EUPORIAS

A quick introduction to the project

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Water sector workshop

Madrid

18/03/2014

@euporias

Met Office

SEVENTH FRAMEWORK
PROGRAMME

Overview

EUPORIAS: European Provision Of Regional Impact Assessment on a Seasonal-to-decadal timescale

EUPORIAS is financed by the European Commission through the Seventh Framework Programme for Research (Theme Six, Environment) – running from November 2012 to January 2017.

The Met Office coordinate the project that gathers 24 partners (EU contribution = 8,9 million €).

Project vision: Increase the ability of EU business and authorities to make effective decisions in climate-sensitive sectors.

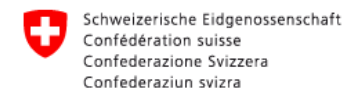Different partners focus on the WATER sector, mainly CETaqua, AEMET, IPMA and University of Leeds

PARTNERS

Climate forecast providers

Met Office (UK)
MeteoSwiss (Switzerland)
Univ. Cantabria (Spain)
AEMET (Spain)
DWD (Germany)
Météo France (France)
KNMI (Netherland)
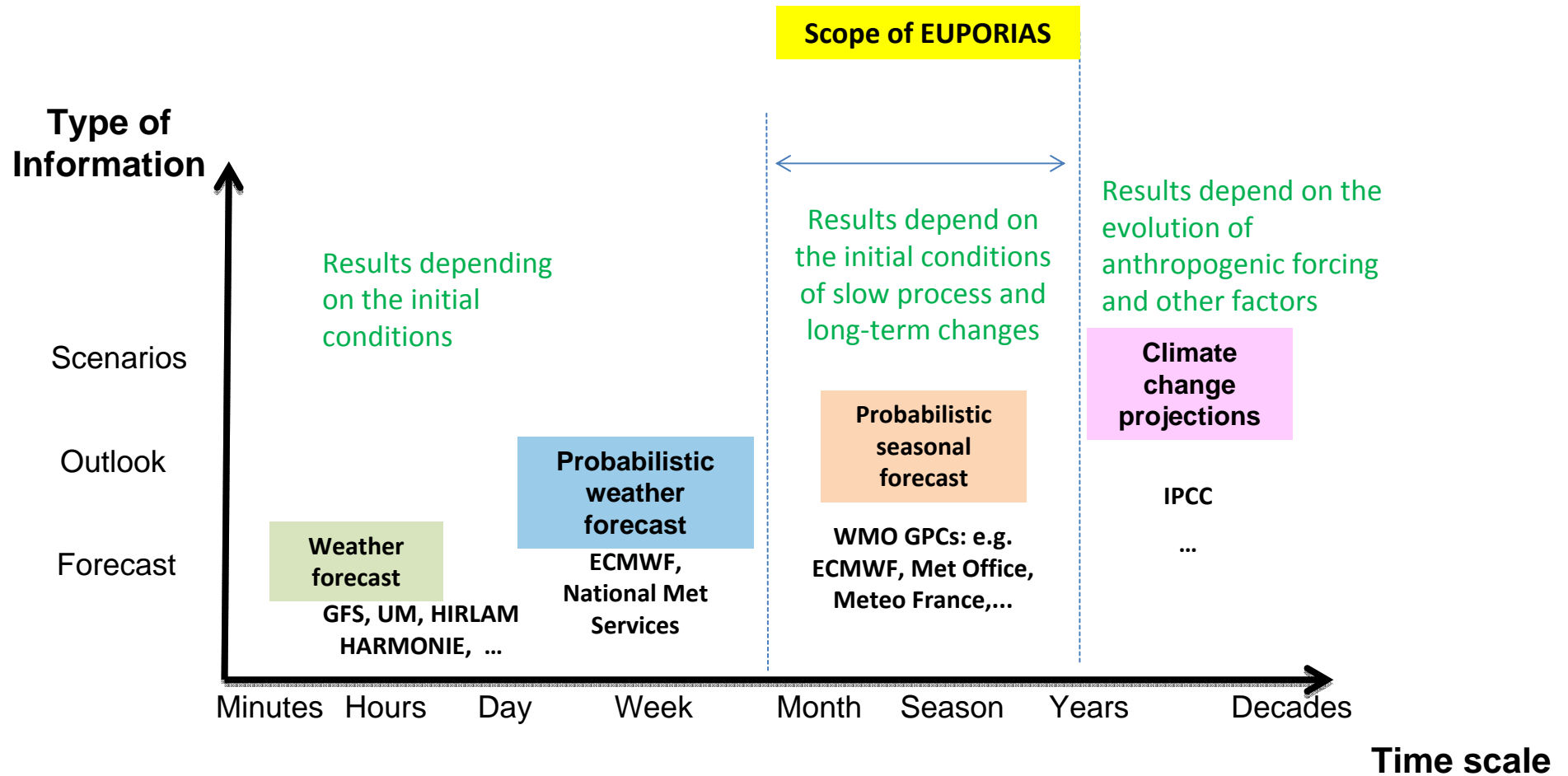SMHI (Sweden)
IPMA (Portugal)
IC3 (Spain)

End-users/decision makers

ENEA (Italy - Energy)
Wageningen Un. (Netherlands – Water, Agr.)
CETaqua (Spain - Water)
TEC (France - Tourism)
IC3 (Spain, Energy, Health)
Un. of Lisbon (Energy, Water, Forestry)
EDF (France - Electricity)
WFP (World /Italy- Food)
WHO (World / Switzerland - Health)
Un. of Leeds (UK - ?)
Un. Lund (Sweden – Forest)
Predictia (Spain – Transport)

Software/service provider

DHI (Denmark, Water & environment DSS)
Predictia (Spain, Web-based data mining solutions)
KNMI (Netherland, Climate database)
Météo France (France, River flow forecast)
Met Office (UK, winter water services…)

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Overview

Type of Information

Scope of EUPORIAS

Results depending on the initial conditions

Results depend on the initial conditions of slow process and long-term changes

Results depend on the evolution of anthropogenic forcing and other factors

Scenarios

Outlook

Forecast

Climate change projections

IPCC

...

Probabilistic seasonal forecast

WMO GPCs: e.g. ECMWF, Met Office, Meteo France,...

Probabilistic weather forecast

ECMWF, National Met Services

Weather forecast

GFS, UM, HIRLAM HARMONIE, ...

Minutes Hours Day Week Month Season Years Decades
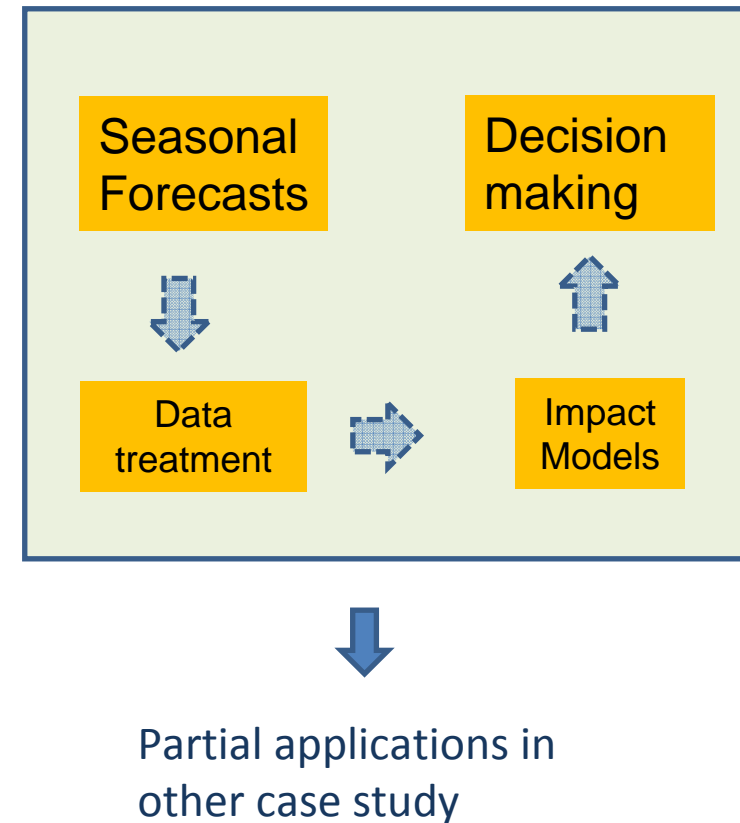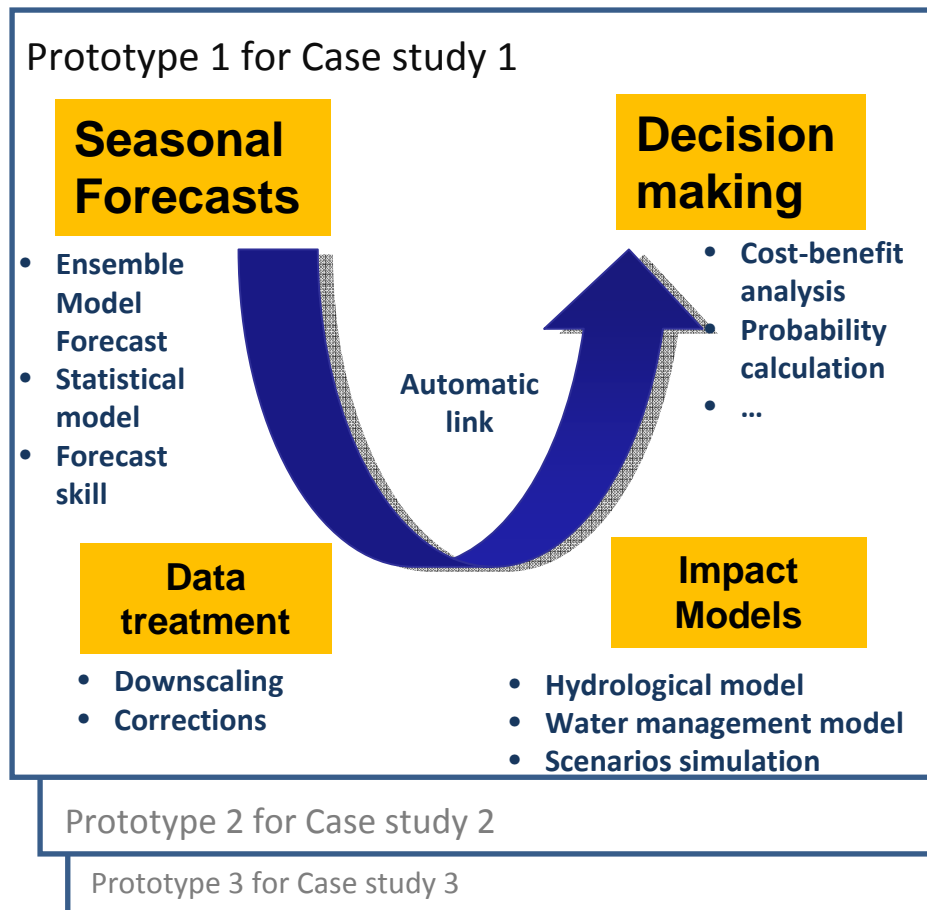
Time scale

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Objectives

1. To develop and deliver a reliable and trusted impact prediction system for **two or three semi-operational prototypes**. These will provide working examples of 'end-to-end' climate-to-impacts-to-decision-making services operating on the Seasonal and Decadal (S2D) time scales.
2. To assess and document key knowledge gaps and vulnerabilities of important sectors (e.g. Water, Energy, Transport, Food security, Health, etc.) along with the needs of specific users within these sectors, through close collaboration with project stakeholders.
3. To **develop a set of standard tools and techniques** tailored to the needs of stakeholders for calibrating, downscaling, and modelling sector-specific impacts on S2D timescales.
4. To develop a knowledge-sharing protocol necessary to promote the use of these technologies.
5. To assess and document the current marketability of climate services in Europe.

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Objetives

2 or 3 semi-operational prototypes

Prototype 1 for Case study 1

Seasonal Forecasts

- **Ensemble Model Forecast**
- **Statistical model**
- **Forecast skill**

Automatic link

Decision making

- **Cost-benefit analysis**
- **Probability calculation**
- **...**

Data treatment

- **Downscaling**
- **Corrections**

Impact Models

- **Hydrological model**
- **Water management model**
- **Scenarios simulation**

Prototype 2 for Case study 2

Prototype 3 for Case study 3

Set of standard tools and techniques

Seasonal Forecasts

Decision making

Data treatment

Impact Models

Partial applications in other case study

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EUPORIAS' structure

Three main blocks:

RT1: understand
- Users needs and current use of S2D
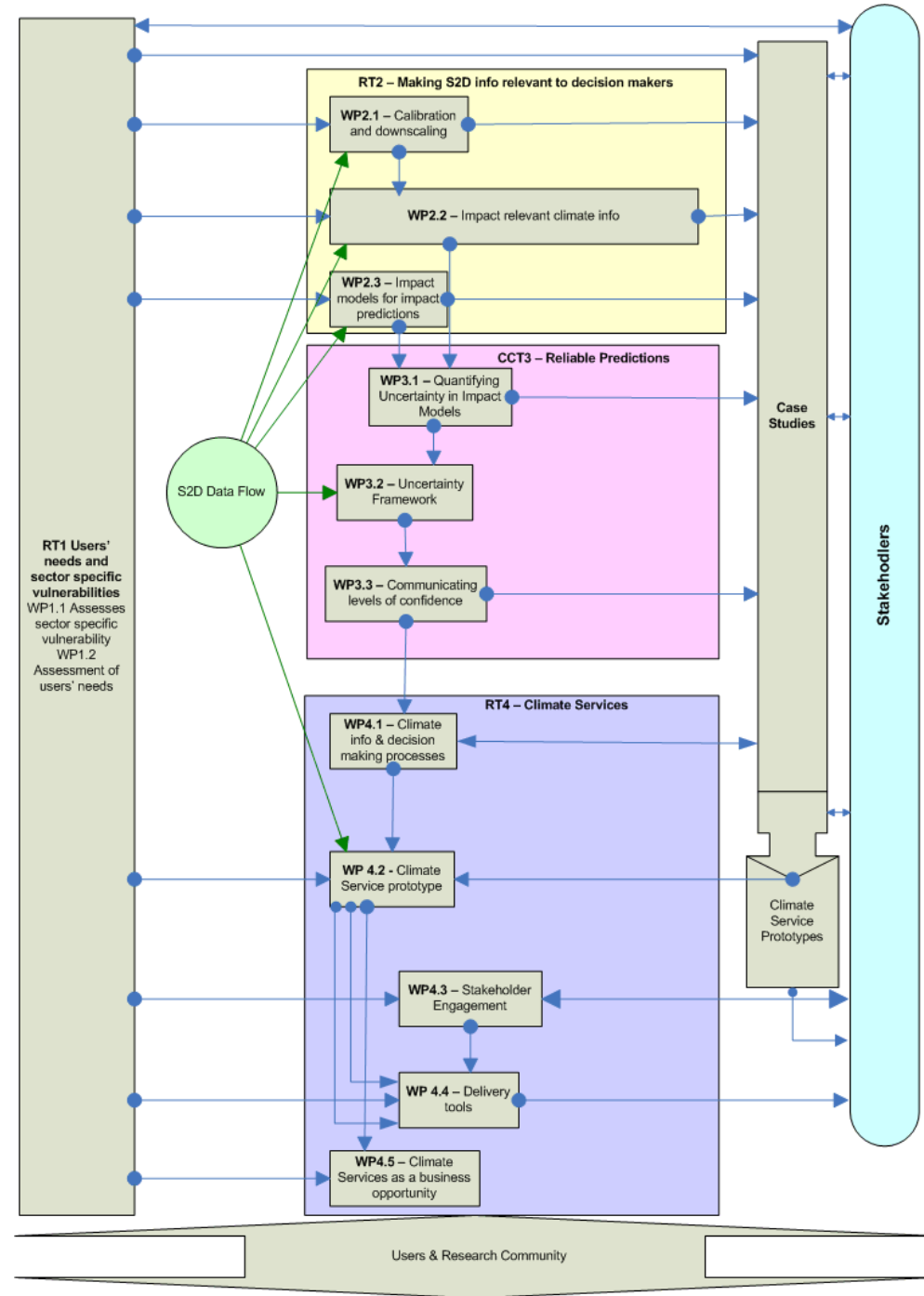- Sector specific vulnerability

RT2: improve
- Decision-relevant scales: downscale
- Decision-relevant parameters: impact models and post-processing

CCT3: Uncertainty
- Impact models' uncertainties
- Combining uncertainties
- Communicating level of confidence

RT4: engage and demonstrate
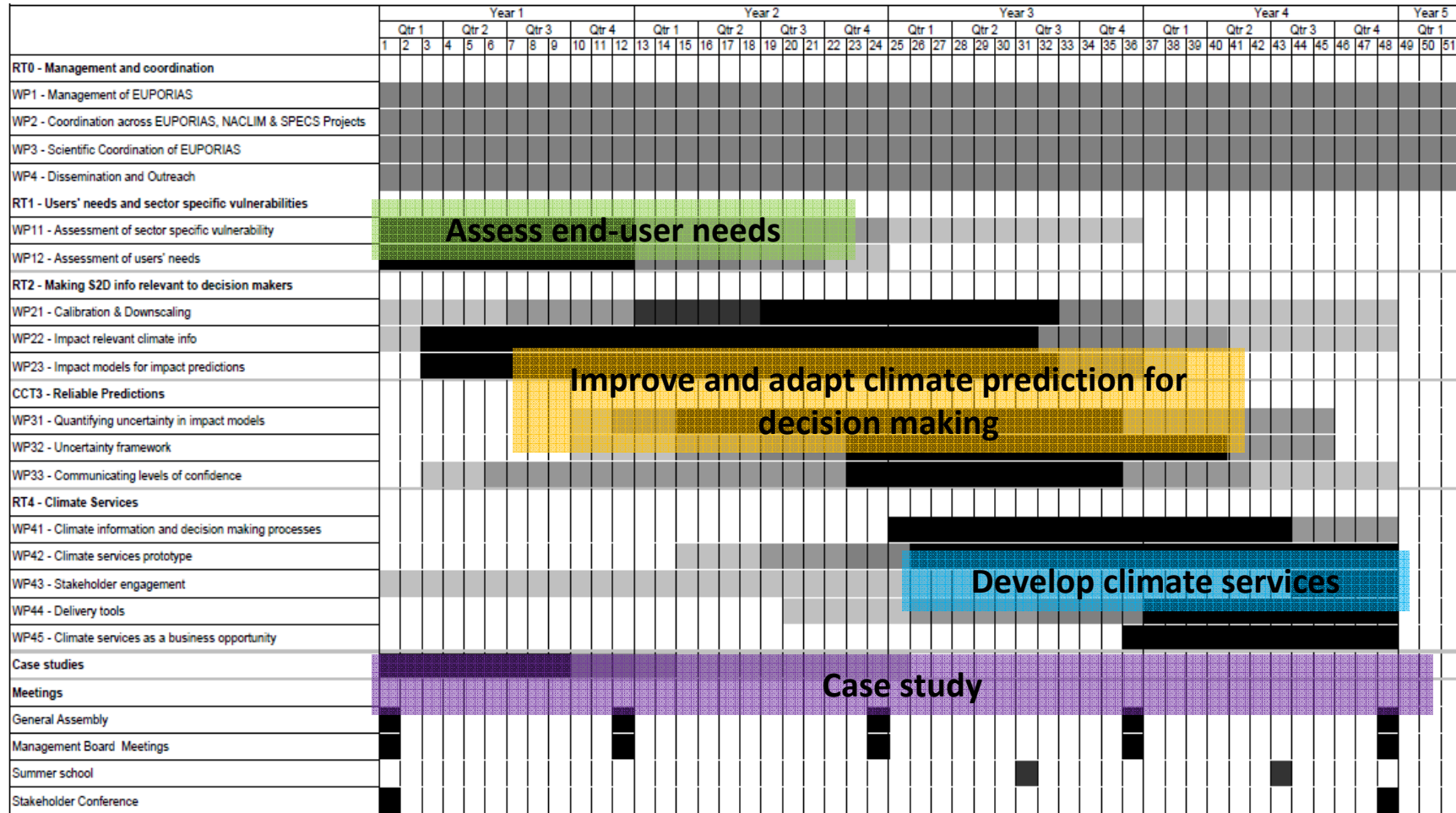- Decision making process
- Climate service prototypes
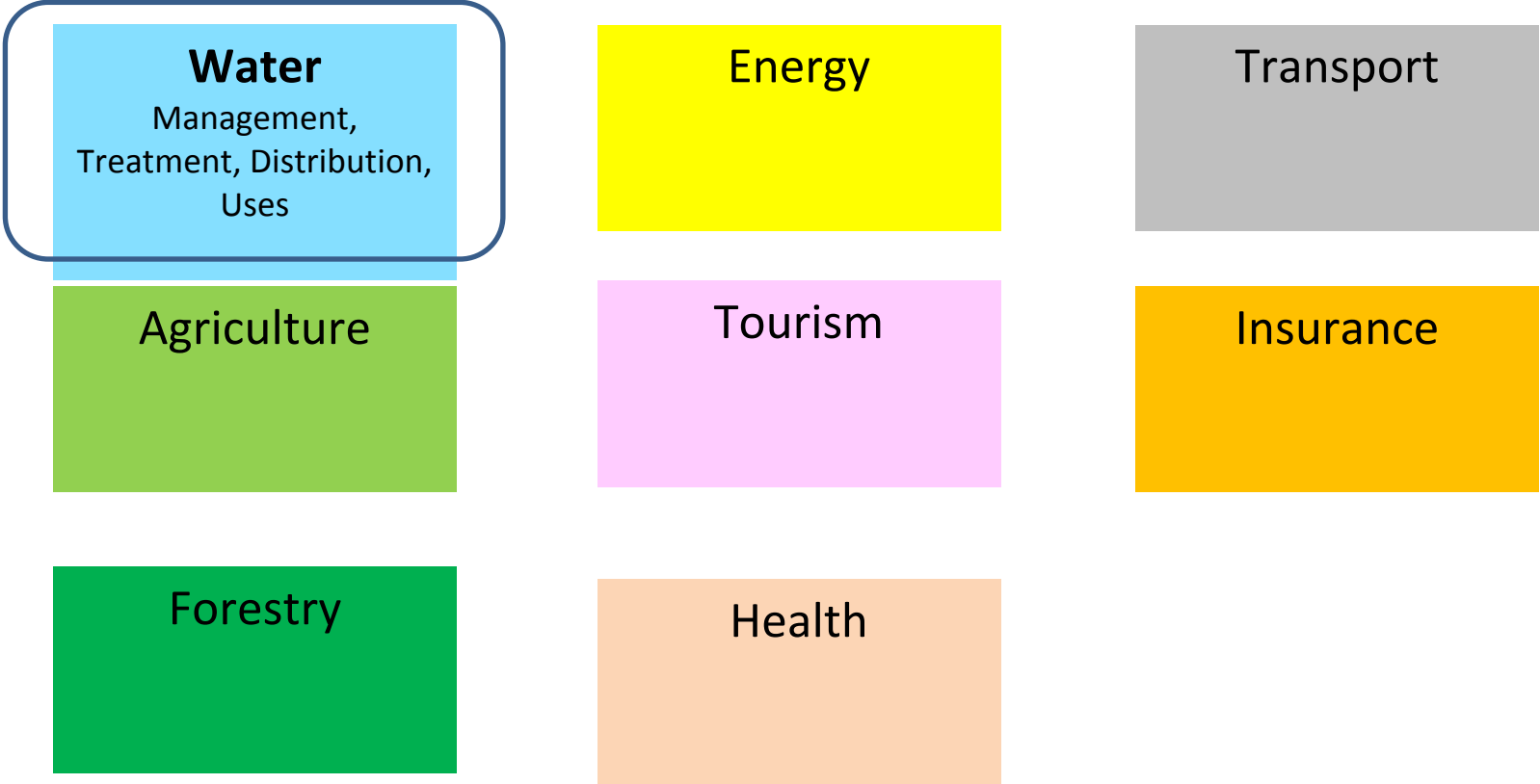- Delivery and engagement
- Business opportunity

Agenda

SECTORS Targeted

Water **Management, Treatment, Distribution, Uses**	Energy	Transport
Agriculture	Tourism	Insurance
Forestry	Health	

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Muchas Gracias

Merci, grazie, thank you, gracias, tak, danke, obrigado, multumesc, tack

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