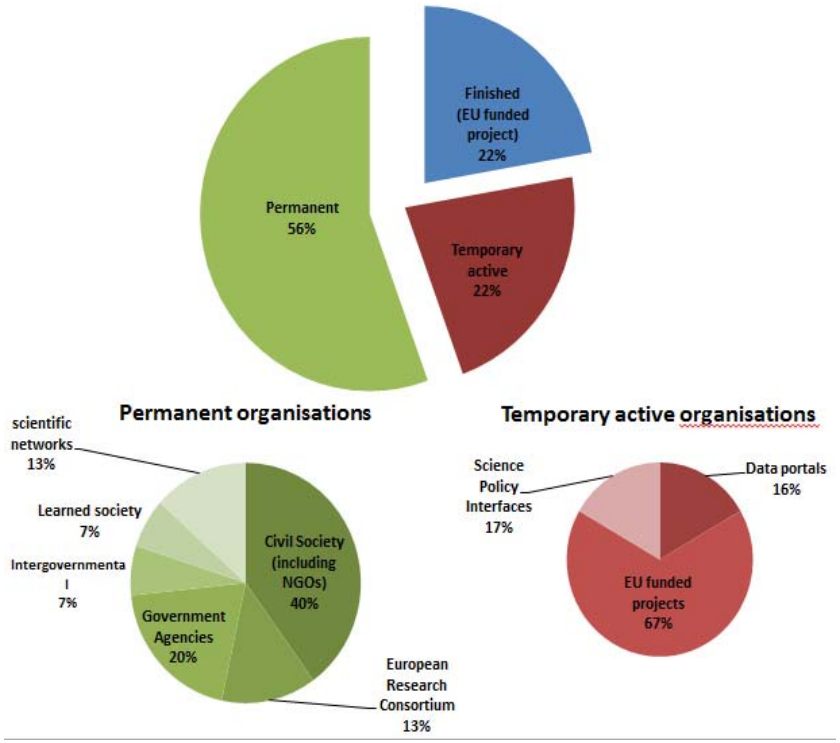
Global and European Knowledge hubs or Initiatives that have influenced most the knowledge flow on Biodiversity and Ecosystem Services in the past 5 years



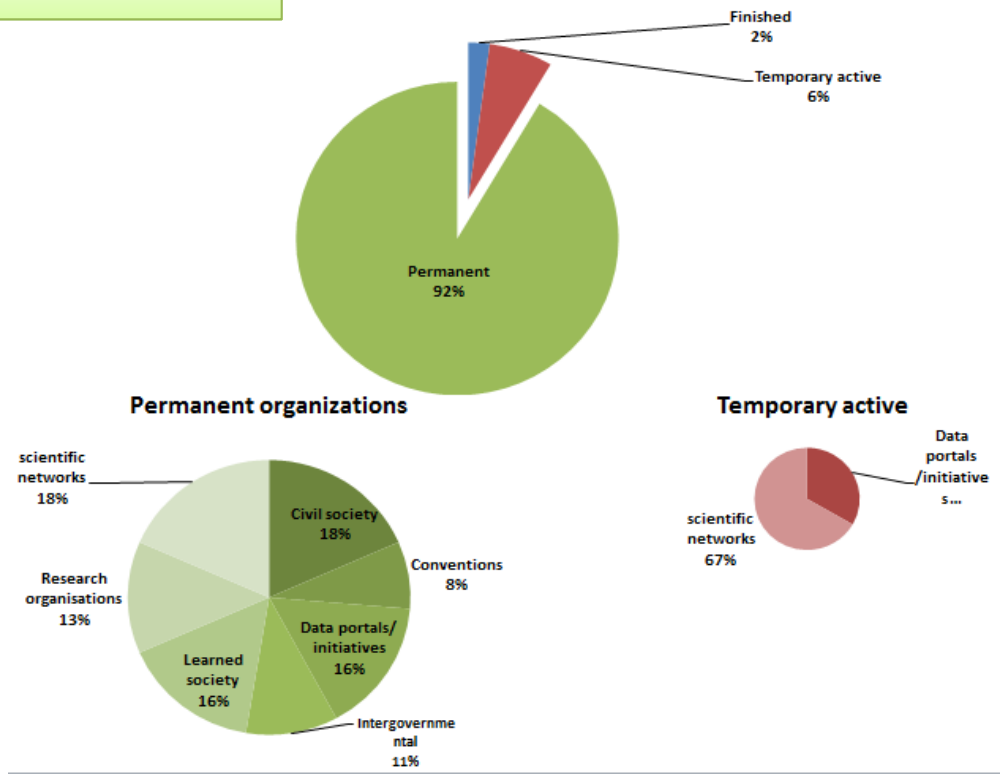
NON EXHAUSTIVE!

Approach 1: Results-Types of organisations/initiatives which have been the most voted for (grade 1) as the most influential hubs for knowledge on biodiversity and ecosystem services.

European Hubs

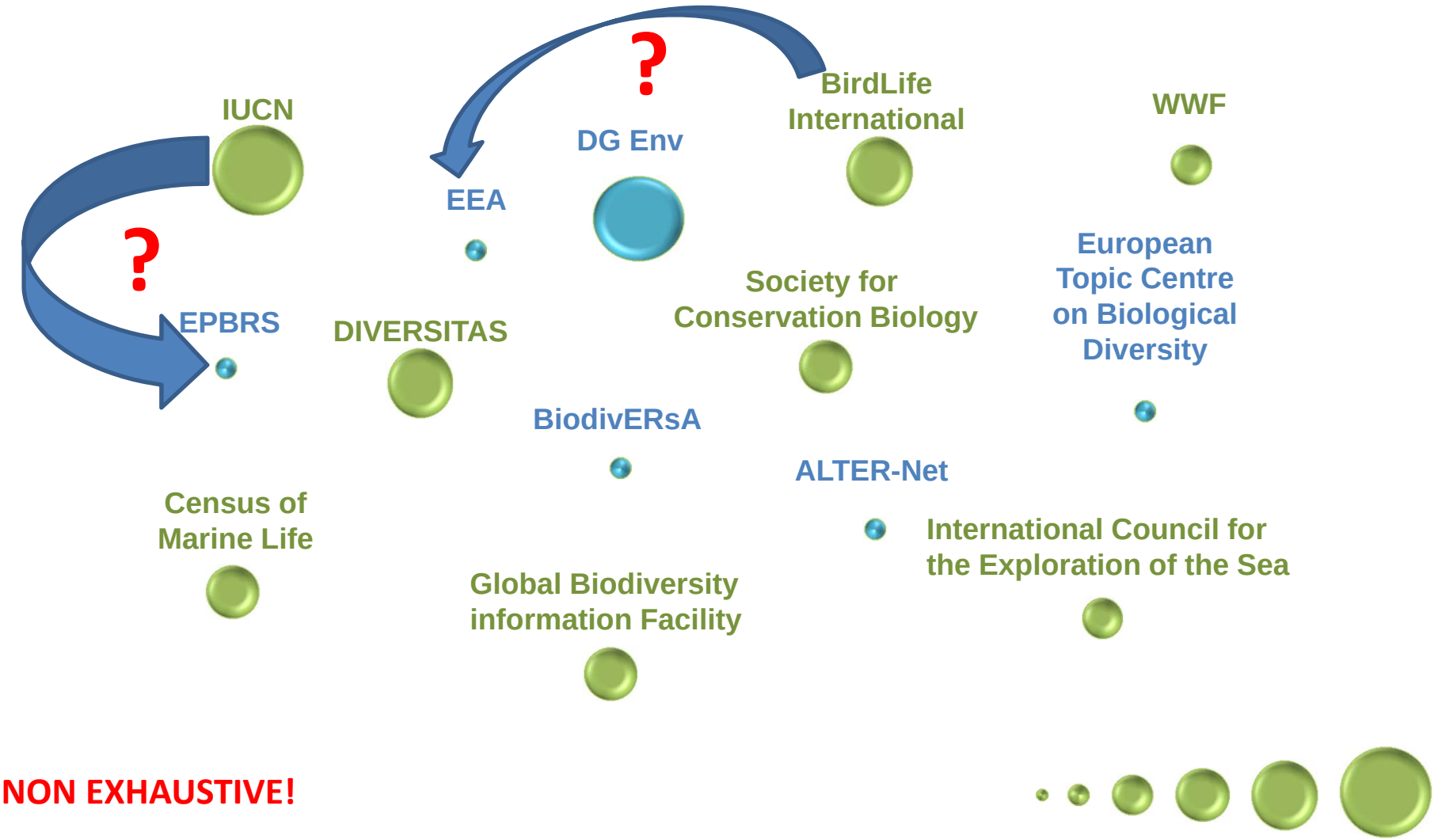


Global Hubs



Biodiversity Knowledge

Approach 2: How is the knowledge flowing between hubs?



NON EXHAUSTIVE!

- Task 1: Who are the experts and the knowledge holders? How is the knowledge flowing in Europe?
- Task 2: Who are the clients/requesters?
- Task 3: What are the barriers to knowledge flow?

Task 3: Who are the clients/requesters?

- A structured analysis of stakeholders involved in biodiversity and ecosystem services issues has been performed in order to establish a list of potential clients/requesters of the NoK

- 24 interviews performed

- each interviewee fulfilled a unique role with specific responsibilities (UNEP, Council of Europe, EC (DG ENV, DG MARE), EEA, ETC/BD, national and regional Government agencies, European NGOs, research institutions and networks)

→3 categories of Clients/Requesters

- **BRIEFERS**: who as a group were most actively engaged in the policy agenda. They derive knowledge from a number of sources including their "immersion" in the policy process

- **DIGESTERS**: who, while they may have some limited active engagement in the policy process tend to be mainly involved in "creating and collating". They tend to need their knowledge related to the basic subject material (information and data) required to develop briefs and digests

- **IMPLEMENTERS:** who are more likely to be involved in the direct implementation (at various levels: regional, national, international, etc) of specific policy areas. They are more likely to need practical knowledge and related information in the form of how to implement process in the context of national and international policy.

Practical NEEDS from policy

From "Briefers":

- Direct contacts for specific questions & facts

From "Digesters":

- „One-stop-shop" for all information
- Clear organisation of knowledge
- Indication of quality of knowledge

From "Implementors":

- Guidance for specific problems (short term)
- „Did someone solve this somewhere else already?"
- Guidance for strategies (mid-term)

- Task 1: Who are the experts and the knowledge holders? How is the knowledge flowing in Europe?
- Task 2: Who are the clients/requesters?
- Task 3: What are the barriers to knowledge flow?

Task 3: Impediments to knowledge provision

The main barriers identified were:

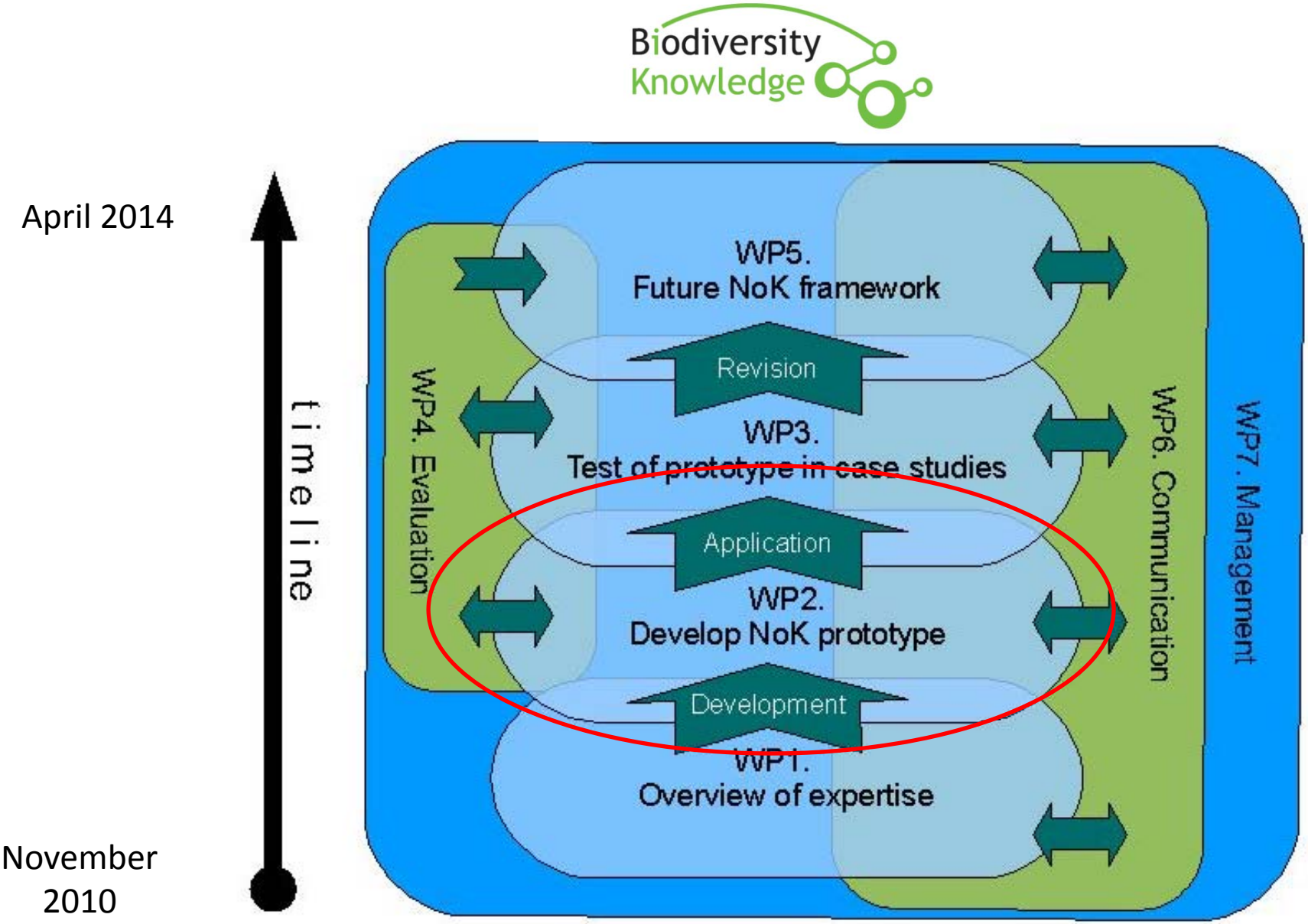
- Information overload.
- Lack of time.
- Information is scattered/ fragmented.
- Finding information (Poorly signposted information and data).
- Restricted access.
- Legal barriers.
- Personal conflict/competition/people do not talk to each other (Summarised as lack of coordination/collaboration).
- Ignorance
- Lack of knowledge.
- Experts' availability.
- No learning from lessons
- Lack of political continuity

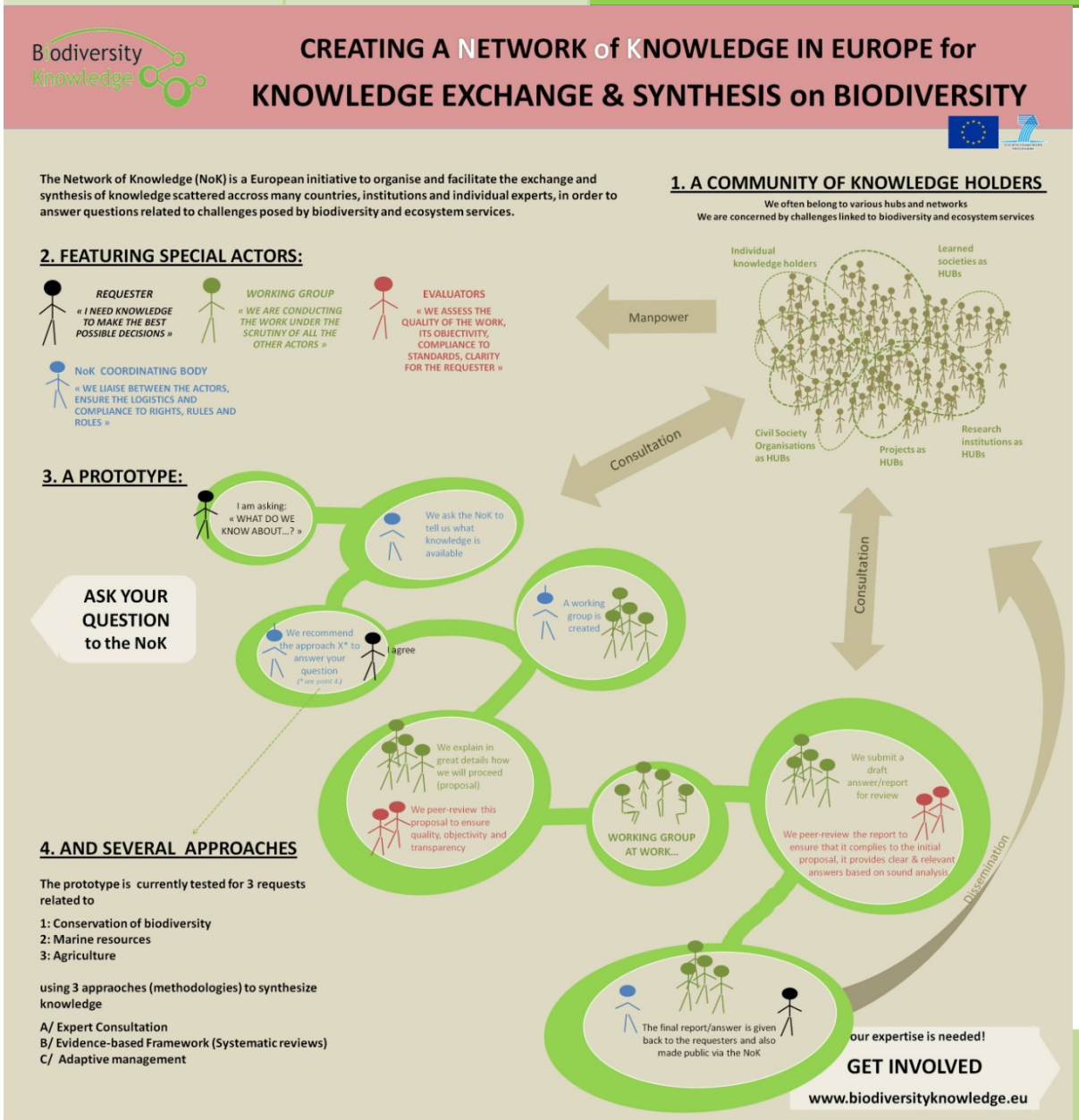
Task 3: Impediments to knowledge provision: Some solutions

The main suggestions included:

- Centralisation/ streamlining of information.
- Thematic presentation of information.
- Digests/briefings.
- Filtered information.
- Tools/mechanisms for information exchange.
- Validation.
- Database creation.
- IT solutions.
- Greater use of social media (e.g. Twitter, Facebook, etc).

Design of the project: Overall project through WPs, links and goals





Livoreil, B., Pullin, A.S., Neßhöver, C., Vandewalle, M., Geijzendorffer, I., Jongman, R.H.G. – KNEU Consortium
Contact: marie.vandewalle@ufz.de
KNEU is a Coordination Action Project funded under the European Commission's Framework Seven Programme, contract number 265299

NoK

(network of knowledge)

PROTOTYPE

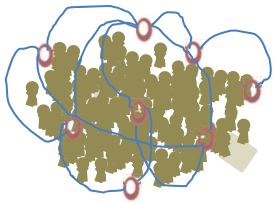
Version 14 – 25/07/2012

Lead author: Barbara Livoreil , Bangor University

Contributors: Ilse Geijssendorffer, Marie Vandewalle, Estelle Balian, Carsten Neßhöver, Rob Jongman & the KNEU consortium

www.biodiversityknowledge.eu

REQUESTERS
Governments, CSO, organizations or groups of persons including the NoK itself

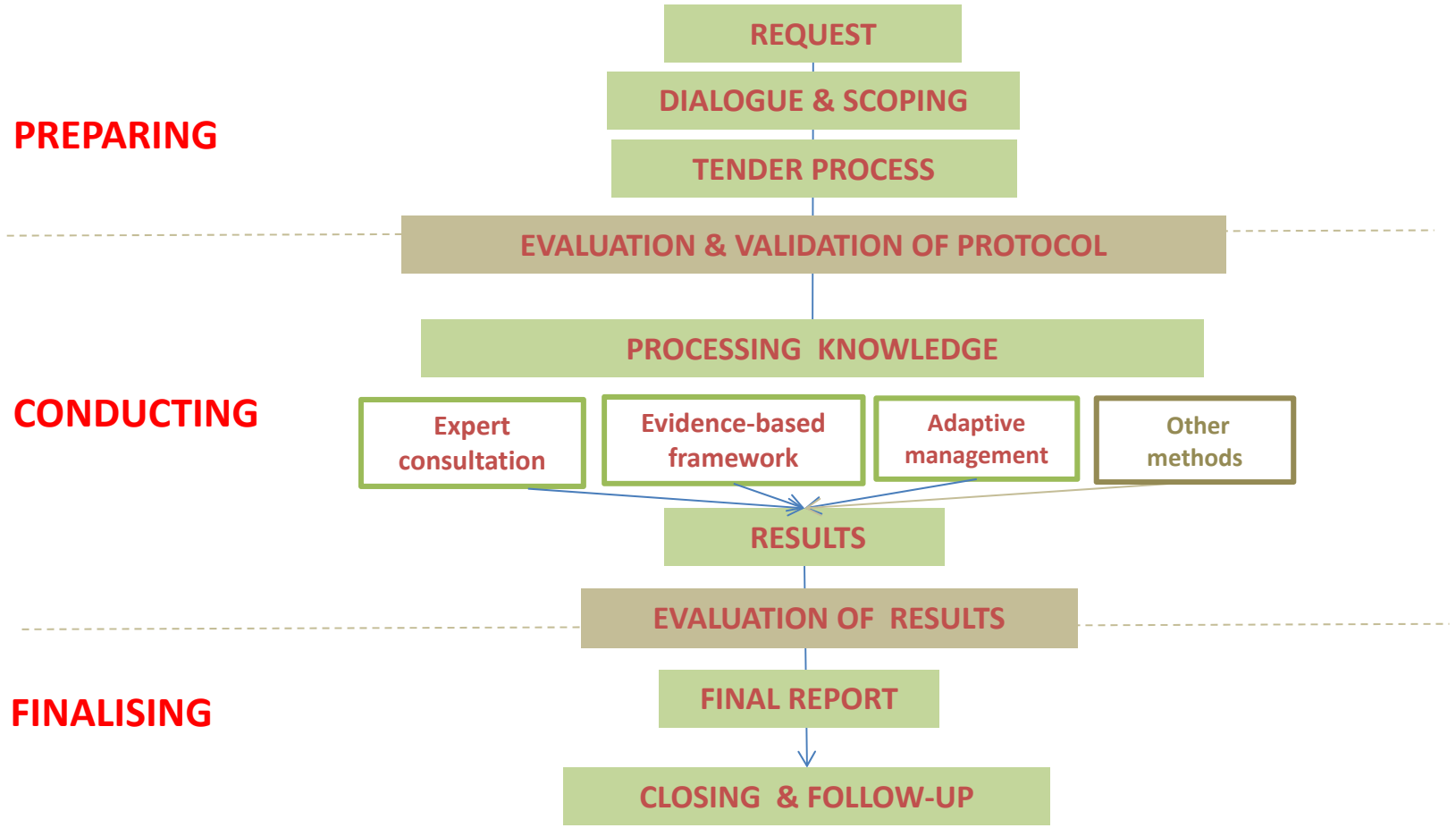


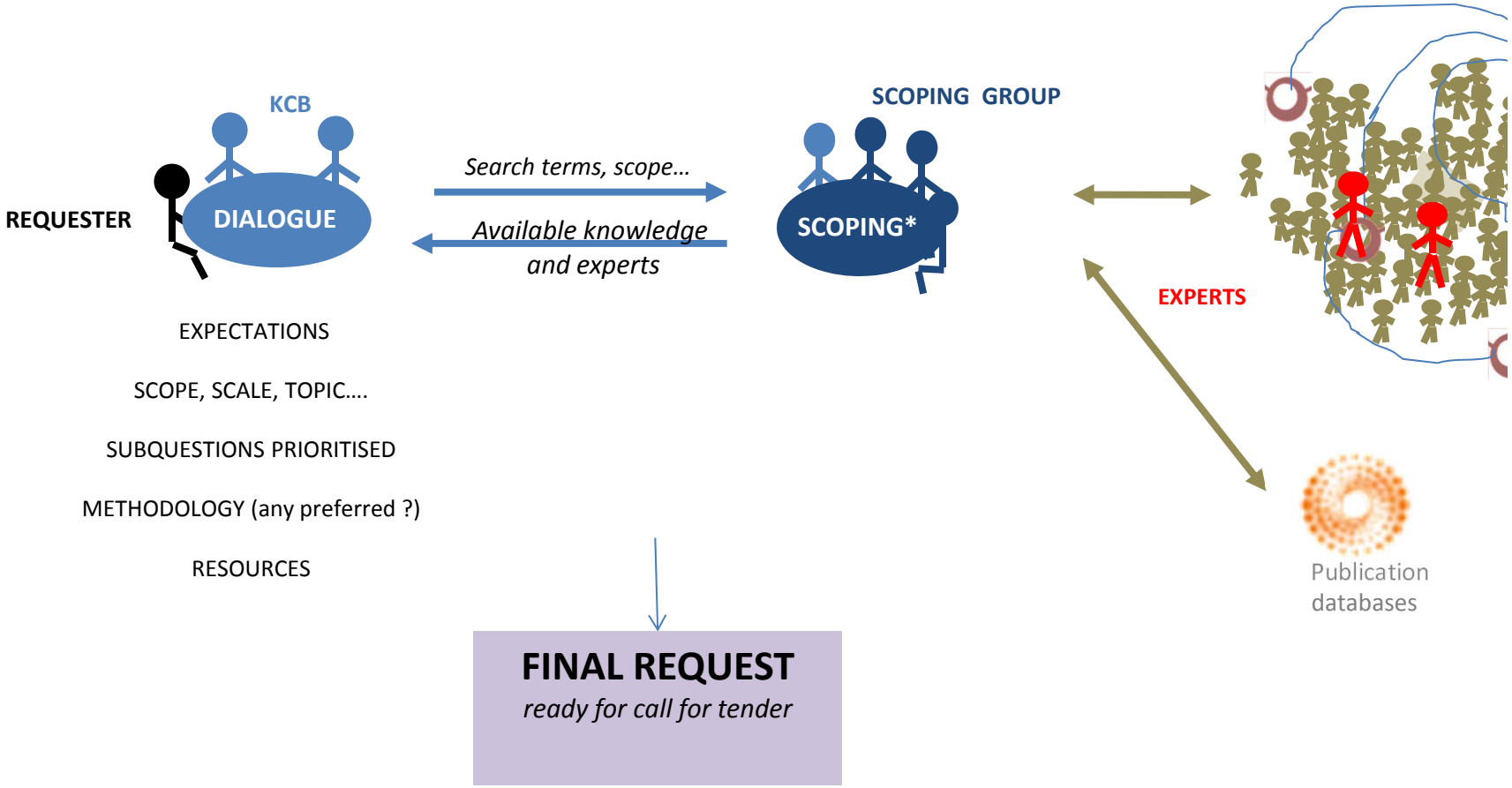
KNOWLEDGE HOLDERS & THEIR HUBS

KNOWLEDGE COORDINATING BODY

Ad-hoc WORKING GROUPS (multidisciplinary)

EVALUATORS / REVIEWERS (multidisciplinary)


PREPARING
REQUEST
DIALOGUE & SCOPING
TENDER PROCESS
EVALUATION & VALIDATION OF PROTOCOL
CONDUCTING
PROCESSING KNOWLEDGE
Expert consultation
Evidence-based framework
Adaptive management
Other methods
RESULTS
EVALUATION OF RESULTS
FINALISING
FINAL REPORT
CLOSING & FOLLOW-UP


KCB
REQUESTER
DIALOGUE
Search terms, scope…
Available knowledge and experts
SCOPING GROUP
SCOPING*
EXPERTS
Publication databases
EXPECTATIONS
SCOPE, SCALE, TOPIC….
SUBQUESTIONS PRIORITISED
METHODOLOGY (any preferred ?)
RESOURCES
FINAL REQUEST
ready for call for tender

FINAL REQUEST

CALL FOR TENDER

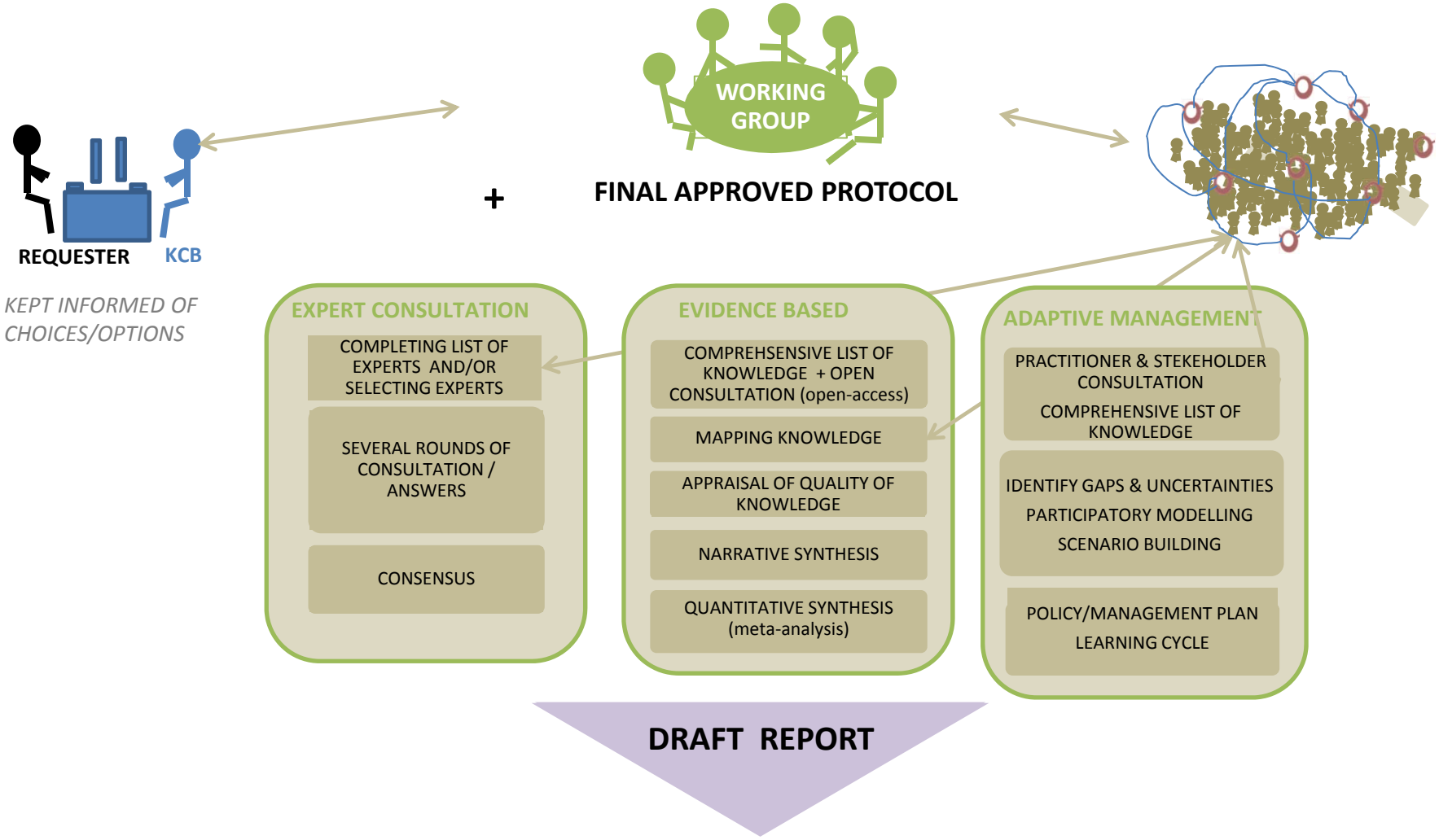
APPLICANTS

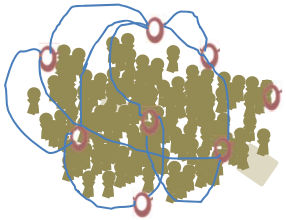
DRAFT PROTOCOL

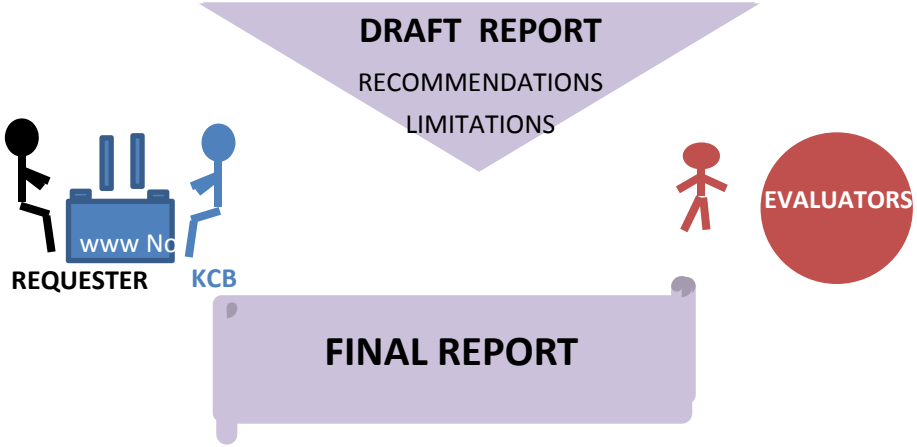
EVALUATORS / PEER-REVIEWERS *+ Open-consultation ?*

FINAL PROTOCOL

made openly accessible / published


REQUESTER
KCB
KEPT INFORMED OF CHOICES/OPTIONS
+
WORKING GROUP
FINAL APPROVED PROTOCOL
EXPERT CONSULTATION
COMPLETING LIST OF EXPERTS AND/OR SELECTING EXPERTS
SEVERAL ROUNDS OF CONSULTATION / ANSWERS
CONSENSUS
EVIDENCE BASED
COMPREHSENSIVE LIST OF KNOWLEDGE + OPEN CONSULTATION (open-access)
MAPPING KNOWLEDGE
APPRAISAL OF QUALITY OF KNOWLEDGE
NARRATIVE SYNTHESIS
QUANTITATIVE SYNTHESIS (meta-analysis)
ADAPTIVE MANAGEMENT
PRACTITIONER & STEKEHOLDER CONSULTATION
COMPREHENSIVE LIST OF KNOWLEDGE
IDENTIFY GAPS & UNCERTAINTIES
PARTICIPATORY MODELLING
SCENARIO BUILDING
POLICY/MANAGEMENT PLAN
LEARNING CYCLE
DRAFT REPORT





DISSEMINATION

Open-access for final report (website NoK)
Summary, Briefs, fact-sheets
Confidential reports?
Press releases
Archives / open-access database

Knowledge transfer tailored to end-users (scientists, policy-makers, managers, business, conservation bodies, consultants, medias, general public…)

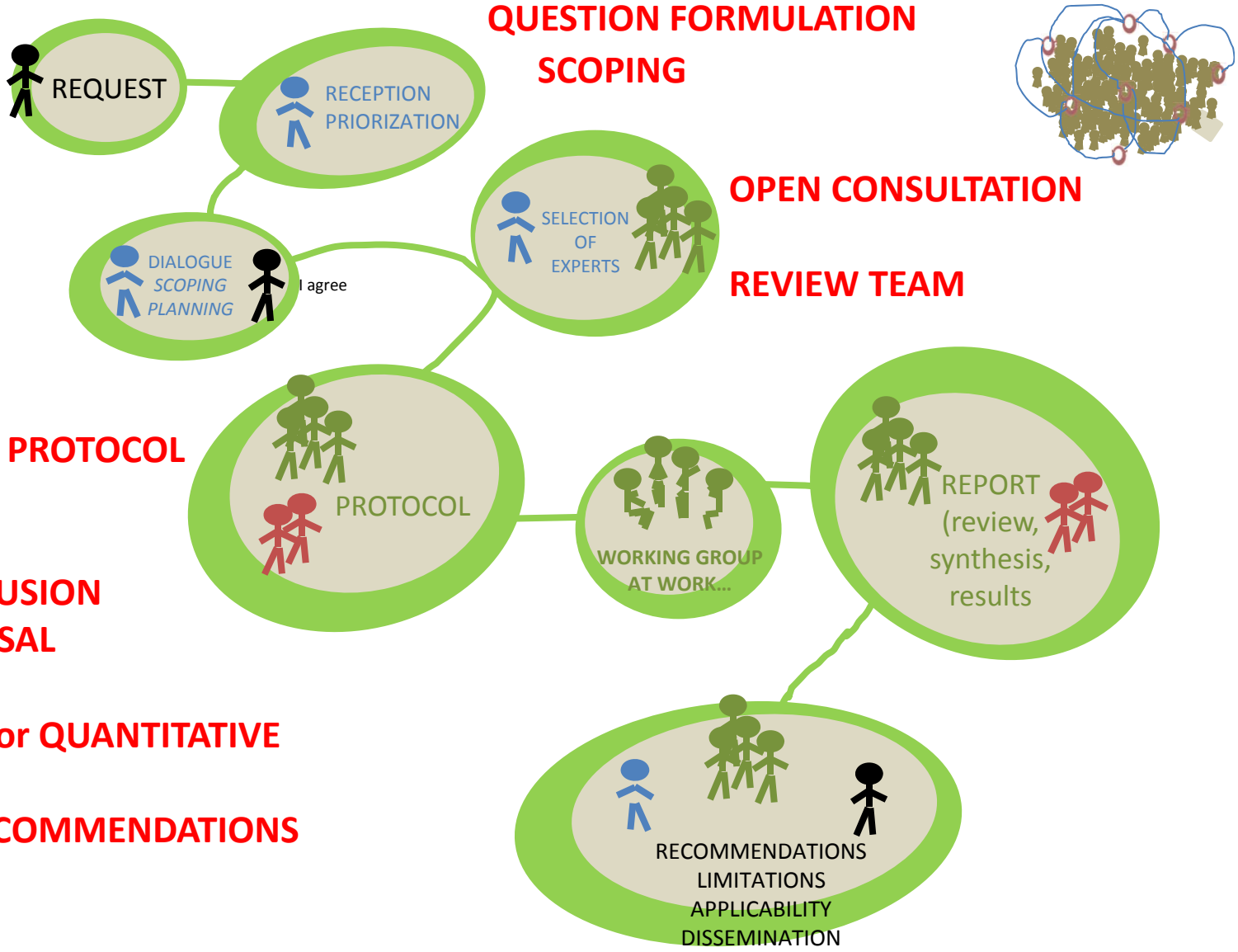
POST-OPERATORY FEEDBACKS FROM REQUESTER

- level of understanding, adoption/adhesion, opposition
- use, implementation (range, frequency)
- barriers to knowledge use

GENERAL FEEDBACKS

- feedback from NoK
- feedback from other sources (outside NoK)
- new requests emerging from application
- consequences of intervention

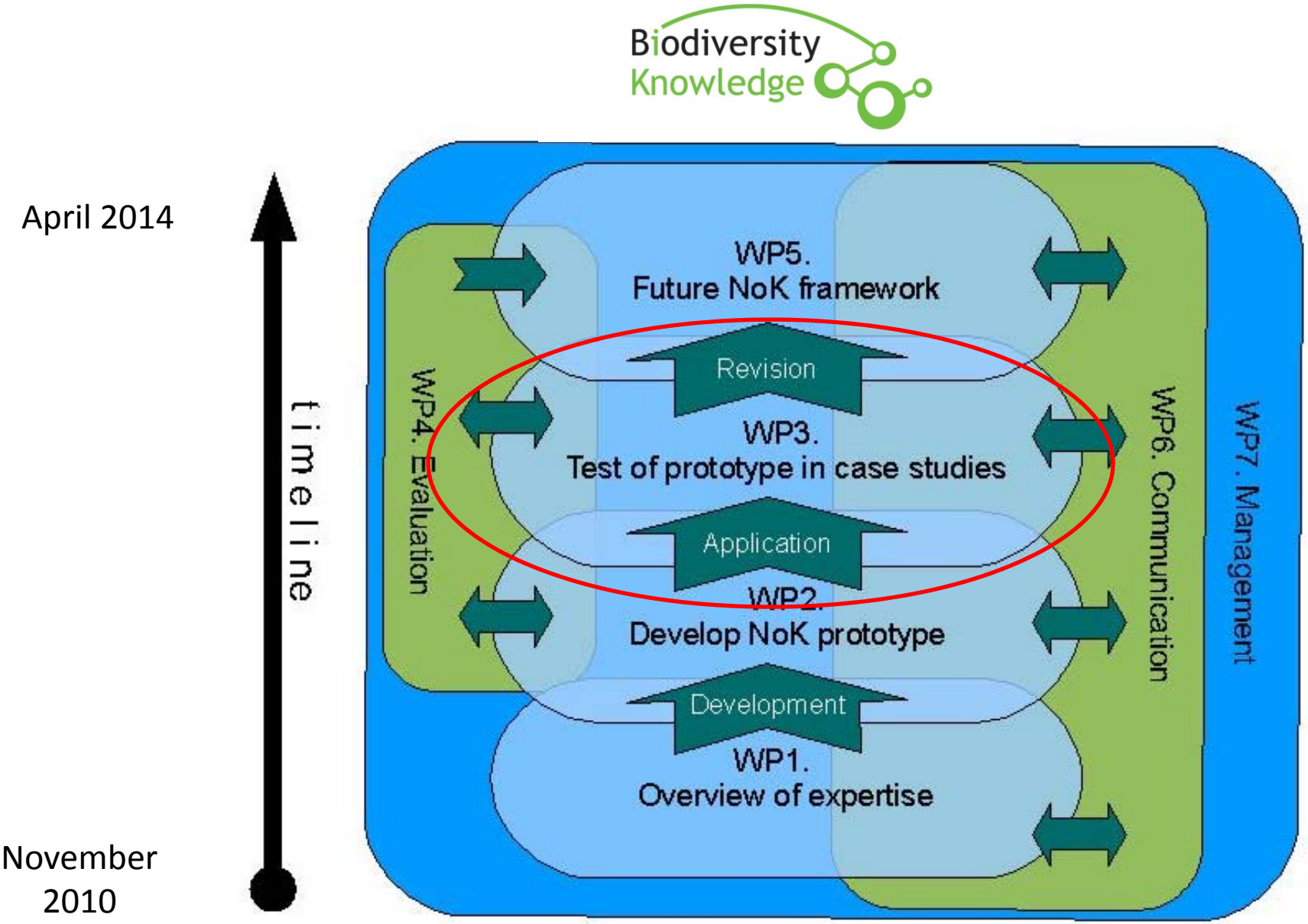
Biodiversity Knowledge



Challenges and opportunities

- Connecting, committing and acknowledging the actors;
- Data sharing, standards and data exchange;
- Governance;
- Finances;
- Quality assurance;
- Communication.

Design of the project: Overall project through WPs, links and goals



WP3 testing the prototype: the demonstration cases

Goals:

perform three policy-relevant demonstration cases to:

- test the NoK prototype in practise
- produce policy relevant output in the topics of the demonstration cases

Case areas:

should cover different sectors and test the NoK prototype in a broad variation of different situations/environments:

- Conservation case: policy driven topic following request of one main requester (DG ENV)
- Agricultural case: policy driven topic following chosen after many consultations with several requesters of different levels
- Marine case: science driven topic

Biodiversity Knowledge

TESTING THE PROTOTYPE: THE 3 DEMONSTRATION CASES

GREEN INFRASTRUCTURES (S. Schindler (UNIVIE))

Impact of multifunctional floodplain management on biodiversity

NATURAL PEST CONTROL (B. Livoreil (FRB))

Which types of landscape/habitat management are effective at maintaining or restoring populations of natural pest control agents?

KELP FORESTS (I. Sousa Pinto (CIIMAR))

What are the current trends in kelp forests in Europe and what is the evidence that these trends will affect the ecosystem's biodiversity and the provision of ecosystem services?

4-Get involved!

Several ways of knowing more about BiodiversityKnowledge and being involved in the design of the NoK:

- www.biodiversityknowledge.eu
- Register to our Newsletter at newsletter@biodiversityknowledge.eu
- Participate in the discussions on the website from the project workshops and conference
- Get engaged in our demonstrate cases as experts

Thanks for your attention…