

CLIMATE ADAPTATION RESEARCH IN A LARGER EUROPE:

AN ANALYSIS AT NATIONAL SCALE

Preliminary Findings & Key Questions
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CLIMATE IMPACT RESEARCH
& RESPONSE COORDINATION
FOR A LARGER EUROPE
EU FP7 ERA-NET



Preliminary Findings

CIRCLE-2 REPORT “Climate Adaptation Research in a Larger Europe: an analysis at national scale”

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Background

The **CIRCLE-2 Climate Adaptation INFOBASE** (<http://infobase.circle-era.eu>), hereafter referred to as **INFOBASE**, is a publicly accessible, online database on Climate Adaptation research. The **INFOBASE** includes relevant information on European research projects funded at **national and local levels** (*National projects*) as well as **transnational projects** funded within the framework of CIRCLE¹ and CIRCLE-2 ERA-Net² (*CIRCLE-2 projects*). The **INFOBASE** is limited to projects with a completion date subsequent to 2005, and by the end of CIRCLE-2 (set to 2014) it **will cover a timeframe of 10 years (2005-2014)** of European Climate Adaptation research.

Because of the transnational and transdisciplinary nature of Climate Adaptation science, the **INFOBASE** information contains **country- and sector-specific definitions** of 'Climate Adaptation' and 'Climate Adaptation research project' as defined by respective national or regional CIRCLE-2 members. The **INFOBASE** information's reliability and quality is assured by a rigorous **Quality Assurance/Quality Control (QA/QC)** process³.

This **preliminary report** highlights some **original findings** resulting from an initial scanning of the information collected and presented in the **INFOBASE** as of the **31st of December 2012**. Its main goal is to unveil some of the potential for analysis that is presented by the **INFOBASE** and to reflect upon key questions that are relevant to fully understand the **Climate Adaptation research (and funding) landscape** across a larger Europe.

A **full report will be launched in early 2014** and will include a more comprehensive analysis of the information provided by the **INFOBASE**. It will benefit from further involvement and feedback of intended users (scientists and policy-makers), namely those involved or interested in the **complex European mosaic of Climate Change Impacts, Adaptation and Vulnerability (CCIVA) research**.

¹ The CIRCLE Coordination Action (FP6 CA) was the earlier edition of the CIRCLE-2 ERA-Net (FP7) and ran between 2005 and 2009.

² www.circle-era.eu/. Annex 1 – Example of a printable tabular list of CIRCLE-2 projects.

³ The **INFOBASE QA/QC** process can be consulted at <http://infobase.circle-era.eu/>.

INFOBASE relevance

The **INFOBASE** is an initiative of the **CIRCLE-2 ERA-Net** that addresses some of the fundamental gaps in the understanding of how Climate Adaptation science has evolved over the past decade. The information contained in the **INFOBASE** and in its analysis reports is of particular relevance for evidence-based adaptation, at a time where the theme gains significant stimulus with the upcoming launch of the **EU Strategy on Adaptation to Climate Change**⁴ and with the **EU Climate Adaptation platform (CLIMATE-ADAPT)**⁵ moving into its second year of existence.

The **INFOBASE** development is an integral part of the support that **CIRCLE-2 ERA-Net** has been providing to both the EU strategy on Adaptation and the CLIMATE-ADAPT platform development. The **INFOBASE** intends to promote **greater coordination and information sharing** between European countries (CIRCLE-2 members or not), the EU and countries outside Europe, thus contributing to the persecution of a fully functional **European Research Area (ERA)** and **Joint Programming (JP)** on Climate Adaptation.

INFOBASE Target audience

The **INFOBASE** and its analysis reports are targeted at all those involved or interested in **Climate Adaptation research and policy** or any other areas related to **Climate Change Impacts, Adaptation and Vulnerability (CCIVA)**.

These may include, among others, both **national and European, public and private: (i) policy-makers**, including research policy-makers; **(ii) decision-makers**, including research managers; **(iii) and researchers** at large.

INFOBASE data

Over 1500 adaptation projects have been submitted to the **INFOBASE** since its launch in 2011. All of these have undergone the **INFOBASE QA/QC process** and approximately 500 have been discarded for not fitting the scope or due to insufficient quality (e.g. lack of information).

⁴ The EU Strategy on Adaptation to Climate Change aims to support coherent, multi-level and multi-sector integrated adaptation policies that complement the activities of Member States. It will be launched in April 2013 (http://ec.europa.eu/clima/events/0069/index_en.htm)

⁵ The CLIMATE-ADAPT platform (<http://climate-adapt.eea.europa.eu/>) was launched in March 2012.

As of the 31st December 2012 a total of **1068 projects** were available for consultation in the **INFOBASE**, of which **1055 were National projects** and **13 were CIRCLE-2 projects**. Most (43%) of the displayed **INFOBASE** projects contain information that is, at least, **partially in English**, making the analysis and exchange of knowledge easier. The majority (49,4%) of displayed projects has a **duration between 2 and 3 years**, with 70,5% of project having already been finalised.

This and other project information including the title, acronym, abstract, funding programmes and involved countries, coordinator and contact information, sectors and adaptation categories, as well as the project's main research outcomes, is detailed in an individual project **INFOBASE factsheet**⁶. Each project can be easily updated by the coordinator by inserting or correcting the project's information directly through the **INFOBASE** user interface. New projects can also be directly inserted using this interface. In both situations, projects will undergo the **INFOBASE** QA/QC process before becoming visible online.

Objectives

Because of the complexity and fast growing characteristics of Climate Change research agendas and in particular of Climate Adaptation research, it is not expected that the information made available through the **INFOBASE** can be, at all times, completely representative of each individual country landscape.

Therefore, the main objective of this preliminary report is ***to capture your attention and to call upon your knowledge in helping us to further increase the number of National Climate Adaptation research projects (from your own country or others) that are submitted and added to the INFOBASE.***

If you have information about Climate Adaptation research projects in your or other countries, please add them directly using the **INFOBASE user interface**⁷ or contact the CIRCLE-2 Coordination at circle2infobase@fc.ul.pt.

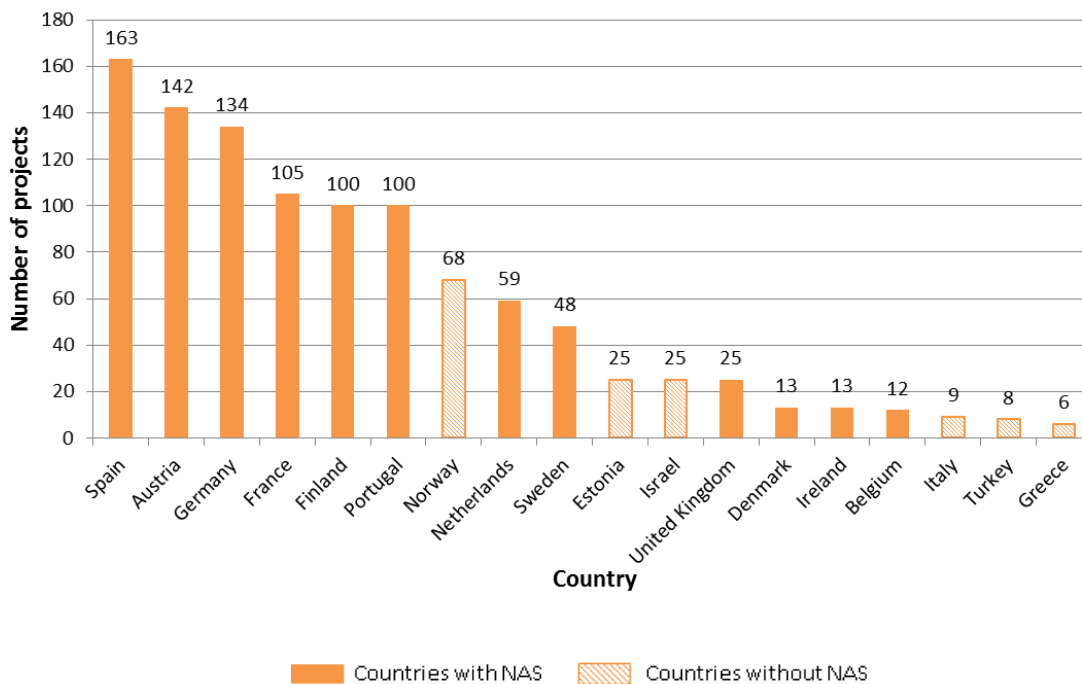
⁶ See Annex 2 - Example of a printable detailed project factsheet.

⁷ Please use <http://infobase.circle-era.eu/> to access the user interface and upload new projects.

Preliminary Findings and Relevant Questions

A number of preliminary findings are reported accompanied by relevant questions that will steer further analysis of the INFOBASE content.

Distribution of projects per COUNTRY



Source: CLIMATE-ADAPT accessed in Feb 2013

Figure 1 - Country distribution of climate adaptation projects available in the INFOBASE. Countries that have formally adopted a National Adaptation Strategy (NAS) are highlighted. Bar numbers indicate the total number of projects.

Relevant questions:

- Are there any countries underrepresented regarding the number of projects in the INFOBASE?
- Is there a plausible link between the adoption/lack of adoption of a National Adaptation Strategy (NAS) and the number of existing climate adaptation projects in a country?
- Are there any identifiable relationships between the number of projects and the level of adaptation research knowledge uptake that occurred during the development of a NAS?

Distribution of projects by SECTOR

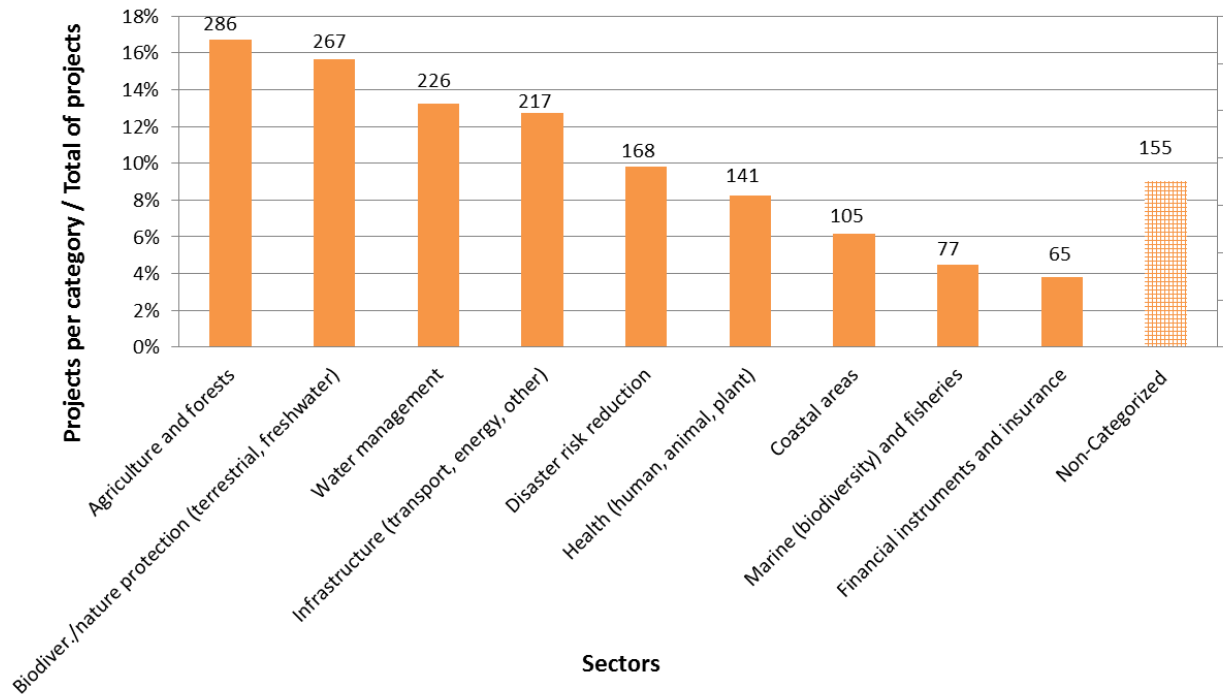


Figure 2 - Distribution of total climate adaptation projects available in the INFOBASE by sector. Percentage represents projects per sector over total number of projects. Projects not attributed (labelled) to a specific sector were considered 'non-categorized'. Bar numbers indicate the total number of projects in each sector. Please note that projects can be labelled with more than one sector.

Relevant questions:

- What are the reasons behind differences in the sectoral distribution of projects across Europe?
- Is there any relationship between the sectoral distribution of research projects across Europe and the individual country adaptation policy agendas?
- Are the projects generally sectoral specific or mostly multi-sector? If so, which sectors are more related with each other?
- Are there any sectors that are more relevant or have higher priority in relation to other? If so, are there significant country (or regional) differences?
- What is the relation between the sector distribution of the projects and the type of funding (i.e. public and private)?

Distribution of projects by CATEGORY

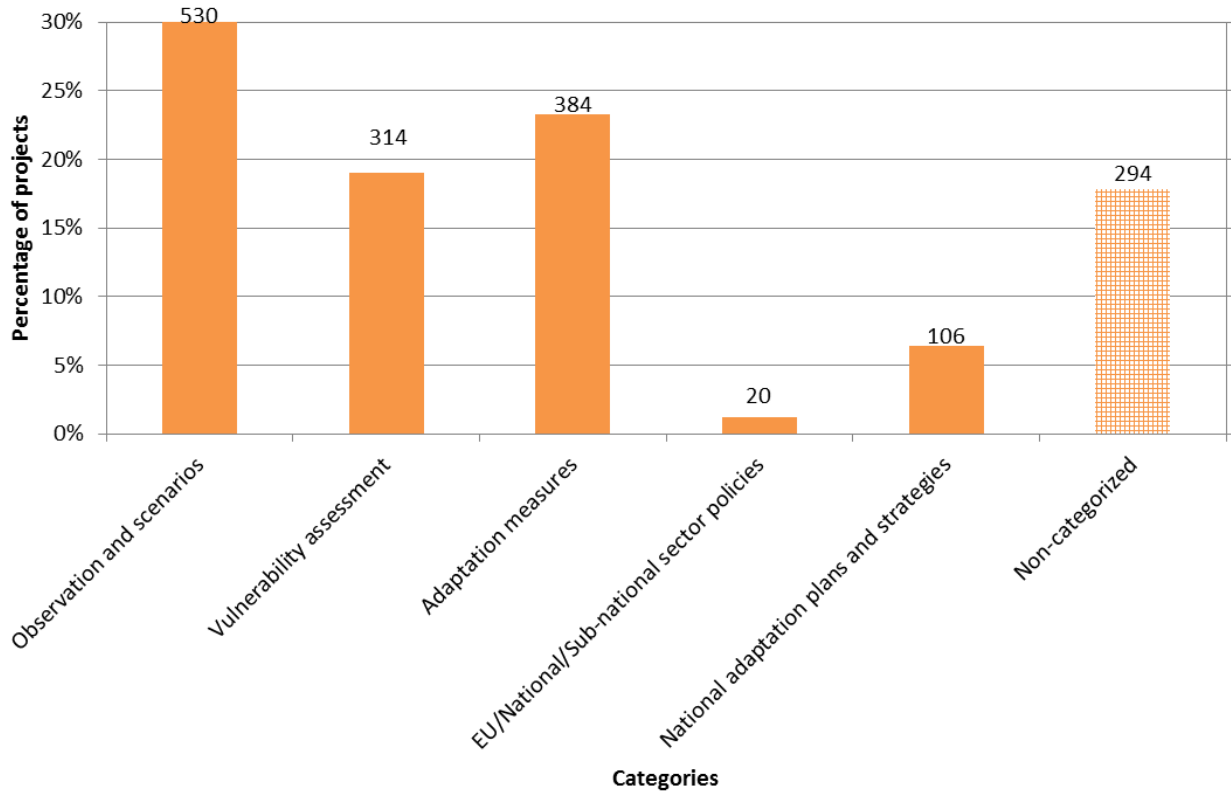


Figure 3 - Distribution of total climate adaptation projects available in the INFOBASE by category. Percentage represents projects per sector over the total number of projects. Projects not attributed (labelled) to a specific category were considered 'non-categorized'. Bar numbers indicate the total number of projects in each sector. Please note that projects can be labelled with more than one category.

Relevant questions:

- Are there any discernible temporal or spatial trends associated with these categories? If so, what are the national or regional drivers behind these trends?
- Are the projects generally category specific or mostly multi-category?
- Are there any particularly relevant adaptation categories missing?
- Does this distribution of projects per category reflect any overall focusing on adaptation research in Europe and/or nationally?

Distribution of projects by START YEAR

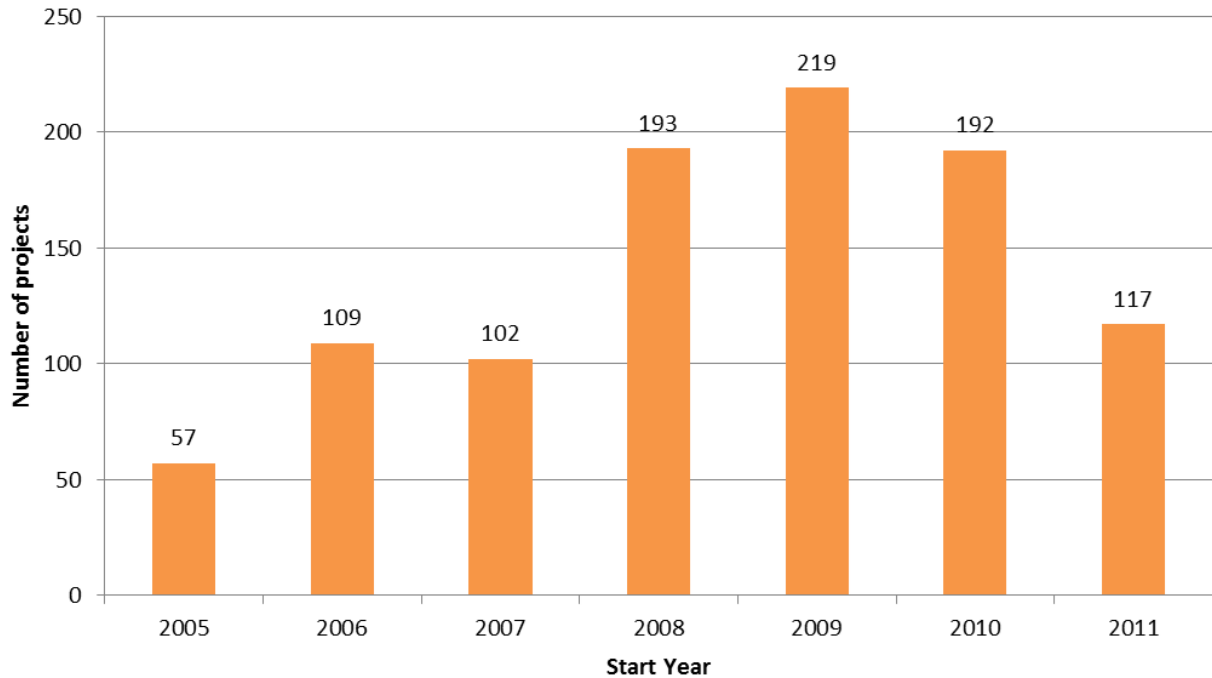


Figure 4 - Distribution of total climate adaptation projects available in the INFOBASE by start year. Bar numbers indicate the total number of projects per year.

Relevant questions:

- Are there any discernible trends in the overall number of projects over time?
- What are, if any, the key political drivers behind this trend? And at what level (i.e. International; EU; National or local)?
- Is there a clear connection between the distribution of projects and the launching of dedicated climate change and climate adaptation research programmes across Europe?

Distribution of projects per SECTOR and per COUNTRY

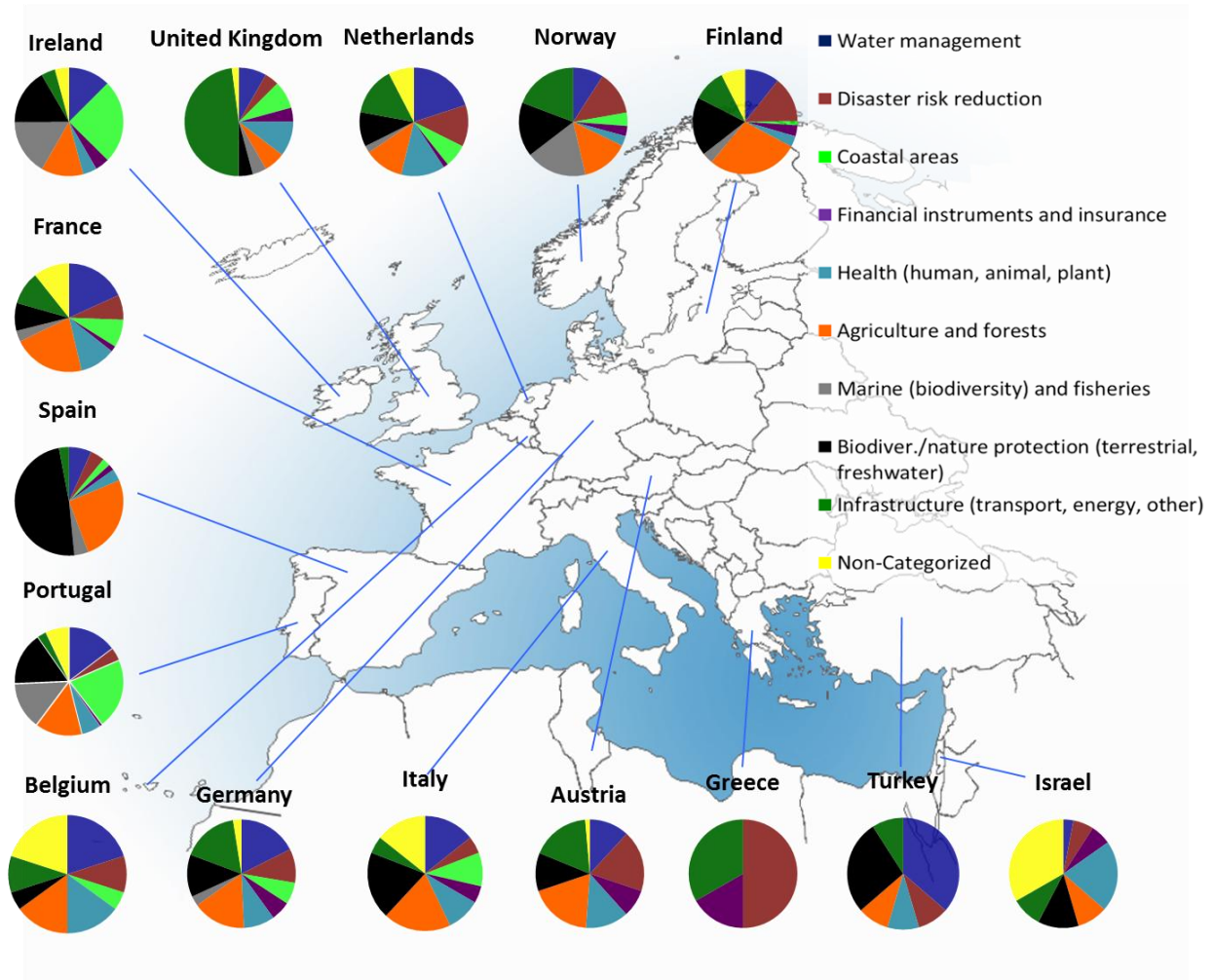


Figure 5 - Distribution of total climate adaptation projects available in the INFOBASE by sector and country. Countries with more than 25% of the projects not labelled in any sector are not reported. Note that projects can have more than one sector.

Relevant questions:

- Why does a country decide to invest more resources (i.e. funding) on a certain sector (or sectors) of adaptation projects?
- What are the key differences or similarities in the distribution of climate adaptation research sectors per countries or geographical areas?
- Is there any clear relationship between the distribution of projects per sector and the launching of dedicated climate change or climate adaptation research programmes across Europe?

Distribution of projects per CATEGORY and per COUNTRY

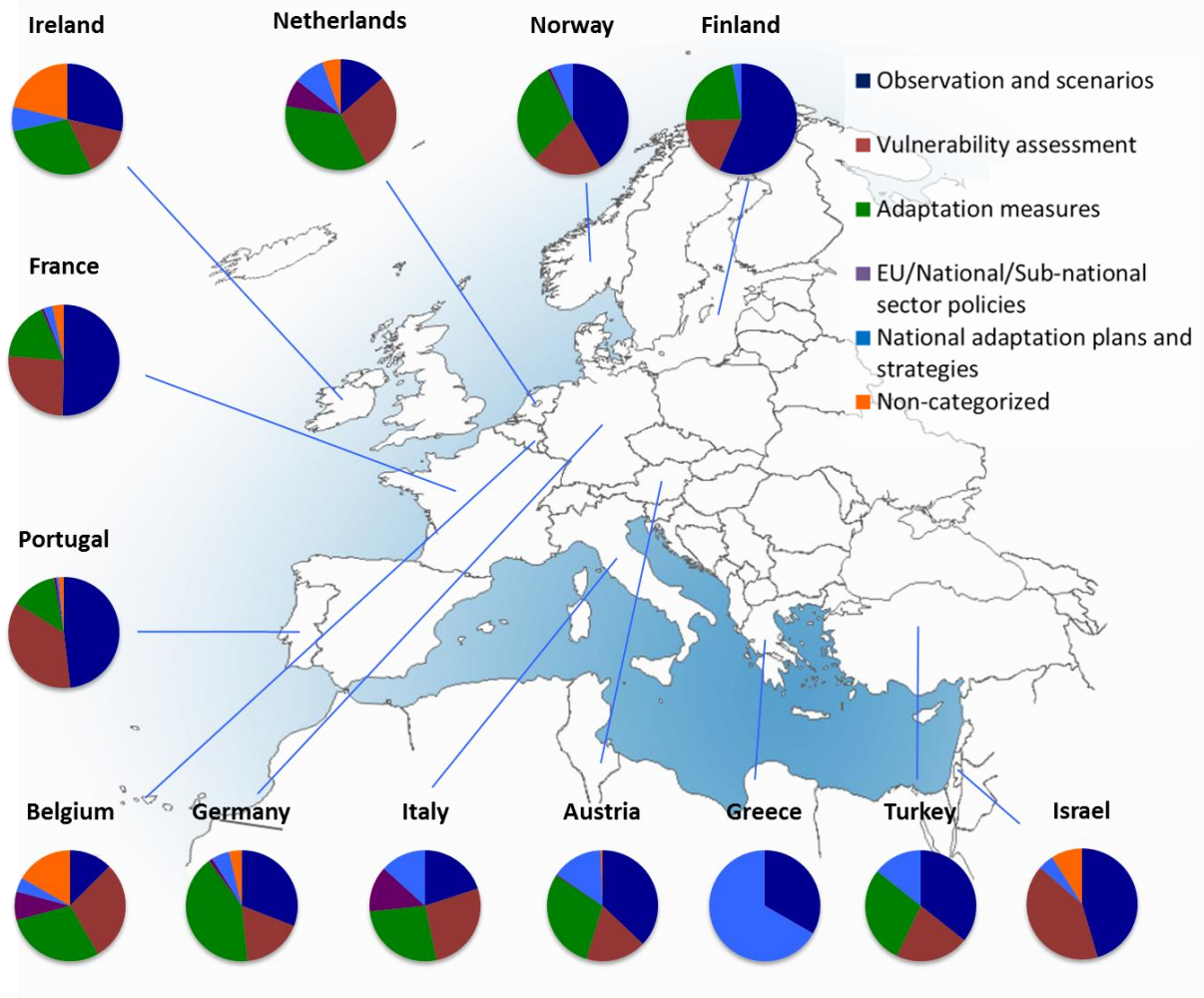


Figure 6 - Distribution of total climate adaptation projects available in the INFOBASE by category and country. Countries with more than 25% of the projects not labelled in any category are not reported. Note that projects can have more than one category.

Relevant questions:

- Why does a country decide to invest more resources (i.e. funding) on a certain category of adaptation projects?
- Are there any differences or similarities in the distribution of climate adaptation research categories per countries or geographical areas?
- Is there any clear relationship between the distribution of projects per category and the launching of dedicated climate change or climate adaptation research programmes across Europe?

TYPE OF FUNDING source per country.

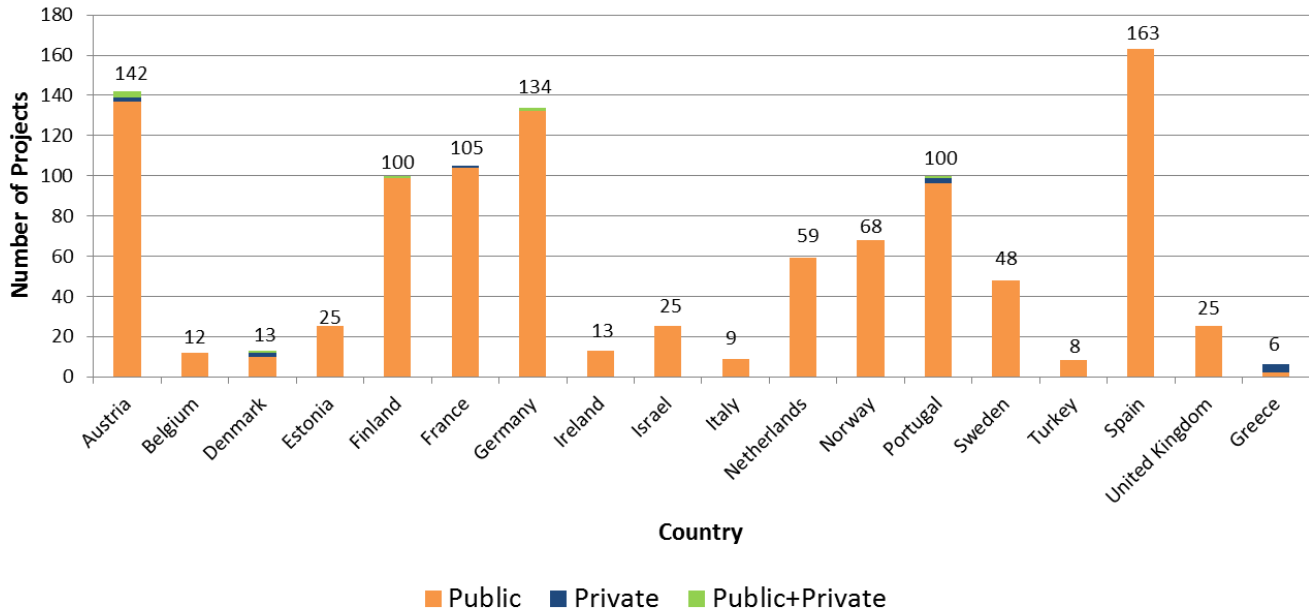


Figure 7 - Distribution of total climate adaptation projects available in the INFOBASE by funding source sector and country. Bar numbers indicate the total number of projects in each country. Please note that projects can have more than one funding organisation.

Relevant questions:

- Does this distribution indicate that funding adaptation research is not a priority for the private sector?
- Is adaptation research mainly a public responsibility?
- Has the private sector been sufficiently involved and engaged in the adaptation research area (e.g. Insurance companies, Utilities)?

Annex 1 – Example of a printable tabular list of CIRCLE-2 projects.



Last update: 2013/03/12

Type: CIRCLE-2; Free text:

Title	Acronym	Type	Country	Duration
Climate change influence on biodiversity, goods and services of Mediterranean lagoons	CLIMBIOMEDNET	CIRCLE-2	France (Coord.), Albania, Italy, Tunisia	2008-2011
Assessment of Risks on transportation Networks resulting from slope Instability and Climate change in the Alps	Arnica	CIRCLE-2	France (Coord.), Switzerland, Italy	2010-2013
Climate change impacts in transitional water systems in the Mediterranean	MEDCODYN	CIRCLE-2	Italy (Coord.), Morocco	2008-2010
Climate and local ANthropogenic drivers and impacts for the Tunisian COastal area	CANTICO	CIRCLE-2	Italy (Coord.), Tunisia	2008-2011
The integrated impacts of marine acidification, temperature and precipitation changes on bivalve coastal biodiversity and fisheries: how to adapt?	ACIDBIV	CIRCLE-2	Portugal (Coord.), Tunisia	2008-2011
Climate Change, Community Response and Multilevel Governance	CCCRMG	CIRCLE-2	Sweden (Coord.)	2008-2009
Participatory design of adaptive groundwater management strategies and instruments in Mediterranean coastal water scarce areas as a response to climate change	AQUIMED	CIRCLE-2	France (Coord.), Morocco	2008-2010
The impact of climate change on Mediterranean intertidal communities: losses in coastal ecosystem integrity and services	INTERMED	CIRCLE-2	Italy (Coord.), Croatia	2008-2010
Climate change: A regional assessment of vulnerability and adaptive capacity for the Nordic countries	CARAVAN	CIRCLE-2	Finland (Coord.)	2008-2011
Integrated Water Management in Coastal Drainage Basins: challenges and adaptation strategies within the framework of climate change	WATERKNOW	CIRCLE-2	Italy (Coord.), Morocco	2008-2011
Climate change adaptation in Norway, Sweden and Finland - Do research, policy and practice meet?	CARePol	CIRCLE-2	Finland (Coord.)	2008-2009
Climate change impacts (natural and anthropogenic) and response options in mountainous areas	CAMELEON	CIRCLE-2	France (Coord.)	2011-2012
Assessing and managing the impact of climate change on coastal groundwater resources and dependent ecosystems	CLIMWAT	CIRCLE-2	Portugal (Coord.), Morocco	2008-2011

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Generated from the CIRCLE-2 Climate Adaptation InfoBase at infobase.circle-era.eu

CIRCLE-2 website: www.circle-era.eu ; Email: circle2infobase@fc.ul.pt

Annex 2 - Example of a printable detailed project factsheet.



Last update: 2013/03/12

Project detail

Title (English)	VULNERABILITY OF WATER RESOURCES TO GLOBAL CHANGE IN MEDITERRANEAN REGION
Title (Native language)	VULNERABILITE DES RESSOURCES EN EAU AU CHANGEMENT GLOBAL EN ZONE MEDITERRANEENNE
Acronym	VULCAIN
Type	National project
Funding Country (Region)	France
Funding Organisation	The French National Research Agency (ANR)
Funding Programme	ANR / VMC - Agence Nationale de la Recherche / Vulnérabilité : Milieu et Climat [Edition 2006]
Total Budget (in Euros)	826,783.00
Coordinator Country	France
Other Countries involved	--
Coordinator Name	Yvan Caballero
Coordinator Organisation	The French Geological Survey (BRGM)
Start Year	2007
End Year	2010
Sectors	Agriculture and forests; Water management
Categories	Vulnerability assessment; Observation and scenarios
Keywords	Global change;water resources;groundwater;water demand;socio-economic foresight;vulnerability;resource to demand balance
Abstract	The Mediterranean region has been pointed out as a « hot spot » in terms of climate change, with severe warming and precipitations decrease. Moreover, the intense population growth rate will probably deepen its water resources structural deficit. In the future, the water scarcity level will depend on both the withdrawals and the climate evolution. The VULCAIN project proposes a method to analyze and compare the climate and socio-economic change impacts on the water resources of the Pyrénées Orientales department. Future climate and drinking/agricultural water use scenarios have been built and their impact on the water resources of the study zone was characterized and compared, with a description of the associated uncertainties. The results allowed the vulnerability characterization based on future water resources to water use budget. The main issues of the vulnerability of the studied territory have been identified, which are currently integrated by the water managers to structure their adaptation strategies.
Relevant Outcomes	Other relevant outcomes - List of publications
Project language	Project partially in English
Website	http://agire.brgm.fr/VULCAIN.ht..
Observations	--

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<http://infobase.circle-era.eu>

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