Deliverable Proof – Reports resulting from the finalisation of a project task, work package, project stage, project as a whole - EIT-BP2020

Name of KIC project the report results from that contributed to/ resulted in the deliverable	**Transformation of Regional Energy Agencies for Climate (T4C) Project**
Name of report	**Deliverable 2: "Deep analysis of current governance models and capacities of Energy Agencies"**
Summary/brief description of report	The aim of this Deliverable is to provide an in-depth analysis of the current organizational set-up of Energy Agencies at European level. EU Energy Agencies' current governance models, processes and systems, as well as the skills and capabilities of their employees, are mapped and analysed via an ad-hoc methodology including a comprehensive survey and a specific focus on the three agencies that are partners in the project. The results of D2 will serve as a basis for the development of the desired new model of operation and, along with D1 analysing the current ecosystem in which EAs are operating, will directly inform the "EU Master Strategy for the Transformation of Energy into Energy and Climate Agencies" (D.3).
Date of report	December 2020

Supporting Documents: attach in pdf format

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EIT Climate-KIC

Transformation of Regional Energy Agencies for Climate (T4C) Project

Deliverable 2: "DEEP ANALYSIS OF CURRENT GOVERNANCE MODELS AND CAPACITIES OF ENERGY AGENCIES"

December 2020

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1. INTRODUCTION

The aim of this Deliverable (D.2) is to provide an in-depth analysis of the current organizational set-up of Energy Agencies (EAs) at European level.

EU Energy Agencies' current governance models, processes and systems, as well as the skills and capabilities of their employees, are mapped and analysed via an ad-hoc methodology including a comprehensive survey and a specific focus on the three agencies that are partners in the project.

The results of D2 will serve as a basis for the development of the desired new model of operation and, along with D1 analysing the current ecosystem in which EAs are operating, will directly inform the "EU Master Strategy for the Transformation of Energy into Energy and Climate Agencies" (D.3).

2. THE ADOPTED METHODOLOGY

In order to perform the required analysis, the consortium adopted a bottom-up approach, taking existing models and practices in EU Energy Agencies relating to governance and internal organization as our starting point.

The procedure used to identify, select, process and analyse the information was the following:

- Survey (see section 3 for details): containing 43 questions focusing on various aspects of the topic of interest and sent to the widest possible number of EU Energy Agencies. The FEDARENE network as well as individual working contacts were leveraged in order to ensure maximum participation and response. Results were then analysed both qualitatively and quantitatively (see section 4 for details).
- Partner agencies' Self-Assessment (see section 5 for details): starting from the questions posed by the Survey, a self-assessment was performed on the three energy agencies that are partners in the project. Each agency performed its own self-assessment according to a previously agreed upon common structure, including: an overview on the legislative framework in which each agency is operating at national, regional and possibly local level (different from D1, where the legislative framework is considered at the EU level); the mission, vision and organizational structure of the EAs; the skills and capabilities of their people; the market opportunities of EAs, describing their current positioning on the market and also containing a first reflection on future potential market opportunities (an aspect which will be deepened in D3).

3.THE SURVEY

3.1 APPROACH

The questionnaire was designed with contributions by all partners. A free and easy to use online survey was thus created on the Google Forms platform.

The link to the questionnaire, alongside an invitation to complete it and a description of its (and generally the project's) main aims, was sent out via a dedicated email message on October 5th, and re-sent as reminder on October 12th and 15th. Further one-to-one messages were sent by project partners to individual contacts within EU agencies inviting them to participate.

In order for it to reach as many European EAs as possible, the questionnaire was conveyed through FEDARENE, the European Federation of Agencies and Region for Energy and the Environment, with over 80 members across 23 Countries in the EU. FEDARENE sent it to the mailing list of its members, which covers the vast majority of EU energy agencies including the three agencies that are partners in the project.

The response rate was fairly good and 27 filled-in questionnaires were reiceved from EAs of 14 different European countries, thus ensuring a significant geographical coverage. Most of the EAs declared regional

areas as their reference territory, but there are also a significant number of agencies operating at the macro-regional level; a smaller number of agencies that work at local level, and only one respondent has the national level as its reference territory (as shown in the following chart):

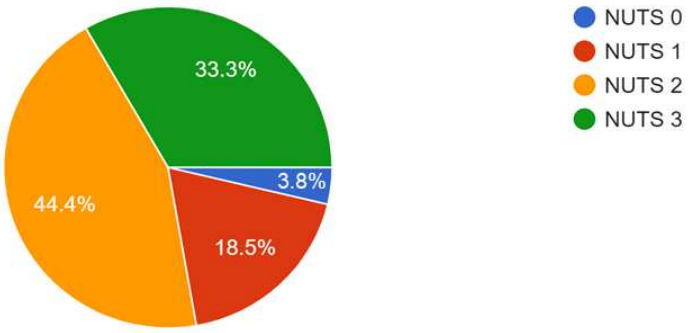

Figure 1 - Reference territory according to NUTS code

The size of the agencies was also very varied, ranging from very small (2 employees) to very large (1300), with an average of around 22 employees per agency (calculated taking off the extreme values in both directions).

3.2 QUESTIONNAIRE

The Questionnaire was composed of 43 questions organized into 5 sections:

1. **General data** (Company name, country, number of employees, reference territory etc.);
2. **Governance aspects, processes and systems** (type of organization and company management);
3. **Skills and capabilities** (staff education and experience on climate change adaptation issues);
4. **Barriers and needs** (support framework for climate change adaptation issues, external expertise needed or possible staff specific training);
5. **Reference market and business opportunities** (key stakeholders/competitors and business/services opportunities related to climate change adaptation issues).

Most questions were multiple-choice, but there were also opportunities to write freely and express one own's views.

For details, please see the full text of the questionnaire in the Annex.

4. THE RESULTS: STATE OF ART OF GOVERNANCE MODELS AND CAPACITIES OF EAs

On the basis of the 27 responses received, the state of the art of governance models, processes and systems as well as the capacities of European EAs is described in the following paragraphs.

4.1 ORGANIZATION OF EAs

Most of the responding agencies (about 70%) reported that they were a public organization. The remaining 30% is divided into the other categories according to the following chart:

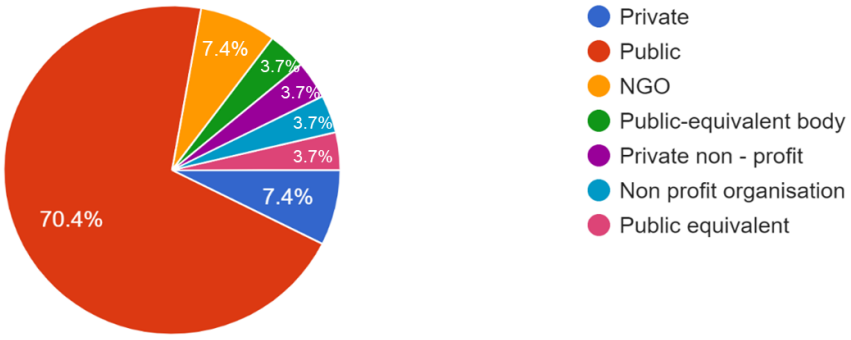

Figure 2 - Type of EAs organization

Most of the EAs work through dedicated departments (63% against 27%) but only 26% of the agencies have a "**Climate Change Adaptation" Department.**

Among the agencies who do not have this type of Department already in operation, only about 12% are planning to introduce it, 41% are not sure and 47% have no current intention of including a Climate Change (CC) Adaptation Department in their structure.

However, a significant share of responding agencies (around 75%) declare to be active in CC adaptation activities. EAs were asked to rate the role of the current and future climate change adaptation activities in relation to their agencies' daily assets and future business, from 1 (Not at all) to 5 (Key activity); the results of their replies are shown in the following two charts:

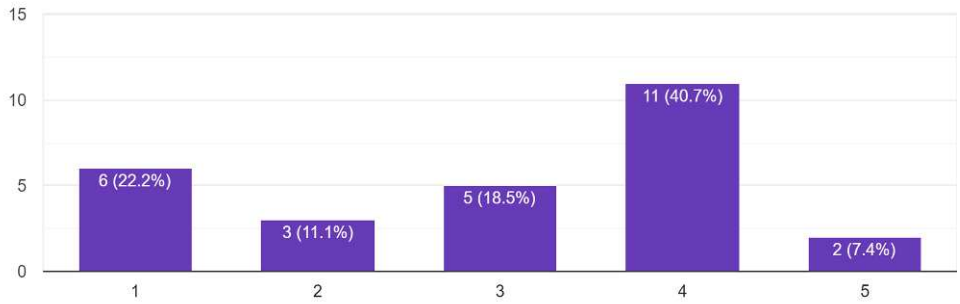

Figure 3 - Rating of current CC adaptation activities in EAs daily assets from 1 (Not at all) to 5 (Key activity)

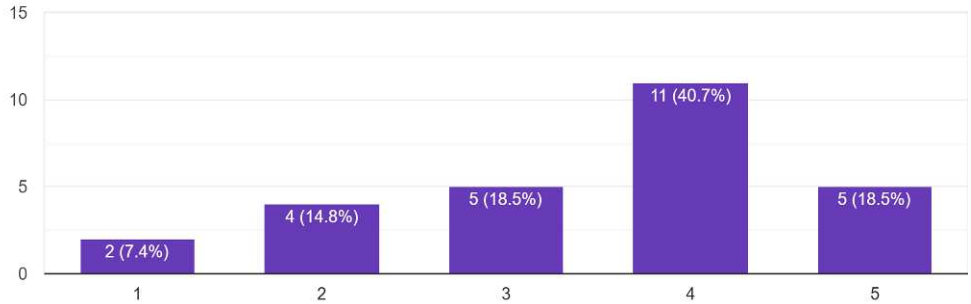

Figure 4 - Rating of future CC adaptation activities in EAs future business from 1 (Not at all) to 5 (Key activity)

From what has been declared by the responding agencies, it can thus be stated that, despite most of the EAs not having a dedicated “Climate Change Adaptation” Department, CC adaptation activities already represent a very significant asset of the EAs' current activities; in terms of future business, the respondent agencies recognize the value of these activities and are willing to further strengthen and increase their key role.

4.2 SKILLS AND CAPABILITIES

4.2.1 EXISTING SKILLS AND CAPABILITIES

In most of the respondent agencies (about 67%) no member of staff has specific education on CC adaptation. The remaining 33% of EAs report that their staff education on CC adaptation is mainly a result of training experiences like Master degrees in Environmental Sciences, PhD on climatology or shorter specific courses on climate change data and related databases.

It can also be noted that the percentage of staff with specific education on climate change adaptation is less than 25% of the EAs' total number of staff in almost 93% of the respondent agencies and in no agency is more than 75%; for the other agencies the percentage are shown in the following chart:

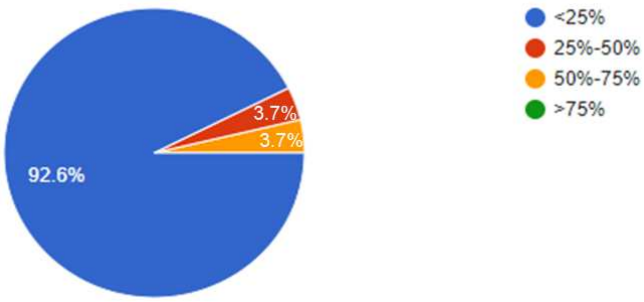

Figure 5 - Percentage of the EAs staff with specific education on CC adaptation

With reference to the working experience on CC adaptation, most of the respondent agencies (around 82%) state that some people in their staff have already worked on these topics.

In particular, the percentage of staff with working experience on CC adaptation is less than 25% of the EAs' total staff in almost 67% of the respondent agencies and is more than 75% only in 3,7%; for the other agencies the percentages are shown in the following chart:

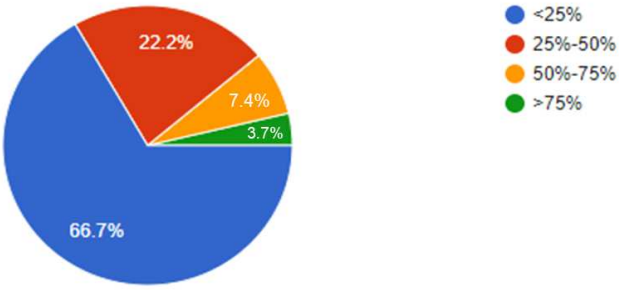

Figure 6 - Percentage of the EAs staff with working experience on CC adaptation

Speaking about proper working experience on CC adaptation, most of the agencies (almost 60%) have already developed a Sustainable Energy and Climate Action Plan (SECAP) in the framework of the Covenant of Mayors for Energy and Climate initiative.

Considering the EAs that have already developed at least one SECAP, the following chart shows the numbers of SECAPs developed by the responding agencies (from a minimum of 1- six agencies- to a maximum of 180 SECAPs -1 agency- already developed):

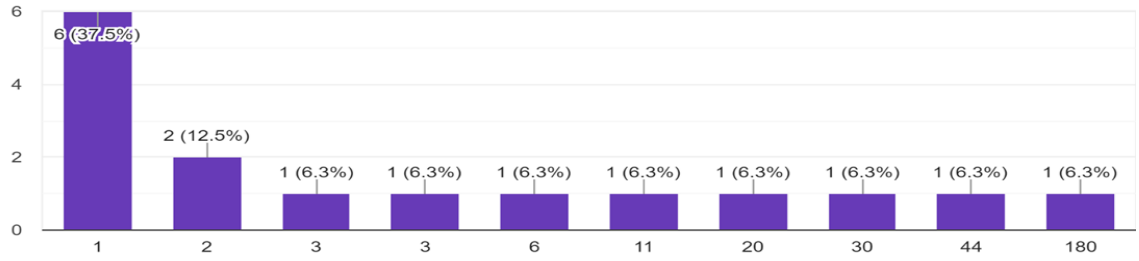

Figure 7 - Numbers of SECAPs developed by the responding agencies

From what has been declared by the respondent agencies, it can thus be stated that, despite most of the EAs having no staff with specific education on CC adaptation, there is already some substantial working experience on these issues, such as for example SECAPs development.

4.2.2 NEEDED SKILLS

Considering the EAs that have already developed at least one SECAP, agencies were asked to identify the needed external expertise on CC adaptation issues related to the CoM initiative, selecting one or more of the following options (reported with the number of preferences received shown in brackets – multiple choice available):

- Modelling climate impacts (12);
- Tools and methods to assess the present and future climate condition (10)
- Mapping city vulnerabilities and identifying assets at risk (9);
- Identification of adaptation measures (7);
- None of them (1)
- Others (specify) (0);

Most of the agencies (around 63%) are planning to offer services on CC adaptation and among these, around 54% have declared to need additional capacity (new staff or training of existing staff) to be able to offer those services (as shown in the following chart):

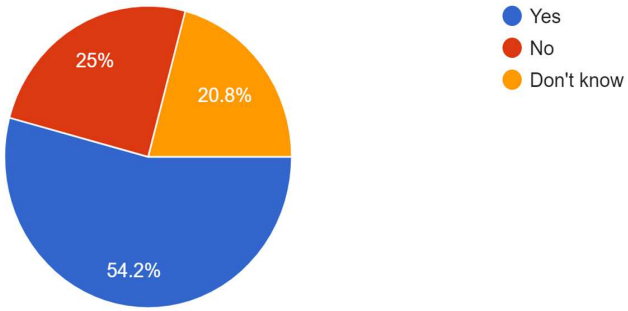

Figure 8 - Additional capacity needs to offer services on climate change adaptation

In order to offer services on CC adaptation, the respondent agencies stated that they need external expertise on the following issues (reported with the number of preferences received shown in brackets – multiple choice available):

- Modelling climate impacts (12);
- Tools and methods to assess the present and future climate condition (10)
- Mapping city vulnerabilities and identifying assets at risk (9);
- Identification of adaptation measures (6);
- Others (specify) (2) – "Developing support for local public authorities on adaptation to CC" and "Finance finding";
- None of them (2)

From what has been declared by the respondent agencies, it can thus be stated that most agencies needed external expertise in order to be able to offer services on CC adaptation, especially related to modelling climate impacts, tools and methods to assess the present and future climate condition and mapping city vulnerabilities and identifying assets at risk.

4.3 BARRIERS and NEEDS FOR TACKLING CLIMATE ISSUES (Gap assessment)

The agencies were asked to rate the level of support that their legal framework (local / regional/ national according the type of the organization) provides to CC adaptation activities; they could select a number from 1 (does not support at all) to 5 (full support). The following chart shows the results:

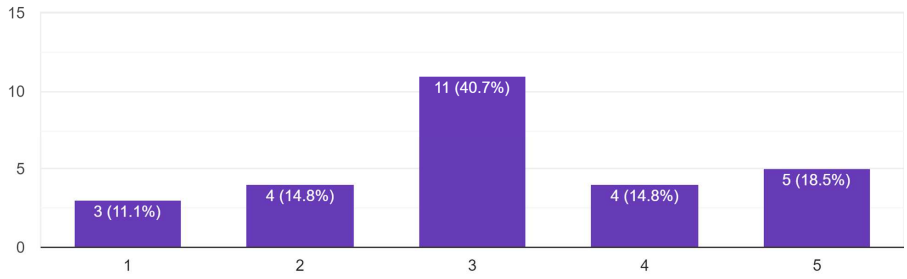

Figure 9 - Level of support of legal framework to EAs climate change adaptation activities from 1 (does not support at all) to 5 (full support)

EAs were also asked to identify the main barriers to CC adaptation issues; in particular, respondent agencies have rated the proposed barriers from 1 (low) to 4 (high), as shown as follows:

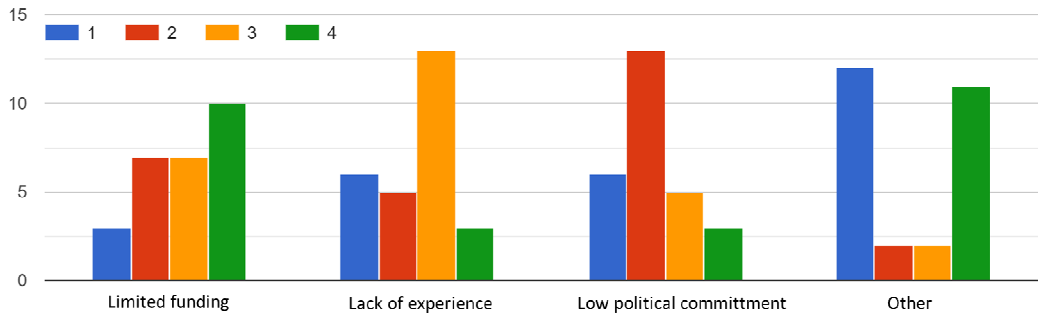

Figure 10 -Barriers to act on climate change adaptation issues from 1 (low) to 4 (high)

Among the proposed options, the main identified barrier seems to be “Limited funding”, with ten agencies rating it as high; followed by “Lack of experience” and “Low political commitment”.

EAs also had the opportunity to freely mention other barriers. Responses were as follows: lack of available trainings and workshops on climate change adaptation, lack of staff, poor coordination of initiatives and experts / stakeholders, regulation framework, technical barriers and different agency missions.

One of the main barriers identified is the lack of staff /lack of available trainings on climate change adaptation; speaking about this, most of the responding agencies (around 74%) stated that a specific training for their staff might enable their agency to foster project on CC adaptation issues. In particular, EAs expressed their interest in training on CC adaptation topics, selecting among the following options proposed by the questionnaire (reported with the number of preferences received shown in brackets – multiple choice available):

- Tools to downscale climate data (15)
- Mapping city vulnerabilities and assets at risk (15)
- Modelling climate impact (14)
- Identifying adaptation actions (12)
- None (5)

EAs were also asked to identify the key stakeholders for activities related to CC adaptation, ranking the proposed options from 1 (the most relevant) to 8 (the less relevant), as shown as follows:

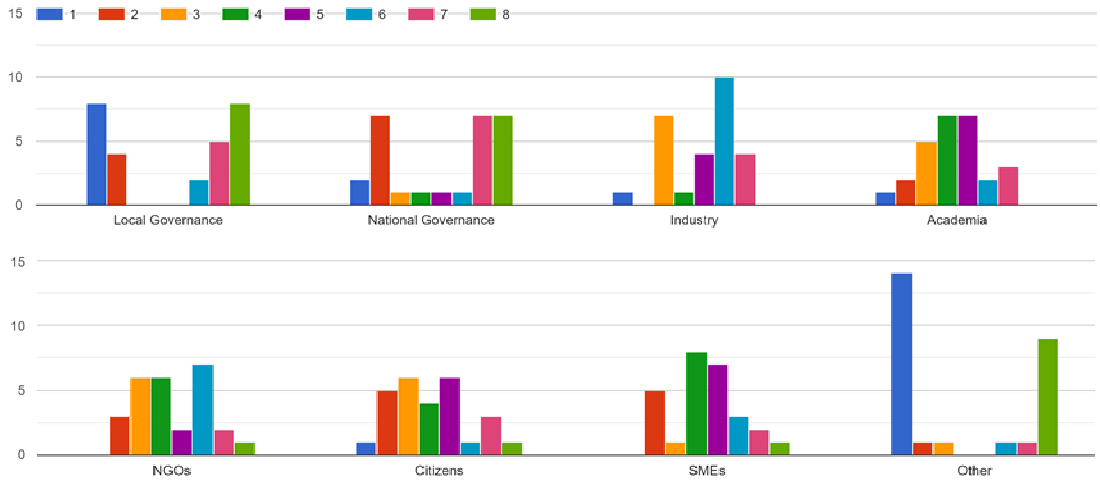

Figure 11 - Key stakeholders as identified by the EAs

Again, EAs were given the opportunity to freely mention other key stakeholders: answers included local nature managers, press, energy communities.

At the end of the questionnaire, respondent agencies were asked to assess the role of climate related activities in their future business, ranking from 1 (not relevant) to 5 (key activity); most of the agencies (around 41%) declare these activities to be very significant (level 3 shown below).

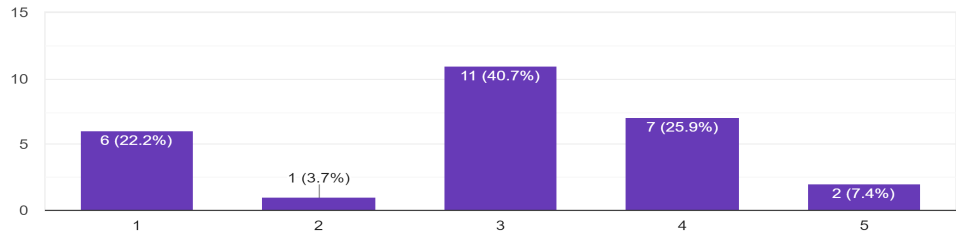

Figure 12 - Commercialization potential of climate related activities on the EAs future business from 1 (not relevant) to 5 (key activity)

From what has been reported by the respondent agencies, it can thus be stated that the main current barriers to act on CC adaptation issues are limited funding and the lack of staff/ and training on CC adaptation. Indeed, EAs identified specific training for their staff as one of their main needs for tackling climate issues, as it could enable them to foster climate-related projects and other activities deemed very significant for their future business.

5. THE SELF ASSESSMENT OF PARTNER ENERGY AGENCIES

5.1 REGEA

5.1.1 LEGISLATIVE FRAMEWORK

The main executive branch of government in Croatia is the Government of the Republic of Croatia. On the Country level, the counties of Croatia are the primary administrative subdivision. Croatia is divided into 21 counties (including the capital city of Zagreb which has the authority and legal status of both a county and a city). The counties are subdivided into 128 cities and 428 municipalities. Among the most relevant tasks that counties are tasked to perform for this document are administration related to agriculture, forestry, industry and construction, and other services to the economy at the county level, as well as road transport infrastructure management and issuing of building and location permits and other documents concerning construction in the county area. The local governments (city and municipality) may also perform each of those tasks at their respective levels according to the law.

In Croatia, REGEA is following the latest legislative regarding energy efficiency and climate. Currently most relevant is the **Integrated National Energy and Climate Plan for the Republic of Croatia for the period 2021-2030 (NECP)** published by the Ministry of Environment and Energy in December 2019**.** NECP combines four key strategies in the dimension of decarbonization:

- The Energy Development Strategy of the Republic of Croatia until 2030 with an outlook to 2050;
- The Long-Term Strategy to Encourage Investment in the Renovation of the National Building Stock of the Republic of Croatia by 2050;
- the Draft of the Low Carbon Development Strategy of the Republic of Croatia until 2030 with an outlook to 2050;
- the Climate Change Adaptation Strategy in the Republic of Croatia until 2040 with an outlook to 2070.

Targets set by the NECP by 2030 are as follows:

- 36,4% share of RES in the gross final consumption of energy;
- the primary energy consumption of 344,38 PJ, and final energy consumption of 268,91 PJ;
- targets for the reduction of greenhouse gas emissions:
  - in the ETS sector: at least 43% compared to the 2005 level;

- for non-ETS sectors: at least 7% compared to the 2005 level.

In order to strengthen energy security and reduce energy imports from third countries, Croatia is exploring the possibility to increase the production of domestic hydrocarbon resources. At the same time, Croatia also has plans to diversify natural gas supply routes by constructing an LNG terminal on the island of Krk.

Besides NECP, Croatia is issuing National Energy Efficiency Action Plans for a period of 3 years. The latest was the Fourth National Energy Efficiency Action Plan for the period from 2017 to 2019, and the 5th Action Plan is currently not released.

Legislative Barriers for climate issues implementation	Legislative Drivers for climate issues implementation
Cities do not have sufficient mechanisms to tailor their energy and climate policies and have very limited fiscal freedom to tailor taxes and incentives to implement "green solutions".	Transposition of the EU Climate law, which will delegate more responsibilities to the regional and local level. Making use of good practices from cities that are signatories of the Covenant of Mayors.
Identification of cities as beneficiaries for funding through different mechanism is still not on satisfactory level. Newly developed National adaptation strategy. Transposition of the New Green Deal into national legal framework.Identification of cities as beneficiaries for funding through different mechanism is still not on a satisfactory level.	Newly developed National adaptation strategy. Transposition of the New Green Deal into a national legal framework.

Table 1 - Legislative Barriers and Drivers for climate issues implementation – Croatia context

5.1.2 MISSION, VISION AND ORGANIZATIONAL STRUCTURE

Overview

REGEA, North-west Croatia Regional Energy Agency, was established in 2008 as a non-profit institution by Zagreb County, Karlovac County, Krapina-Zagorje County and the City of Zagreb under the framework of the Intelligent Energy Europe (IEE) programme.

REGEA has coordinated and participated in numerous international and national projects dealing with sustainable development and implementation of energy efficiency and RES measures. REGEA is developing innovative mechanisms for financing such projects such as Energy Performance Contract – ESCO model and Public-Private Partnership – PPP. One of REGEA's important areas of work includes the preparation of strategic and planning documents for its founders (i.e. regional authorities), but also for other Croatian cities. Other than that, REGEA also has experience in preparing background papers, technical calculations and analyses, feasibility and pre-feasibility studies, business plans and other financial analyses, construction project management, supervision and technical supervision and energy examinations energy certifications.

Mission

The main objectives and the role of REGEA are to promote and encourage the regional sustainable development in the fields of energy and environmental protection through the implementation of energy efficiency measures and the utilization of renewable energy sources.

Its activities include:

- Supporting the development and implementation of national, regional and local energy investment projects (e.g. building energy renovation and construction).
- Developing long-term strategies, energy efficiency programmes and action plans (e.g. national strategies, SMART City strategies and SECAPs…).

- Developing innovative mechanisms for financing energy projects such as Energy Performance Contract –ESCO model and Public-Private Partnership – PPP.
- Preparing background papers, technical calculations and analyses, feasibility and pre-feasibility studies, business plans and other financial analyses.
- Construction project management, supervision and technical supervision.
- Energy examinations, energy certifications.
- Education and promotion of best practice, issuing educational publications.
- Launching promotional and crowdfunding campaigns.

Vision

REGEA's vision is to guide Counties and Municipalities to become greener, smarter and more sustainable and resilient. REGEA is nurturing the good cooperation with Municipalities and Counties to try to guide them in delivering the Green Deal and achieving carbon-neutrality and implementing the most effective climate change mitigation and adaptation measures for Croatia.

To do so, REGEA wants to bring in the best, most innovative projects and green technologies at a local level in the fields of energy, climate, transport, infrastructures, urban regeneration and digitalization, while at the same time promoting citizens engagement and empowerment.

Organizational structure

REGEA counts 32 employees with one Director, 2 Deputy Managing Directors, 3 Assistant Managing Directors and 26 professionals, divided into 3 offices. While the Director is situated in the main office, in the Bračak Energy Center, the 2 Deputy Managing Directors in Zagreb Office, each office has one Assistant Managing Director that coordinates the tasks in the office. Most of the employees are situated in Zagreb Office (17), followed by the Bračak Energy Center (11) and Karlovac (4).

All 3 offices are managing the projects for their Counties and Municipalities in the Counties. In most cases, professionals working in the offices have enough knowledge to be able to manage all the projects for their Municipalities, but in rare times when that is not the case, other offices jump in, offer their expertise and help to train their colleagues in the area that is needed.

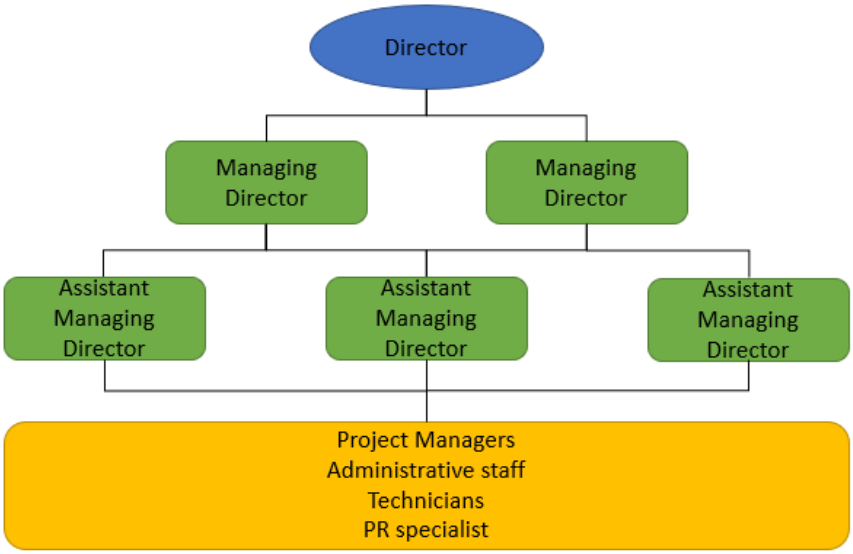

Figure 13 REGEA's organizational structure

5.1.3 SKILLS AND CAPABILITIES

REGEA as previously mentioned, counts 32 highly-skilled employees. Currently, there is one Director, 2 Deputy Managing Directors, 3 Assistant Managing Directors and 26 professionals. 44% of REGEA's employees are female. Turnover is very low. Most of REGEA's staff hold Degrees in Engineering (19) and Economics (9), one in Architecture and one in Public Relations. The number of employees with no higher education is 3, working as technicians and in the administration.

REGEA has coordinated and participated in numerous international and national projects dealing with sustainable development and implementation of energy efficiency and RES measures. One of REGEA's important areas of work includes the preparation of strategic and planning documents for its founders (i.e. regional authorities), but also for other Croatian cities. Another key area of work and expertise in the development and implementation of innovative financial models for renewables and energy efficiency projects based on project/investment aggregation, which are applicable on the regional but also on the national level. All of the employees of REGEA speak English.

No employee has any specific education, qualification or certification in climate change and adaptation topics.

5.1.4 MARKET OPPORTUNITIES

REGEA is Croatia's largest Regional Energy Agency and a recognized centre of excellence in the area of climate and energy. As such, the current role of REGEA in the energy and climate market is mainly:

- to support City of Zagreb, Karlovac County, Krapina-Zagorje County and Zagreb County in energy-related activities, such as energy planning but also urban planning;
- to support Local Authorities in the Covenant of Mayor's initiative, drafting their Sustainable Energy and Climate Action Plan. To support integrated energy and climate planning in general:
- to develop long-term strategies, energy efficiency programmes and action plans;
- developing innovative mechanisms for financing energy projects such as Energy Performance Contract –ESCO model and Public-Private Partnership – PPP;
- to develop and participate in EU projects (in the fields of energy and climate, sustainable development, smart city, alternative fuels, circular economy etc.).

Next to the current efforts, in the terms of future growth REGEA will strongly focus on the following:

- supporting the development of a regional network of public and private stakeholders that could guide Croatia into the carbon-free future and help with the development and implementation of climate change mitigation and adaptation strategies
- increasing the participation to climate-related EU, national and local projects;
- supporting integrated energy and climate activities;
- supporting Local Authorities and other bodies (mainly public, but potentially also private ones) in the promotion and setting up of energy communities.

5.2 IRE

5.2.1 LEGISLATIVE FRAMEWORK

In Italy, Regions represent the first level constituent entities of the State government. There are 20 Italian regions (15 with ordinary statute and 5 with special statute), in turn divided into Provinces, Municipalities and Metropolitan cities. Each region is a territorial body with its own statutes, powers and functions according to the principles established by the Italian Constitution. From the legislative point of view, legislative power belongs to both the State and to the Regions, placed on the same level; the competence is attributed by subject. Specifically, Regions have competence over energy and climate; this has a direct impact on the work of IRE with Liguria Region and Local Authorities, which is thus deferring to regional laws with the exception of voluntary initiatives such as the Covenant of Mayors.

In Italy the **national legislative context** on climate and energy in which IRE Spa is operating is based on two pillars:

1. **The Integrated National Plan for Energy and Climate (PNIEC):** this plan was published in January 2020 by the Economic Development Ministry and was sent to the European Commission in implementation of Regulation (EU), 2018/1999. It sets binding national 2030 targets on energy efficiency, renewable sources and the reduction of CO_2 emissions. It also establishes targets to be achieved in terms of energy security, interconnections, the single energy market and competitiveness, development and sustainable mobility, defining precise measures that guarantee the achievement of the objectives defined within the Paris agreement and the transition towards an economy zero climate impact by 2050. The plan is structured on five integrated lines of intervention: decarbonization, efficiency, energy safety, market development and research, innovation and competitiveness. In particular, PNIEC sets the following 2030 targets:
    - 30% of the share of energy from RES in Gross Final Energy Consumption (at least 14% covered by Transport sector);
    - 43% reduction in primary energy consumption compared to the PRIMES 2007 scenario;
    - 33% reduction of greenhouse gases.
2. **National Plan for Adaptation to Climate Change (PNACC):** this Plan, as implementation document of the National Strategy for Adaptation to Climate Change (SNACC), represent the key reference in term of climate change (CC) adaptation in Italy, since:
    - It contains the updated picture of current climatic trends and future climatic variations at national level, identifying homogeneous climatic areas (i.e. portions of territory characterized by similar climatic conditions during the historical reference period and similar projections of climatic anomalies);
    - It analyzes the expected impacts and vulnerabilities of several environmental resources and socio-economic sectors;
    - It identifies about **350 possible adaptation actions** (Soft, Green e Grey) and tools for their monitoring and evaluation of effectiveness, suggesting a timeline for their implementation and possible sources of funding at European, national and regional level.

To ensure the greatest possible participation in the drafting of this document, the Ministry of the Environment and Sea and Territory Protection launched a public consultation at the beginning of 2017. A second consultation was held in 2018 and led to a sharing of the Plan by the Regions; PNACC is now undergoing the Strategic Environmental Assessment (VAS) procedure in order to become effective.

At the regional level, to this day the drafting of a Regional Strategy for adaptation to CC is not compulsory; however, Regional Strategies and Plans have been strongly recommended during the PNACC consultation

phase, in order for its implementation to be truly effective at local level. This could be the main point of weakness of the regional legislative framework.

Liguria Region is now in the early stages of the process of defining its Adaptation to CC Regional Strategy; it will probably be the main topic of works for the new upcoming Regional Board and Council (after the latest elections held at the end of September 2020), together with the updating of the Regional Environment Energy Plan 2014-2020.

As Regional Energy Agency, IRE is entrusted by law to support Liguria Region in its energy planning. Since at the European and national levels the trend is to integrate energy and climate, IRE could provide support to the Region also in relation to climate issues, in synergy with other relevant subjects such as the Regional Environmental Agency, the University and other Research Centers (as better described in the "Market opportunities" section).

Legislative Barriers for climate issues implementation	Legislative Drivers for climate issues implementation
Long procedures of the Legislative tools (Plans and Strategies) to become effective	National Plan for Adaptation to Climate Change (PNACC) as key pillar of legislative context on climate issues
Regional Strategy for Adaptation to CC not compulsory by law	Italian Regions have strong autonomous legislative power
Currently the local level is still involved in climate issues only thanks to individual initiatives of the municipalities	Strong recommendation to Italian regions to draft a Regional Strategy for Adaptation to CC

Table 2 - Legislative Barriers and Drivers for climate issues implementation – Italy context

5.2.2 MISSION, VISION AND ORGANIZATIONAL STRUCTURE

Overview

IRE is a public joint-stock company established by Liguria Region (in North-West Italy) to deal with Infrastructure development, building and urban Renovation and the implementation of Energy policies at regional level.

It was created in 2014 from the merging of three existing regional agencies: the energy agency "ARE" (born in 1996 in the framework of the SAVE/PERU European programme and subsequently recognized with a regional law), the building renovation agency "ARRED" and the infrastructures development agency "Infrastrutture Liguria". In 2018, a fourth entity, the development agency of Savona city "IPS", also merged into IRE, thus bringing the number of its employees up to 44. A further merge with another local technical agency dealing with infrastructures and environmental remediation might be in the pipeline in the near future. IRE currently has two offices, the main one located in the city centre of Genoa and a local branch in Savona city.

In terms of ownership, IRE's majority shareholder is the regional Government through its holding company for economic development FILSE (94%). The remaining shares are split between various local public entities: Municipalities (including the three largest cities in the Region – Genoa, La Spezia and Savona – and various smaller ones, for a total of 19 Municipalities), one Province, the University of Genoa, the 4 public Social Housing Operators, the Ports of Genoa Authority and Genoa's Chamber of Commerce.

According to the national law applying to in-house public companies, at least 80% of IRE's turnover needs to result from activities for its public shareholders, but the company is allowed to work for private clients for up to 20% of its turnover. Up to this day, however, IRE has been working exclusively "in-house".

project management, supervision and technical supervision and energy examinations energy certifications.

Mission

IRE's mission is to provide technical support to the Regional Government and the other local public entities (mainly the Municipalities of Liguria) concerning its three main areas of expertise:

- Renovation, management, valorisation and development of new infrastructures (roads, bridges, river banks, etc.) in the regional territory;
- Building and urban regeneration, urban planning, social housing and valorisation of the public building stock;
- The Energy sector, in particular energy planning, the introduction of new norms and implementation of energy policies, implementation of energy innovation projects and initiatives;
- European and National funds research, in order to maximise interventions and integrate/ increase direct regional investments.

IRE also acts as Central Purchasing Body on behalf of Liguria Region.

Specifically, IRE's Energy Department has as its main aims the identification, promotion and implementation of energy policies and the introduction of new energy technologies within Liguria Region. It supports the regional authority and the other local administrations (mainly municipalities, but also Port Authorities, Provinces, regional Parks, etc..) in the elaboration and implementation of energy and climate plans and CoM related activities; promotes the local acquisition of energy laws; manages a consortium of public entities to procure electricity on the market as well as the regional procedure for the energy certification of buildings. Other activities include the monitoring and evaluation of energy interventions, the promotion of sustainable mobility, the development of innovative financing schemes for energy efficiency and energy training and awareness-raising activities.

IRE is also active at international level, in the past two decades taking part in over 50 EU projects mostly focusing on energy policy priorities. In recent years, IRE's EU activity has been extending its focus beyond energy to also include climate and sustainable topics such as green infrastructures, nature-based solutions, urban regeneration/ heritage and mobility.

IRE’s main client is Liguria Region (47% in 2019); other clients include the regional healthcare sector (8%), the regional financial holding company (11%), the EC through EU projects (4%), and others (mainly Municipalities). About half of IRE’s turnover is generated by activities in the energy sector (40%); 28% by activities in the Urban regeneration sector, 17% by activities in the Infrastructures sector, 8% by activities in the healthcare sector and 5% by European projects.

Vision

IRE's vision is to make Liguria Region greener, smarter, more sustainable and resilient by working in close cooperation with its Municipalities. Its overarching aim is to support the Liguria territory – which is a very peculiar and fragile one – in delivering the Green Deal and achieving carbon-neutrality by 2050, promoting and mainstreaming the most effective mitigation and adaptation solutions to respond to current climate change challenges.

To do so, IRE will bring in the best, most innovative and green technologies at local level in the fields of energy, climate, transport, infrastructures, urban regeneration and digitalization, while at the same time promoting citizen engagement and empowerment. These smart technologies are to be introduced and adapted to the local conditions, with the objective to make the Liguria territory increasingly livable and responsive, a place where people want to live and work in because of its high quality of life.

Organizational structure

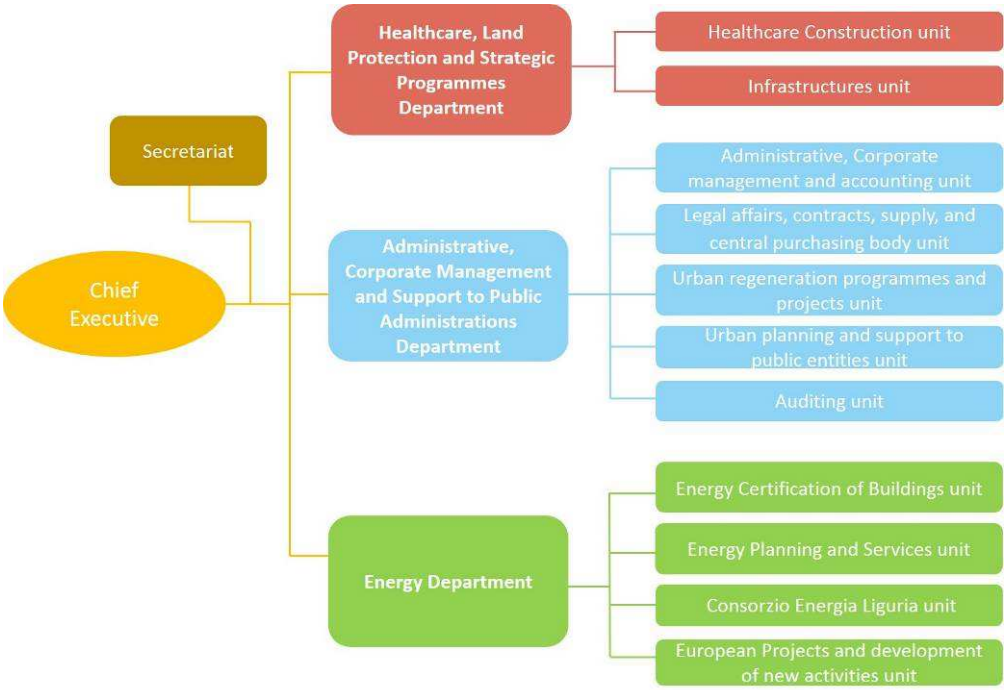

Figure 14 - IRE SpA Organizational Chart

IRE has a Chief Executive, appointed by the Regional Government and serving a three years mandate (which can be extended once for further three years); a Board of Statutory Auditors, appointed by the shareholders every three years; and three top-level employees as Directors. Each Director manages one of the agency's three Departments, namely:

- "Healthcare, Land Protection and Strategic Programmes" Department, divided into the "Healthcare Construction" and "Infrastructures" Units.

- "Administrative, Corporate Management and Support to Public Administrations" Department, divided into five Units: "Administrative, Corporate management and accounting" ; "Legal affairs, contracts, supply, and central purchasing body"; "Urban regeneration programmes and projects"; "Urban planning and support to public entities"; "Auditing".

- "Energy" Department, divided into four Units: "Energy Certification of Buildings"; "Energy Planning and Services"; "Consorzio Energia Liguria" (public regional consortium to purchase electricity on the market); "European Projects and development of new activities". The Energy Department also has a Technical Director reporting directly to the Department's Director.

Since IRE is not a public-body (i.e. a local administration) but a public-equivalent body, its employment policies and procedures are a hybrid between public and private: employees have private sector contracts but are selected and hired through a public call, in line with the national legislation for this type of companies. The same legislation also encourages exchanges/ secondments of employees among similar public-equivalent bodies while searching for specific skills, in order to avoid hiring new staff as much as possible; hence, one IRE employee is currently working in secondment in another public regional company; conversely, one professional is currently working in IRE seconded from another regional company. IRE also occasionally hires consultants to carry out specific tasks.

5.2.3 SKILLS AND CAPABILITIES

IRE counts 44 highly-skilled employees evenly divided into its three Departments. In 2020 there are 3 directors, 12 managers and 29 professionals.

66% of IRE employees are female. The average age is 44,8. Turnover is very low (-6%).

Most of IRE's technical staff holds Degrees in either Engineering (17) or Architecture (8), with a handful of exceptions holding Law (1), Economics (5), Sociology (1), Foreign Languages (1) and Political Science (1) Degrees. The number of employees with no higher education is 8, working either as Assistants or in the Administrative Department.

Specifically, the Energy Department employs 17 people, of which 1 General Director, 1 Technical Director, 6 are working in the Energy Certification Unit, 5 in the Energy Planning Unit, 1 in the Consorzio Energia Liguria Unit and 3 in the European projects Unit.

IRE's Energy Department employees have technical expertise in energy projects design, planning and implementation; public procurement and tendering procedures for energy; monitoring and evaluation of energy projects; project management; communication and dissemination; energy training; support to regional policy making and in the management of ERDF calls; EU funds research and management. As for formal certifications, we can mention the following ones obtained by its staff:

- Project Management Certification (held by 16 employees)
- Expert in Energy Management (EGE) Certification (2 employees)
- IPMVP protocol Certification (1 employee)
- Home Energy Advisor (HEA) Certification (1 employee)
- Energy Auditors for Buildings (4 employees)
- EEA Certification (2 employees)

About 70% of the Energy Department’s staff speaks good English, a higher percentage than in the other Departments.

No employee within the Energy Department (and the company in general) has any specific education, qualification or certification in climate change and adaptation topics. One engineer within the Department holds a specialization in Environmental issues.

5.2.4 MARKET OPPORTUNITIES

The current role of IRE in the energy and climate market is mainly:

- to support Liguria Region in energy-related activities, such as energy planning, energy certification of buildings process, promotion of e-mobility, etc.;
- to support Local Authorities in the Covenant of Mayors initiative, drafting their Sustainable Energy and Climate Action Plan;
- to act as Central Purchasing Body for energy for public Authorities, through an Agreement between IRE and Consorzio Energia Liguria;
- to support Local Authorities in the development of EIB-ELENA applications, and more generally in finding resources for implementation of their energy innovation projects;
- to develop and participate in EU projects (in the fields of energy and climate, sustainable development, smart city, alternative fuels, etc.), both as project partner or subcontractor of Liguria Region or other Municipalities (especially Genoa and Savona).

In terms of future growth opportunities, since the actual trend is to integrate energy and climate issues, IRE is planning to explore new potential opportunities such as:

- increasing the participation to climate-related EU, national and local projects (on adaptation to CC, Nature Based Solutions, resilience, urban regeneration linked to CC effects, etc..);
- supporting Liguria Region in integrated energy and climate activities (such as Regional Strategy for adaptation to CC in synergy with the update of the Regional Energy Plan);
- extending its activity of guidance and support at local level to also include private clients, thus playing a driving role for the innovation of the regional territory. In this sense, IRE could act as the subject linking the public and private sectors, on the one hand supporting the public sector in the definition of policies and actions; while on the other hand, helping the private sector developing technologies and implementing the actions;
- supporting the Liguria Port Authorities (and potentially other Italian Port Authorities) in integrated energy and climate planning;
- supporting Liguria Region in setting up and developing a regional network of public and private stakeholders for the study and testing of alternative fuels and technologies for the energy transition, with a specific focus on hydrogen;
- supporting an ever increasing number of Local Authorities in the transition from SEAP to SECAP, with a specific focus on urban resilience;
- supporting Local Authorities and other bodies (mainly public, but potentially also private ones) in the promotion and setting up of energy communities, also capitalizing on the experience gained with the Consorzio Energia Liguria in the energy contracts management.

5.3. CEA

5.3.1 LEGISLATIVE FRAMEWORK

The governance system in Cyprus is quite centralised, with Government and public services administered by the Council of Ministers, which is the executive branch of the government and is made up of the President of the Republic and the Ministers of each government department. Conversely, local authorities in Cyprus have less powers with the general duties and powers of each municipality/local authority defined within the Municipalities Law 111 of 1985 – 16/02/2011, including the municipal budget and the various income streams, including taxes, fees, rates, duties, and fines. A significant percentage of each municipality's budget is comprised of an annual grant from the government, which is approved by the Council of Ministers. In addition, large projects, including infrastructure development projects, are primarily financed by central government, and must be approved by the Council of Ministers.

The centralised governance system in Cyprus has a direct impact on the work of CEA with local authorities, as local authorities do not have the powers to take more ambitious action on energy and climate, and are constrained by central government legislation and policy.

As an EU MS, Cyprus has developed an integrated **National Energy and Climate Plan** (NECP) which sets out the national targets, strategies, policies and programmes of Cyprus for the period 2021 to 2030. It defines relevant targets and implementation strategies for each of the five Energy Union Dimensions (energy security & promotion of renewable energy sources; the internal energy market; increasing energy efficiency; reducing emissions and decarbonising the economy; and research and innovation) as well as targets related to climate change and the Paris Agreement.

The targets for Cyprus are outlined in the Figure below:

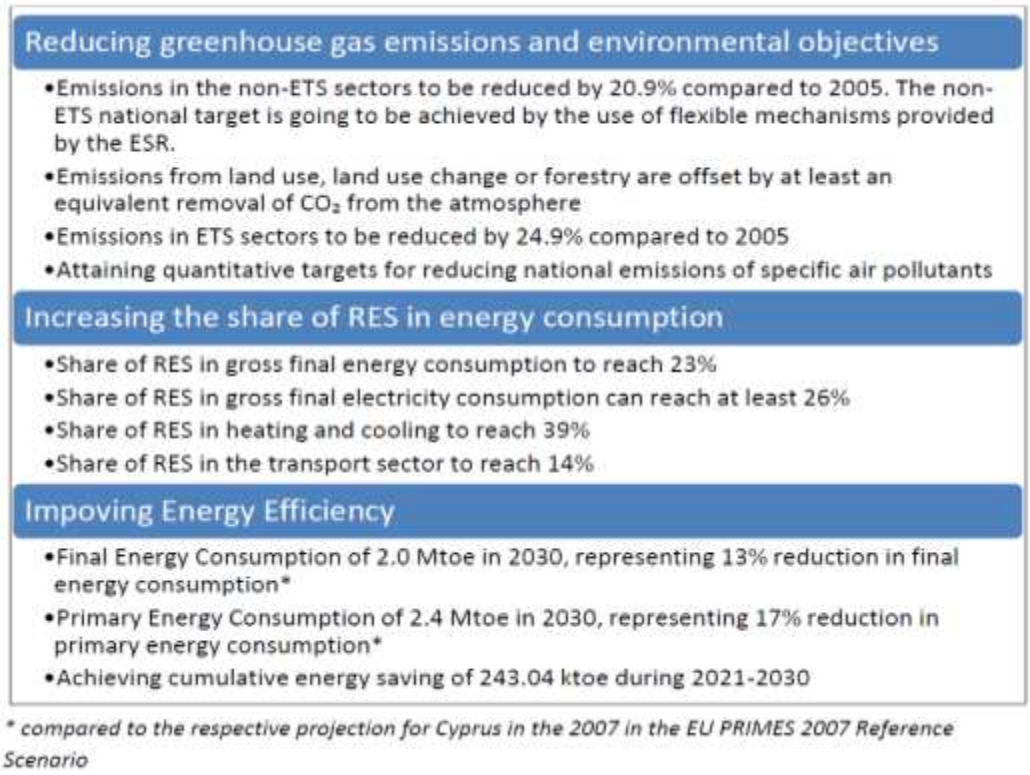

Figure 15 – Cyprus National Energy and Climate Plan targets

Beyond the targets and policies set out in the NECP, action on energy and climate is further promoted in several supportive policies and strategies, including:

1. **National Strategy and Action Plan for the Adaptation to Climate Change**; adopted in May 2017 by the Council of Ministers (decision no. 82.555). The National Climate Change Adaptation Strategy (2016) sets out the adaptation measures and actions that will be taken over short timescales (i.e. immediately), mid-timescales (up until 2020) and longer timescales. A total of 69 adaptation measures and actions are described, for the natural resources and sectors that were identified as at risk from climate change in the country's Climate Change National Risk Assessment:
    - Water resources (7 measures)
    - Land resources (4 measures)
    - Coastal regions (4 measures)
    - Biodiversity (11 measures)
    - Agriculture (6 measures)
    - Forestry (10 measures)
    - Fishing and aquaculture (2 measures)
    - Public Health (9 measures)
    - Energy (9 measures)
    - Tourism (1 measure)
    - Infrastructure (6 measures)
2. **National Long-term Strategy for Renovation of Buildings**; adopted in April 2020, which sets out the legislative measures, incentives, measures, and actions to support the renovation of the building stock in Cyprus, for both public and private buildings. Examples of the measures within the Strategy include:

    - Minimum requirements for the Energy Performance of buildings set out in legislation. As part of this legislation, as of June 2020 all domestic buildings (homes) that undergo deep renovations must achieve an energy rating of A, whilst smaller types of renovations must achieve an energy rating of B+.

- Conduction of energy audits of large businesses every 4 years.
- Financial incentives, through the provision of subsidies for the installation of RES and upgrading of insulation in buildings.
- Roll-out of smart meters.
- Targets for renovation of public buildings (e.g. 3% of the total floor area of buildings owned by central government to be renovated each year as per Art. 5 of the EED 2012/27/EE) and energy efficiency of public buildings (e.g. central government must only buy and rent buildings with a high energy efficiency rating and all new central government buildings must be NZEBs).

In general, the key weakness in the legislative framework around energy and climate, is the lack of enforcement of the various legislations and requirements therein. A lack of good practices around regulatory and policy measures further impedes the full and proper implementation of the energy and climate legislative framework.
There are additional weaknesses specific to Cyprus, the primary one being that the electricity market in Cyprus is a monopoly; there is only one electricity generating organisation, the Electricity Authority of Cyprus, which is a semi-governmental organisation. There are steps to liberalise the electricity market, but there have been significant delays in implementation. Related to this, the requirements for energy communities in the Directive on common rules for the internal market for electricity have not been transposed in Cyprus, which impedes the ability of local authorities, communities and households from taking ambitious action and self-generate and self-consume electricity from renewable energy sources, which has knock-on effects in the achievement of emission reduction targets.

Legislative Barriers for climate issues implementation	Legislative Drivers for climate issues implementation
The actions and measures within the NECP are centralised, with responsibility for their implementation lying with central government departments and very little role given to local authorities.	National Long-term Strategy for Renovation of Buildings, which provides several incentives to improve the energy performance of the building stock in Cyprus.
There are no minimum standards related to green roofs, permeable pavements etc. within urban planning regulations	Law N. 73(I)/2016 on Public Procurement, promotes green public procurement and sets out environmental & energy efficiency criteria for use in public procurement.
Law 90/1972 on Urban and Regional Planning Regulates the zones and siting of renewable energy systems. Prohibits the installation of small wind turbines for use in the home, as well as novel integrated-PV construction materials.	The 2021-2027 programming period of the EU Structural Funds and Cohesion Policy emphasises the role of local authorities with 6% of the ERDF budget dedicated to sustainable urban development.
There is no legal requirement for the adoption and implementation of the measures in the Sustainable Urban Mobility Plans (SUMPs) by local authorities.	Law 2013 (112(I)/2013) on the promotion of RES Sets up a National Fund for Renewable Energy and Energy Efficiency, which aims to ring-fence funds for use in support/subsidy schemes for renewable energy and energy efficiency.

Table 3 - Legislative Barriers and Drivers for climate issues implementation – Cyprus context

Legislation/ Policy	Weakness	Strength	Description
NECP	x		The actions and measures within the NECP are centralised, with responsibility for their implementation lying with central government departments and very little role given to local authorities.
Strategy for Renovation of Buildings		x	Provides several incentives to improve the energy performance of the building stock in Cyprus.
Sustainable Urban	x		There is no legal requirement for the adoption and implementation of the measures in the

Mobility Plan			SUMPs by local authorities.
Law 2013 (112(I)/2013) on the promotion of RES	x	x	Sets up a National Fund for Renewable Energy and Energy Efficiency, which aims to ring-fence funds for use in support/subsidy schemes for renewable energy and energy efficiency. However, the fund has never truly been ring-fenced, with the money in the fund often transferred and utilised in the central budget to cover gaps and shortfalls.
Law N. 73(I)/2016 on Public Procurement		x	Promotes green public procurement and sets out environmental & energy efficiency criteria for use in public procurement.
Urban Planning	x		There are no minimum standards related to green roofs, permeable pavements etc. within urban planning regulations.
Law 90/1972 on Urban and Regional Planning	x		Regulates the zones and siting of renewable energy systems. Prohibits the installation of small wind turbines for use in the home, as well as novel integrated-PV construction materials.
EU Structural Funds and Cohesion Policy		x	The 2021-2027 programming period emphasises the role of local authorities with 6% of the ERDF budget dedicated to sustainable urban development. In addition, 65% to 85% of ERDF and Cohesion Fund resources will be allocated to the priorities of a Smarter Europe and a Greener, carbon free Europe.

Table 4 - Strengths and weaknesses of the key aspects of the energy and climate legislative and governance framework in Cyprus

5.3.2 MISSION, VISION AND ORGANIZATIONAL STRUCTURE

Overview

CEA is a Non-Governmental not-for profit organisation (NGO). Officially established in 2009, CEA was co-funded by the European Commission (75%), through the Intelligent Energy for Europe Programme, and the Union of Cyprus Communities (25%) for it first three years of operation. It is a public-equivalent body, and thus is obliged to comply with Public Procurement legislation (Law 73(I)/2016).

As an NGO, CEA is not a central, regional, or local governmental organisation, so must raise its own funds as it does not rely on government for its funds/budget. It does this through participation in EU research and innovation projects and through offering training, consultancy, and other technical services. It receives a small grant from the Union of Cyprus Communities and Union of Cyprus Municipalities which amounts to 3.8% of CEA's annual budget.

In Cyprus, NGOs are regulated by Law N. 104(I)/2017 on associations and foundations and other related issues, which falls within the remit of regional District Offices under the Ministry of Interior.

Mission

CEA's mission is to promote the sustainable development of local authorities, within the framework of the relevant EU strategies (e.g. Clean Energy for all Europeans Package, Green Deal etc.) and legislation, across the themes of energy security and supply, development and promotion of renewable energy, the rational use of energy and energy efficiency, and climate change.

Its objectives are the promotion of renewable energy sources and sustainable transport, improvement of energy efficiency, and contribution to the mitigation and adaptation to climate change, whilst acting as a key source of information and knowledge related to energy and environment for local authorities and the general public.

Vision

CEA's vision is to actively contribute to the conservation of energy resources, the protection of the environment and the improvement of the quality of life in Cyprus. Furthermore, the Agency's 2030 vision for Cyprus is one in which the island is equitable, with no exclusions, resilient to climate change and governed by the principles of sustainable development.

CEA has developed a pathway towards its 2030 vision, made up ten focus areas, in which the Agency plans to direct its efforts:

1. **Climate Change Mitigation and Adaptation**	Actions at a local and national level, including the use of nature-based solutions and other innovative technical and technological solutions, aimed at mitigation and adaptation to climate change thus supporting climate resilient communities.
2. **Energy Efficiency**	Actions focusing on energy renovations of buildings, promotion and adoption of energy efficient standards and principles, and strengthening Green Public Procurement.
3. **Just Transition**	Actions focusing on promotion of the uptake of green skills and professions; social inclusion; and participatory methods to ensure fair and democratic decision-making.
4. **Sustainability Mobility**	Actions that promote accessible, affordable, and clean mobility through sustainable urban design and use of sustainable and green technology.
5. **Energy Communities**	Actions that support local authorities and local communities to set up energy communities.
6. **Renewable Energy**	Actions that focus on energy storage and that support the energy transition of Cyprus in an environmentally friendly manner.
7. **Circular Economy**	Actions to support the development of circular economy policies; development of regulatory and legislative recommendations; promotion of Circular Public Procurement and the use of Lifecycle Assessment.
8. **Sustainable Tourism**	Actions to support the development of sustainable tourism and the use of blue energy by the tourism industry.
9. **Finance and funding**	Actions to develop and promote innovative funding mechanisms in Cyprus for the financing of environmentally friendly and sustainable development projects.
10. **Training and Awareness Raising**	Training and educational actions across schools, businesses, and other interested parties on the above focus areas.

Table 5 -CEA pathway towards its 2030 vision

Organisational Structure

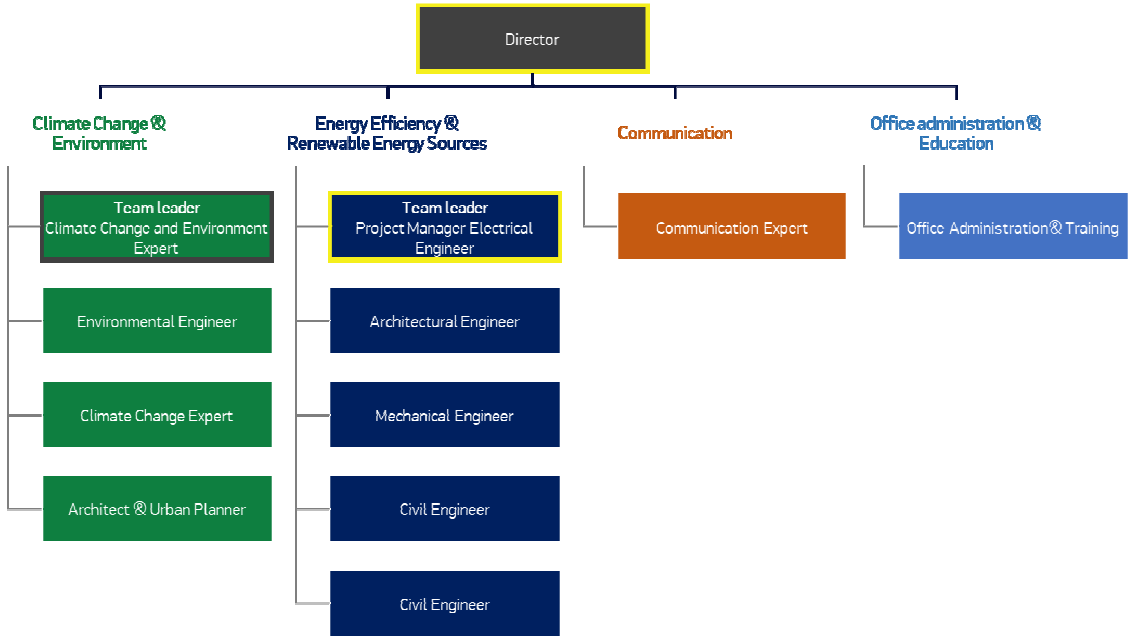

Figure 16 – CEA organizational chart

CEA has 12 full-time employees, divided into two teams, as depicted in the organisational chart below.

It is governed by a Management Board, made up of 11 members, and assisted by an Advisory Committee. The Management Board consists of the following representatives:

Union of Cyprus Communities (2 members)	Cyprus Environment Commissioner

Department of Environment, Ministry of Agriculture, Rural Development and Environment	Cyprus Association of Renewable Energy Companies
Cyprus Consumers Association	University of Cyprus
Cyprus Employers & Industrialists Federation	Cyprus Scientific and Technical Chamber
Cyprus Association of Energy Saving Companies	Federation of Environmental Organisations of Cyprus

Table 6 – CEA Management Board

The Advisory Committee assists the Management Board through offering expertise and advice, whilst offering technical assistance and expertise to the staff of the Energy Agency where required. It comprises of representatives from other Energy Agencies (Crete and Madeira); academia (Cyprus University of Technology and Technical University of Crete); industry (Cyprus Chamber Of Commerce and Industry and Solar Power Europe); and public authorities (Electricity Authority Cyprus; Transmission System Operator and Cyprus Organisation for Standardisation).

The decision-making body of CEA is the General Assembly, which is made up of the Management Board, the Advisory Committee, and the staff of the agency (see Diagram below).

Figure 17 – CEA General Assembly structure

5.3.3 SKILLS AND CAPABILITIES

CEA has 12 full-time employees: one Director, two Team Leaders and nine professionals. As of 2015 CEA has been certified as an equal opportunities' employer, which is reflected in the gender balance of the agency, 50% of the staff is female. The average age of the office is 32.

CEA's employees are highly qualified and have post-graduate degrees (11 employees), across the fields of engineering, architecture, and environmental science.

Specifically, CEA employees hold post-graduate degrees in Environmental Engineering (2); Civil Engineering (3); Electrical Engineering (1); Mechanical Engineering (1); Architecture (2); Environmental Biology (1); Environmental Technology (1); Urban Planning (1); and Digital Media and Communications (1).

In addition, two staff members are certified Energy Auditors, three staff members are qualified experts for the issuing of Energy Performance Certificates, one staff member is a certified Internal Auditor of Environmental Management Systems according to ISO 14001:2015, whilst staff have been trained in BREEAM (Building Research Establishment Environmental Assessment) and in NZEBs.

The Climate Change and Environment Team has experience and expertise in climate change, including in climate change risk assessment (4).

All members of staff are fluent in English.

5.3.4 MARKET OPPORTUNITIES

CEA currently offers the following services:

- Support to Local Authorities in the Covenant of Mayors initiative, drafting and monitoring their Sustainable Energy Action Plans (30 SEAPs) & Sustainable Energy and Climate Action Plans (2 SECAPs). CEA is an official supporter of the CoM initiative.
- Consultancy services including energy audits; lighting assessments; feasibility studies; environmental impact assessment studies; business plan development; and technical measurements/assessments.
- Support to Local Authorities and other public bodies in Green Public Procurement, through the provision of training, services, and tools for the procurement of products and services with environmental and energy criteria.
- Education and vocational training. CEA is certified by the Human Resources Development Authority of Cyprus as a training centre and provider, offering training to professionals in energy audits and energy management; energy efficiency of buildings; project management; infrared thermography; heat pumps; green public procurement etc.
- Information and awareness-raising through various channels. CEA is an information point for the general public, and has prepared informational material across all its activities, with the aim of supporting the public to save energy and take action for the environment and climate change.

Support to local Authorities and other public bodies, in attracting EU funding through the participation of EU funded research and support programmes

In terms of future growth opportunities, CEA is planning to explore new potential opportunities as well as enhance it services, in the areas of:

- Sustainable Energy and Climate Action Plans. CEA plans on supporting LAs in developing SECAPs and in their implementation and monitoring. Services related to climate change risk assessment, adaptation planning, and modelling.
- Nature-based solutions. CEA plans to offer consultancy services in the assessment and implementation of NBS for both LAs and public authorities.
- Innovative finance models (e.g. EU city facility, structural funds), including in the development of such models and in their operation and management, with the aim of supporting LAs and public authorities fund energy and climate action.
- Energy renovation in public bodies, including in attracting funds; developing technical specifications; developing tender and procurement documents; project management; and assessment of renovations.
- Education and employability, including developing programmes that support the training of young professionals in green skills and professions; including through placements and training both within Cyprus and across the EU, with the aim of reducing unemployment and promoting the take-up of skills that will support the labour market under the EU Green Deal.
- Training, increasing the range of vocational training courses and continuing professional development courses, to include climate change resilience and adaptation skills.
- Energy communities, lobbying and supporting the government in the development of the regulatory and policy framework for energy communities in Cyprus. Supporting LAs in setting up energy communities.

- Sustainable Neighbourhoods, promotion of neighbourhoods/urban spaces that promote shared use of spaces, NBS and green spaces, sustainable mobility, community cohesion, and improved quality of life for citizens.
- Maritime decarbonisation, supporting the maritime sector in decarbonisation and achieving zero net emissions in line with the Green Deal, through the design of innovation calls.
- Energy audits of local authorities, energy audits and services for the development and implementation of Energy Management Systems according to ISO 50001:2011 in local authorities.
- Lead partners in EU projects, increase the number of EU funded projects in which CEA is coordinator.
- Technical and financial assessment of loans for RES projects for banks, services to local banks to support their assessment of RES projects and investments.
  Stakeholder/participatory techniques/vision building for a carbon-neutral and climate resilient future.

6. CONCLUSIONS

Overall, the results of the Survey suggest that, despite most of the EAs not having a dedicated "Climate Change Adaptation" Department or specifically trained staff, CC adaptation activities already represent a very significant asset of their current activities, with SECAPs being developed in most of the EAs.
EAs are willing to increase their climate-related offer in the coming years, but they report the need for external expertise in order to be able to do it, especially related to:

- modelling climate impacts,
- tools and methods to assess the present and future climate condition,
- mapping city vulnerabilities and identifying assets at risk.

The lack of staff and training is identified as a relevant barrier to effectively tackle climate topics; in this sense, a specific training of EAs' internal staff could enable them to further develop their climate-related offer and increase their business.

The three self-assessments mostly confirm and reinforce the survey's findings. The three EAs are structured by Departments, with CEA also featuring a dedicated "Climate Change and Environment" Department. Despite not having received specific training on these topics, all three agencies are already actively working on Climate Change topics. The size of the three agencies varies slightly, but the background and skills of their personnel is quite similar, mostly composed of technical staff with an engineering degree.

Moreover, the three self-assessments also highlight some interesting additional aspects:

- All three partner EAs have an integrated national Energy and Climate Plan as a reference framework, meaning that they (and possibly most EU countries) are currently aligned with EU directives in relation to energy and climate.

- All three partner EAs share the common Vision of contributing to make their territories greener, smarter, more sustainable and resilient. This means that, despite being located in different parts of the EU with different characteristics, their needs and future objectives are aligned, as adaptation to climate change is very much a global challenge.

- All three partner EAs are currently operating in a similar way and offering similar services on the market, also sharing the same priorities for future development. The areas for future market opportunities identified by all the three agencies are adaptation, nature-based solutions and energy communities.

ANNEX

Questionnaire "Energy Agency's involvement in climate change adaptation"

GENERAL DATA

1. Company data
   Name_____
   Country_____
   Region_____
2. Number of people working in your organization today
   _____
3. Your reference territory is a:
   Multiple choice: NUTS 0, NUTS 1, NUTS 2, NUTS 3

GOVERNANCE ASPECTS, PROCESSES AND SYSTEMS

4. Your organization is:
   Multiple choice: Private, Public, NGO, Other (specify_____),
5. Your agency is:
   Multiple choice: managed by departments, driven by projects

   If it is managed by departments answer the following questions:

   - 5a - One department is dedicated to climate change adaptation?
     Multiple choice: Yes, No
   - 5b - If none, do you plan to introduce it?
     Multiple choice: Yes, No, Not sure

SKILLS AND CAPABILITIES

6. Your agency is active in climate change adaptation:
   Multiple choice: Yes, No
7. Activities related to climate change adaptation are a part of your daily activities:
   Please rate from 1 (Not at all) to 5 (Key part of your daily activities) _____
8. Some people in your staff have specific education on climate change adaptation:
   Multiple choice: Yes, No

   If you have staff with specific education on climate change adaptation, indicate their training experience:
   Multiple choice: degree (specify_____), master, other courses
9. The percentage of your staff having a specific education on climate change adaptation is:
   Multiple choice: <25%, 25%-50%, 50%-75%, >75%

10. Some people in your staff have a specific experience on climate change adaptation:
    Multiple choice: Yes, No
11. Share of your staff working on climate change adaptation is:
    Multiple choice: <25%, 25%-50%, 50%-75%, >75%

BARRIERS AND NEEDS

12. Your agency has already developed a Sustainable Energy and Climate Action Plan (SECAP):
    Multiple choice: Yes, No

    If "Yes" answer the following questions:
    12a – Number of SECAPs your agency developed_____
    12b - Your agency needed external expertise on:
    Multiple choice: tools and methods to assess the present and future climate condition, modelling climate impacts, mapping city vulnerabilities and identifying assets at risk, identification of adaptation measures, others (specify_____), none of them

13. Your agency has already supported implementing projects on adaptation to climate change:
    Multiple choice: Yes, No
14. Your agency is planning to offer services on adaptation to climate change:
    Multiple choice: Yes, No

    If "Yes" answer the following questions:
    13a - Your agency will need external expertise on:
    Multiple choice: tools and methods to assess the present and future climate condition, modelling climate impacts, mapping city vulnerabilities and identifying assets at risk, identification of adaptation measures, others (specify_____), none of them
    13b Your agency will need staff additional capacity:
    Multiple choice: Yes, No, Don't know
15. Your local/regional/national legal framework support your activities with regards to climate change adaptation:
    Please rate from 1 (Does not support at all) to 5 (Supports fully)_____
16. Your barriers to act on adaptation to climate change are:
    Please rate from 1 (low) to 5 (high): limited funding_____, lack of experience_____, low political commitment_____, others (specify_____) _____
17. A specific training for your staff might enable your agency to foster projects on adaptation to climate change
    Multiple choice: Yes, No
18. Your agency might be interested in training on:
    Multiple choice: tools to downscale climate data, modelling climate impact, mapping city vulnerabilities and assets at risk, identifying adaptation actions, others (specify_____), none of them
19. Comments:

    _____

    _____

_____
_____

REFERENCE MARKET AND BUSINESS OPPORTUNITIES

20. The key stakeholders for your operation that you work with are:
    Multiple choice: Local governance, National Governance, Industry, Academia, NGOs, Citizens, SMEs, Other (please specify)
21. These stakeholders are or could be key for activities related to climate change adaptation: Please rank them from 1 (the most relevant) to 8 (the less relevant): Local governance_____, National Governance_____, Industry_____, Academia_____, NGOs_____, Citizens_____, SMEs_____, Other (please specify_____) _____
22. Your key competitors are:
    _____
23. Adaptation to climate change will play a role in your business in the future:
    Please rate from 1 (not at all) to 5 (key activity)_____
24. Please identify the top three business/service opportunities for your agency related to climate change adaptation
    _____
    _____
    _____
    _____
25. Please provide examples of projects and initiatives that your agency is planning to develop in the future on adaptation to climate change
    _____
    _____
    _____
    _____
26. Please assess the commercialization potential for climate related activities in your sphere of business (market potential) from 1 (not relevant) to 5 (key)_____