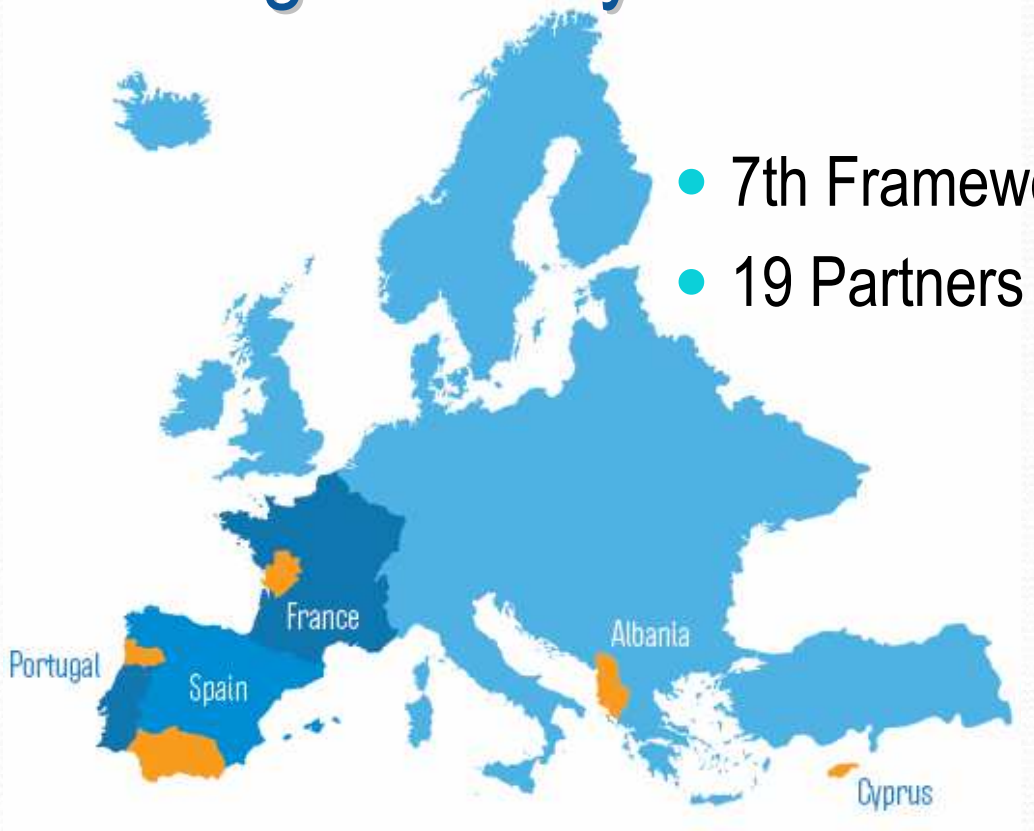
KEY CONCEPTS IN NOVIWAM
(and Conference Structure)

Seville, 21th of January 2013

Overview

- The Project Consortium
- Triple Helix - Clusters
- Questions behind the Project
- Objectives
- Research and Innovation areas
- Methodology
- RDI Agendas and priorities
- Beyond NOVIWAM
- Structure of the Conference

NOVIWAM – **NOV**el **I**ntegrated **WA**ter **M**anagement Systems for Southern Europe



- 7th Framework Programe - Capacities
- 19 Partners – 5 Regional Clusters

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NOVIWAM Consortium

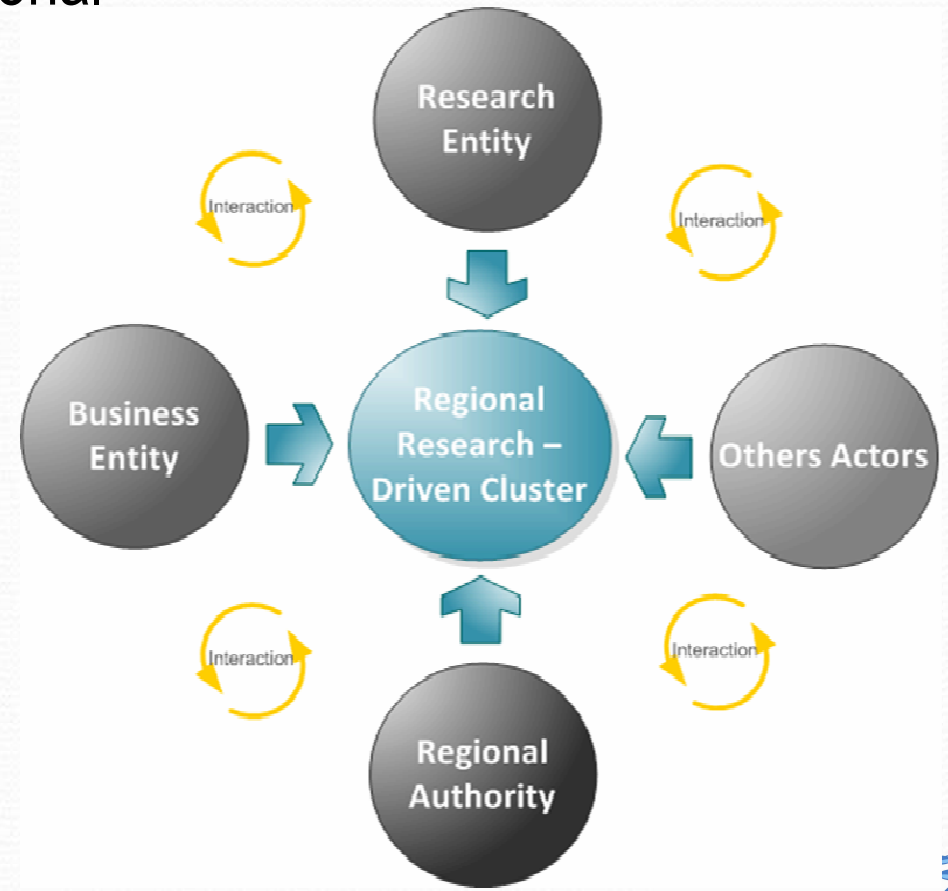
- Coordinator: Andalusian Water General Secretariat
- 5 countries: France, Spain, Portugal, Albania & Cyprus

Triple Helix - Clusters

- Conceptual framework for regional development based on R&I

Cluster:
Michael Porter. *The Competitive Advantage of Nations (1998)*

Triple helix:
Etzkowitz, H., Leydesdorff, L. (1997)



Triple Helix - Partnership

NOVIWAM Region						
Triple hélix Model		Cyprus	Albania	Poitou-Charentes (France)	Andalusia (Spain)	Northern Hydrographical Region (Portugal)
	Regional Authorities	SBLA	DPUK	RPC	SGMAA, AAC	ARHNorte
	Research entities	CUT	UPT	INRA, IRSTEA	CENTA, UGR, UCO	UMINHO
	Business entities	ATLANTIS	SHUKALB	OIEAU	AYESA	SIMBIENTE

Questions behind the project

- Which technical solutions are local policy makers and public **authorities demanding from researchers**?
- How can private and public actors of the **triple helix cooperate towards** an efficient management and effective **implementation of water directives**?
- How region-specific research and **innovation can reinforce and improve regional water management policies**?

A token of this… DSS and hydrology

- When was the first water related DSS built?
- *"A DSS is an interactive computer based system that helps decision makers utilize data and models to solve unstructured problems" Gorry and Scott-Morton (Massachusetts Institute of Technology).*
- *A framework for Management Information Systems (1971) Sloan Management Report.*
- Why it took so long? What were the factors hindering the process? Money? Human Resources? What can be done in the future to improve it?

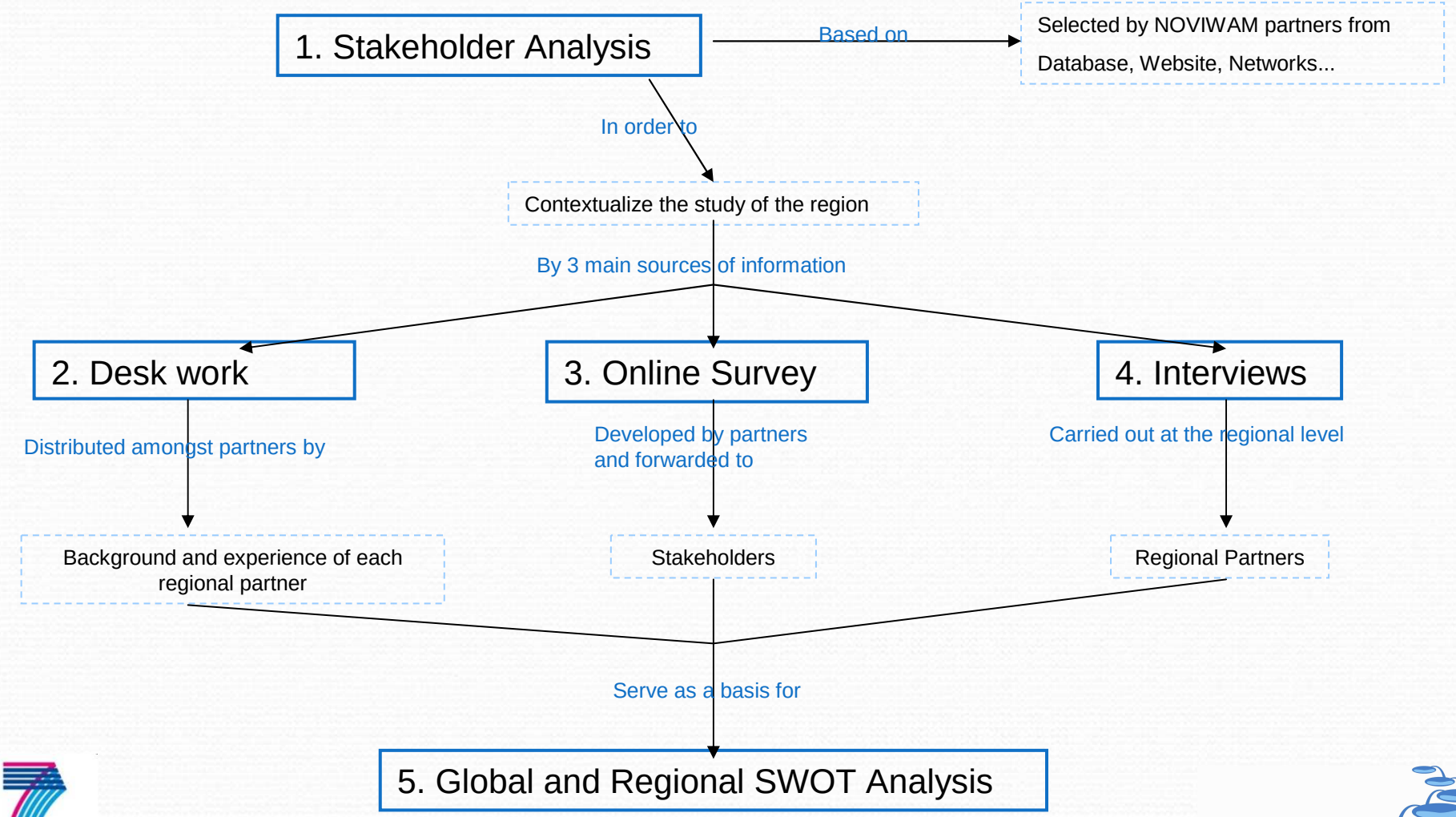
Main goals of the project NOVIWAM

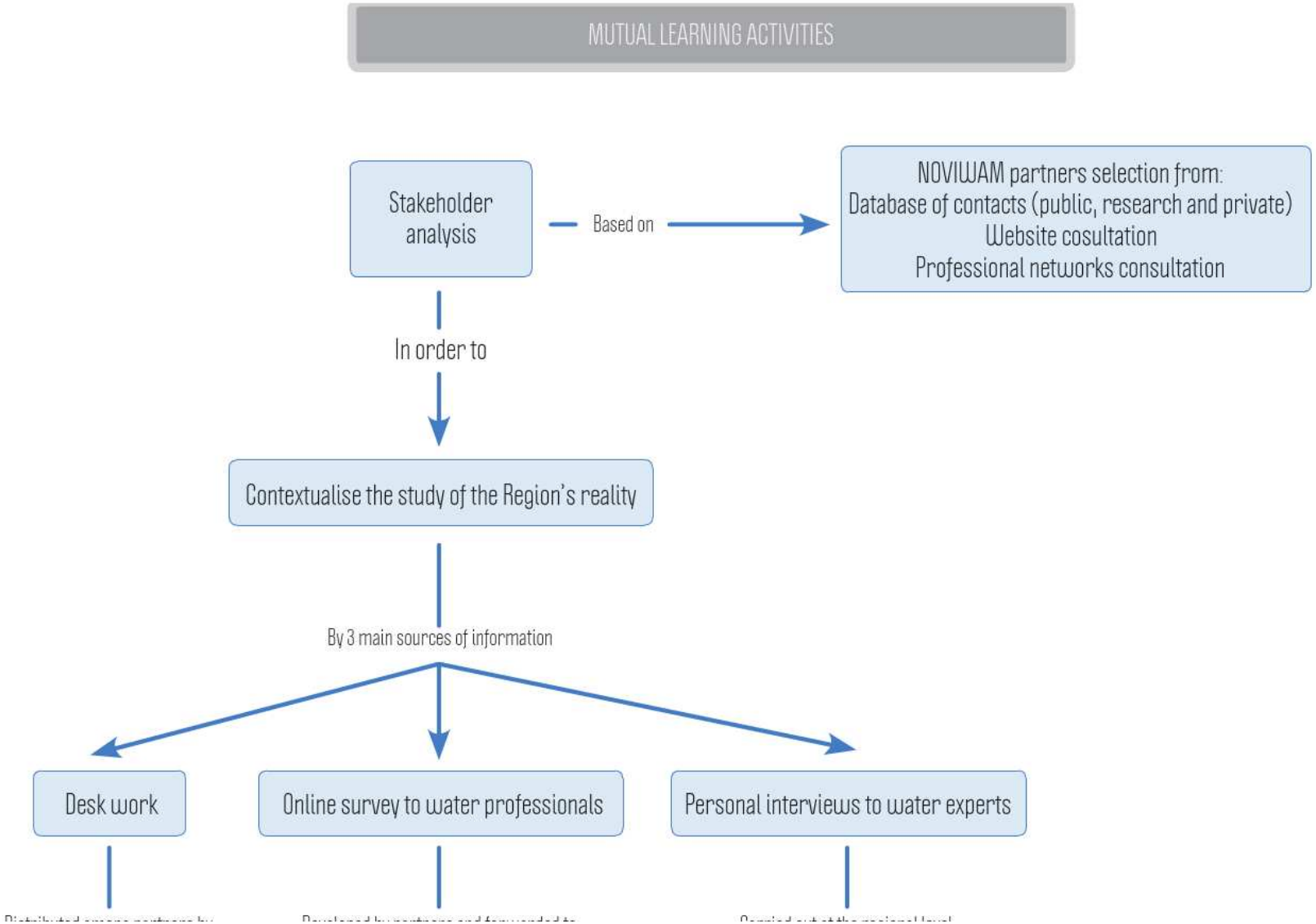
- to facilitate **cooperation** between the triple helix components (authorities, business, research) of each regional cluster
- to become a wide **research-driven network** of clusters
- to define new **water-related research and technological development activities** at European level

NOVIWAM R&I areas

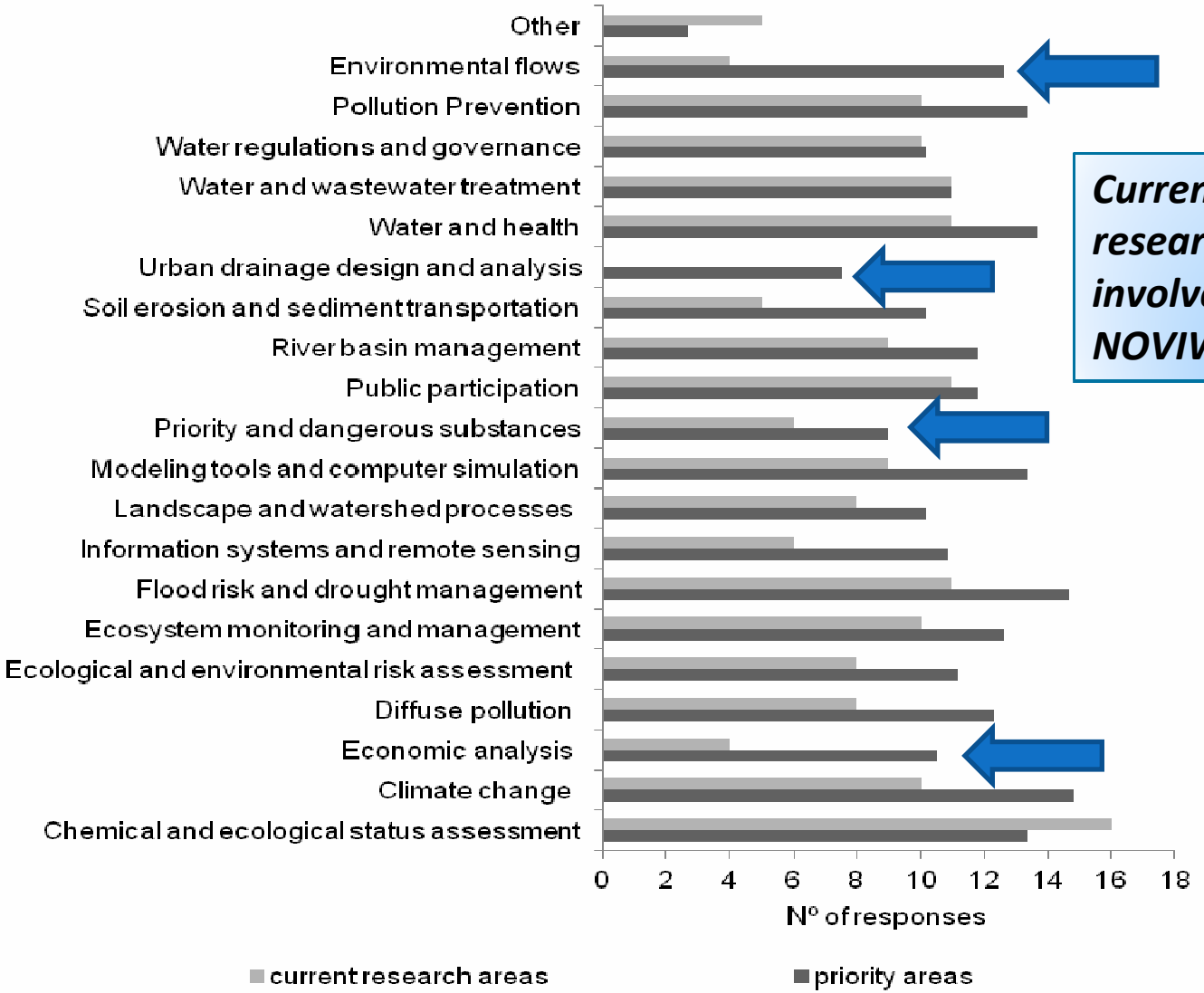
- System Innovations:
  - Hard (product/process)
  - Soft (institutions/management)
- Partners with expertise covering most of water sector
- Priority focus on:
  - tools and methods for IWRM
  - bridging knowledge links between stakeholders

Methodology:Multiple discrete approach




MUTUAL LEARNING ACTIVITIES
Stakeholder analysis
Based on
NOVIWAM partners selection from:
Database of contacts (public, research and private)
Website cosultation
Professional networks consultation
In order to
Contextualise the study of the Region's reality
By 3 main sources of information
Desk work
Online survey to water professionals
Personal interviews to water experts

Identification of core issues: R&I



Current and priority research areas of involvement in NOVIWAM regions

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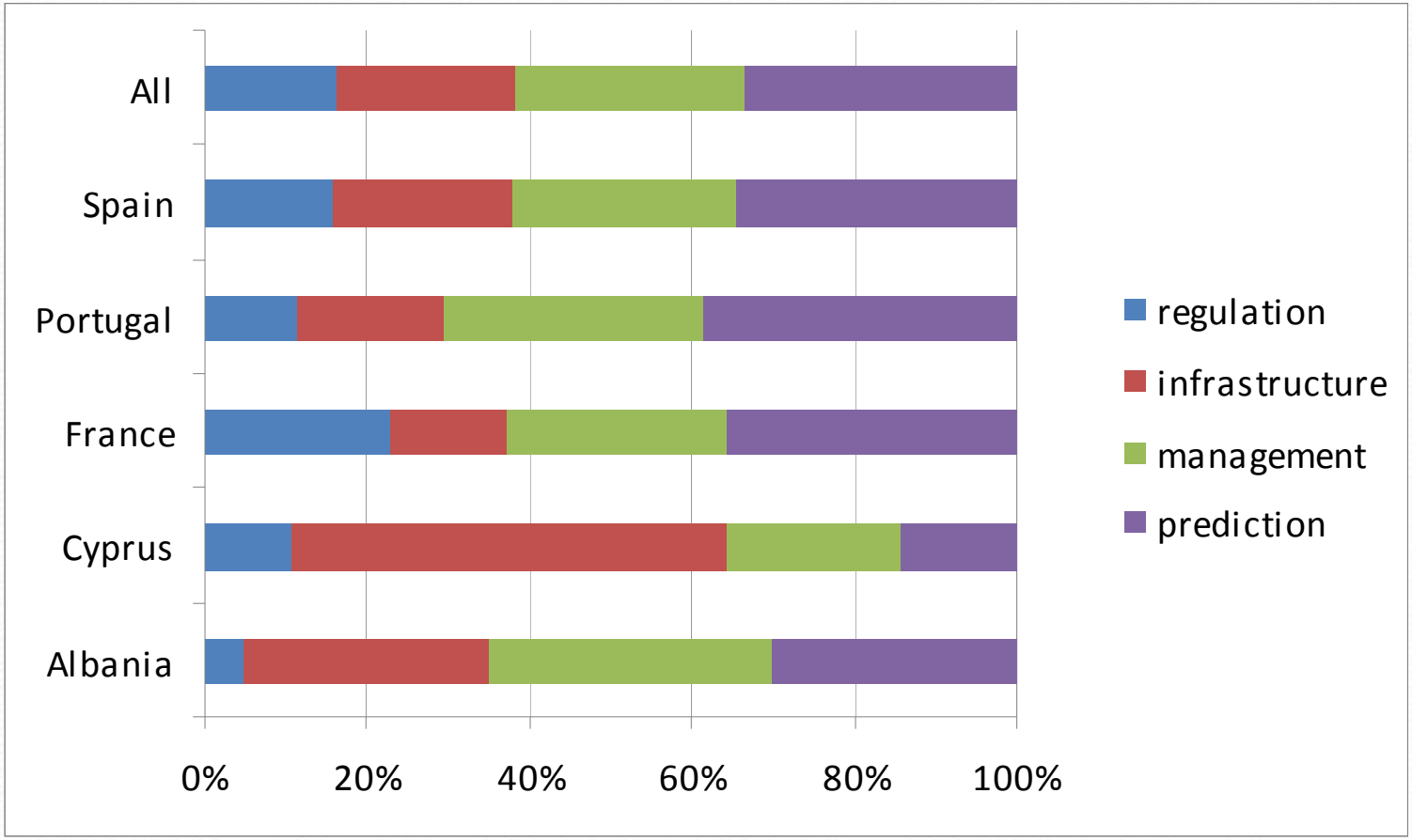
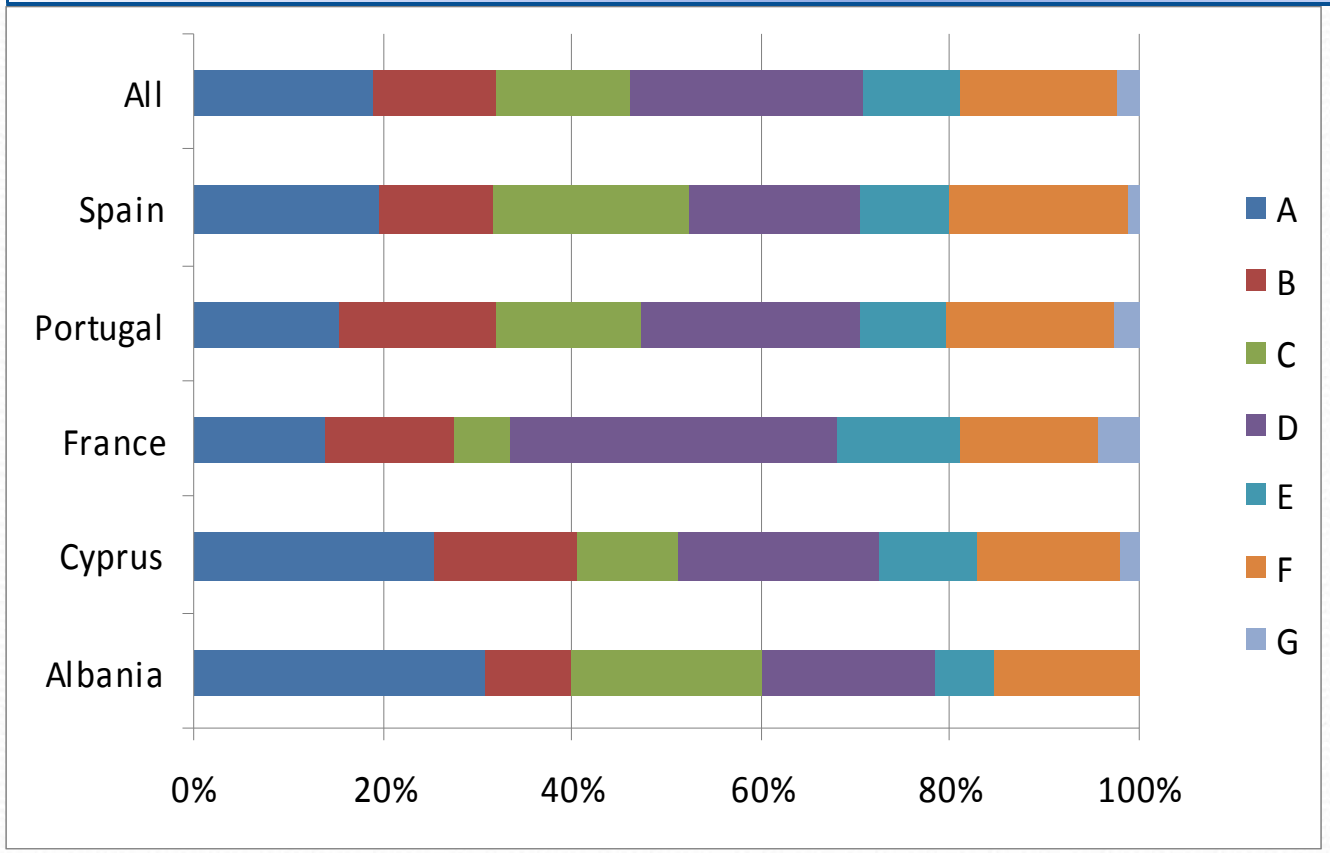
Identification of core issues: R&T

Alleviation of flood damages will principally come from



Identification of core issues: Governance and Mgt

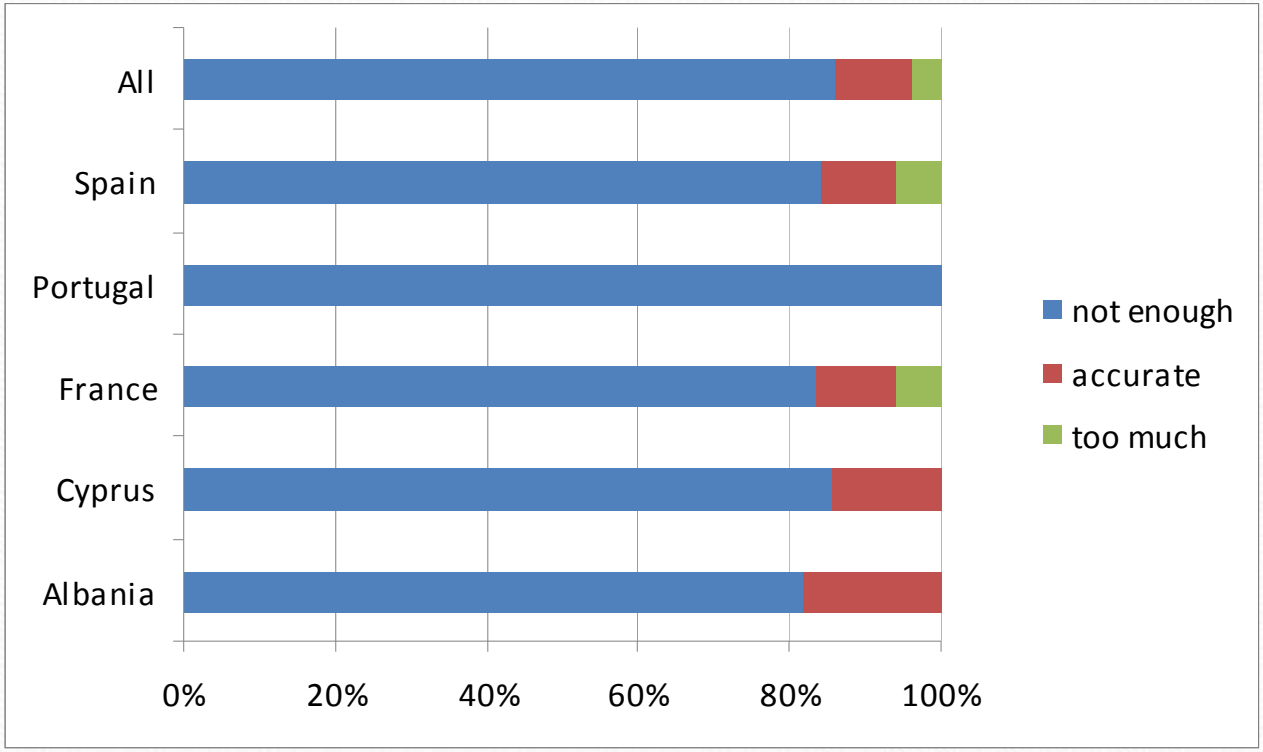
Initiatives more efficient to solve water pollution problems



A: Increase public investment on wastewater treatment
B: Increase authority support to wastewater reclamation
C: Adjustment of payment for sanitation services towards the achievement of full cost recovery
D: Management Measures for decreasing diffuse pollution problems instead of control of effluent pollutant maximum limits
E: Improvements on private point-source treatment
F: Stricter adjustment of discharges according to water quality goals instead of control of effluent pollutant maximum limits
G: Other

Identifying the core issues: Environmental and socio-economic context

How do you perceive the involvement in water management issues of the general public



Methodology: Analysis and Agenda development

Development of the Joint Action Plan

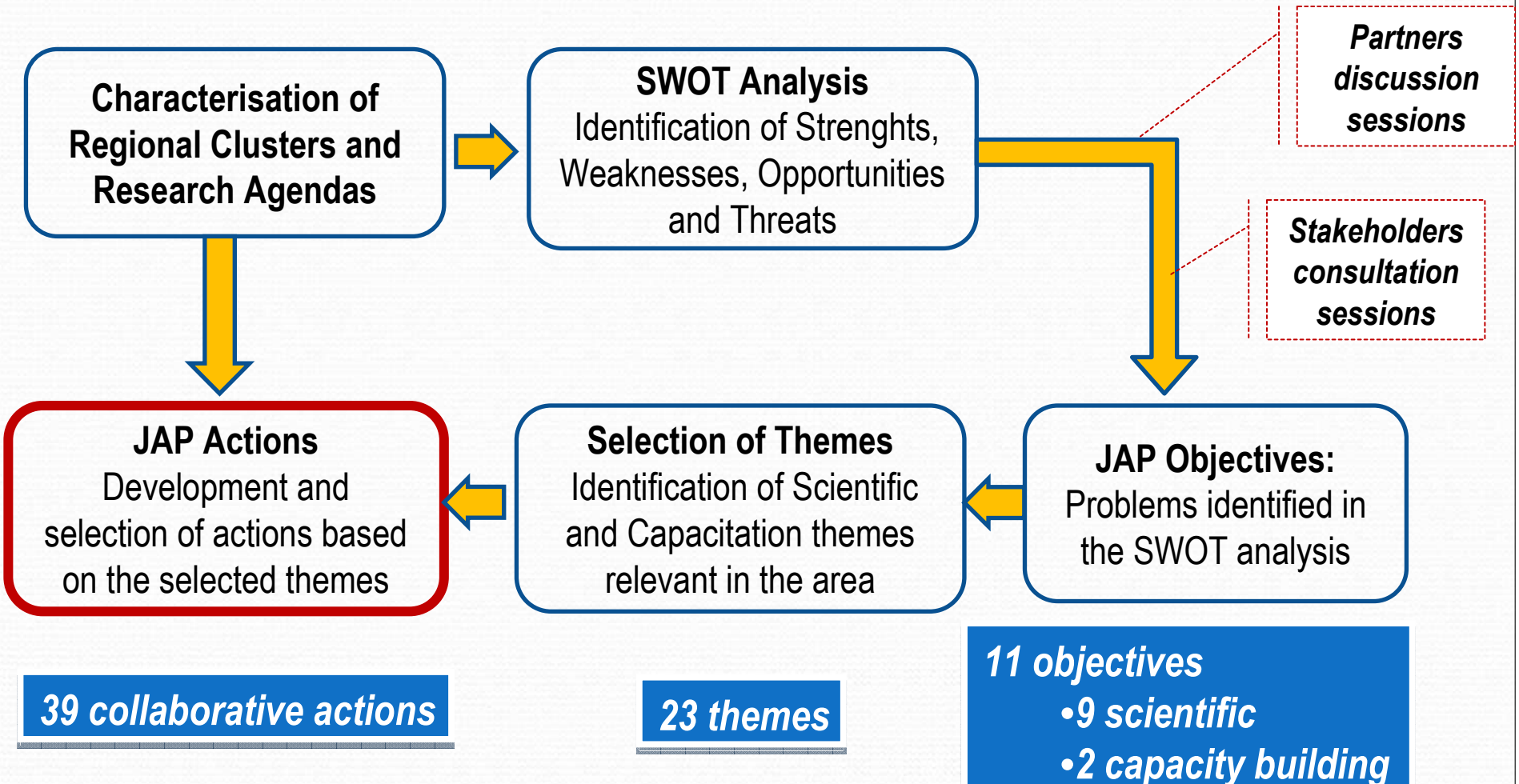
Internal Factors: Strengths/Weaknesses
External Factors: Opportunities/Threats

SWOT Analysis
Identification of Strenghts, Weaknesses, Opportunities and Threats

Selection of Themes
Identification of Scientific and Capacitation themes relevant in the area

JAP Activities
Development and selection of activities aime at solving the problems identified in the SWOT based on the selected themes

A need for action: The Joint Action Plan



External experts monitoring/reviews

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Highlights from the SWOT Analysis

Science and Technology	Governance and Management
(S1) - Evolution in the use of DSS.	**(W8)** Novelty of the IWRM legislation and administrative organization.
(W4)- Absence of channels for the knowledge and data exchange between the triple helix.	**(O7)** Reinforcement of partnerships between water authorities and entities to support data production and treatment and the development of New technological solutions
(W2) Lack of DSS software to introduce economic tools in water management in all NOVIWAM regions	
(O3) Data processing through DSS can help to visualize in all regions the economic and social value of environmental services	

Example of a double-checked project

- CORRELATION WITH SWOT:
  1. Researchers experienced in the integration of the social and cultural dimensions of water (S),
  2. No economic tools for water management in any region (W),
  3. Demand for convenient water pricing tools (O),
  4. Increasing availability of water data of use for RTD in all regions (O),
  5. In general, toughening of the opposition between ‘economics’ and the ‘environment’(T),
  6. Socio-economic and demographic pressures, lead to the overexploitation and degradation of water resources (T)

WG	JAP Research Objectives
A	Management of groundwater bodies
	Management of coastal and transitional water bodies
	Management of interior surface water bodies
B	Assessment and monitoring of water bodies status
	Optimisation of IWRM infrastructures
C	Water social and economic value
	Alternative sources of water
	Integration of New Technologies
D	Management of extreme event risk scenarios
E	Bridging knowledge links between triple helix actors
	Improving Governance and Institutional Capabilities

WORK GROUP	Objectives	Themes	Correlation with SWOT
A	**3. Management of groundwater bodies**	Vulnerability assessment, nitrates contamination, emergent pollutants, etc.	**W.1.** LLack of data availability, data dispersion, data incompatibilities, and difficulties to access to data, both quantity and quality data for surface and groundwater **T.6.** Difficulty in solving common issues in water and agro- forestry planning
	4. Management of coastal and transitional water bodies	Overexploitation of coastal aquifers and saline water intrusion, turbidity problems in estuaries, intensification of coastal erosion, etc.	**S.1.** Increasing use of technological tools to assist decision making processes in catchment management **W.11.** Generally, lack of resources to adequately control the compliance of water laws and prosecute infringements **T.5.** Climate change increases in the frequency and severity of extreme events (droughts and floods), exacerbation of water scarcity impacts, degradation of water quality, and increase in sea levels
	5. Management of interior surface water bodies	Management of eutrophication processes, River ecosystem management, monitoring and assessment of soil loss in hillslopes and dams infilling rates due to dryland rivers processes, etc.	**S.1.** Increasing use of technological tools to assist decision making processes in catchment management **W.1.** Lack of data availability, data dispersion, data incompatibilities, and difficulties to access to data, both quantity and quality data for surface and groundwater **O.7.** Reinforcement of partnerships between all regional water authorities and specialized entities to support the data production, treatment and development of new tools, mechanisms and technological solutions

Research Priorities

Lack of DSS software to identify water distribution losses	**Optimization of IWRM infrastructures**	Integral system for the diagnosis and losses of water distribution networks based on GIS open systems
Floods events in urban areas	**Management of extreme event risk scenarios**	Development of model predicting responses in urban areas, due to heavy rainfall events'
Lack of representativeness in the monitoring data	**Assessment and monitoring of water bodies status**	Development of technologies for in-situ ecological status assessment through available physicochemical data
Degradation of water resources	**Management of groundwater bodies**	Assessment and remediation for emerging products
Delay in the accomplishment of 2015 WFD Envi. Objectives	**Management of interior surface water bodies**	River restoration as a tool for Integrated Water Resources Management

Researchers and business are crucial in proposing JAP actions following detected challenges

Decision makers are essential to raise priority research and development issues posed at regional level

Innovation agendas on water

Definition of innovation and strategic agendas needed as identified by EIB, JPI Water Challenges, Common Implementation Strategy (CIS)of the Water Framework Directive (WFD) or during the session on water SPI on WWF6, where the generation of a collaborative JAP was pushed forward

Current priorities for NOVIWAM

- To promote cooperation:
  - within the NOVIWAM partners
  - with other initiatives and regions
- To foster implementation actions identified in the JAP
- Memorandum of Understanding → NOVIWAM Cluster

Structure of the Conference

Session 1	Strategic RTD&I topics on water. NOVIWAM Objectives
Session 2	Linking users and Generators of water RTD&I
Session 3	Water policy and RTD&I in the European Union
Session 4	Building Strategic agendas on water RTD&I
Parallel	Brokerage event

Thanks for your attention

César Alcácer
Centro de las Nuevas Tecnologías del Agua
(CENTA)
calcacer@centa.es