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INRES
Insular regions cooperating for maximising the environmental and economic benefits from research in Renewable Energy Sources

Seventh Framework Programme – Capacities (Regions of Knowledge)
Support Action

Work package 2 (Regional Assessment and Mapping)
Deliverable 2.1 (Templates of the Cartographic Competence Scheme and the Regional RES-ID Card)

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Dissemination level - Confidentiality		
PU	Public	X
PP	Restricted to other programme participants (including the Commission Services)	
RE	Restricted to a group specified by the consortium (including the Commission Services)	
CO	Confidential, only for members of the consortium (including the Commission Services)	

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1. Introduction

The present deliverable provides guidelines for conducting the work to be accomplished during the data gathering process in Work package 2. Concrete instructions for carrying out the information collection from the three project regions Canary Islands, Crete and Samsø in terms of their performance levels towards renewable energy sources (RES) are needed in order to allow the efficient execution of the subsequent comparative analysis.

The document is divided into two main sections:

- Template for the **Cartographic Competence Scheme (CCS)**, to be elaborated for each region;
- Template for the **Regional RES- ID Card**, to be elaborated for each region.

The **CCS** aims at giving a detailed overview on the regions' key players involved in activities dealing with the RES sector. In this regard, information will be gathered on all players making up the triple helix model in the regions (Public bodies, RTD performers and Industrial players), aimed at presenting a complete picture of the whole RES community in each region (macro perspective).

The **Regional RES- ID Card** will go one step further by analysing in detail the regional state-of-the-art of the RES sector in each region (micro perspective). Renewable energies of interest to all three project regions are:

1. *Solar energy,*
2. *Wind energy,*
3. *Water energy,*
4. *Bioenergy,*
5. *Geothermy.*

In this regard, regional core competences with regard to RTD and innovation policy management, research performance and technology transfer capabilities for renewable energy applications will be presented. The regional policy map can be elaborated straight away thanks to the direct participation of regional policy makers to the project, on the contrary the scientific and industrial maps require the approaching of further not directly involved scientific institutions and industrial players, so as to be able to illustrate the actual state of play of the RES sector in each region and reflect the performance of regional actors as well as their necessities in the best possible way. To this end, in order to smoothen the work, to facilitate the analysis and achieve comparable information, two questionnaires have been elaborated addressed to the scientific and industrial RES communities (Annex I and II).
Both schemes, the CCS and the RES-ID Card, will create the basis for carrying out the cross-regional analysis to be accomplished subsequently, a key document for setting the framework for initiating future concerted policy and research strategies.

2. Cartographic Competence Scheme

The Cartographic Competence Scheme (CCS) is structured in two main sections, aimed to improve the technical profile of each island:

a) Overview on the regional context
b) Regional key players

Below, the distribution of responsibilities as concerns the work completion of the CCS is presented:

Data collection responsibilities:

	Canary Islands	Crete	Samsø
Public authorities	ACIISI	REAC	SEA
RTD actors	ITC	FORTH	SEA Academy
Industrial players	DOBONTECH	CANDIA	Brdr. Stjerne K.S.
Overview [a)]	ALL	ALL	ALL

The data collection process should be finalised on **31st October 2009**!

Overall completion of the CCS:

	Canary Islands	Crete	Samsø
Industrial players	DOBONTECH	CANDIA	Brdr. Stjerne K.S.

The Cartographic Competence Schemes should be finalised on **30th November 2009**!
In the following detailed instructions are given for the content of the two main sections.

2.1. Overview on the regional context

Data for completing Section 2.1 has to be collected by ALL project partners. The overall completion of this section is under responsibility of the industrial INRES project partners (DOBONTECH, CANDIA, Brdr. Stjerne K.S.).

Please provide a short description of your island with regard to the following aspects:

- Geography
- Demographic and socioeconomic indicators (population, employment, GDP, effects of renewable energy on regional GDP, etc.)
- Industrial environment (main industrial sectors, adoption of different RES in the region)
- Number of companies/ employees operating in the RES sector
- Research, training and innovation environment (universities and research centres, science and technology parks, students enrolled in RES related studies)

Maximum lengths: 2 pages

2.2. Regional key players

Data for completing Section 2.2 has to be collected by ALL project partners, according to their different roles in the project.

The target to be reached amounts to **20 profiles within the INRES network**. Consequently, the minimum number of profiles to be collected per region is seven profiles. However, please do not narrow your data collection to these seven players in your region (when possible) and *consider all key players you regard as important for illustrating your regional RES situation* and reaching the project's overall objectives.

2.2.1. Public bodies

Data for completing Section 2.2.1 has to be collected by the public authorities (ACIISI, REAC, SEA).

Please collect information on institutions within your region responsible for the management and financing of regional innovation programmes. In case your regional context depends heavily on national institutions and programmes which you consider important for the project, please name also these players. Possible institutions to be mentioned here are amongst others:

- Public administrations,
- Regional development agencies,
- Regional technology and innovation agencies,
- Etc.

Please use the following template for providing information on each player.

Administration/Agency	
URL	
Director/Responsible	
E-Mail	
Address	
Phone	
Brief organisation profile	

2.2.2. RTD performers

Data for completing Section 2.2.2 has to be collected by the RTD actors (ITC, FORTH, SEA Academy).

This section foresees the collection of information on regional RTD players active in RES field. These actors can be:

- Universities (faculties and departments),
- Research institutions,
- SMEs with a strong and relevant RTD profile.

As *inclusion criteria*, please consider indicators such as institution size, collaboration with SMEs, capacity to attract research funds, focus to applied research results, participation to community programmes, attitude towards international collaboration.

Please use the following template for providing information on each player.

Organisation/Department	
In case of *SME*: role in the RES sector (manufacturer, distributor, installer, etc.)	
URL	
Director/Responsible	
E-Mail	
Address	
Phone	
Brief organisation profile	
Research areas - Solar energy - Wind energy - Water energy - Bioenergy - Geothermy	
Offered services	

2.2.3. Industrial players

Data for completing Section 2.2.3 has to be collected by the industrial players (DOBONTECH, CANDIA, Brdr. Stjerne).

Please collect data on main industrial RES players, with specific focus to SMEs. Both actors should be considered:

- Technology suppliers and service providers (manufacturer, distributor, installer, etc.)
- Technology end-users

As *inclusion criteria*, please consider indicators such as market experience, collaboration with research institutions, innovation and technology commitment, attitude towards international collaboration.

Please use the following template for providing information on each player.

Company	
URL	
Director/Responsible	
E-Mail	
Address	
Phone	
Brief organisation profile	
Role in the RES sector a) Technology supplier and service provider (manufacturer, distributor, installer, etc.) b) Technology end-user	
Technology areas - Solar energy - Wind energy - Water energy - Bioenergy - Geothermy	
Adopted technologies (e.g. in production processes and buildings' construction)	

3. Regional RES-ID Cards

The Regional RES- ID Card aims to provide a thorough picture on the each island's RES scenario and should include information, such as:

- Overview on the regional RTD and innovation policy management and available funding resources for the RES sector
- Detailed analysis of 3 to 5 policies
- Regional research agendas
- Distribution and adoption of RES technologies in industrial processes
- International cooperation in the RES sector
- SWOT regarding the strategic positioning of the regional research and industrial RES-community

Below, the distribution of responsibilities as concerns the work completion of the regional RES- ID card is presented:

Data collection responsibilities:

	Canary Islands	Crete	Samsø
Public authorities	ACIISI	REAC	SEA
RTD actors	ITC	FORTH	SEA Academy
Industrial players	DOBONTECH	CANDIA	Brdr. Stjerne K.S.

The data collection process should be finalised on **31st December 2009**!

Overall completion of the Regional RES- Cards:

	Canary Islands	Crete	Samsø
Public authorities & RTD actors	ACIISI	REAC	SEA Academy

The Cartographic Competence Schemes should be finalised on **31st January 2010**!

In the following detailed instructions are given for the content of the different sections.

3.1. Regional RTD and innovation policy framework

Data for completing Section 3.1 has to be collected by the public authorities (ACIISI, REAC, SEA).

Section 3.1 should give evidence to the legal and political framework with particular regard to the RES sector in each insular region. As for INRES objectives, the regional RES clusters located in the three partner regions consider the following areas as important RES sectors to be investigated on:

- Solar energy,
- Wind energy,
- Water energy,
- Bioenergy,
- Geothermy.

With "policies" are meant all operational programmes, plans, laws, initiatives, networks, etc. that support the development of the RES sector in the regions.

The policies to be presented should refer to the last programming period (2000 – 2006) as well as to the new programming period (2007 – 2013). In this regard, policies should be illustrated that favoured the diffusion and adoption of RTD in the RES field in the past as well as running initiatives for developing advanced technologies and enhancing the investment in the sector should be presented. A top down approach should be adapted, i.e. the focus should lie in the first place on RTD and innovation programmes and laws particularly addressed to the RES field (as for example energy plans), aimed at sustaining the sector's sustainable progress in each region. Furthermore, further RTD and innovation programmes in which the RES sector is embedded, shall be named. Next to RTD and innovation programmes and laws also further projects and initiatives (i.e. help desks, networks, etc.) shall be mentioned.

The following table 1 should be used as supporting tool for completing the section, so as to present the collected information in the same structure and thus make it easier comparable.

Table 1 – Overview on RTD and innovation policies

RES- related RTD and innovation policies	RTD and innovation programmes/Legislative references/Public incentives/Projects/Others initiatives (help desks, networks, etc.)	Title	Short description	RES sector	Budget spent, Source of funding	Time scale

3.1.1. Detailed policy analysis

After the first overview on the RTD and innovation scenario in each region, a more exhaustive description for the most important identified policies should be provided along with illustrative indicators, if available. Please describe more in detail **three to five** of the presented policies under section 3.1. In this sense, please detail the following information for each measure by filling in the template.

Maximum length: 2 pages for each initiative

NAME OF THE MEASURE	
TIME SCALE	
BUDGET	
KEY ACTORS (i.e. funding institution)	
RATIONALE (why the initiative has been set up in the region)	
SECTOR (if possible related to RES)	
TARGET GROUPS	
RATIONALE	
AREA OF INTEREST	
FOCAL POINTS AND SPECIFIC OBJECTIVES	
KEY ACTIVITIES	
FUNDING INFORMATION	
EX-POST EVALUATION (main outcomes/ indicators available, e.g. number of start-ups, beneficiaries, implemented projects, etc.)	
CONTACT AND REFERENCE DATA	

3.2. Regional research agenda

Data for completing Section 3.2 has to be collected by the RTD actors (ITC, FORTH, SEA Academy).

Please detail what research activities the public scientific RES community in the region is carrying out in order to boost the further development of the industry sector.

A questionnaire may be used as supporting tool for being able to respond to the following sections as appropriate and thoroughly as possible (see Annex I).

The presentation should be made according to the distinction agreed on in the project (solar energy, wind energy, water energy, bioenergy, geothermy). In the following are listed the sub-sections of section 3.2 on which information should be collected.

3.2.1. Research focus and current research activities

Illustrate on which research projects (national and international) the research community has been working during the last five years and which projects are currently being carried out.
Please use as supporting tool the following scheme for presenting conducted research activities:

Research profile	
Organisation	
Title	
Sector	
Abstract: Please give a brief description on the conducted research activity (< 500 characters). The abstract should answer to the following questions: ▪ Where (geographically) is it from? ▪ What sort of organisation is offering it? ▪ What research is being carried out? ▪ What is it aimed for? ▪ What are the main advantages?	
Special features	
Innovative aspects	

3.2.2. Available RES technologies

Demonstrate the outcomes of conducted research projects, describing main technologies/prototypes developed for the RES sector.
Please use as supporting tool the following scheme for presenting research results:

Technology profile	
Organisation	
Title	
Sector	
Abstract: Please give a brief description of the technology (< 500 characters). The abstract should answer to the following questions: ▪ Where (geographically) is it from? ▪ What sort of organisation is offering it? ▪ What is being offered? ▪ What can it be used for? ▪ What are the main advantages?	
Special features	
Innovative aspects	
Main advantages of the technology (main economic advantages/benefits)	
Current stage of development[1]	
Intellectual Property Rights[2]	

(1) (1) Development phase – laboratory tested; (2) Available for demonstration – field tested; (3) Already on the market
(2) (1) Patent applied for; (2) Patents granted; (3) copyright protected; (4) exclusive rights; (5) secret know-how; (6) Others – registered design, plant variety right, etc.

3.2.3. International research cooperation

Please describe cooperation activities of the scientific community within the region (e.g. networks) as well as with regard to further regions, both at national and international level, considering also the project partner regions (Canary Islands, Crete, Samsø).

Maximum length: 2 pages

3.3. SWOT – Regional assessment – Research Perspective

Data for completing Section 3.3 has to be collected by the RTD actors (ITC, FORTH, SEA Academy).

Please illustrate the regional situation in terms of core competencies and shortcomings with regard to knowledge production and technology transfer capabilities in the RES sector. **Please use not more than five items for each column.** If different items refer only to one specific RES sector, please mention the sector.

Focusing on own resources (personnel, organizational aspects, financial aspects, etc.), what are the **STRENGHTS**, i.e., capabilities to provide comparative advantages in the RES sector in the Region?	Focusing on own resources (personnel, organizational aspects, financial aspects, etc.), what are the **WEAKNESSES**, i.e., absent resources, activities not carried out in the proper way?
- Public-private cooperation / Increasing number of collaboration between research and industry - Strong research base (research infrastructure) - Highly skilled personnel - Development of innovative RES technologies - International cooperation activities - Others, please specify:	- Not enough start-ups - Low level of budget for conducting RTD activities in the RES sector - Poor linkage between research entities and enterprises (weak understanding between researchers and industry complicates joint projects) - Poor research base - No international orientation - Others, please specify:
Focusing on aspects outside control, where are the **OPPORTUNITIES** for RES- regional actors, i.e. open up possibilities to capitalise?	Focusing on aspects outside control, where are the **THREATS** for research organisations, i.e. close off future possibilities?
- Availability of EU RTD funds for research - Surplus of well educated researchers - Networking possibilities (Clusters, Technology Platforms, etc.) - Strong RES- technology offer by research actors - Strong RES- technology demand from industrial actors - Others, please specify:	- Funding programmes to support research with content far from current research interests - Bureaucracy barriers - Few incentives for public-private partnerships - Low awareness of regional research capacity - Brain drain - Others, please specify:

3.4. Industrial RES performance

Data for completing Section 3.4 has to be collected by the industrial players (DOBONTECH, CANDIA, Brdr. Stjerne).

In section 3.4 the performance of the industrial community is taken under investigation. A questionnaire may be used as supporting tool for being able to respond to the following sections as appropriate and thoroughly as possible (see Annex II).
In the following are listed the sub-sections of section 3.4 on which information should be collected.

3.4.1. Distributed and Adopted RES technologies

Demonstrate main distributed and adopted technologies in the regions. Please use as supporting tool the following scheme:

Technology profile	
Company	
Role in the RES sector (manufacturer, distributor, installer, end-user, etc.)	
Title	
Sector	
Abstract: Please give a brief description of the technology (< 500 characters). The abstract should answer to the following questions: ▪ Special features ▪ Innovative aspects ▪ Main advantages	

3.4.2 Private research

In case of strong research activities accomplished by private players, please fill in the following template for research activities carried out during the last five years.

Research profile	
Company	
Role in the RES sector (manufacturer, distributor, installer, end-user, etc.)	
Title	
Sector	
Abstract: Please give a brief description on the conducted research activity (< 500 characters). The abstract should answer to the following questions: ▪ Where (geographically) is it from? ▪ What sort of organisation is offering it? ▪ What research is being carried out? ▪ What is it aimed for? ▪ What are the main advantages?	
Special features	
Innovative aspects	

3.4.3. International cooperation

Please describe cooperation activities of the industrial community within the region (e.g. networks) as well as with regard to further regions, both at national and international level, considering also the project partner regions (Canary Islands, Crete, Samsø).

Maximum length: 2 pages

3.5. SWOT – Regional Assessment – Industrial Perspective

Data for completing Section 3.5 has to be collected by the industrial players (DOBONTECH, CANDIA, Brdr. Stjerne).

Please illustrate the regional situation in terms of core competencies and shortcomings with regard to knowledge production and technology transfer capabilities in the RES sector. **Please use not more than five items for each column.** If different items refer only to one specific RES sector, please mention the sector.

Focusing on own resources (personnel, organizational aspects, financial aspects, etc.), what are the **STRENGHTS**, i.e., capabilities to provide comparative advantages in the RES sector in the Region?	Focusing on own resources (personnel, organizational aspects, financial aspects, etc.), what are the **WEAKNESSES**, i.e., absent resources, activities not carried out in the proper way?
- Public-private cooperation / Increasing number of collaboration between research and industry - Strong research base (research infrastructure and human capital) - Strong financial capacity of RES- industrial actors - Adoption of highly innovative technologies in production processes and facilities - Internationalisation of companies - Others, please specify	- Not enough start-ups - Low level of budget for conducting RTD activities in the RES sector - Poor linkage between enterprises and research entities (weak understanding between researchers and industry complicates joint projects) - Low innovation commitment of companies - No international orientation - Others, please specify
Focusing on aspects outside control, where are the **OPPORTUNITIES** for RES- regional actors, i.e. open up possibilities to capitalise?	Focusing on aspects outside control, where are the **THREATS** for research organisations, i.e. close off future possibilities?
- Availability of EU RTD funds for research - Surplus of well educated researchers - Networking possibilities (Clusters, Technology Platforms, etc.) - Strong RES- technology offer by research actors - Strong RES- technology demand from industrial actors - Others, please specify	- Funding programmes to support research with content far from current research interests - Bureaucracy barriers - Few incentives for public-private partnerships - Low awareness of regional research capacity - Brain drain - Others, please specify

Annex I – Questionnaire regional research community

1. GENERAL INFORMATION	
Organisation/Department	
Acronym	
Address	
Website	
Director	
Email	
Telephone/Fax	

2. SKILLS

Add rows, if necessary.

Keywords (max 10)									

Research topic(s)			
	Research area(s) [1]	**Sub-sector(s)**	**Description**[2]
1			
2			
3			
…..			

[1] to be chosen among the research areas: solar energy, wind energy, water energy, bioenergy, geothermy.

[2] Brief description (max. 200 characters) of the research topic.

3. RESEARCH ACTIVITIES

Add new Tables, if necessary.

Projects (max 5) [1]	
Title	
Website	
Abstract	
Research area(s) [2]	
Sub-sector(s)	
Duration (from month/year – to month/year)	
Funding Organisation	
Total Project Value (€)	
Role [3]	
Activities [4]	

[1] Indicate projects where the Organisation/Department has been or is involved in the last five years.

[2] to be chosen among the research areas: solar energy, wind energy, water energy, bioenergy, geothermy.

[3] Coordinator - partner - sub-contractor ……

[4] Brief description (max. 500 characters) of research activities carried out (final aim, main advantages, etc.)

4. RESEARCH RESULTS

Add rows, if necessary.

Journals Publications (max 10)			
Author(s)	**Title**	**Journal**	**Year/Vol./Pages**

5. COLLABORATIONS

5 most representative collaborations

Name	Country	Research area(s) (1)	Sub-sector(s)	Description(2)	Public/Private

(1) to be chosen among the research areas: solar energy, wind energy, water energy, bioenergy, geothermy.

(2) Brief description (max. 200 characters) of the collaboration topic.

6. SWOT – Regional research community	
Please use <u>not</u> more than 5 items per each column	
Focusing on own resources (personnel, organizational aspects, financial aspects, etc.), what are the **STRENGHTS**, i.e., capabilities to provide comparative advantages in the RES sector in the Region?	Focusing on own resources (personnel, organizational aspects, financial aspects, etc.), what are the **WEAKNESSES**, i.e., absent resources, activities not carried out in the proper way?
☐ Public-private cooperation / Increasing number of collaboration between research and industry	☐ Not enough start-ups
☐ Strong research base (research infrastructure)	☐ Low level of budget for conducting RTD activities in the RES sector
☐ Highly skilled personnel	☐ Poor linkage between research entities and enterprises (weak understanding between researchers and industry complicates joint projects)
☐ Development of innovative RES technologies	☐ Poor research base
☐ International cooperation activities	☐ No international orientation
☐ Others, please specify:	☐ Others, please specify:
☐ Others, please specify:	☐ Others, please specify:
☐ Others, please specify:	☐ Others, please specify:
Focusing on aspects outside control, where are the **OPPORTUNITIES** for RES- regional actors, i.e. open up possibilities to capitalise?	Focusing on aspects outside control, where are the **THREATS** for research organisations, i.e. close off future possibilities?
☐ Availability of EU RTD funds for research	☐ Funding programmes to support research with content far from current research interests
☐ Surplus of well educated researchers	☐ Bureaucracy barriers
☐ Networking possibilities (Clusters, Technology Platforms, etc.)	☐ Few incentives for public-private partnerships
☐ Strong RES- technology offer by research actors	☐ Low awareness of regional research capacity
☐ Strong RES- technology demand from industrial actors	☐ Brain drain
☐ Others, please specify:	☐ Others, please specify:
☐ Others, please specify:	☐ Others, please specify:
☐ Others, please specify:	☐ Others, please specify:

Annex II – questionnaire regional industrial community

1. GENERAL INFORMATION	
Company name	
Legal status	
Role in the RES sector (manufacturer, distributor, installer, end-user, etc.)	
Contact person (name & position)	
Address	
Website	
Email	
Telephone/Fax	
Number of employees	

2. COMPANY CURRENT TECHNOLOGIES	

Add new Tables, if necessary.

Title	
Sector (solar, wind, water, bioenergy, geothermy)	
Sub-sector(s)	
Abstract: Please give a brief description of the technology (< 500 characters). The abstract should answer to the following questions: ▪ Special features ▪ Innovative aspects ▪ Main advantages	

3. TECHNOLOGY SKILLS & ASSETS

Keywords (max 10)									

Technologies used (*please classify also the relevant RES sector and sub-sector(s)*)		
1.		
2.		
3.		
4.		
5.		
Does the company owns patents?	☐ **Yes**	☐ **No**
- of which industrial inventions	☐ No	
gained through acquisition?	☐ Yes	☐ No
- of which utility models	☐ No	
gained through acquisition?	☐ Yes	☐ No
- of which commercial trademarks	☐ No	
gained through acquisition?	☐ Yes	☐ No

4. RESEARCH ACTIVITIES

Add new Tables, if necessary.

Projects (max 5) [1]	
Title	
Website	
Abstract	
Research area(s) [2]	
Sub-sector(s)	
Duration (from month/year – to month/year)	
Funding Organisation	
Total Project Value (€)	
Role [3]	
Activities [4]	

[1] Indicate projects where the Organisation/Department has been or is involved in the last five years.

[2] to be chosen among the research areas: solar energy, wind energy, water energy, bioenergy, geothermy.

[3] Coordinator - partner - sub-contractor ……

[4] Brief description (max. 500 characters) of research activities carried out (final aim, main advantages, etc.)

5. COLLABORATIONS

5 most representative collaborations

Name	Country	Research area(s) (1)	Sub-sector(s)	Description (2)	Public/Private

(1) to be chosen among the research areas: solar energy, wind energy, water energy, bioenergy, geothermy.
(2) Brief description (max. 200 characters) of the collaboration topic.

6. SWOT – Regional industrial community	
Please use <u>not</u> more than 5 items per each column	
Focusing on own resources (personnel, organizational aspects, financial aspects, etc.), what are the **STRENGHTS**, i.e., capabilities to provide comparative advantages in the RES sector in the Region?	Focusing on own resources (personnel, organizational aspects, financial aspects, etc.), what are the **WEAKNESSES**, i.e., absent resources, activities not carried out in the proper way?
☐ Public-private cooperation / Increasing number of collaboration between research and industry	☐ Not enough start-ups
☐ Highly skilled personnel	☐ Low level of budget for conducting RTD activities in the RES sector
☐ Strong financial capacity of RES- industrial actors	☐ Poor linkage between enterprises and research entities (weak understanding between researchers and industry complicates joint projects)
☐ Adoption of highly innovative technologies in production processes and facilities	☐ Low innovation commitment of companies
☐ Internationalisation of companies	☐ No international orientation
☐ Others, please specify:	☐ Others, please specify:
☐ Others, please specify:	☐ Others, please specify:
☐ Others, please specify:	☐ Others, please specify:
Focusing on aspects outside control, where are the **OPPORTUNITIES** for RES- regional actors, i.e. open up possibilities to capitalise?	Focusing on aspects outside control, where are the **THREATS** for research organisations, i.e. close off future possibilities?
☐ Availability of EU RTD funds for research	☐ Funding programmes to support research with content far from current research interests
☐ Surplus of well educated researchers	☐ Bureaucracy barriers
☐ Networking possibilities (Clusters, Technology Platforms, etc.)	☐ Few incentives for public-private partnerships
☐ Strong RES- technology offer by research actors	☐ Low awareness of regional research capacity
☐ Strong RES- technology demand from industrial actors	☐ Brain drain
☐ Others, please specify:	☐ Others, please specify:
☐ Others, please specify:	☐ Others, please specify:
☐ Others, please specify:	☐ Others, please specify:

ANNEX III – RES sub-sectors

The INRES network and its regional research-driven clusters identified five RES fields as the most important sectors on which the analysis to be carried out in the three regions should focus:

1. Solar energy,
2. Wind energy,
3. Water energy,
4. Bioenergy,
5. Geothermy.

For all five RES sectors sub-sectors have been assigned, considered, after a first brainstorming session and trans-regional knowledge exchange, the most important ones for the INRES regions and the most significant ones for completing the RES picture.

RES sectors	RES sub-sectors
Solar energy	- Solar thermal - Photovoltaics - Solar Thermal for electricity production
Wind energy	- On shore - Off shore
Water energy	- Small hydro - Energy from the sea
Bioenergy	- Biomass to heat - Biomass to electricity - Biofuels
Geothermy	- Shallow (solar) geothermy - Deep geothermy

However, in order to avoid limitation to the data gathering process and to receive as much information as possible from the regional RES key players, these sub-sectors will not be included as parameters in the questionnaires. The questionnaires´ respondents will have free choice in describing their particular activities in the RES field, thus allowing for identifying the actual sub-sectors and customising the project activities to be carried out subsequently in the best possible way to the regional needs.