



MARCO

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Development of a categorized database of EU-based climate services providers

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Summary

This database describes the methodological basis for data mining, i.e. collecting information on EU-based climate services suppliers. The information is fed into a categorised database containing information on 500 climate services providers.

Approval

Date	By
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“This report contains an embedded excel file with the database of EU-based climate service providers. To view the database, please download the present report and open it on your computer with a compatible pdf viewer.”





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List of Abbreviations

Abbreviation	Full name and explanation
C3S	Copernicus Climate Change Service
CS	Climate services
ERA-NET / ERA4CS	European Research Area for Climate Services
ISIC	International Standard Industrial Classification of all Economic Activities (classification by the United Nations)
NACE	Nomenclature statistique des activités économiques dans la Communauté européenne (classification of the European Union)



1 Background and Aim

1.1 Context

Climate change is among the most important societal challenge of our time (cf. World Economic Forum 2016). Responding to the challenge requires immediate actions to reduce greenhouse gas emissions and to adapt to those unavoidable changes that are already occurring. To do so, climate services play a major role as being part of the solution, as they support climate-informed decision-making on all levels in public administration and private businesses.

As such, the concept of climate services has rapidly evolved over the past years. Due to the various climate services definitions, which stem from the historical developments and differing user needs, MARCO applies the very broad definition of climate services as provided by the European Research and Innovation Roadmap for Climate Services (European Commission 2015),

“(...) which covers the transformation of climate-related data — together with other relevant information — into customised products such as projections, forecasts, information, trends, economic analysis, assessments (including technology assessment), counselling on best practices, development and evaluation of solutions, and any other service in relation to climate that may be of use for the society at large. As such, these services include data, information and knowledge that support adaptation, mitigation and disaster risk management (DRM).”

Although climate services science has become an essential part of climate research in Europe as well as on global scale, the landscape of the climate services community is still scattered. To support sustainable growth on the climate services market, the European Union has taken several actions in its current research framework Horizon 2020 (H2020); among others demonstration calls on the added value of climate services, the ERA-NET for Climate Services or coordination and support actions aiming at networking. Further activities to be mentioned are those launched by the Copernicus Climate Change Service (C3S).

Against this background, MARCO aims at unveiling market opportunities to support future market growth. The market is thereby defined as a space of commercial and non-commercial exchange of information and products. It thus includes, in accordance with the definition above, activities within the red rectangle (see figure 1). To do so, different methodologies and approaches will be integrated to analyse the supply and demand side of the market, and forecasting future users’ needs.

The supply side of the market in the red rectangle will mainly be assessed by two complementary approaches – the quantitative, transactional analysis performed by kMatrix (see in particular MARCO Del. 2.1 to 2.3 as well as Del. 4.2, 4.3 and 4.5) and the qualitative market assessment by HZG-GERICS and the related Del. 3.1 and Del. 3.2.

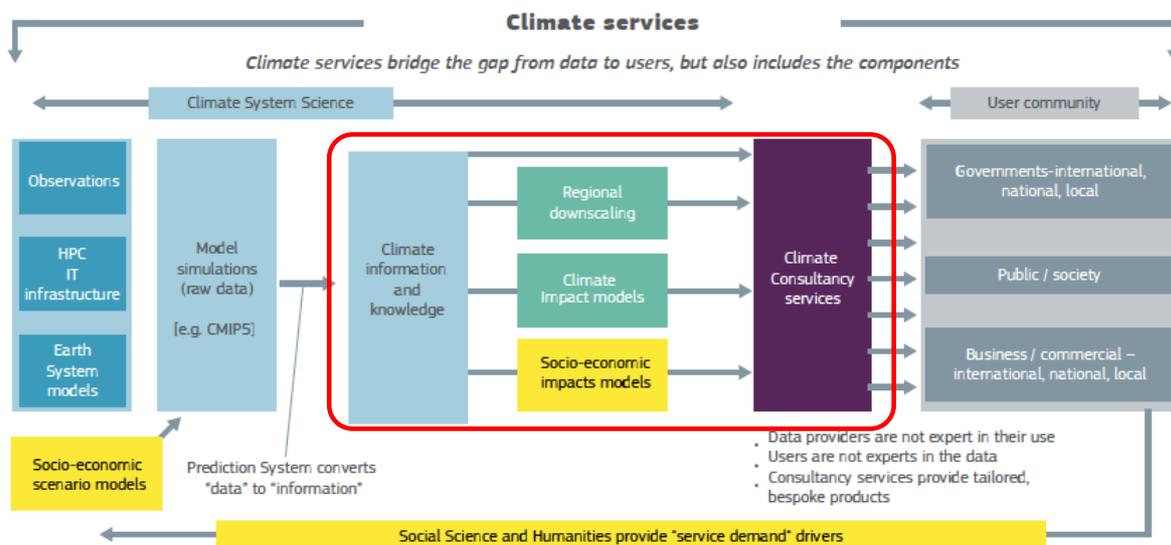


Figure 1: The essence of climate services.

Source: European Commission 2015

1.2 Aim of Task 3.1

Against this background task 3.1 ‘Mapping and qualification of EU-based climate services providers’ contributes to the assessment of the supply side of the market in work package 3. In the course of this mapping activity the basic climate services related questions are:

- Who is providing CS?
- What CS related activities are they engaged in?
- Which types of CS do they provide?
- Who are the targeted customers / clients / users?
- Which sectors do climate service providers approach?
- Which geographic markets do climate service providers address?
- Are the provided services mainly commercial?

The MARCO assessment builds upon different methodologies (see next chapter) to include as much information as possible to overcome previous constraints such as a limited geographic focus or a one-shot approach (i.e. only conduction of a survey) as it has been the approach in the JPI Climate or ERA-NET mappings. A broader methodological access (incl. online survey and desk research) and geographical coverage (EU-28) was chosen in MARCO in order to draw a larger picture of the European CS landscape.

Even though MARCO is primarily interested in the red rectangle in figure 1 a complete picture is needed, as all activities in the red rectangle depend on basic elements of the climate service infrastructure such as data collection, observation and measurements, high-performance computing, global coupled models and the provision of raw data. All of which are necessary ingredients to generate climate information and knowledge. That is why these ingredients have also been part of this assessment.



The results of this mapping exercise will serve as input to the gap analysis (task 2.2), in which the results will be connected with outcomes of other MARCO activities (namely the demand side assessment in work packages 4 and 5 as well as the market foresight in WP 6). In order to do so, the initial terminology introduced in MARCO Deliverable 2.1 ‘Initial definitions, taxonomy and report’ was applied as a starting point.

There are two deliverables related to task 3.1, which are inseparably connected to each other and should be read together.

All information available from similar previous activities (mainly those in JPI Climate in 2013 / 14 and the H2020 ERA-NET co-fund action ERA4CS), the online survey and the desk research were collected in one database, which forms **MARCO Del. 3.1: Development of a categorized database of EU-based climate services providers**. The methodology for data mining as well as the database itself is part of this report.

The second deliverable – **Del. 3.2 – Analysis of European climate services providers** – is a report providing the results based on the collected data. It only contains a very short methodological chapter, in which the applied terminology is introduced. This seems to be essential to reflect the presented results and the conclusions drawn.



2 Methodology

In order to collect and analyse as much information on CS providers as possible different methodologies and data sources were combined and taken into account.

The mapping of task 3.1 builds on previous works within the JPI Climate's Fast Track Activity (FTA) 2.2 on "Mapping Climate Service Providers in Europe" in 2013 and 2014 (cf. Máñez et al. 2014) as well as a mapping exercise conducted within the ERA-NET for Climate Services in 2016. Within FTA 2.2 an online questionnaire was conceived and sent out to climate services providers in the eleven participating JPI Climate member countries in 2013 and 2014. Mainly providers from Austria, Belgium, Germany and Italy responded to this survey then. Within the ERA-NET the mapping from 2013 / 2014 was re-activated and extended to the 18 ERA4CS member countries. The replies in both mappings were collected and visualised on the Climate Knowledge Hub (CKH) online portal (www.climate-knowledge-hub.org).

These previous mappings only build on online surveys for data collection. For the purposes of MARCO, a combined approach of an **online survey** (see section 2.2) and **desk research** (see section 2.3). Experiences from previous mappings showed that response rates from private businesses are typically lower compared to public CS providers such as national meteorological services, universities or public authorities. The desk research supplemented the survey to also include those providers that were missed out by the survey. The results of both approaches are collected in a database as an excel file, which will be provided as a separate deliverable 3.2.

2.1 Information Needs – Applied Terminology

As briefly mentioned in section 1.2, the following topics were subject to the market assessment.

2.1.1 Who is providing CS?

Basically, a variety of different types of organisations provide climate services. According to the European Research and Innovation Roadmap for Climate Services (cf. European Commission 2015) there are five main types of organisations:

- (Extensions of) meteorological services
- Public climate service centres (not from meteorological services)
- Universities or university networks
- Private businesses
- Climate information management in business consulting services.

Previous mapping activities within the JPI Climate and the ERA-NET provided evidence that there are further types of organisations that provide climate services such as public administration / policy bodies, or non-profit-organisations (cf. Máñez et al. 2014).

As the previous mappings dug deeper in the whole public / scientific domain of the CS landscape, the mapping in MARCO aim to be more balanced between the public / scientific and private business domain. In order to not only get a better understanding of the 'private' part of the CS landscape in quantitative terms (i.e. the number of private businesses providing CS) but also qualitative terms, the category 'private businesses' was divided into three sub-categories (start-ups, small- and medium-sized enterprises, large companies).



Thus, the following categories of CS providers were applied in task 3.1:

- National meteorological services (or extensions thereof)
- Public climate service centres
- Universities or research-performing organisations
- Non-profit-organisations
- Industry or professional bodies
- Public administration / politics
- Industry / large companies
- Small and medium-sized enterprises
- Start-ups

Each organisation that is included in the mapping is assigned to the category that fits best, even though there are sometimes overlaps. Some research performing organisations are, for instance, also non-profit-organisations. The same applies to industry or professional bodies.

2.1.2 Which CS related activities are the providers engaged in?

When looking at the essence of climate services (cf. European Commission 2015, see also figure 1) it is obvious that different components are needed to (co-) develop climate services and making them available and accessible to the users' communities; this is also reflected in the respective definition (see page 4). In order to transform climate-related data into customised products they first need to be collected with respective observational technologies. The kMatrix report differentiates between air-borne, land-based, sea and satellite facilities. High-performance computing capacities and (global and regional climate) models are needed in order to translate the raw data into climate information and knowledge on spatial scales relevant for the various different impact modelling communities (incl. socio-economics). These modelling activities also include model development itself in order to improve model results. Finally, the results are used to provide respective consultancy services for the different users' communities.

In order to identify, which of these components are already well covered and which still need to be improved, the following CS related activities taken from the essence of climate services (cf. European Commission 2015, see also figure 1) were assessed for each identified CS provider. It is important to mention that an organisation could be engaged in several of these activities:

- Data collection and observations
- High-performance computing
- Model development
- Modelling and re-analysis
- Climate information and knowledge
- Regional downscaling
- Impact modelling (incl. socio-economics)
- Consultancy services



This aspect of the market assessment has not been subject to previous mappings.

2.1.3 Which types of CS do climate services provider offer?

The number of climate services products that have been developed over the past years has increased substantially. In order to make this variety somehow manageable in the framework of this study, services are categorized according to their main features. Literature provides different categorizations of services varying in breadth and / or depth. Depending on the purpose and the scope of the respective underlying studies, the number of categories ranges from four, including several sub-categories (cf. Otto et al. 2016), to sixteen (cf. Máñez et al. 2014).

In case the number of categories is chosen to broadly, overlaps between categories might not allow a clear separation which results in a biased picture of the climate services landscape. If the number of categories is too small and narrow, differentiation between services will be difficult as results might be inconclusive.

It is mainly the terminology outlined in MARCO Del. 2.1 (cf. Poessinouw 2016) that is applied in task 3.1 to ensure comparability and merging of results later during the project. The terminology differentiates between eight types of climate services, which are (see table 1):



Table 1: Types of climate services applied to MARCO

Types	Description
Measurements	Instruments and technologies for measurement and calibration, e.g. provision of assistance and advice in the assembly of sensing arrays for ground-based stations.
Operations	Collection and provision of raw data, e.g. provision of raw data to media weather centres.
Modelling	Modelling of data, both certified and non-certified, e.g. modelling of collated data in order to predict the most likely rate of degradation of the polar ice cap.
Data Management	Provision of calibrated data sets, data archiving, data certification and data sales, e.g. provision of validated data sets to consultancies for further analysis.
Processing & Re-Analysis	Provision of data analysis and retrieval services including data mining tools, e.g. provision of essential climate variable models to academia.
Advisory Services	Advisory services, risk assessment and decision support tools provided to public and private sector organizations, e.g. risk assessment for the long-term location of nuclear power stations.
<i>Other Consulting</i>	<i>Consulting services not elsewhere covered, e.g. provision of advice on corporate statements to shareholders on corporate policy towards climate change.</i>
Publication	General publication of analysis findings, e.g. assembly of publications on climate forecasts based on data and analysis for both private and public-sector organizations.

This terminology was slightly modified. As ‘other consulting’ does not appear to be climate services it was deleted. On the contrary, capacity buildings and trainings are added, as these specific types of climate services do not fit in one of the other categories.

2.1.4 Who are the targeted customers / clients / users?

In general, a CS user is considered an individual or organization with responsibilities for decisions and policies in climate-sensitive settings, to whom some form of climate information is delivered. According to this definition, users can be expected to be decision-makers in businesses and the policy area and / or public administrations on various levels from local to international. This notion of a user is also reflected in the value chain depicted in the Roadmap (cf. European Commission 2015). In addition, societal actors are included in



the Roadmap called ‘public / society’. Societal actors, for instance, could be media, non-governmental organizations or other non-profit-organizations such as industry bodies.

Previous projects and initiatives, such as CLIPC (Constructing Europe’s Climate Information Portal) or JPI Climate, assessed user requirements in different respects and, thus, also made stakeholder analysis of different user groups (cf. Lémond et al 2011, Swart et al. 2017, Rössler et al. 2017). The user groups identified in most of these assessments are:

- (Climate) Scientists, incl. impact modellers (in some case these two are put together in one user group, sometime they are split up in two)
- Intermediary users such as consultancies
- Societal end users

However, there might, depending on the purpose of the study, be other segmentations as well, e.g. a differentiation between data users and product users.

Based on these different previous activities, the users’ groups applied in task 3.1 are the following:

- Public decision makers / politicians
- General public and media
- Researcher
- Private business
 - Small businesses and practitioners, e.g. architects, engineering offices
 - Consultancies
 - Corporations / Industries

2.1.5 Which sectors do climate services provider approach?

Similar to defining types of climate services, the definition of sectors can follow different approaches. These are in more detail outlined in EU-MACS Del. 1.1 – Review and Analysis of Climate Service Market Conditions chapter 3.3.2 (cf. Cortekar et al. 2017). Basically, the following approaches can be distinguished:

- According to national accountings using the globally applied International Standard Industrial Classification (ISIC). Another, similar approach related to the ISIC classification but in particular applied in the European Union is the NACE-coding.
- Sectors often applied in adaptation plans / strategies; examples from Germany, Finland and the UK are illustrated in the respective EU-MACS Deliverable 1.1.

Even though the sector borders are drawn differently, they basically contain the same societal domains, which are also reflected in the chapter on key economic sectors of Working Group III of the latest IPCC Assessment Report (AR5) (cf. IPCC 2014). These sectors, however, are selected to steer adaptation or mitigation activities from a policy point of view and are to some extent drawn according to political responsibilities.



- When looking at many research projects, a rather generic segmentation of the market is applied. The ‘official’ C3S sectors are, for instance, water, energy, agriculture and forestry, health and infrastructure, and insurance.
- kMatrix applied a segmentation of 24 sectors (cf. Poessinouw 2016), which, in contrast to the other ones, seems to be very much business-driven.

However, all these segmentations are in principle ‘fluent’. A combination of the four aforementioned approaches is applied in MARCO for the following reasons:

1. It is expected – and previous mapping provide evidence for that (cf. Máñez et al. 2014, www.climate-knowledge-hub.org) – that commercial and non-commercial providers play an active role on the market for climate services as outlined in the introduction. Thus, a purely commercial-oriented segmentation seemed to be inappropriate.
2. The methods applied for data mining are surveys and desk research (see sections 2.2 and 2.3). It was expected (and was confirmed later) that the information on providers webpages are not available in the necessary granularity.
3. It was planned from the beginning that the MARCO activities should be supplemented by previous mappings, in which other sectors were chosen (at least to some extent).

In order to allow integration of these different data sources, the sectors as shown in table 2 were applied in the market assessment.

Table 2: Sectors applied in task 3.1

Sector	Sector
Water	Forestry & timber
Agriculture	Tourism & leisure (incl. hotels)
Energy (incl. renewables)	Building & construction
Catastrophe management	Health (incl. hospitals and pharmaceuticals)
Biodiversity	Defence
Exploration & mining	Ecosystems
Transportation & logistics	(Critical) Infrastructures
Industry & trade	Urban / spatial planning
Finance & insurance	Food & drink
Waste management	Social structures & governance (incl. public services and cheritables)
Education	Other



2.1.6 Which geographic markets do climate services providers address?

It is important to know, on which geographic markets the different CS providers operate. This allows to identify, which geographic markets are already well addressed and where there might appear a gap between supply and demand (which will be done in the gap analysis in task 2.2 by integrating the results of the supply and demand side assessment, and the market foresight). The segmentation in this respect is easier compared to the previous ones and includes the following ‘levels’ from local, regional, national, transnational, and to global.

While the segmentation itself is easy, finding the necessary information is not. While many CS providers operate on global / European / national market, the services are mostly applied on a local level (e.g. a risk assessment for a specific production site) or, in contrast, could not be specified (risk assessment for a whole value chain).

This makes the determination of geographic markets the most difficult and most error-prone part of the assessment.

2.2 Survey

The survey in MARCO was designed to capture as many information as possible, while, at the same time, should allow integration of main findings of previous mappings. In order to do so, the survey was coordinated with the WP leader (LGI) and Matthias Themessl, who was (a) involved in previous mappings within the JPI Climate and the ERA-NET and (b) is a member of the MARCO Advisory Expert Committee.

The survey consists of 42 questions (open and closed) in total and is organised in two main parts. More general questions regarding the participating organisation were asked in the first section, while more detailed questions regarding specific CS products were asked in the second part. The second part of the survey consisted of three loops so that the participants were able to describe three of their services in more detail (but were also able to end the survey after the first and second service). The survey structure and questions asked are provided in table 3.

Table 3: Structure of survey and topics addressed

First section	Second section
<ol style="list-style-type: none"> 1. In which country (and city) are you located? 2. What type of organisation do you work at? 3. Is the provision of CS the main focus? 4. Number of staff devoted to CS 5. Which CS related activities do you perform? 	<p>Description of up to three services regarding</p> <ol style="list-style-type: none"> 1. Type of service 2. Targeted users 3. Targeted sector 4. Geographic market 5. Commercial or non-commercial provision

The survey was implemented on esurveycrator.com and launched in mid of June (remainders were sent out at the beginning September). The survey was made available to the CS community via:



- A specific HZG GERICS mailing list conducted for MARCO and EU-MACS consisting of roughly 600 contacts across Europe
- Through the Climate-KIC network
- The MARCO homepage and Twitter account

In order to reach out to as many CS providers as possible, the survey was disseminated via mailing lists but also via Twitter, websites etc. This makes the description of the basic sample difficult, if not impossible.

2.3 Desk Research

While for the project design the survey was meant to be the core activity for the mapping, it soon became clear that desk research would play a much bigger role than initially expected. The reasons for that are the following:

- A very similar mapping exercise has been conducted in the frame of the ERA-NET in the summer of 2016. As the community of CS providers was already invited to a mapping the previous year the motivation to participate in another mapping only one year later was low (cf. Swart 2017).
- It appears that public or research performing organisations are more open to respond to surveys compared to private businesses. The desk research thus played an important role to capture the private part of the market in particular.

The desk research took into account:

- The 188 private CS providers identified by kMatrix (cf. Poessinouw 2017)
- Partners in relevant projects in H2020 and FP7 identified via the CORDIS database (roughly 50 projects have been checked) focussing on private CS providers
- Known private CS providers that were invited to previous mappings but did not participate (cf. Göransson & Rummukainen 2014, Banos de Guisasola 2014, Engen Skaugen 2014, Cortekar et al. 2014)
- The publicly available information from the ERA-NET mapping taken from www.climate-knowledge-hub.org (profiles generated based on a survey)
- Additional desk search for specific countries so far underrepresented in the sample

2.4 Quality Assurance and Limitations

In order to check if, in particular, desk research provided reasonable results, some profiles were double-checked by two persons. In some other cases, in which staff from CS providers participated in the survey, the organisations' profiles were also subject to desk research. In both cases, the quality control procedures did not provide alarming results. The created profiles were congruent in most parts.

Desk research allows to collect many relevant information, but it is limited when it comes to the details, as in many cases, only generic information is available on organisations' websites. Some limitations are:



1. It is easy to find out, which are the targeted sectors or users / customers / clients or what types of climate services are offered. But it is only possible in very few cases to find out, if a specific service is only offered to a specific user or to all users mentioned on an organisations website.
2. Many private CS providers, for instance, offer risk assessments but it is not clear from their webpages, if climate is one component in these assessments. It might or might not be the case. In order to cope with this issue, a colour code is applied to the database:
 - Black font on white shows CS providers
 - Orange font on white shows organisations, which look further from the core of CS but may well pertain to connected regions 'in the box' of the broader perimeter we have agreed to explore in the project. What they provide as services relevant to climate is not clear from their websites. These organisations would reflect the example of risk assessments, corporate strategies or business management (which could or could not include CS).
 - Red font on white shows organisations that have activities related to climate, but clearly out of our box (see figure 1). Examples to this case are companies that make PR, communication or lobbying.

The methodology and terminology provided by kMatrix will be further improved throughout the project (in particular in Del. 2.2 and 2.3 that will, according to the project timeline, be submitted at the end of Nov. 2017 and end of Oct. 2018) that might result in more clarification on this colour coding. Changes can then be made to the database, as the methodology evolves (first improvements have already be announced for Del. 2.2).

3. Other limitations became obvious related to the 'type of organisation', 'geographic market' and the commercial (or non-commercial) mode of provision.
 - The categories for types of providers are to some extent overlapping, as at least some research performing organisations (RPO) are also non-profit organisations (NPO) (according to their websites); there are other that are private. All of them were categorised as research organisations.
However, even though some climate services providers could be categorized as RPO and NPO **does not** lead to double counting. The first order criterion is the name of climate services provider and then it is categorized as RPO or NPO. The same applies to other potential overlaps. The entire database is double-checked with respect to double-counting of providers.
 - The differentiation of private providers in large company, SME and start-ups in some cases is difficult based on the publicly available information. There is a definition of SME from the European Commission but there is none for start-ups (except 'fluent' explanations mostly including terms such as 'engaged in technological innovation' or 'engaged on new or emerging markets').
 - Geographic markets are also often difficult to identify. Many organisations operate on a European or global "market" but do provide local solutions. In only very few case organisations state, that they focus on, e.g., Norwegian cities or regions.



- The provision mode is typically not easy to assess and might in many cases reflect a continuum. Commercial provision aims at generating revenues. Public providers are typically not allowed to generate substantial revenues but could, nevertheless, they charge prices for their products. These prices, however, are typically only cost covering. That is why all organisations belonging to the public domain (Nat. Meteorological Organisations, (most of the) universities and research performing organisations, public administrations) do not mainly provide services commercially (but could for sure charge a cost covering price).
4. Due to the financial and time restrictions it was not possible to identify all European-based climate services providers. **The sample thus does not claim to be complete or representative.** Biases might result, e.g. from language restrictions. Even though LGI – a supporting partner for this task – has an extraordinary large language variety in their portfolio it is not possible to cover all European languages. Many of the smaller providers often might only have a website in their language and could for this reason not be identified.



3 Database of European-based Climate Services Providers

During data mining – i.e. survey and desk research – information about 500 CS providers was collected and collated in a database: MARCO **Deliverable 3.1 – Development of a categorized database of EU-based climate services providers**. This number reflects the status as of 02. April 2018. This number has changed as findings from other work packages, in particular work package 5, have been included. This has been done after the evaluation, which was conducted between October and December 2017.

The database provides information to the questions raised in section 1.2, which are:

- Who is providing CS?
- What CS related activities are they engaged in?
- Which types of CS do they provide?
- Who are the targeted customers / clients / users?
- Which sectors do climate services providers approach?
- Which geographic markets do climate services providers address?
- Are the provided services mainly commercial?

In addition, the following information are included:

- Department in organisation (in some case more than one department of an organisation participated)
- Country and city
- Website, from which the information was collected
- Whether or not CS are the organisations main activity
- Number of staff devoted to CS activities (only for those organisation that participated in the survey)
- Source of information (survey, desk research, kMatrix to give hunches to the reader, if the information is provided by the organisations themselves or collected externally)
- Additional information on findings that do not fit in any of the categories

The database is provided as an excel file embedded in this pdf file. The first sheet contains a cover page, the second sheet provides a introduction briefly summarizing the terminology applied as well as a brief explanation of the colour code of different entries (see also figure 2). The third sheet provides information on the climate services providers as outlined above. The third sheet consists of 72 columns and could thus not be displayed here, as it is simply too large.



Type of organisation *	CS related activities *	Types of CS *	Targeted customer / clients / users *	Targeted sectors *	Targeted market	Provision mode
Nat. Met Service	Data collection & observations	Advisory services, risk assessments and decision support tools	Small businesses, practitioners, e.g. architects, engineering offices	Water	local	free of charge
Public Climate Service Center	High-performance computing	Data management, incl. calibrated data sets, data archiving, data certification	Corporations/ Industries	Forestry	regional	commercial
University or Research Performing Org.	Model development	Measurements, incl. instruments and technologies for measurements and calibration	Researchers	Agriculture	national	
Non-Profit-Organisation	Modelling and re-analysis	Modelling, including climate, impacts and socio-economics	Consultancies	Tourism	transnational	
Industry or professional body	Climate information and knowledge	Operations (collection and provision of raw data)	Public decision makers / politicians	Energy	global	
Public administration / politics	Regional downscaling	Processed data, incl. re-analysis	General public and media	Building & Construction		
Industry / large company	Impact modelling (incl. socio-economics)	Publications, e.g. synthesis and assessments, guidance documents, manuals	Other	Catastrophe Management		
SME	Consultancy services	Capacity building / training		Health		
Start-up	Other	Other		Biodiversity		
Other				Ecosystems		
				Transport & Logistics (Critical) Infrastructures		
				Industry & Trade		
				Urban / Spatial Planning		
				Finance & Insurance		
				Nutrition		
				Waste Management		
				Social Structures & Governance		
				Education		
				Other		
* own segmentation based on previous mappings	* Terminology taken from the "essence of climate services" (cf. European Commission, 2015)	* kMatrix terminology + capacity buildings & trainings	* targeted customers / clients / users chosen in accordance with previous mappings	* sectors deviating from kMatrix terminology; chosen from previous mappings		

Figure 2: Structure of Climate Services Providers Database.

The results generated from this database will be provided in **MARCO Del. 3.2 – Analysis of European climate services providers.**

However, it has to be kept in mind that the mapping provides a **static view of the market**. An outlook, i.e. a **more dynamic view**, in which direction the market could potentially develop will be given in the gap analysis (task 2.2) and the corresponding Del. 2.5. This deliverable will integrate findings from the quantitative and qualitative providers (WP3 and WP4) and users assessments (WP4 and WP5) as well as the market foresight activities (WP6).



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