Biodiversity Knowledge

Creating a Network of Knowledge for biodiversity and ecosystem services
www.biodiversityknowledge.eu

Introduction to the conference and the Network of Knowledge approach

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HELMHOLTZ
CENTRE FOR
ENVIRONMENTAL
RESEARCH – UFZ

1st BiodiversityKnowledge conference, Brussels, 21st-23rd of May, 2012

Why we are here

CBD COP10, Nagoya, October 2010

1. Complexity
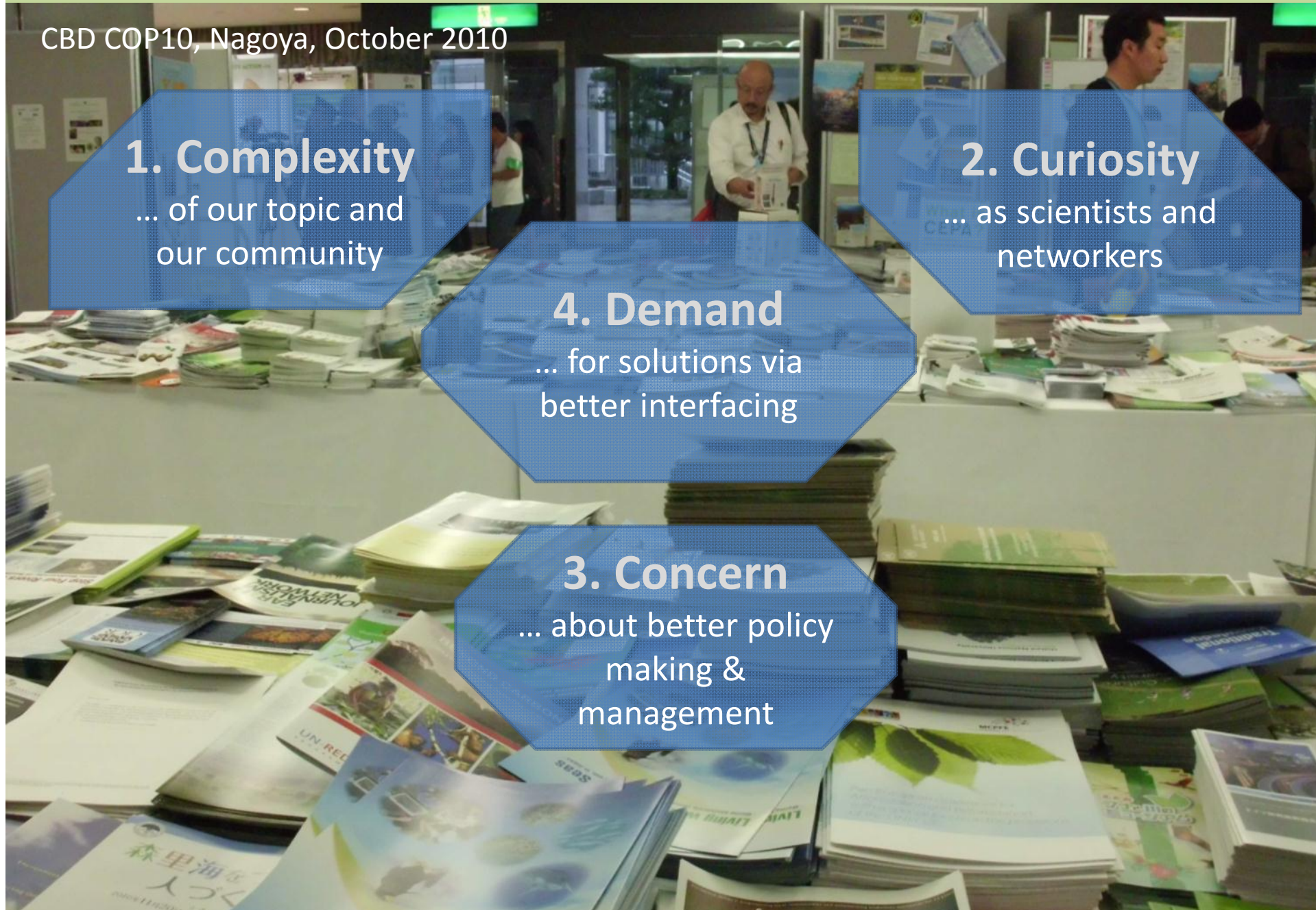… of our topic and our community

2. Curiosity
… as scientists and networkers

4. Demand
… for solutions via better interfacing

3. Concern
… about better policy making & management

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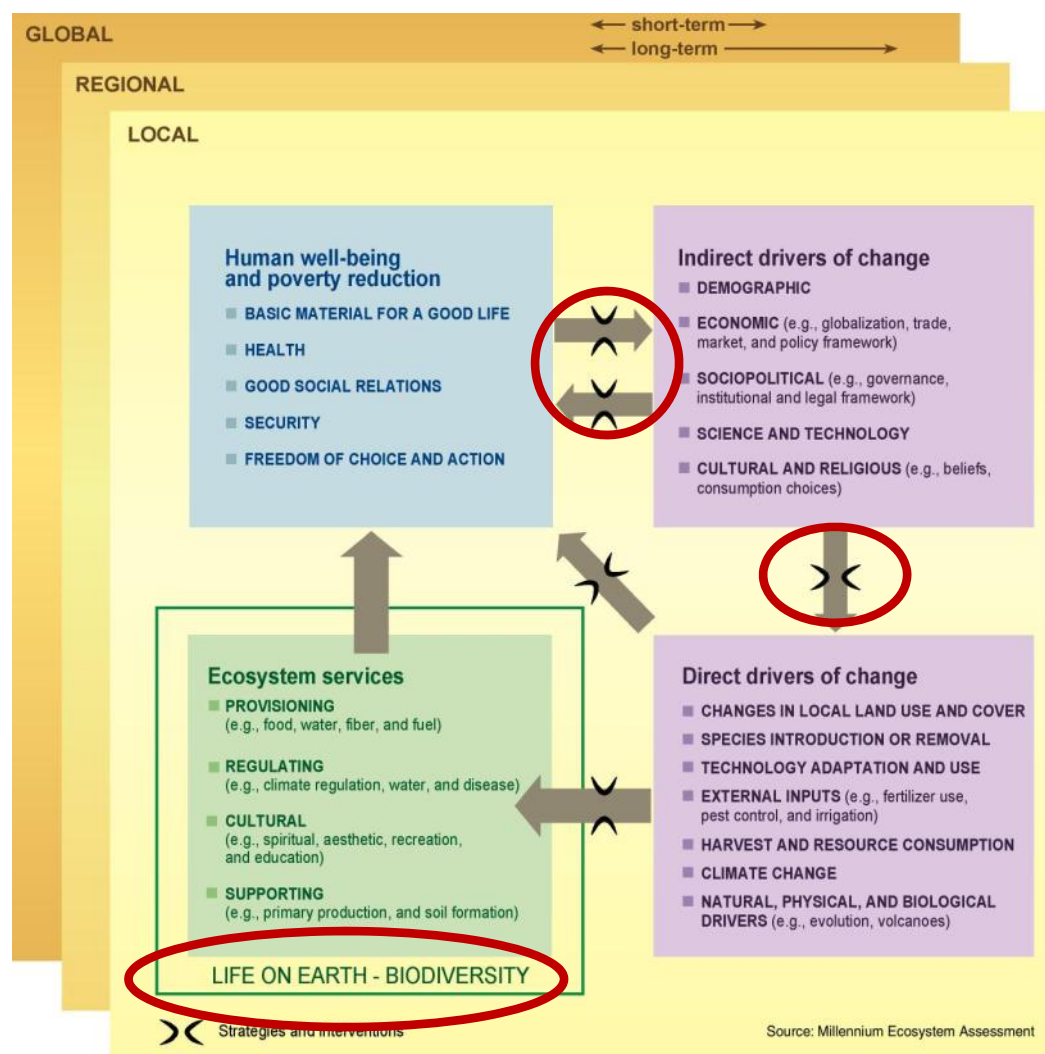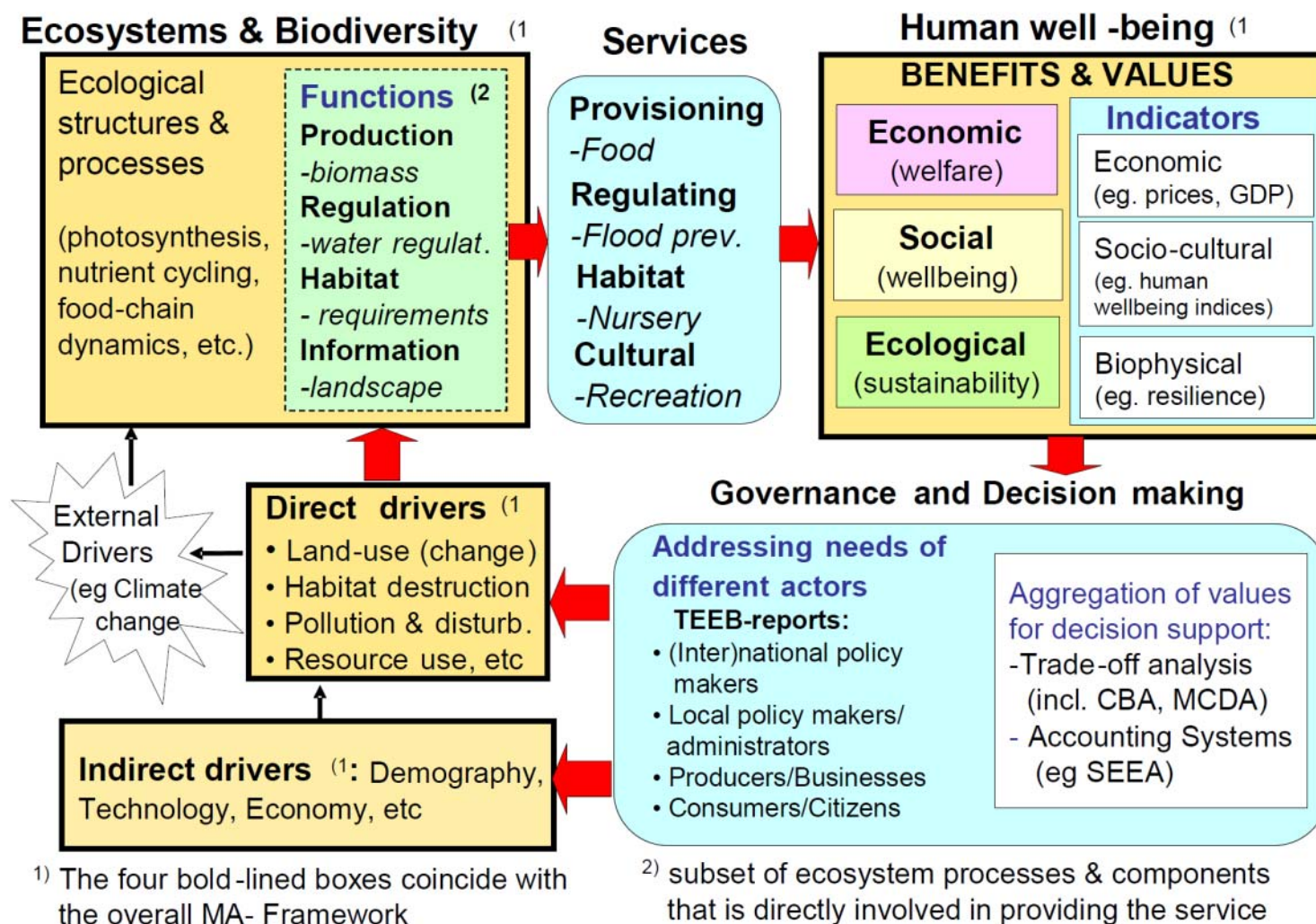
3. Concern
... about better policy making & management

The framework is not getting easier – for policy and for science

Millennium Ecosystem Assessment (2003, 2005)

Biodiversity
Knowledge

The framework is not getting easier – for policy and for science

Ecosystems & Biodiversity (1

Ecological structures & processes

(photosynthesis, nutrient cycling, food-chain dynamics, etc.)

Functions (2
Production
-*biomass*
Regulation
-*water regulat.*
Habitat
- *requirements*
Information
-*landscape*

Services

Provisioning
-*Food*
Regulating
-*Flood prev.*
Habitat
-*Nursery*
Cultural
-*Recreation*

Human well -being (1
BENEFITS & VALUES

Economic (welfare)
Social (wellbeing)
Ecological (sustainability)

Indicators
Economic (eg. prices, GDP)
Socio-cultural (eg. human wellbeing indices)
Biophysical (eg. resilience)

External Drivers (eg Climate change)

Direct drivers (1
• Land-use (change)
• Habitat destruction
• Pollution & disturb.
• Resource use, etc

Governance and Decision making

Addressing needs of different actors
TEEB-reports:
• (Inter)national policy makers
• Local policy makers/ administrators
• Producers/Businesses
• Consumers/Citizens

Aggregation of values for decision support:
-Trade-off analysis (incl. CBA, MCDA)
- Accounting Systems (eg SEEA)

Indirect drivers (1: Demography, Technology, Economy, etc

1) The four bold-lined boxes coincide with the overall MA- Framework

2) subset of ecosystem processes & components that is directly involved in providing the service

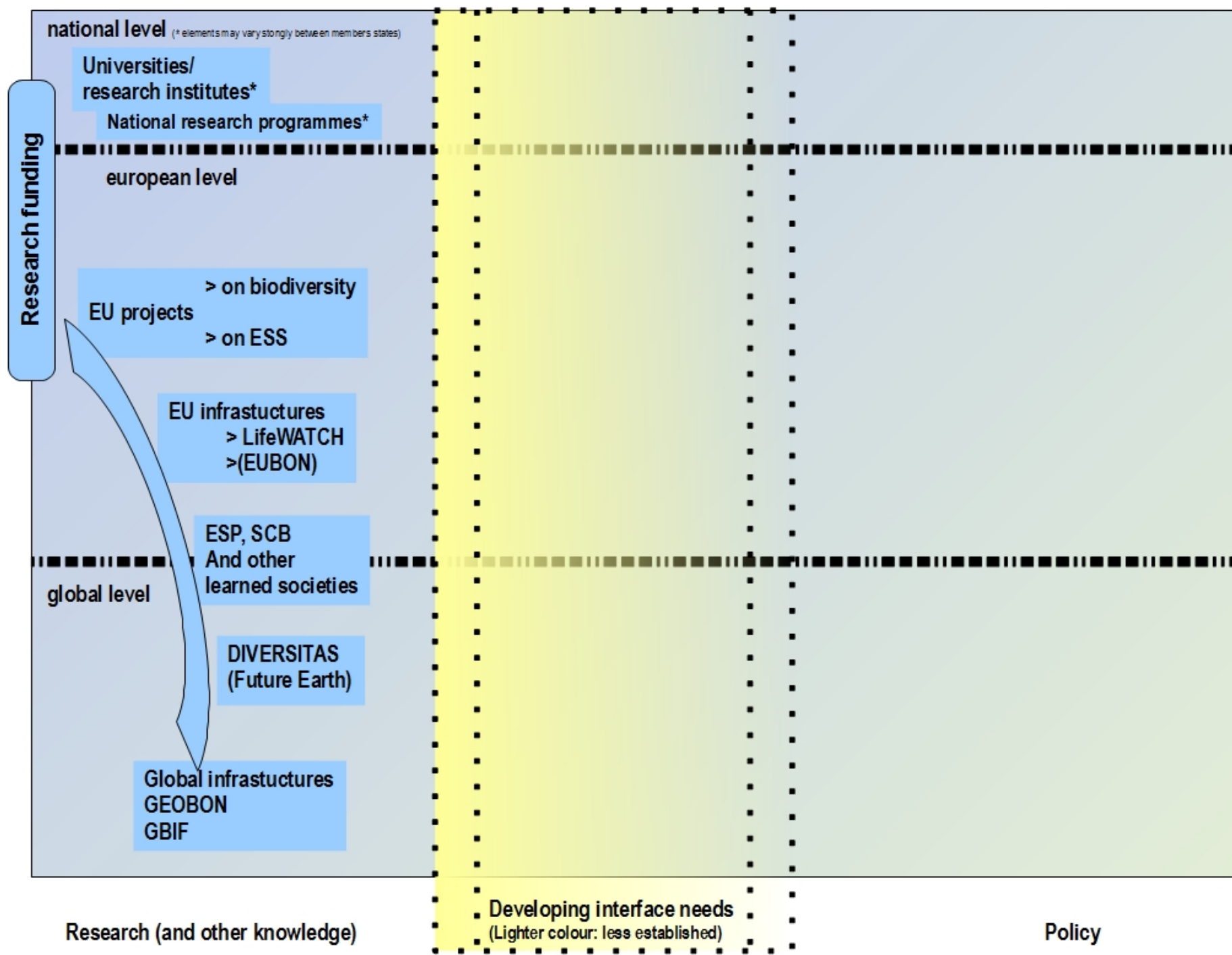The economics of ecosystems & biodiversity
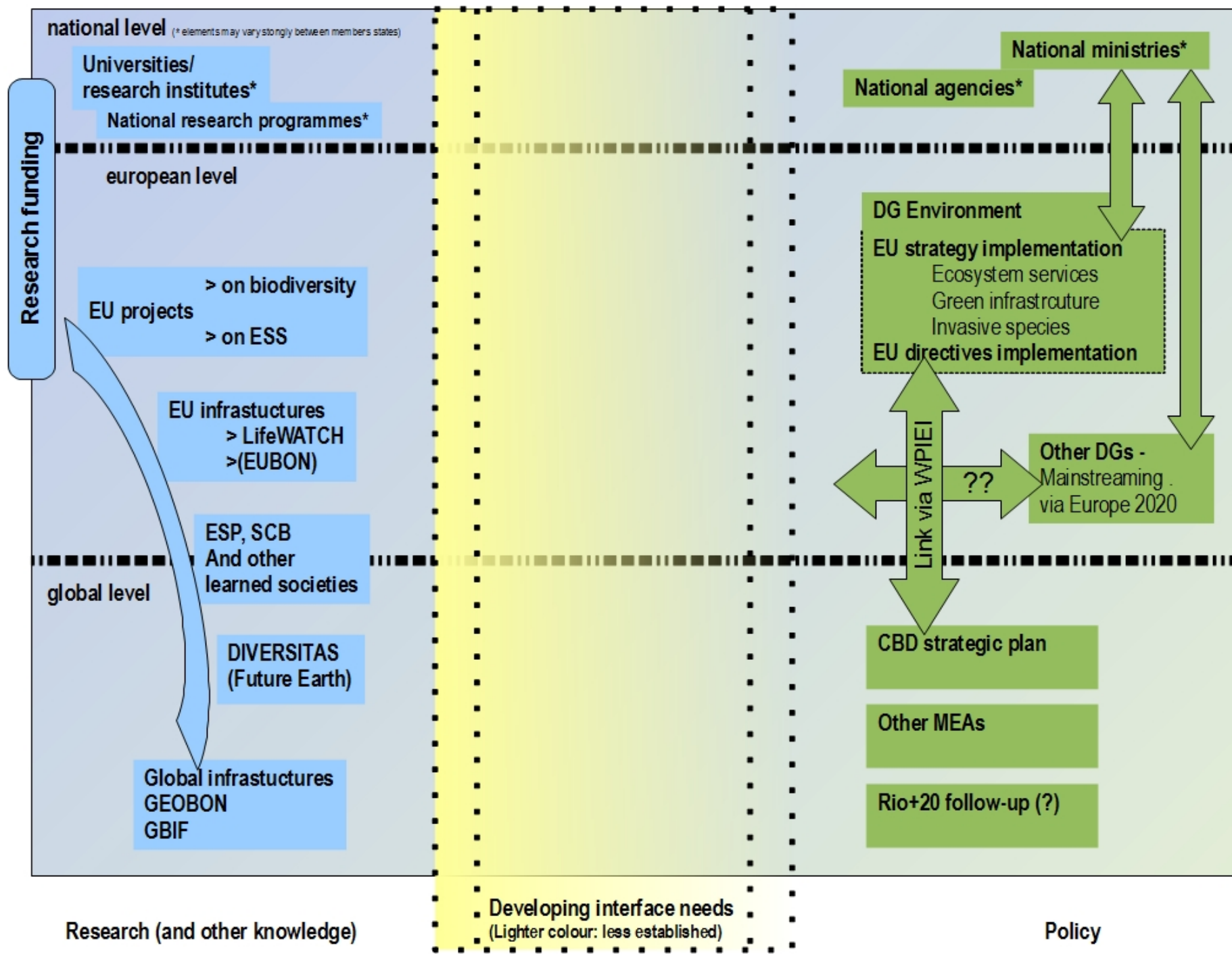
TEEB Foundations (2010)
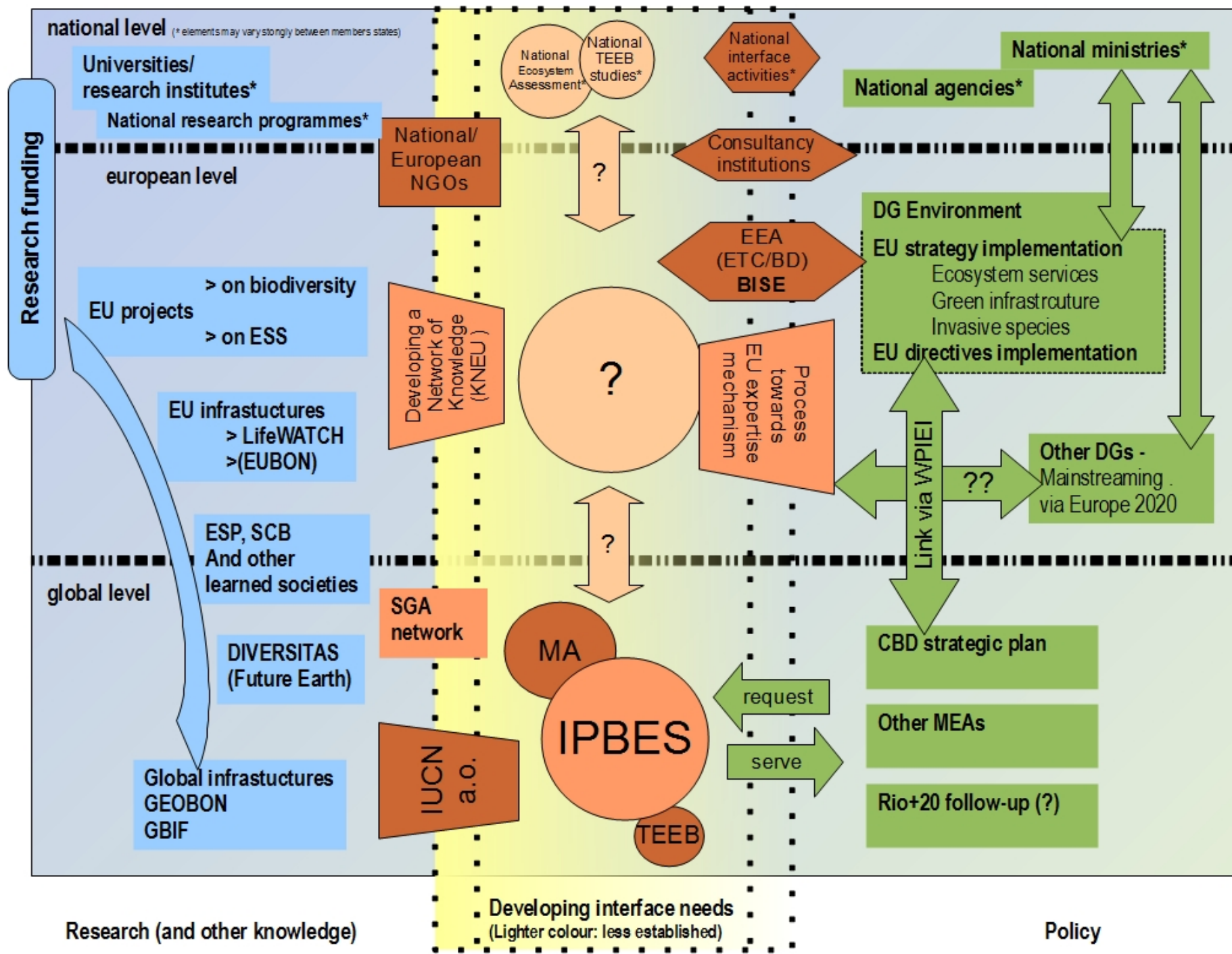
The complexity of the knowledge landscape

Knowledge landscape: Global hubs, key networks or initiatives that have influenced most the policy on Biodiversity and Ecosystem Services in the past 5 years

CITES
GLP
GISP
UNDP
RAMSAR
DIVERSITAS
UNESCO
WCMC
BirdLife International
MA
GEF
OBIS
CI
CABI
ICES
SCB
RUBICODE
TRAFFIC
UNEP
CBD
FAO
IUCNOSG
WWF
IPBES
ESSP
MACIS
SCOPE
IUCN
Earthwatch Institute
IGBP
Plantlife International
TEEB
CEE
Bern Convention
SSC
CGIAR
GEO BON
ICSU
REDD
Wetlands International
FSC
ICRI
ISEE
TNC
UNFCCC
IWC
UCS
Census of Marine Life
CMS
IPCC
ISSG

From mapping study and prioritisation exercise, KNEU-project, WP1

Increasing priority

Research funding

national level (* elements may vary strongly between members states)

Universities/
research institutes*

National research programmes*

european level

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 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 (?)

Research (and other knowledge)

Developing interface needs
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Drafted by UFZ Science-Policy Expert Group, 27/04/2012

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global level

DIVERSITAS
(Future Earth)

SGA
network

Global infrastuctures
GEOBON
GBIF

IUCN
a.o.

National
Ecosystem
Assessment*

National
TEEB
studies*

National
interface
activities*

National ministries*

National agencies*

Consultancy
institutions

Developing a Network of Knowledge (KNEU)

EEA
(ETC/BD)
BISE

DG Environment

EU strategy implementation
Ecosystem services
Green infrastrcuture
Invasive species
EU directives implementation

Process towards EU expertise mechanism

?

Link via WPIEI

Other DGs -
Mainstreaming .
via Europe 2020

??

MA

IPBES

request

serve

CBD strategic plan

Other MEAs

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**Integration in biodiversity science over the last 15 years
- towards our own "particle accelerators"**

- **Networks of Knowledge – EDIT, ALTER-Net, MARBEF**

- **Data networks like GBIF, EBONE, … developing**

- **> 50 biodiversity research projects in FP5-FP7**

- **First integration steps in ecosystem services research**
  - ESP
  - FP7 projects

- **Infrastructures: LIFEWATCH & EXPEER**

- **Integration in national funding: BiodivERsA**

Biodiversity
Knowledge

Products of different kinds

- **Thousands (?) of research papers**
- **Databases**
- **Science/Policy briefs**
- **Meetings …**

Processes for identification of research needs

- **EPBRS recommendations**
- **EPBRS Research Strategy**
- **DIVERSITAS Science Plan**

Carpenter et al. (2006)

Biodiversity Knowledge
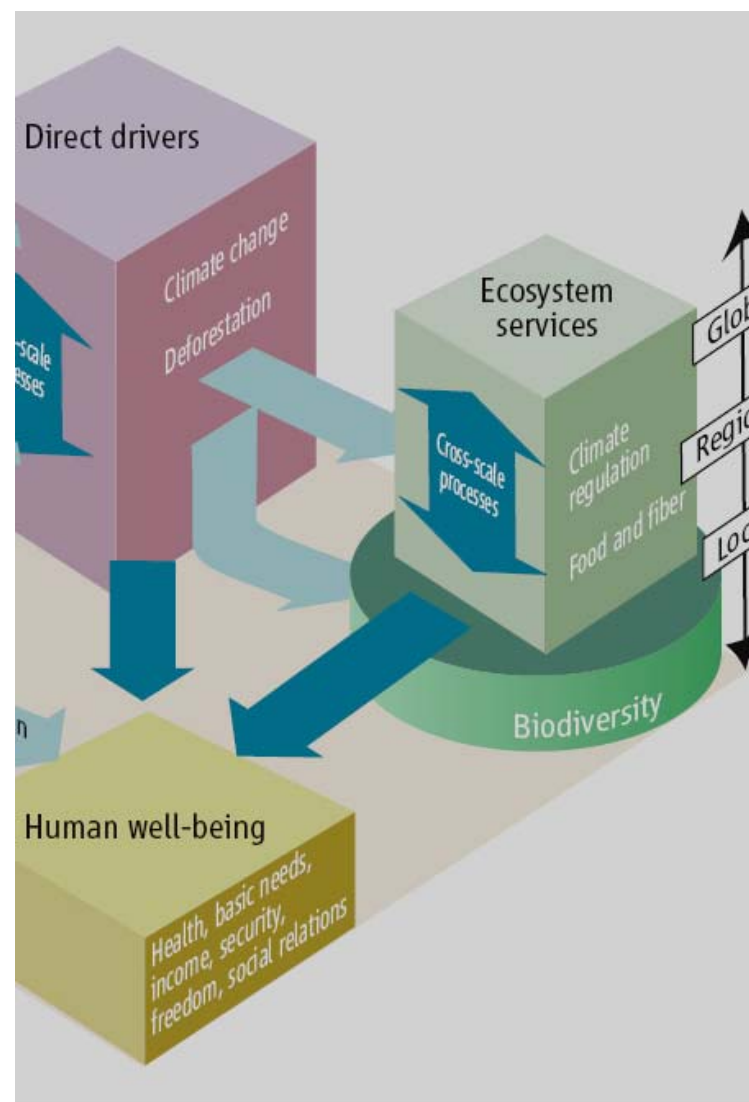
New, additional challenges ...

- **Businesses ask for ways to better accounting for biodiversity**
  - TEEB
  - Business & Biodiversity initiatives
  - ...

- **Links to other "Grand challenges"**
  - Health
  - Food security
  - Energy security
  - ...

Biodiversity Knowledge

Why we are here

CBD Aichi Targets 2020

- Highly ambitious goals with strong mainstreaming component

EU Biodiversity Strategy 2020

- Diverse target system (6 targets, 20 activities)
- Big challenges (inter alia) with regard to assessing ecosystem services and developing a "green infrastructure"

  - Very uneven level of preparation and knowledge across member states

  - Diverse governance approaches and multiple knowledge holders
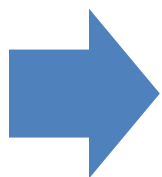
  Need for integrative and flexible governance approach between commission, MS and other knowledge holders

Biodiversity Knowledge
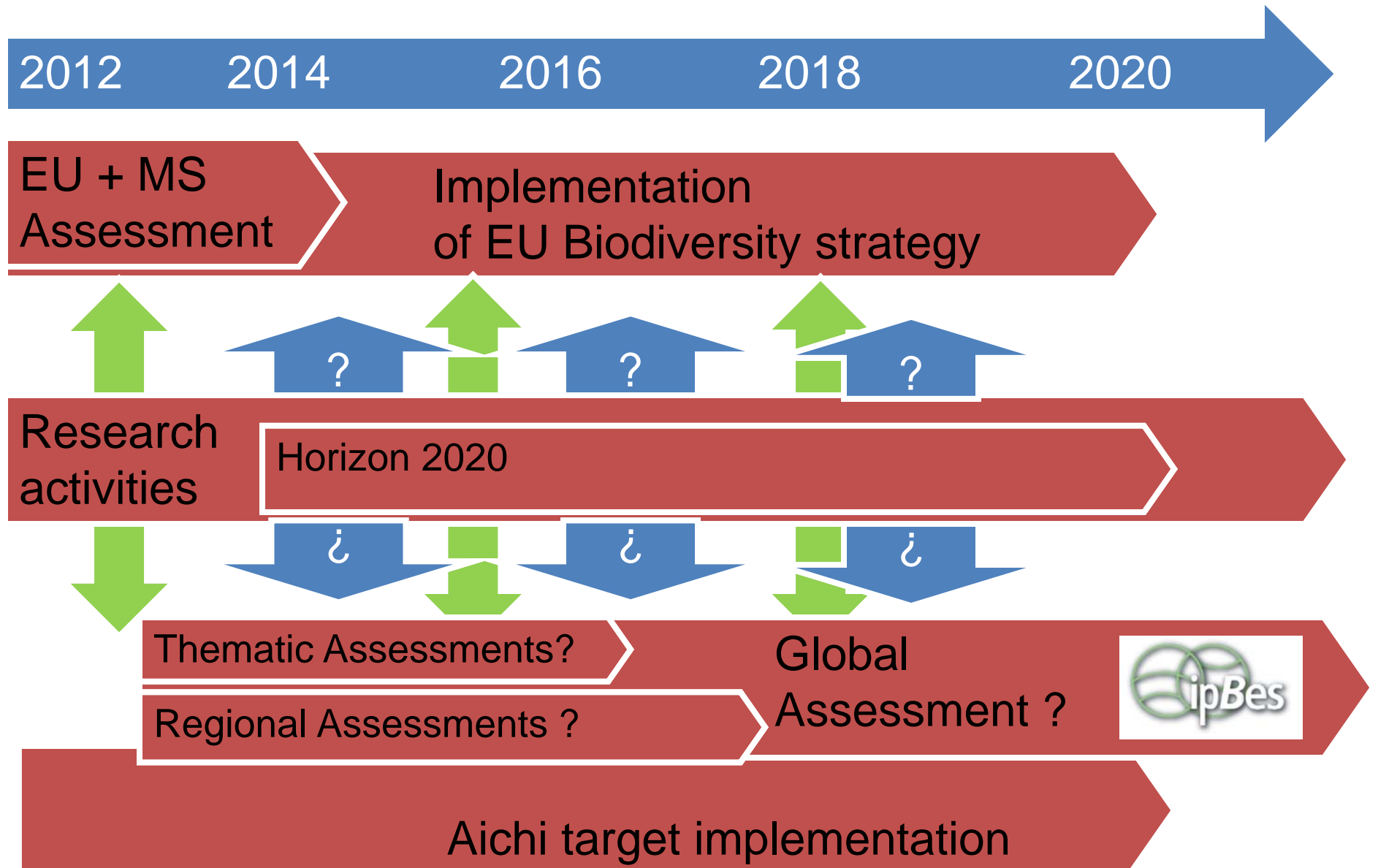
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Developing the right products and measures

Lack of adequate measures?

Right tools and fora to communicate?

Reports and what else?

>> Joint Assessments

>> Best practices

>> …

LIVING BEYOND OUR MEANS

ecoonnect
Restoring the web of life

Global Biodiversity Outlook 3

The Economics of Ecosystems of Biodiversity

DECISION-MAKERS DESK

Designing the form of an interface

Cross-level Typology of SPI Organisations
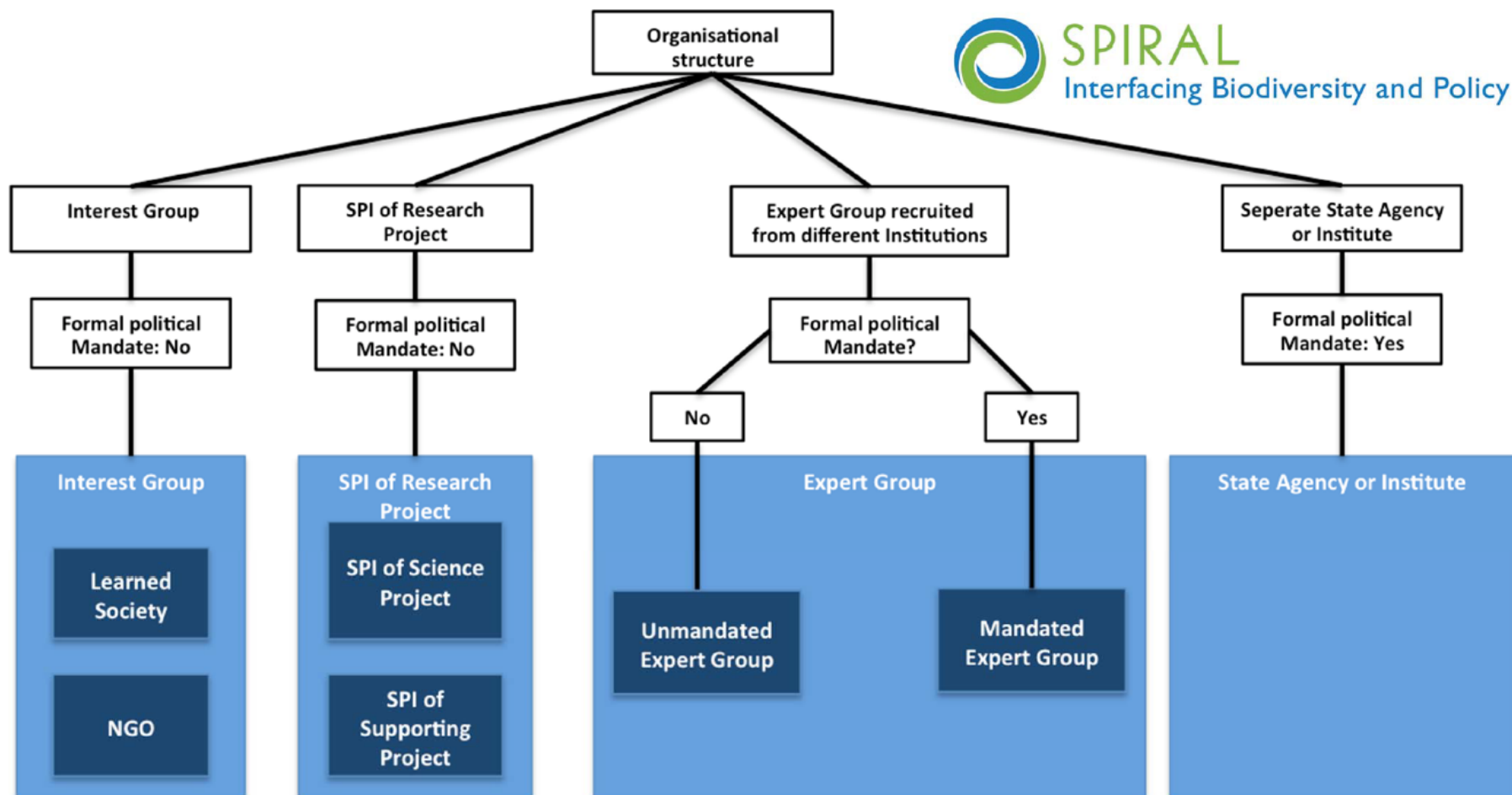
From mapping SPIs study in SPIRAL project, www.spiral-project.eu

IPBES as global dimension to the problem

General AIM of IPBES:

Ensuring that the best available Knowledge
is made available to Governments and
other decision makers.

The challenge of designing regional hubs & networks
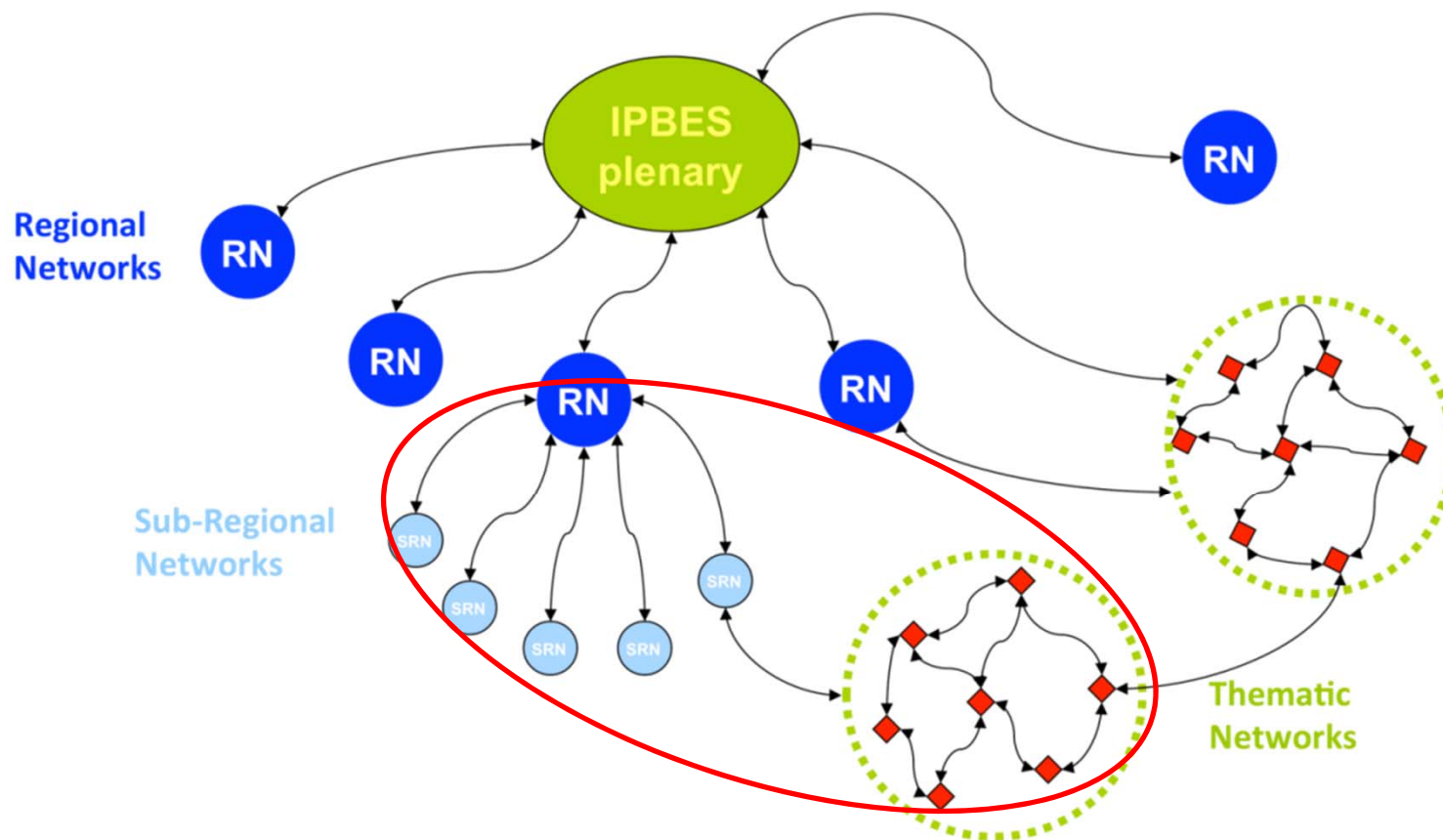
Need for a European Network of Knowledge to support
- **European policy needs**
- **IPBES from a regional perspective**

Figure based on the NestNet-workshop, Leipzig March 2011

Conclusions - Finding a new balance in the landscape
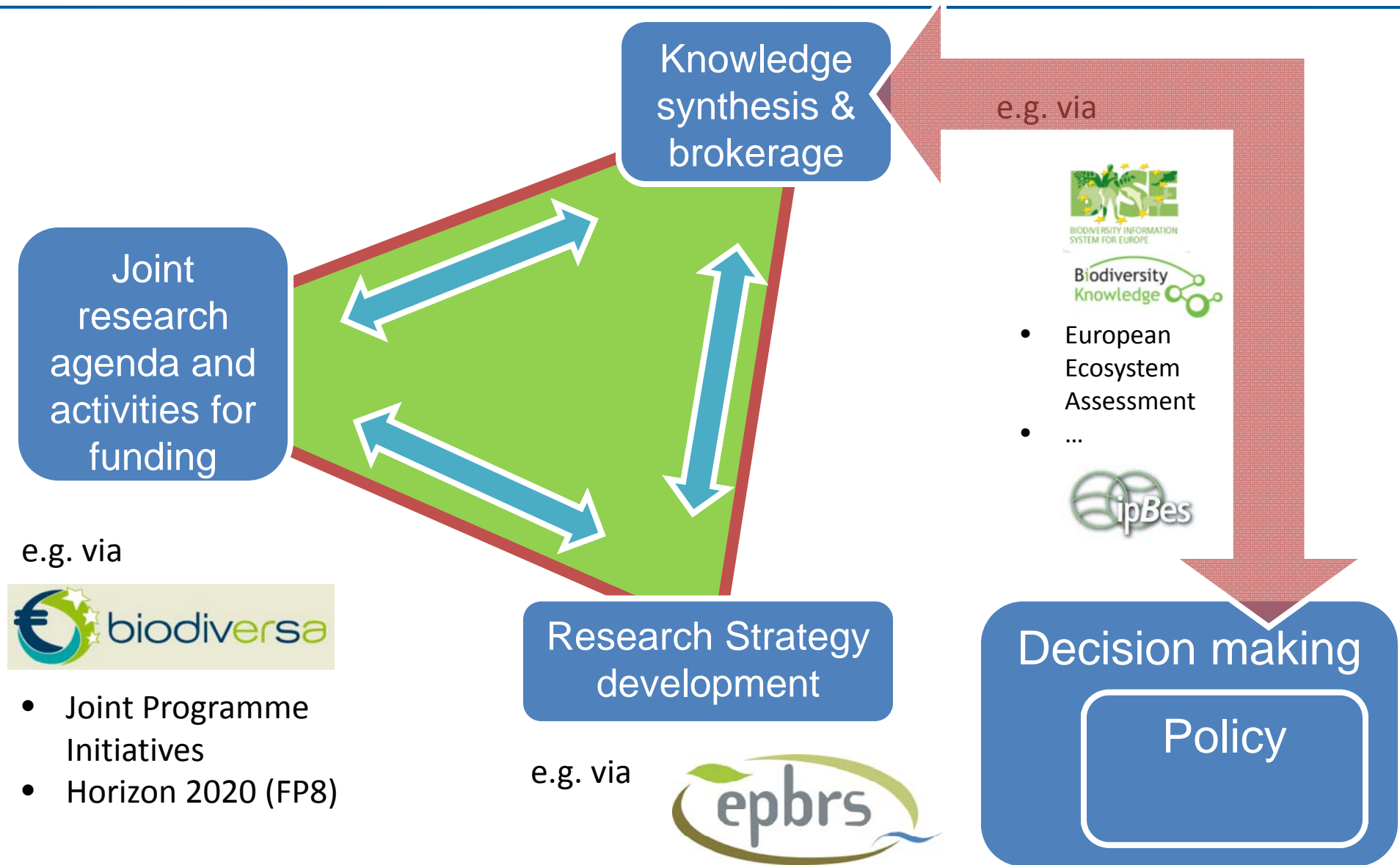
Knowledge synthesis & brokerage

e.g. via

Joint research agenda and activities for funding

e.g. via

biodiversa

- Joint Programme Initiatives
- Horizon 2020 (FP8)

Research Strategy development

e.g. via

epbrs

BISE
BIODIVERSITY INFORMATION SYSTEM FOR EUROPE

Biodiversity Knowledge

- European Ecosystem Assessment
- …

ipBes

Decision making

Policy

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Biodiversity Knowledge

Network of Knowledge (NoK)?

- 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.

EPBRS (2009)

Workshop on a Network of Knowledge on Biodiversity: a contribution from Europe

6 May 2009 - Palace of the Academies - Brussels

Biodiversity Knowledge

Aim of BiodiversityKnowledge:

Ensuring that the best available Knowledge is made available to Governments and other decision makers in Europe.

Timeline of the KNEU project to develop a recommended design

Elements of the NoK
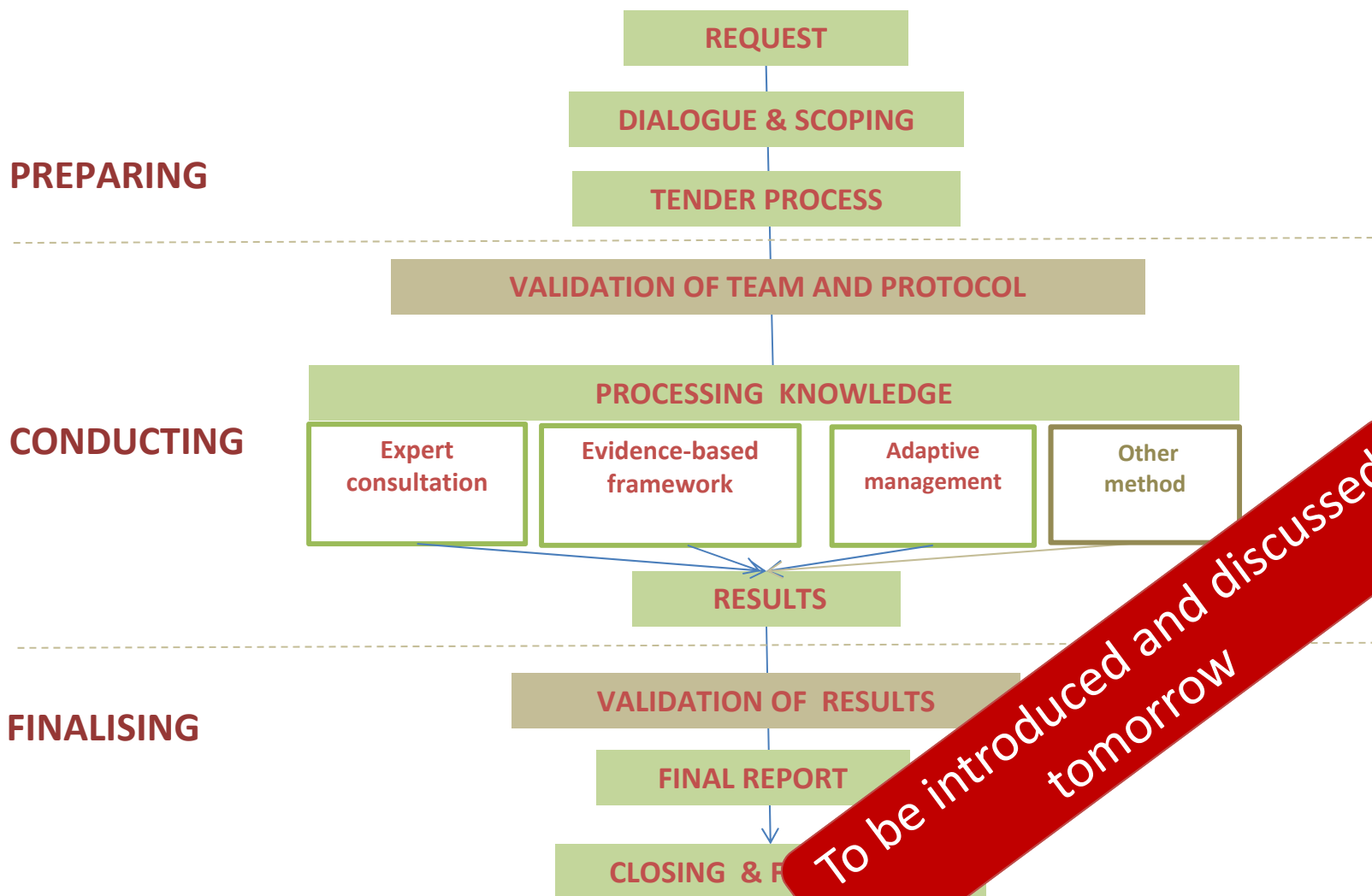
KNOWLEDGE HUBS,
HOLDERS, PROVIDERS

- **Providing a platform for exchange and mutual learning** (bring together „complexity" and „curiosity")
  - Engage them to become a „community of interest"
  - Link directly with plattforms like BISE and Eye on Earth

Biodiversity
Knowledge

Linking up with other initiatives & institutions

- **Applied side in Europe**
  - EU Ecosystem Assessment and according national initiatives (EU Strategy 2020)
  - EEA & BISE
  - …
- **Research side in Europe**
  - EU projects and networks of excellence
  - Learned societies
  - …
- **International side**
  - IPBES
  - GBIF; GEOBON
  - SGA-network, …

To be discussed throughout the conference

Biodiversity Knowledge

Elements of the NoK

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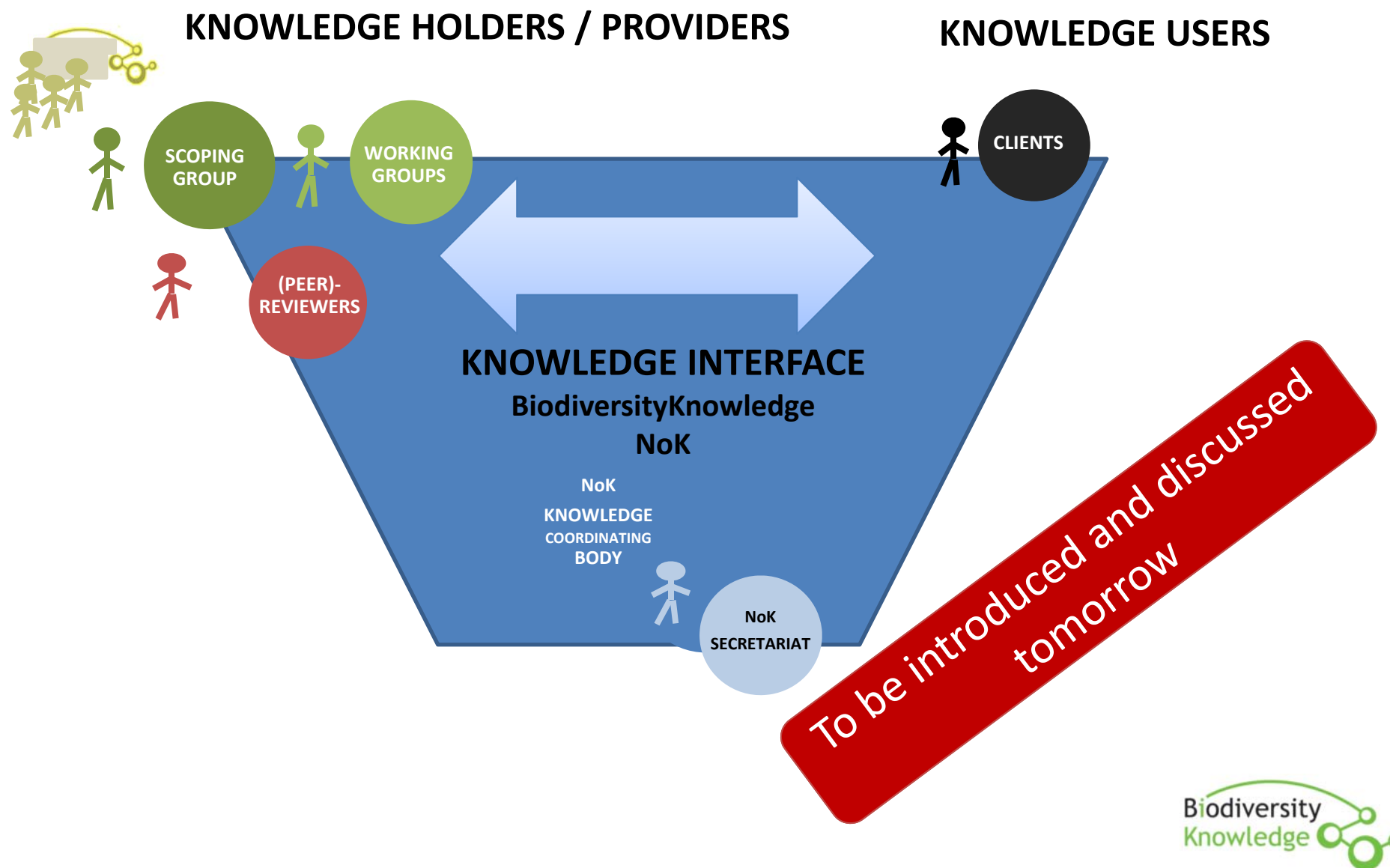 - Link directly with plattforms like BISE and Eye on Earth

www NoK

CLIENT   KCB

- **Providing a process for request-driven advice** (link to „concern")
  - with clear rules and procedures
  - Ensure a sound communication

Biodiversity
Knowledge

5. The contribution of BiodiversityKnowledge

Prototype for request-driven action

PREPARING

REQUEST

DIALOGUE & SCOPING

TENDER PROCESS

VALIDATION OF TEAM AND PROTOCOL

CONDUCTING

PROCESSING KNOWLEDGE

| Expert consultation | Evidence-based framework | Adaptive management | Other method |

RESULTS

FINALISING

VALIDATION OF RESULTS

FINAL REPORT

CLOSING & F...

To be introduced and discussed tomorrow

Biodiversity Knowledge

Elements of the NoK

- **Providing a platform for exchange and mutual learning** (bring together "Complexity" and "Curiosity")
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- **Providing a process for request-driven advice** (link to „Concern")
  - with clear rules and procedures
  - Ensure a sound communication

- **Development an open but coherent governance structure** (find ways to address "Demand")
  - Involving a variety of thematic and national knowledge hubs
  - Making the link to decision making

Some challenges …

- **Wide participation:** A huge number of diverse knowledge holders, with different capacity to join in efforts

- **Collaboration:** open access approach needed

- **Dublication:** reduction by networking

- **Minimising bias, ensuring quality:** clear (review) procedures needed - but wide variety of knowledge and approaches needed

- **Striving for relevance:** good linkage and buy-in by policy needed (via a future "EU mechanism"?)
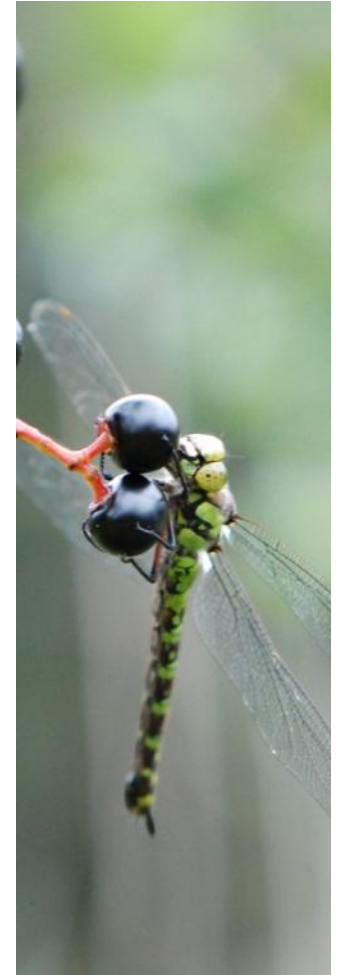
Biodiversity
Knowledge

What to achieve at the conference

1. **Take a look and reflect at the European knowledge & interface landscape** (Monday afternoon)
2. **Discuss solutions for shaping a Network of Knowledge**
   - from technical/administrative perspective (Tuesday morning)
   - from thematic and practical perspective (Tuesday afternoon)
3. **Discuss the international context of IPBES, and its European dimension** (Wednesday morning)

- **Identify next steps and ways of staying engaged**
  - via future information and exchange
  - via the demonstration cases

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Thank you

> for joining us with your curiosity and concern
> to help us find new ways for interfacing knowledge and action