



**Refined transition strategy,  
Region of Crete –  
Regional Energy Agency of Crete**

Status: <Final>  
Author: <Dr. N. Zografakis – K. Kalitsounakis>  
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# 1. Introduction (1 page)

## 1.1. The BIOSIRE project

BIOSIRE aims to establish a shift towards bio-diesel and electric propulsion for fleets, ships and special vehicles in tourist areas in Spain, France, Greece, Italy, Croatia and Austria. The consortium is composed of regional authorities of tourist areas, energy agencies and research and consultancy organisations specialised in energy, agriculture and transport.

BIOSIRE local actions are directed at market transformation and changing the behaviour of fleet operators, tourists and residents, farmers and the potential suppliers of used cooking oils. These actions cover the full production and distribution chain.

During the first project year, on the regional level, the stakeholders have been identified and local working group meetings and a local workshop were organised to prepare the market transformation

This Refined Transition Strategy has its focus on the region of Crete. A similar strategy is produced for the other five regions in the BIOSIRE project.

All deliverables and other information on the BIOSIRE project can be found at [www.biosire.eu](http://www.biosire.eu).

## 1.2. Goal of this document

The goal of this document is to refine the transition strategy towards cleaner transport in our region. The refinement is based on the lessons learned during the first year of the BIOSIRE project.

There are two main sources for these lessons.

The **first source** is formed by the lessons from previous projects and implementations in tourist areas, that have been studied in Workpackage 2 and are included in two deliverables:

D2.1 Database of Case Studies

D2.2 Draft Implementation Handbook

Within BIOSIRE the implementation of the transition towards biofuel and electric vehicles in tourist regions is divided into three phases:

3.1 Activating Enabling Strategies

3.2 Market Transformation

3.3 Change Behaviour

The **second source** of lessons is provided by the conclusions from the work on Activating Enabling Strategies in our region that was finalised in the summer of 2009.

The lessons from the two sources are used to refine the planning for the BIOSIRE implementation for the period September 2009 – February 2011.

## 1.3. Structure of document

At first, the original plan for the regional implementation is presented in Chapter 2. This is the plan as it was formulated in the contract of the BIOSIRE project with the Intelligent Energy Europe Programme.

In chapter 3 we present the lessons for our region from the first year of working in the BIOSIRE project.

Finally the lessons are used to prepare the refined strategy for the next two phases of the BIOSIRE project in chapter 4.

## 2. Initial regional plan for the Region of Crete

### 2.1. Demonstrator description: Region of Crete – Regional Energy Agency of Crete

Application area: The region of Crete, Greece

Context:

Crete is one of the main tourist destinations in Europe, being visited by more than 3 millions of tourists each year. The tourist sector consists of a big number of luxurious hotels (many of them are certified by ISO 14001) and can provide huge quantities of used vegetable oils and fats, which could be used as raw material for biofuels' production. In parallel the agricultural sector – which is also very important for Cretan economy – can be assessed to realize whether it is a suitable cultivation for biofuels production.

In Crete (also in the whole Greece), biodiesel is the main bio-fuel, which is distributed through the normal gas-stations network as a mixture with diesel. The Greek legislation has specified the maximum percentages of the mixtures (2.75% biodiesel – 97.25% diesel) and therefore all the end-users consume blends of diesel and biodiesel without the possibility - at the time being - to consume higher percentages of biodiesel or even pure biodiesel. The Regional Energy Agency of Crete implemented the first innovative use of high biodiesel mixtures in Greece into busses of the Public Bus Company of Eastern Crete. The busses used mixtures of 5%, 10%, 15% and 20% of biodiesel with diesel. It was a pioneer project with the cooperation of many important national and regional actors (Region of Crete, Public Bus Company of Eastern Crete, Technical Centre of Vehicles Control, National Technical University of Athens). Total annual diesel consumption in Crete was 127.486 tons in 2000, 163.708 tons in 2005 and is estimated to be 200.000 tons in 2010.

In Crete – at the time being – there are four (4) operators collecting used cooking oils mainly from hotels and big restaurants. The collected quantities at the end of the logistic chain are transported to the mainland to be mixed with other vegetable oils for producing biodiesel (There are seven production units in operation in Greece). REAC has already done an

approach of the production and the logistics of the collection of waste vegetable oils in Crete.

In Crete there are 612 tourist busses – which are directly related to tourist transport – but there are also 168 urban busses, 255 interurban busses, 1408 taxis and large number of rental cars (approx. 7.500), which are also related to tourist transport.

Local actions:

The general aim is the detailed and analysed investigation in biofuels possibilities (consumption but also production) connected especially with tourism (use in tourist buses, rent-cars and motorbikes, off-road cars, but also ships and ferry boats, and in parallel the production of biofuels from recycled vegetable oils and fats of hotels) and the active involvement of all the relative bodies which could contribute and facilitate the quicker and easier integration of biofuels in our island, e.g. policy and decision makers, scientists, hoteliers, related associations, fuel retailers, craftsmen but also local agricultural associations for the possibilities of “biofuels’ plants cultivations”. The investments possibilities in biofuels (incentives and financial back-up) are also under consideration.

More specifically the tasks are:

A detailed analysis of Greek and Cretan regional policy in biofuels will be conducted, which will particularly focus in biofuels integration in Cretan tourism:

Biofuels production of recycled oils coming mainly from tourism and restaurants.

Biofuels production possibilities from suitable cultivated plants in Crete and residual vegetable oils

Approach of a biofuels production plant in Crete

An analysed description of biofuels possibilities in Cretan tourism will be undertaken which will include:

Collection and biofuels production scenarios from recycled vegetable oils and fats from hotels and big restaurants

Implementation scenarios for hotels (especially big ones) for using biofuels in their own vehicles’ fleets

Implementation scenarios of biodiesel use in ships (big ferry boats and smaller vessels for tourist local transportations),

Applications in tourist (or tourism related) vehicles, e.g. public busses, tourist busses, rent-cars and motorbikes, off-road vehicles etc.

Biofuels as a part of tourism promotion strategy

The Regional Energy Agency of Crete has the intention to examine also the possibility of biodiesel production from olive oils which are not eatable

Prepare the development of a biofuels market network which will involve the Cretan fuel retailers (petrol stations).

A study about financial incentives for investments in biofuels sector in Crete will also be included, with the cooperation of Cretan Banks.

Promotion and awareness action directed to cooking oils collection companies, municipalities, fleet operators, hotels, tourists and local residents

During BIOSIRE, REAC will work on increasing the number of hotels and restaurants supplying cooking oils. The potential annual volume is estimated at 400.000 litres (to be reached at the end of the BIOSIRE project).

Promotion and adoption of electric vehicles mainly for historical city centers, hotels, tourist entertainment sites, golf clubs etc.

Examine the possibility for exploiting the surplus of energy by wind-parks as energy for recharging the electric vehicles

Role of BIOSIRE partners:

The Region of Crete - Regional Energy Agency of Crete, a BIOSIRE partner, will carry out the actions in co-operation with the local stakeholders.

An example of the Local Working Group in Crete implemented by the Regional Energy Agency of Crete (REAC) :

- Heraklion Technical Centre of Vehicles Control
- Public Bus Company of Eastern Crete
- Association of Vehicles Engineers
- Municipalities and their Enterprises
- Directorate of Transport of Heraklion Prefecture
- Region of Crete
- Technical University of Crete
- Association of Hotel Owners in Crete

## 2.2. Regional objectives in Crete

Result indicators	Quantification of success
Increase in the number of hotels and restaurants that provide used cooking oil	Crete: + 80
Total annual volume of treated used cooking oil fit for biodiesel production	Crete: 1.000 Tons

Result indicators	Quantification of success
Number of possible farmers growing crops fit for biodiesel	Crete: 3
Volume of locally available residual vegetable oil (annual)	Crete: 200 tons
Price of alternative fuel compared to diesel	Price equal or lower then conventional fuels
Number of public filling stations for high blends of biodiesel	Crete: 2
Total number of fleet operators reached by promotion actions	Crete: 30
Total number of fleet operators that participated in workshops/events	Crete: 20
Total number of individual meetings with fleet operators	Crete: 20
Number of mechanics from fleets trained	Crete: 10
Total number of tourist reached by promotion actions	Crete: 10.000
Total number of residents reached by promotion actions	Crete: 80.000
Number of car dealers and their mechanics reached by promotion actions	Crete: 15
Share of tourist that consider the destination as sustainable	Crete: 60%
Annual use of biodiesel in litres by tourist related fleets (shift from diesel to biodiesel)	Crete: 6.000
Number of fleet operators that shift (part of) their fuel use to biodiesel/ or electric propulsion	Crete: + 3
Number vehicles shifted to biodiesel	Crete: + 9
Annual reduction of MJ primary energy use	Crete: 192.000
Annual reduction of CO2 emissions in kg	Crete: 10.800

# 3. Lessons from first year: Region of Crete – Regional Energy Agency of Crete

## 3.1. Tools for implementation in Crete

Within workpackage 2 of the BIOSIRE project, a database of case studies and an Implementation Handbook have been prepared (both available on [www.biosire.eu](http://www.biosire.eu) ). In this section we describe the lessons from these deliverables for the implementation in our region.

The analysis of existing cases – case studies – of specific Biodiesel Initiatives and Electric Vehicles in Transport in “D2.1 Case Study Guide” is a useful tool presenting recent best examples in Europe. The “Case Study Guide” is not just a quoting of selected examples but is also a European reference of actual successful implementations of biodiesel and electric vehicles with a specific critical structure. It combines the description of the basic factors for success with the main difficulties and obstacles. The variety of case studies achieves a spherical approach by including various technologies and applications, very useful for our planning and strategy.

It's exploitation for the demonstrative activities in Crete is very important because many of the examples – including the one implemented in Crete by the Regional Energy Agency of Crete – undertake activities addressed and adapted to the needs of Crete, especially the following ones:

1. Pilot Implementation of Biodiesel in Public Busses in Crete
2. Public transport buses running on biodiesel, Zagreb, Croatia
3. Recycled cooking oil as a fuels in La Rochelle
4. Historical development of Biofuel use in Catalonia and wider diversification of energy sources in Barcelona's public transport operations
5. Replacement of conventional vehicles with electric three-wheelers in Mykonos, Greece
6. Combustion engine-free zone, Zermatt, Switzerland
7. The Talerbus service, Lungau region of Switzerland

The “D2.2 Implementation Handbook” is a very important reference handbook for the implementation of biodiesel and electric vehicles

initiatives in the region of Crete. The document provides useful data for biodiesel and electric vehicles adopting a concrete bottom up structure. The technical handbook contains important selected technical information in order to ameliorate our market transformation plan and to make the local initiative successful. Specifically, the most important data for the implementation of demonstration activities in Crete are:

1. Current situation of biodiesel / statistics
2. Feedstock for biodiesel production
3. Strategy / various approaches for the whole chain of biodiesel
4. Technical considerations for biodiesel use
5. Specifications of biodiesel
6. Current situation of electric vehicles / statistics
7. Types of electric vehicles
8. Types of batteries
9. Recharging infrastructures for electric cars
10. Specific notes for the use / maintenance of electric vehicles

All the above key data – case studies and implementation handbook – give important information in order to enhance our local and regional activities through:

1. Exploitation of the specific information which fits to tourist regions
2. Presentations of specific information and data to local, regional and national key-actors
3. Adoption and adaptation of lessons learned in other regions through the analysis of best examples
4. Provision of advanced information for a) biodiesel feedstock b) biodiesel c) biodiesel use d) supply chain and distribution of biodiesel e) electric vehicles f) technical data for electric vehicles g) infrastructure for charging electric vehicles etc.
5. Motivation of local and regional actors to implement demonstration activities by providing them with specific and adapted information of relevant best practices and technical issues

## **3.2. Activating enabling strategies in Crete**

During the first year of the BIOSIRE project our region has worked on creating the basis for the local implementation, through the development of policies, strategies and networks. A detailed description of the outcomes

from this project phase is included in a separate document called „Market Transformation Plan“. In the present document we provide summarized content from that larger document.

### 3.2.1. Market Framework in Crete – Greece

Conclusions from Market Analysis of existing market for alternative fuelled vehicles within the Demonstrator’s region.

As “**National Incentives for electric and hybrid vehicles**” in Greece we mention:

1. exemption from the special registration tax as it is imposed to all other private use cars
2. also exemption for its life from the yearly circulation taxes.
3. exclusion from the restrictive rules of circulation, where these are applied.

The first “**National Incentives for biodiesel**” have been integrated in the Law 3340/2005. It defines the quantities of biodiesel per year:

1. Year 2005: 51.000 (thousands liters)
2. Year 2006: 91.000 (thousands liters)
3. Year 2007: 114.000 (thousands liters)

which are tax-exempted by the “Specific Consumption Tax”.

The tax exemption is considered as an important incentive for the insertion of biodiesel in the Greek Market for the first three years (2005-2007).

For the next years, the biodiesel quantities which are distributed in the Greek market through the refineries are:

1. Year 2008: 123.000 (thousand liters)
2. Year 2009: 182.000 (thousand liters)

Despite of the initial tax exemption, biodiesel has faced “**Constraints**” to the extensive distribution – within the national market – to the end users. The National Legislation & Regulations don’t permit – yet – the direct distribution of biodiesel to the end users (e.g. transport companies). The whole quantities of biodiesel have to follow a specific procedure:

1. Biodiesel is **produced** in biodiesel plants by imported seed oils or produced in mainland Greece
2. The interested companies participate in a “**Specific Bid - Evaluation Procedure**” supervised by the Ministry of Development
3. Afterwards, the **evaluation** defines the biodiesel quantities which each company can sell to the refineries
4. The companies deliver the aforementioned quantities of biodiesel to the **refineries**

5. Biodiesel is **mixed** with diesel in the refineries and the mixtures are forwarded to the petrol stations
6. Biodiesel is consumed in **transport** (end users) – as mixture – through the petrol stations

The above procedure, although adequate for introducing biodiesel to the fuel market, it doesn't give the opportunity for further development of biodiesel market. The competition of companies is only at the first stage of the market chain (at the "evaluation procedure" of the Ministry).

The Region of Crete – Regional Energy Agency of Crete has organized a series of working meetings – contacts with **Public Authorities** related to the **National Policy** and also with **Regional and Local Management Bodies**. The **outcomes** of the above bilateral communications are:

1. The "**Green Vehicles**" are under the priorities of the Minister of Transport & Communication.
2. The Ministry of Transport & Communication examines current financing opportunities (European and National) for funding the integration of green vehicles in public transport e.g. **hybrid bus**.
3. "**Electric Vehicles**" and "**Hybrid Vehicles**" – also hybrid taxis – have special privileges e.g. tax exemptions, exemptions of traffic restrictions.
4. The existed incentives are not enough for the further use of electric (and hybrid) vehicles and there are no public facilities – except the pilot & private ones – for **recharging** these vehicles.
5. **Municipalities** examines the possibility of electric mini-busses and other electric vehicles at historical, archeological and city centers.
6. The Ministry of Development / Ministry of Economics have approved the tax exemption of biodiesel for three years (2005-2007) in order to support the insertion of biodiesel in the Greek Market.
7. The ministerial programme "EXIKONOMO" (Save) motive Municipalities to implement innovative activities – also in **Transport Sector** – with a subsidy of 70%.
8. The "Community Support Framework" also includes the implementation of innovative activities in Transport Sector with the Support of the Ministry of Development.
9. The development of Biodiesel Companies in Greece has exceeded the initial estimations. The capacity of these companies is much higher than the estimated one and therefore the current legislation is out of date.
10. Taking into account that the **direct supply of biodiesel to the transport providers is not permitted**, it is not able to integrate in the National Market the whole biodiesel produced in Greece. As a result, many biodiesel companies export the rest of biodiesel in other countries.

11. A “**Working Group**” – within the **Ministry of Development** – examines the potential framework (preconditions, incentives, taxation etc.) for involving “Large Fleets” in an extra regulation for the consumption of biodiesel (big mixtures or even pure).
12. The Region of Crete – Regional Energy Agency of Crete **has been invited** to participate in the next working group of the Ministry of Development.
13. The **energy cultivations** are subsidized by the State until 2009. These subsidies – as an initial incentive – motivated – so far – many Greek farmers to adopt energy cultivations (sunflower seed, cottonseed etc.).
14. Despite the fact that from 2010 there is no subsidy for the energy cultivations, there is an indirect support through the “Specific Evaluation Procedure” by the Ministry of Development for the allocation of biodiesel for each biodiesel company. **The biodiesel companies which are supplied vegetable oils by Greek Farmers**, achieve bigger share of biodiesel for selling to the refineries.
15. The **Collection of Used Cooking Oil** is also foreseen – besides the national laws – by the **Municipal Regulations**. The Municipal Regulations foresees the prohibitions, consequences etc.
16. The main **Municipal / Inter-Municipal** Waste Management Bodies as well as other big companies (e.g. **Supermarkets**) are very willing to develop the **collection of used cooking oil in Crete**, but they have serious lack of information. They need support and guidance for the implementation of the collection.
17. There are also **hotels** in Crete – mostly big hotels – which have been certified with ISO 14001 / EMAS and have implemented relevant procedures of used cooking oil collection. These hotels can be exploited a best examples in Crete.
18. The Region of Crete – Regional Energy Agency of Crete has already provided **information, guidance and support** to the local & regional municipal organizations.

### 3.2.2. Consultation with stakeholders in Crete

Conclusions from **intensive consultation with all kinds of relevant stakeholders** (e.g. vehicle suppliers, resort managers, used oils collectors, supermarkets, municipalities, municipal enterprises, ministries, regional authorities, tourists) to identify (a) **existing barriers** limiting the take up of the relevant propulsion technology, and (b) the **type of measures** likely to encourage greater demand for this technology.

The main results for the consultation process are:

1. There is a **very significant potential** of used cooking oil in Crete, but the biggest share of this potential is unexploited.
2. The used **cooking oil collection companies** develop competitive methods in order to achieve bigger market share.
3. The integration of the **used cooking oils** in the production of biodiesel is **very profitable**.
4. The **collection** of used cooking oils is also a **very profitable** procedure.
5. A **specific technology** is developed in Crete by the implementation of used cooking oils collection.
6. The suppliers of used cooking oil (e.g. **restaurants**) **are seeking for return – benefits** and many of them choose the collection company according to the value or usefulness of the return – benefit.
7. There are also other suppliers of used cooking oil (e.g. restaurants) which choose the collection company according to the most **effective collection mode**.
8. The suppliers also demand to receive a **certification** in order to prove that they cooperate with a collection company. It has to be noticed that it is already foreseen by the legal framework and it is not optional.
9. Additional, the used cooking oil collection company is also obliged to have a **certification for defining the final destination** of used cooking oils (e.g. biodiesel companies).
10. Despite the fact that there is not any **biodiesel plant** – yet – in Crete, the biodiesel companies from the mainland consider Crete as an important market of used cooking oils.
11. Before the **consultation process**, the basic supplier of used cooking oils in Crete was the sector of restaurants, taverns etc.
12. After the consultation process, the used cooking oil collection companies are approaching also **other markets** – which are suggested by the Regional Energy Agency of Crete – for instance households, supermarkets etc.
13. **Tourism is also an advantage** for the used cooking oil collection and therefore the collection companies have to exploit the whole tourist industry e.g. Hotels, Resorts etc.
14. The respective **enterprises of the Municipalities** (waste management etc.) already have an important mechanism which can be used for the implementation of used cooking oil collection. Nevertheless, they need the **political decision by the Municipal Council** – also great support for confronting the difficulties.
15. The results of the **specific interventions of the Regional Energy Agency of Crete** in the fields of political commitment are very successful.

16. There are some **practical obstacles** in the collection at public places with exposed tanks. Unprotected tanks with used cooking oil may cause accidents (e.g. by leaks of oil).
17. There is a **gap of information - communication between** the responsible authorities, the collection companies, the biodiesel companies and the restaurants, hotels etc. At the first (1<sup>st</sup>) Local Workshop organized by the Region of Crete - Regional Energy Agency of Crete, it was the first time which all the relevant bodies participated in a common event, having the opportunity to be informed for very important issues and to discuss all their obstacles, opportunities etc.
18. The procedure of “**biodiesel distribution**” - from the production to the final consumption - is **inflexible** and makes difficult the information of the general public as well as the transport providers (busses, taxis, trucks etc.).
19. The **Network of Petrol Stations in Crete** are committed that is able to undertake the distribution of pure or high blends of biodiesel in case that the legal framework permits it.
20. The possibility of a **biodiesel production plant in Crete** is a realistic approach and the Region of Crete – Regional Energy Agency of Crete encourages potential investors on this direction providing all the existing data, information etc.
21. All the relevant private and public bodies / organizations are informed – for the first time – in common events for the development of the “**Electric Vehicles**” in Crete.
22. The Region of Crete – Regional Energy Agency of Crete has **achieved a great impulse taking also into account that this is the first organized approach of the chain at Greek regional level.**

### 3.2.3. Local policy options in the Region of Crete

The “**Existing Legal Framework**” is considered as an **inflexible** framework and procedure which restricts the development of biodiesel market over the defined limits. Despite these limitations, the Region of Crete – Regional Energy Agency of Crete has the **ability to strengthen** the market by implementing alternative policy approaches:

1. The Region of Crete is the administration authority of the whole island of Crete. Therefore, the prestige of the regional authority can **facilitate the promotion and development** of the used cooking oil collection Market. The activities which are implemented by the Region of Crete – Regional Energy Agency of Crete have a great impact at local and regional level. It is very important to note that the authority which **approves, licences and inspects the used**

**cooking oil collection companies at regional level is the Region of Crete.**

2. At the first phase of the project, a **unanimous acceptance** – for participating in promotional activities of the used cooking oil collection – has been achieved by the big and tourist Cretan Municipalities. Many contacts, official letters, meetings etc. have created a great impulse for the development of cooperation with the important Municipalities. The **political commitment of the Mayors** is very important for the market transformation because 1<sup>st</sup>. they lead equipped and experienced mechanised of waste management and 2<sup>nd</sup>. they can address and motivate easily the citizens of the municipality. The active involvement of the Mayors in the procedure is an important success for Crete.
3. It is well known that Crete is a tourist island. The share of tourists which are interested in “**Green Tourism**” is increased every year. This is a very efficient tool for promoting used cooking oil collection to tourist enterprises. For instance, the used cooking oil collection is promoted in **Hotels** in combination with other environmental activities for achieving the environmental certification e.g. ISO 14001.
4. The year of 2009 is the final year for the provision of subsidies for “energy cultivations” in Greece. Therefore, the used cooking oils and the energy crops as feedstock for biodiesel will have an equal market competition from 2010. The subsidy for the energy cultivations was a disadvantage for the used cooking oils.
5. The new programme “EXIKONOMO” (Save) foresees actions – also in Transport – **for Municipalities over 10.000 inhabitants**. The subsidy is 70%. This is a great opportunity for Municipalities to submit proposals for innovative implementation of biodiesel in their fleets. The Region of Crete – Regional Energy Agency of Crete has already implemented information activities and is in close cooperation with the Municipalities.
6. The new development law gives also the opportunity for implementation of sustainable activities e.g. the Region of Crete – Regional Energy Agency of Crete motivates **big Hotels for using electric vehicles** within their installations and integrating electricity chargers by Photovoltaics – Green Electricity and Electric Vehicles)!

# 4. Refined strategy of the Region of Crete

## 4.1. Market transformation

### 4.1.1. Objectives of this phase

The Market Transformation phase has the following time plan:

- Mallorca, Crete, Austria, La Rochelle: From September 2009 until February 2010.
- Veneto and Croatia regions: From September 2009 until February 2011

The objectives of this phase are to:

Further define and develop the local demonstration programme from a technical-economic-normative point of view in consideration of the entire value chain (tasks 3.2.1-3.2.5);

Conduct additional local consultation on the demonstration programme with regards to the articulation of the technical-economic aspects (3.2.6);

Promotion of the activities to the final users (including tourist operators as well as transient tourist population) (3.2.7); and

Development of the plans to change behaviour (3.2.8)

The activities to be conducted build upon the plans in 3.1.5 and will result in the finalisation of the Plan for the changing behaviour.

### 4.1.2. Detailed Work-plan in the Region of Crete

1. **Validation** of the list of the **authorized collection companies** of used cooking oils
2. Implementation of the information – promotional **campaign** (using the new specific leaflet) with the Municipalities – Municipal Enterprises of Water Supply and Sewerage through the “regular invoice envelops” (140.000 leaflets)

3. The Region of Crete – Regional Energy Agency of Crete operates as an “**Information Center**” and “**Clearing House**” for citizens, used cooking oil collection companies, restaurants, hotels, supermarkets etc.
  4. **Provision of the list** of collection companies to all the interested bodies (restaurants, hotels, general public etc.)
  5. Provision of the list of collection companies to the **Association of Biodiesel Companies** (also individually to biodiesel companies)
  6. **Continuation** of the – successful – contact with the association of biodiesel companies, promotion of the Cretan Market and investigation of potential innovative activities in Crete
  7. **Incitation and support** of demonstration activities for collection of used cooking oils at Cretan Chains of Supermarkets / Sponsoring
  8. **Common promotion** and demonstration activities with Hotel Chains for the collection of used cooking oils – in cooperation also with the Union of Hoteliers
  9. **Implementation of promotional activities** in cooperation with the **Union of Petrol Stations** and production of special promotional material (e.g. stickers for petrol pumps) in order to inform the fuel consumers for the percentage of biodiesel consumed
  10. Exploitation of biodiesel companies which also have networks of petrol stations for **demonstration and promotional activities (e.g. pilot petrol station)**
  11. Provision of technical – financial information for **Municipalities** for potential demonstrative implementation of biodiesel in their fleets
  12. Maximize the positive impulse by creating a **dynamic and transparent used cooking oil market in Crete** – also in the field of biodiesel use in Crete
  13. Information and promotional activities for the possibility of a **biodiesel production plant** in Crete (**clearing-house for the available technologies**)
  14. **Updating of the study** for the capacity of used cooking oils in the region of Crete
  15. Promotion of the **labeling procedure** for the restaurants, hotels etc. which participate in the collection of used cooking oils
  16. Promotion of the **labeling procedure** for the companies, organizations, institutes etc. which use electric vehicles and special promotion for electric vehicles powered by green electricity e.g. electricity produced by Photovoltaics etc.
- **Implementation of Local Working Group Meetings**
1. The first (1<sup>st</sup>) Local Working Group Meeting was held in Crete on 5<sup>th</sup> December 2008.

2. The second (2<sup>nd</sup>) Local Working Group Meeting was implemented on 29<sup>th</sup> June 2009 in order to finalise the basic considerations of the 1<sup>st</sup> Local Workshop in Crete.
  3. We plan to have two (2) Local Working Group Meetings during the phase of Market Transformation, one at the beginning of the phase and one before the 2<sup>nd</sup> Local Workshop in Crete.
- **Implementation of Local Workshops**
1. The first (1<sup>st</sup>) Local Workshop was realized in Crete on 1<sup>st</sup> July 2009.
  2. We are planning to have the second (2<sup>nd</sup>) Local Workshop in Crete before the beginning of the next phase Changing Behaviour.

The main actors which will be involved to the above activities are:

1. **Region of Crete – Regional Energy Agency of Crete:** Responsible for the activities implemented in Crete / Greece
2. **Media (newspapers, magazines, radio, TV):** Implementation of regional and national information – promotional activities
3. **Municipalities / Municipal Enterprises of Water Supply and Sewerage:** a) Participation of twelve (12) big Municipal Enterprises of Water Supply and Sewerage in the wide information – promotional campaign with the forwarding of 140.000 leaflets through the “regular invoice envelops” and b) Investigation of potential demonstration activities at local level (used cooking oil collection and/or biodiesel)
4. **Used Cooking Oils Collection Companies:** a) Participation in the demonstration activities of the collection procedure at regional level (e.g. official list, evaluation procedure etc.) and b) Implementation of a Network of Used Cooking Oil Collection Companies in Crete
5. **Biodiesel Companies:** a) Cooperation with the collection companies which are operated in Crete and b) Investigation of demonstration activities of biodiesel use
6. **Restaurants / Association of Restaurants:** a) Meetings and contacts with all (4) Associations of Restaurants of Crete, b) Contribution to the used cooking oil collection, c) Participation in promotional activities and d) Promotion of the Labeling procedure for the collection of used cooking oils
7. **Hotels / Union of Hoteliers:** a) Cooperation with the certified hotels (8) with ISO 14001 / EMAS, b) Contribution to the used cooking oil collection, c) Implementation of special promotional activities in Tourism and d) Promotion of the Labeling procedure for the collection of used cooking oils as well as for the use of Electric Vehicles
8. **Supermarkets:** Incitation for the implementation of demonstration activities of used cooking oil collection / Sponsoring

9. **Petrol Stations / Association of Petrol Stations:** Implementation of specific information and promotional activities for biodiesel
10. **Regional Authorities:** Responsible for the procedure of License and Control of the Used Cooking Oil Collection Companies
11. **Tourist related bodies, organizations, companies etc.:** Promotion of electric vehicles and simultaneous promotion of green electricity for electric vehicles

## 4.2. Changing behaviour in the Region of Crete

### 4.2.1. Objectives of this phase

For: Mallorca, Crete, Austria, La Rochelle. Duration March 2010 until February 2012.

During this phase tangible “real life” behavioural changes are expected to be witnessed in the use of alternative fuels and clean vehicles.

The planned activities regard the launching of the demonstrator programme with the relevant distribution/recharge point network, special vehicle fleets using the different propulsion systems and participation of the final operators and users. Given that the IEE programme does not finance hardware investments for the conversion, the activities in this phase regard all the accompanying measures considered to be important to ensure successful operation of the local demonstrators.

### 4.2.2. Expected Work-plan in the Region of Crete

An overview of the work-planning for the third (final) implementation phase (Changing Behaviour) in Crete can be structured as follows:

#### 1. Local Implementation

Presentation of realistic demonstration activities in Crete:

- a) Extensive networking with **tourist companies** (hotels, restaurants etc.) which provide used cooking oils. The **number** of the participating companies and the **quantities** of the collected used cooking oils will be increased as well as the related behaviour, as a result of the activation during the previous phases. Promotion of a specific labelling for restaurants etc. which adopted a sustainable behaviour.
- b) Concrete entrepreneurial networking with the **used cooking oils collection companies** in Crete. Due to the intensive cooperation of the previous phases and the “**clearing house**” role of REAC, the number and the efficiency of the used cooking oils collection companies will be increased as well as the related behaviour.
- c) Promotion and support of the **links and cooperation** of the direct entrepreneurs of used cooking oils collection with the indirect actors which will be involved and will contribute to the collection of used cooking oils collection, e.g.:
  - **Supermarkets** decided to join the project of collecting used cooking oils because of BIOSIRE activities of REAC.
  - Together with the participating **Municipalities and their related Enterprises (D.E.Y.A.)** will provoke a great change of behaviour of **Housekeepers, Consumers and Citizens**.
- d) Increased supply of **biodiesel production companies** with Cretan used cooking oils will be also one of the results of the intensive BIOSIRE activities in Crete.
- e) Initiatives for **biodiesel production plant** in Crete: Two (2) potential investors are assessing the possibility of operation of regional production unit of biodiesel.
- f) Participation of **petrol stations** and **Union of Petrol Stations** in demonstration activities of biodiesel. The petrol stations will act as intermediary for raising awareness and changing the behaviour of the drivers (fuel consumers). Promotion of a specific petrol station information sign for biodiesel. Their involvement is also due to the REAC and BIOSIRE activities in Crete.
- g) Participation of **municipalities in demonstration** activities for used cooking oils collection / biodiesel. The municipalities will be the trustworthy authorities for changing the behaviour of the citizens.
- h) Participation of **tourist companies / organisations** in the used cooking oil collection and/or biodiesel and/or electric vehicles. Crete – as a tourist island – will have to achieve the changing of behaviour of tourists in order to develop a sustainable tourist profile.

## 2. Local Working Group Meetings

We plan to have two (2) Local Working Group Meetings during the phase of Changing Behaviour, one at the beginning of the phase and one before the 3<sup>rd</sup> Local Workshop in Crete. During the second one, the

basic considerations of the 3<sup>rd</sup> Local Workshop in Crete will be discussed and finalised. The announcement and the result of these meetings will be intensively promoted by **local and regional mass media**. REAC will also publish **articles** in local / regional newspapers about biodiesel and pilot users of electric vehicles.

### 3. Marketing and Information Campaigns

The main tools for marketing and information campaigns are:

- A specific **leaflet** for used cooking oil collection
- Additional **door-to-door distribution** of the leaflet after its initial distribution
- **Labelling of restaurants** which collect their used cooking oils
- **Labelling of supermarkets** which implement used cooking oil collection
- **Labelling of petrol stations**
- **Press releases – articles**

The Region of Crete – Regional Energy Agency of Crete will realise information and marketing campaigns in cooperation with:

- a) Municipalities
- b) Supermarkets
- c) Restaurants
- d) Hotels
- e) Petrol Stations
- f) Transport Providers (e.g. Public Bus Companies)
- g) Association of Car-Rental Companies
- h) Association of Car Dealers
- i) **Schools**: REAC has developed a mechanism of annual energy and environmental educational interventions at primary and secondary schools of Crete for many years. All these activities will be exploited and adapted for the promotion of used cooking oils collection, biodiesel and electric vehicles. Students are a very important target group for changing behaviour.

### 4. Planning Future Broadening and Up-Scaling

The Region of Crete – Regional Energy Agency of Crete will organise a **Local Workshop in Crete** before the end of the phase Changing Behaviour. The main elements of the “Roadmap for Future Broadening and Up-Scaling” will be discussed. This Local Workshop will be also

exploited – as the final workshop of the three implementation phases – for the first evaluation of the achievements / results in Crete. The outcomes of the workshop should refine the approach and encourage the future development of:

- sustainable used cooking oils collection,
- biodiesel production in relation to the Cretan feedstock (used cooking oils),
- efficient and sufficient biodiesel distribution and use in transport,
- sustainable procurement of clean vehicles (e.g. electric vehicles) / alternative fuels (e.g. biodiesel) in tourism,
- sustainable procurement of clean vehicles (e.g. electric vehicles) / alternative fuels (e.g. biodiesel) in municipalities – public authorities etc.

## **5. Cooperation during the implementation and future development with Scientific Bodies and Environmental Organisations**

The achievements of REAC – in the framework of BIOSIRE in Crete – are planned to have a sustainable impact for a long time period after the end of the project. Therefore, we will foster the cooperation with scientific bodies and environmental organisations (e.g. Universities, NGOs etc.) implementing common activities for changing behaviour.

These bodies and organisations keep regular contact, communication and cooperation with thousand scientists, researchers, members, supporters etc. and they implement also individual campaigns for changing behaviour. All these campaigns will be exploited and adapted by the Region of Crete – Regional Energy Agency of Crete in the field of used cooking oils collection, biodiesel production and use as well as adoption and use of electric vehicles in Crete. Implementing all these activities we can achieve the positive reinforcement of the key market-actors and the general public.

## 4.3. Overview of time planning

WP 3: Implementation	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
	Jun	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb
3.1 Activating Enabling Strategies																					
3.2 Market Transformation (Veneto and Croatia)																					
3.2 Market Transformation (Austria, Crete, La Rochelle, Mallorca)																					
3.3 Changing Behaviour (Austria, Crete, La Rochelle, Croatia, Mallorca)																					
Local consultation workshops (LWS)		x							x												x
Local working group meetings	x				x				x			x								x	

Deliverables			D2.3							3.1A-D											3.13.2	
Other outcomes			I										II				III					

I = Market transformation Plan(Month 12) (All regions)

D3.2 Refined transitation strategy (this document)

D3.1 A-D Roadmap for Changing Behaviour for first demonstrator group (Month 18) (Four regions)

II = Local Information Campaigns (Month 22) (Four regions)

III = Technical training (Month 26), (only foreseen in La Rochelle and Mallorca)

D.3.1 E-F Roadmap for Changing Behaviour for second demonstrator group (Month 30) (Two regions)

D3.2 A-D Planning for future broadcasting upscaling (Month 30) (Four regions)