SUSTAINABILITY REPORT 09

CONSORZIO OBBLIGATORIO DEGLI OLI USATI

25 YEARS OF SUSTAINABILITY

Since 1984, COOU activities have made it possible to achieve great results in relation to environmental protection:

- 4.3 million tons collected and re-used used oils, with removal of hazardous waste.

- 1.5 billion euro saved in crude oil import by means of re-refined products.

INDEX

INTRODUCTION

The COOU 2009 Sustainability Report concerns the Consortium and every subject involved in the waste oil sector. The papers describe the environmental, economic and social results referring to sustainable development[1] goals; further providing a description of COOU strategies adopted to reduce the environmental impacts (environmental performance), to manage the business in sustainable way (economic performance), to improve the social and work conditions related (social performance).

The report is based on a pyramid structure where the first part is devoted to the description of COOU and the operational activities developed in 2009 by the Consortium (including comunication).
The second part of the document is aimed at presenting the environmental, economic and social performance of the different element that make up the used oil chain.
In comparison to the previous edition, the Report 2009 is characterized by the following new elements and specific studies:

- **Environmental benefits analysis of oil re refining activities.** The analysis focuses on the comparison of environmental impacts associated to re-refining processes with virgin production bases and combustion of used oil.
- **Benchmarking of the used oil management pattern in France.** As last year for England, a detailed study of the French waste oil management pattern has been developed. COOU's goal is to provide an outlook of significant used oil management pattern at European level in order to single out strengths and weakness of the Italian pattern.
- **Dissemination of results.** Report 2009 comes with an attached DVD containing interviews with COOU stakeholders and an English summary of the Sustainability Report 2009. The aim is to promote the dissemination and comprehension of the content to a diverse audience, also comprised of different nationalities.

To ensure transparency of both content and report modalities, the Report was compiled following the guidelines by the Global Reporting Initiative (GRI).

The Arthur D. Little Company, as independent auditor, is responsible for examining the accuracy and completeness of the information, providing certification through a specific verification certificate (available in the Appendix).

1. The goal of sustainable development is to "meet the needs of the present without compromising the ability of future generations to meet their own needs. - World Commission on Environment and Development. Our common Future. Oxford University Press,1987, pg43

COOU ACTIVITIES

1.1 COOU PROFILE

The COOU[2] is an Italian Environmental Consortium with legal status of private enterprise, whose constitution was established by law in order to achieve the important social objective of safeguarding the environment from the dispersion of hazardous waste such as used oil.

Within this framework, the public body has the responsibility of policy establishment and control, while the achievement of objectives and operative responsibility are undertaken by the private structure. The Board is composed of representatives from companies (the “Partners”) selling lubricants, either new or re-refined, and by representatives from the Ministries of Productive Activities, Environment, Health, and Economy and Finance.

In 2009, the Consortium completed 25 years of activity; since 1984, COOU has operated on waste oil management to protect the environment[3]; the main tasks of the COOU are:

- to ensure the collection of used oils around the country, proceeding to their recycled use.
- to invest in communication to inhibit general incorrect environmental behaviour.

Waste oil

Waste oil is the result of lubricant use (a blend of mineral and/or synthetic base stocks with additives) in internal combustion engines, such as automobiles, motorcycles, industrial and agricultural vehicles, ships and in industrial machinery. Used oil is included among the so-called “dangerous wastes” listed in Decree Law No. 95/92.

Significant environmental effects are mainly due to the use of lubricants. Although the technological and qualitative improvement of both oil and machines (motors, industrial machinery, etc...) has resulted in increasing the useful life of lubricants with reduced need for replacement, there is still a risk of loss due to leakage and accidental dispersion.

A significant amount of dispersed oil is associated mainly with oil change "do-it-yourself" and in that part of the industrial sector where combustion occurs unauthorized use in oil emulsions

2. It was created in 1982 by Decree No. 691 to implement the EEC directive 75/439 about the “dangerous waste”.
3. if the used oil is redeployed incorrectly or used in an improper manner, it could create serious damage. Such hazards include:
- poisoning of animals and vegetation if poured onto ground surface, due to in-depth oil penetration;
- the elimination of animal and plant life in water habitats if dispersed in such environments, due to the formation of a thin oxygen repellent film on the surface.
- intoxication and sickness If burned without any special precautions being taken, the used oil discharges into the atmosphere a high number of pollutants.

1.2 CONSORTIUM SYSTEM

Used oil, as hazardous liquid waste, requires careful management in terms of collection, selection and treatment; the collaboration between the Consortium and the subjects of the waste oil sector (companies selling lubricants, collectors, treatment plants, etc) guarantees the efficiency of activities.

The management of used oil is guaranteed by the " Consortium System" which is composed of the subject shown in Figure 2.1; this system besides the COOU includes:

- Oil holders such as industries, service stations, repair, private, etc.
- Collectors represented by 72 companies located throughout Italy; they are authorized by the competent authorities to collect waste oil from the holders; the COOU shifts the oil collected to Consortium deposits and establishes proper management considering the oil quality.
- Treatment plants where collected oils are processed:
  - Refineries: the used oils have been re-refined, obtaining regenerated base oils of similar quality to those obtained from oil refining.
  - Combustion plants: oils are reused as fuel in combustion plants (especially cement works), benefiting from its calorific value (about 9,000 kcal/kg) within the limits of the law relating to air emissions.
  - Incinerators: used oils with characteristics that do not allow either regeneration or combustion; in this case used oil is thermally destroyed at authorized facilities.

Destinazione degli oli usati gestiti nel 2009

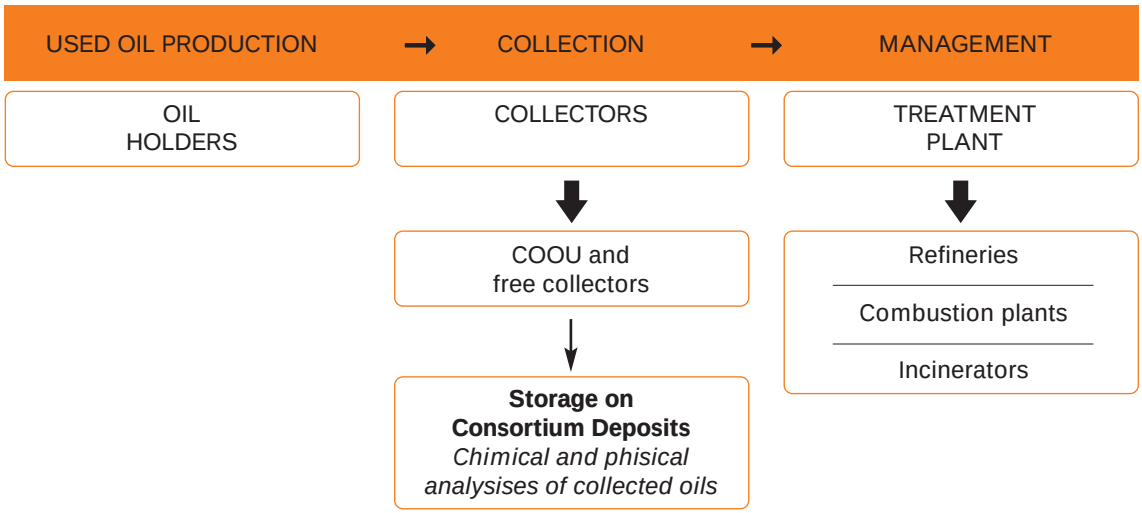


Figure 1.1

Consortium system's subjects.

1.3 COLLECTION OF USED OIL

In 2009, collected used oils stood at 194,209 tons, less than 8.6% compared to 2008 (Figure 2.2). This development was influenced mainly by the strong contraction suffered by the lubricating oil market and the consequent reduced production of oil.

However, it should be noted that in the 2009 the ratio between the collected used oil and the new lubricating oil released for consumption grew from 42.6% (data referred to 2008) to 48.7% (Figure 2.3).

Collected used

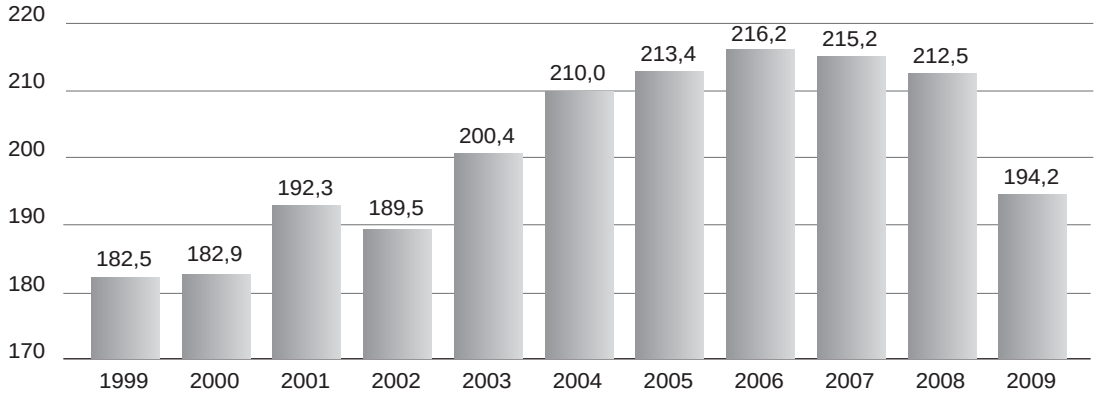


Figure 1.2

Collected used oils in the period 2000-2009.
(Source: COOU Annual Financial Statement 2009)

Ratio of collected used oil and oil available for consumption

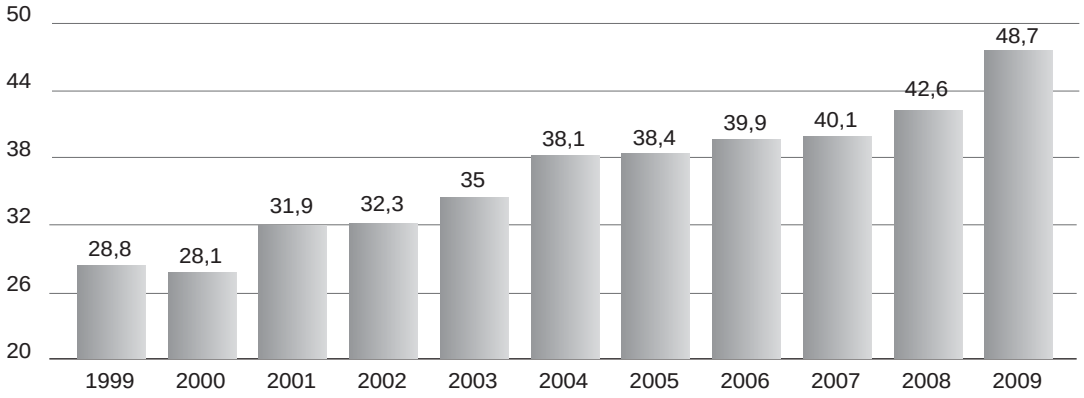


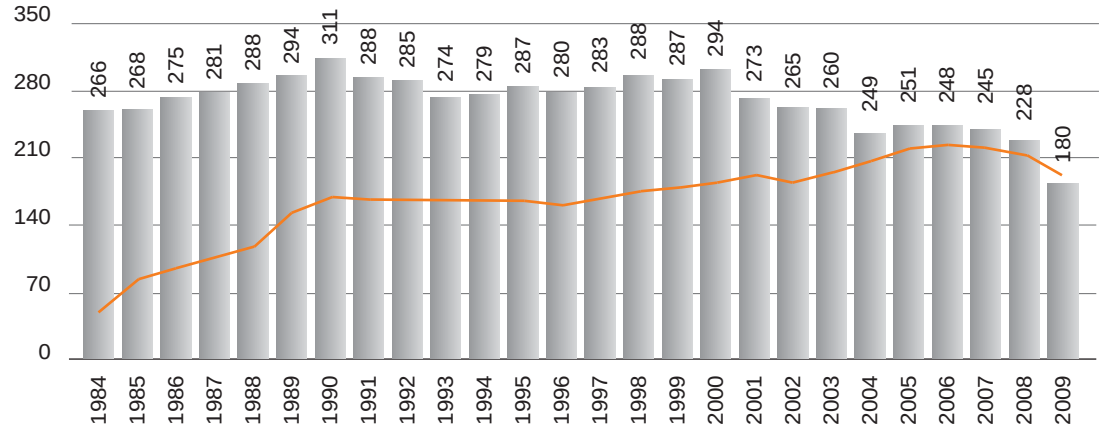
Figure 1.3

Ratio of collected used oil and new lubricating oil available for consumption.
(Source: COOU Annual Financial Statement 2009)

25 years of collection COOU

The comparison (Figure 2.4) between the annual production of used oil in Italy, graphically represented by histograms, and the used oil collected by COOU year by year (line), reflecting a gradual improvement in collection over the years. It reflects the efficiency of the collection system.

Figure 1.4



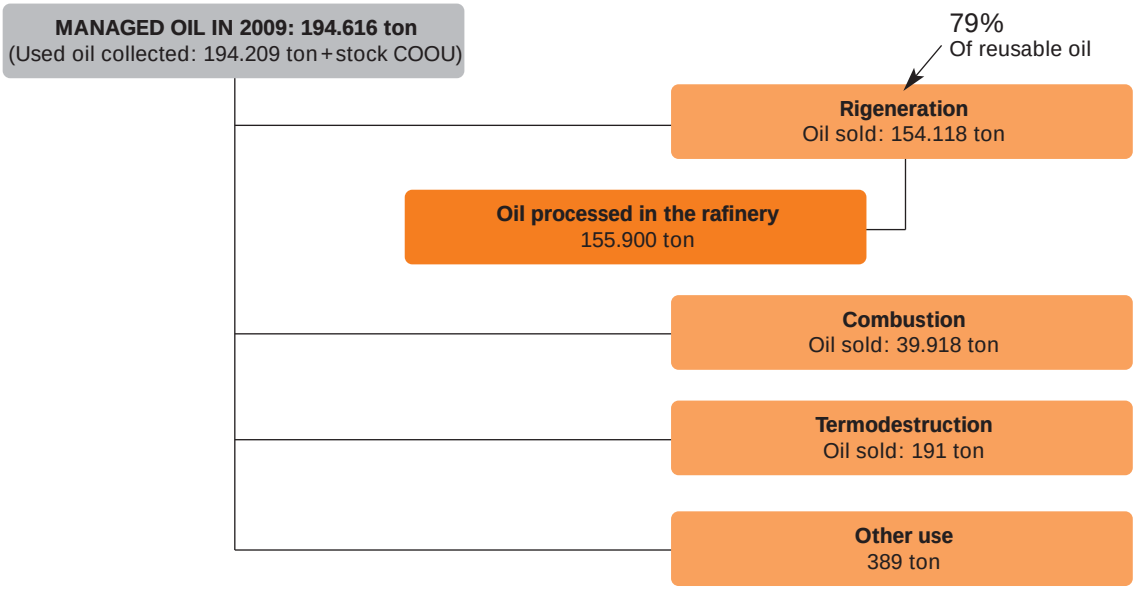
Comparison between the production of used oil in Italy and the used oil collected by COOU Ratio of collected used oil and new lubricating oil available for consumption.

1.5 MANAGEMENT OF USED OIL

As provided by article 3 of Legislative Decree no. 95/92, in Italy the disposal of waste oils occurs primarily by re-refining; oil not suitable for re-refining is disposed through combustion (energy recovery). When oils are contaminated (such as PCBs above a certain level), they are sent to incineration. The destination of used oil collected by COOU in 2009 is represented in the following Figure 2.5; in particular, the amount of used oil sold to refineries for regeneration is approximately equivalent to 79%.

Figure 1.5

Destinazione degli oli usati gestiti nel 2009



Destination of used oil collected in the 2009.
(Source: COOU Annual statement 2009)

RE-REFINING

This destination has top priority because it allows the full recovery of used oil, indeed, every 1.5 kilograms of used oil can yield up to 1 kilogram of new base oil with characteristics that are similar to a base stock produced directly from crude oil. The used oil suitable for such processing is sold to a few specialized refineries, which charge the product as raw material in their plants and obtain as base stocks gas oil, fuel oil and bitumen as output.
In the 2009 the waste oil processed at refineries amounted to 155.900 tons.

The process of re-refining of waste oils

Re-refining allows the elimination of excess carbon and metal oxides present in used oils. They have been converted into a new base oil with quality similar to base oils derived directly from crude oil refining.

COMBUSTION

Combustion is performed when used oil is not suitable for re-refining, thus being sold to a few authorized plants (e.g. cement factories), which burn the used oil as a fuel. This destination provides different advantages: first of all, the factory furnaces reach very high temperatures, thereby neutralizing dangerous pollutants and filtering all fumes produced in order to ensure acceptable emissions-levels into the atmosphere; secondly the used oil has a heating power in the scale of 9.000 kcal/kg, a level similar to fuel oil. In 2009, COOU sold 39,918 tons of oil for combustion facilities on national territory. In regards to the current year, an amount equal to 15% of total non-regenerative oil is destined for processing at facilities abroad (Switzerland).

The calorific value of waste oil

The combustion of waste oils is mainly in non-regenerative plants (cement) authorized to replace traditional fuels in order to be able to harness heat.

THERMO DESTRUCTION - INCINERATION

When the used oil can neither be refined nor burned due to its high level of contamination, it must be eliminated in special plants (incinerator), which provide for its relevant destruction. Through this process the used oil is completely eliminated, thus mitigating its harmful impact to the environment.
The amount of oil disposed of by incineration has decreased gradually in recent years, confirming this trend in 2009 with 191 t.

Disposal of waste oils by incineration

Incineration is the method of disposal of waste oil collected that contain pollutants difficult to separate (ie. oils containing polychlorinated biphenyls-PCBs at levels exceeding those provided by law).

1.6 ENVIRONMENTAL BENEFITS OF RE-REFINED OF OILS USED

The environmental relevance of re-refining has been established by the guidelines of the European Directives 87/101/EEC (specific on used oils) and the more recent Directive 2008/98/EC on waste, which recognize the priority of recycling in the hierarchy of waste management. Paragraph .21 of this Directive is entirely devoted to the theme of waste oils.

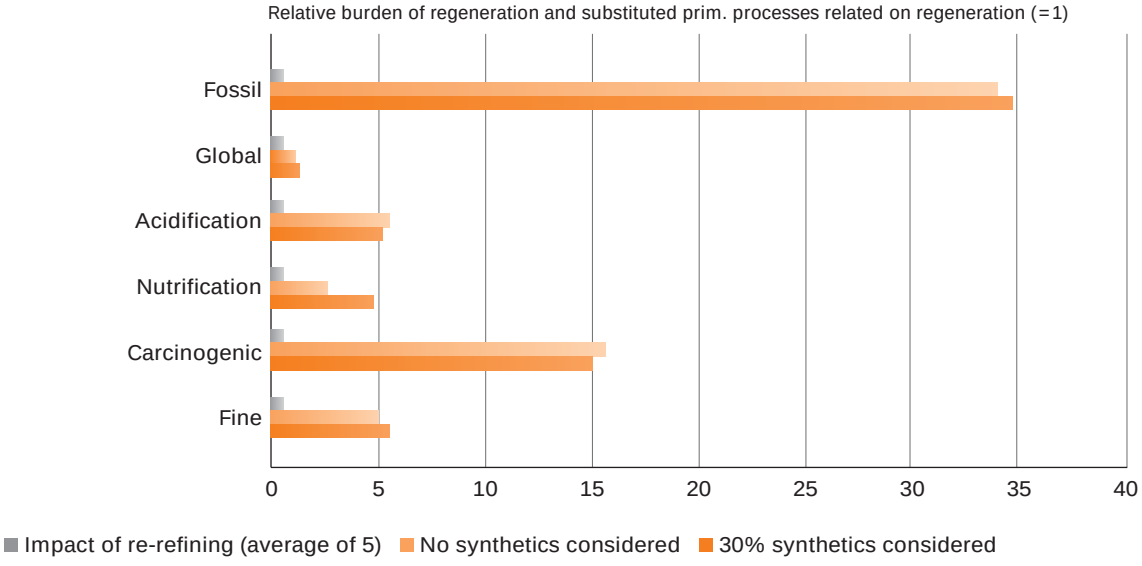
STUDY ON RE-REFINING OF USED OIL

Environmental and energy impacts of re-refining waste oils were assessed by the LCA study promoted

in 2005 by European Association of Re-Refining Industry (GEIR).
Results show benefits associated with the production of re-refined oils[4] when compared to the production of virgin oil from refineries and to combustion.
The analysis of impacts was based on the LCA method (Life Cycle Assessment - ISO 14040 series); different categories of impact were also investigated: consumption of fossil resources, global warming potential (expressed in CO2 equivalent), acidification, nitrification and toxicity (especially about carcinogenic pollutants and fine particulate).
Environmental impacts are assessed through a qualitative point of view (Figure 2.6 and 2.7); the analysis provides information relative to the magnitude of the differences at hand.
The assessment leads to the following main conclusions:

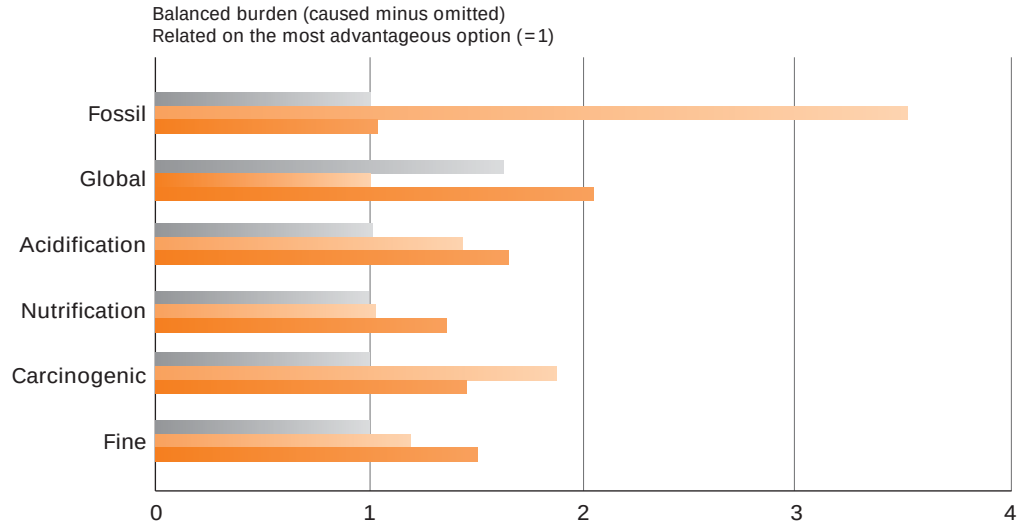
- comparison with the production of base oils in standards oil refineries shows clear environmental benefits of re-refining;
- environmental benefits of re-refining increase with the percentage of synthetic compounds used in the production of virgin oils;
- in comparison to combustion, re-refining (assuming 30% of synthetic components) has less environmental impacts for all impact categories except global warming. In this case, combustion proves to be superior given that a mix of coal/coke is replaced by used oils.

Figure 1.6



Comparison between LCA results related to used oil re-refining and primary oil production.

4. To analyze the impacts of such processes, advanced re-refining techniques (mainly based on hydrogenation technology) has been considered.



Re-refining (30% synthetics considered)
Combustion
Substiution of coal and coke mix Substiution of heavy fuel oil

Figure 1.6

Comparison between LCA results related to used oil re-refining and primary oil production.

COOU COMMUNICATION ACTIVITIES

According to Article 11 of Legislative Decree no. 95 of 1992, COOU activities focus on communication campaigns in order to gain public opinion on environmental problems of used oils.

2.1 COMMUNICATION STRATEGIES

The COOU communication activities addressed to different targets: public opinion, non-professional users, businesses and professional institutions, local institutions and collective stakeholders.
In addition, the COOU has the following targets related to the consortium system: shareholders and internal stakeholders (ie used oil companies, employees and managers).
The communication activities that address the public are particularly focused on the awareness of the "used oil problem". The aim of the COOU is to foster public access to appropriate and environmentally sound solutions in a global perspective of sustainability. The target audience also includes holders of small quantities of lubricating oils, which often escape collection. This is the so-called "do it yourself ", which deserves undivided attention considering the potential damage that oil can cause if leaked into the environment. In 2009, maximum pressure in information and education was channeled in the direction of two distinct areas: the general public and the sector more "sensitive" population in terms of behavior and environmental education: the young generation.

2.2 COMMUNICATION IN 2009

The international economic crisis inflicted critical consequences on the communication activities of 2009; re-establishment of confidence levels for citizens was the main goal in order to demonstrate the constancy of COOU scopes. In addition, in 2009, a corporate campaign was developed for the 25th anniversary of the Consortium's activities. Aim of the corporate campaign is to show the benefits produced by the Consortium in twenty five years of activities, as flagbearer in releasing practical solutions and suggestions of good practice for the used oil management.

2.2.2- INFORMATION ACTIVITIES

Corporate campaign

The aim was to reach the "do-it-yourself" field (increased from 5% to 11%) through a television commercial transmitted on Italian channels RAI and Mediaset in order to communicate the hazards of the oil used. The campaign expressed disapproval of improper behavior and encouragement to those virtuous. The Italian water polo national team was emblem of positive testimonial.
In 2009, the Consortium also aired New Magazine, the biweekly television program on environmental issues broadcast by Sky and a network of local television network.
The character of New Magazine has confirmed its main features: to inform and update the public on environmental issues most topical, and follow the activities of the Consortium through interviews, surveys and insights.

Scuola Web Ambiente

The COOU, in collaboration with Legambiente and the patronage of the Ministry for the Environment has promoted the project “School Web Environment”. It addresses secondary school pupils involved in the design and composition of personal websites on environmental issues.

Up to now, the project has a membership of over 500 classes. During the academic year 2008/2009, the Consortium launched two national competitions, "Environment 2.0" and "Doing School Web Environment”, which rewarded the best sites and class projects dealing with environmental issue.

Promotion on School Web Environment was further enhaced through a call center in 2009 in order to increase the adhesion of schools and provide technical support and assistance to teachers.

Motorshow 2009

COOU was present with its stand at Motorshow in 2009, the International Automobile Exhibition in Bologna. The Consortium invited guests and fans of motor racing on a track slot with 8 lanes. To take part in the race, participants passed a quick test consisting of proper management of hazardous automobile waste: used lubricating oil.

Other informational activities:

Among other information activities developed in 2009:

- Gondoliamo: in April-May 2009, COOU in collaboration with Environment Department of Venice, has launched an informative advertising campaign in order to raise awareness of public opinion regarding used lubricating oil disposal. Information centers are situated in various parts of the city of Venice and special meetings are prepared with sector operators and schools.
- Website COOU: the web site www.coou.it includes information referring to the main ongoing activities in which the consortium is involved, besides the updates on legislative, press, and national communication initiatives.

2.2.3 - INSTITUTIONAL COMMUNICATION

In 2009, COOU promoted communication with institutional stakeholders through several initiatives, both national and local.

Among the main activities:

Twenty-fifth Anniversary Celebration of the Consortium

On November 25, in Rome's historic Hall of the Temple of Hadrian, the Consortium proposed an institutional meeting celebrating the twenty five years of activity in the management of the lubricating oil used. The current and sensitive environmental issues are discussed and the guests at the conference gave an overview of successes and obstacles of the Italian environmental context.

Ecomondo 2009

In 2009 COOU attended Ecomondo, the International Fair of Material & Energy Recovery and Sustainable Development. The Consortium has proposed to the visitors of the fair two important events: the presentation of the Third Report of Sustainability and reflection on new forms of environmental communication (the COOU television commercial was exhibited.

2.2.4 - INTERNAL COMMUNICATION

The annual convention (in 2009 the convention was in Sicily) is the special meeting for the System Consortium subjects. During the meeting, a network of collection companies and re-refining plants share the annual results and hold open discussions on waste oil events. The main issues of 2009 were the following: changes to European environmental Directives, the evolution of the global market, the crisis in the automotive sector and the declining consumption of lubricating oils.

EUROPEAN MANAGEMENT OF USED OIL

The detailed analysis of oil management scenarios in other European countries is part of a specific program of the COOU that aims to analyze the systems adopted by other nations in comparison with the national model from a qualitative point of view. In particular, the analysis conducted by COOU focused on the current destinations of waste oil and future prospects according to new European directive on waste. The Sustainability Report 2009 edition focused its central study on the used oil management model in France.

3.1 STUDY CASE: FRANCE

The structure of French management of waste oils is similar to the Italian model, especially for the collection system. The French Environment Agency ADEME, as COOU, is the reference for subjects of sector. Unlike Italy, the main treatment of waste oil at the national level is divided in energy recovery and, secondly, re-refining; a portion of waste collected for re-refining is exported in refineries in Germany and Spain.

3.2 ADEME

ADEME is involved in the implementation of public policies in the areas of environment, energy and sustainable development. The Agency is responsible for promoting research and improvement in terms of technology and innovation and promotes the dissemination of information on environmental issues.
The communication activities supported by ADEME are directed to the public and sector- professionals; relating to the issue waste, ADEME is responsible of:

- Prevention of waste production (in private households and companies);
- Management and treatment of waste;
- Management of pollution and contaminated soils (management of environmental impacts on human health and promoting the reuse of brownfield sites).

In Italy

The COOU is a non-profit organization and is reference to the network of stakeholders in the used oil sector: the owners (including private citizens), collectors, and waste disposers.
The aims of the Consortium are:

- raise awareness and encourage proper waste oil collection;
- check the management system and proper disposal of used oil collected;
- reconcile the interests of businesses, through sharing of resources.

3.3 USED OIL CLASSIFICATION

In France, waste oils are classified on two categories:

- Dark oils: they are industrial oils (oils associated to heat treatment, oils for compressors) and automotive oils (represented mainly by engine oils). Dark oils are subject to re-refining processes or energy recovery (e.g. cement production plant).
- Clear oils: they are mainly industrial oils and characterized by a low level of degradation. They are derived from the hydraulic transmission oils, oils for turbines, insulating oils for transformers and they can be recycled by simple treatments (mixing).

In Italy

The classification of used oil collected is based on chemical analysis; they establish the most appropriate destination. Depending on specific parameters (water content, saponification number, total chlorine, etc.), oils suitable for re-refining are shipped to refineries.
Oil not meeting these conditions are instead used as fuel oil (combustion).
If oils are contaminated by pollutants (eg. presence of PCBs at levels exceeding those provided by law), they are eliminated through incineration processes.

3.4 MANAGEMENT OF WASTE OILS

In 2008 the total quantity of waste oil resulting from the automotive sector was approximately 364,000 tonnes of which about 338,000 were collected (total data also considered clear oil, approximately equal to 82,000 tonnes) in 2009, the value has a slight reduction of 3.8%.
The drop in the lubricants market has reduced the collection of used motor oil, partially offset by the collection of waste from industrial activities. Compared to 2008 the re- refining has decreased by about 4%, while energy recovery shows an increase.
Regarding the management of waste oil for combustion is interesting to note that in 2009 there is a substantial reduction of waste oil sent to cement plant and an increasing of quantity sent to the treatment facilities of industrial waste and kilns to produce lime.

In Italy

In Italy the management of the oil used is characterized by specific national legislation already in accordance with the provisions of Directive 2008/98/EC in terms of managing used oil.
Recycling is considered the best destination (most results in terms of environmental benefits and impacts on human health); re-refining in Italy covers more than 80% of reusable oil, while combustion is considered as an alternative only for that part of oils do not meet the requirements.

3.5 THE CHAIN

Collection System

The waste oil collectors operate on the French territory free of charge and must be approved by the Prefects, according to specific procedure defined by Decree Law of 28 January 1999; in addition, collectors must have a storage facility authorized under the regulation of ICPE – (Installations pour la Classees Protetion de l'Environnement).
The collection network includes about fifty organization and one hundred repositories for oil storage; the authorized collectors refer to Nationale des Industries d'Huiles Ramasseurs agrèès Usagees of CNPA (Conseil National des Professions de l'Automobile), founded in 1980 to represent and protect the professionalism of the actors in this field.

In Italy

Collectors are part of a well-structured system with reference of the COOU, which checks the entire chain of used oil.

Collectors are constituted by small / medium size companies that work in specific areas according to their area of origin (North, Central, South).

In Italy, there are 72 collectors at no cost for oil owners. The costs are insured by the compulsory contribution paid by the Consortium companies that leads to the consumption of lubricating oils.

Management of waste oils

Waste oils have been managed at plants for energy recovery (cement and incineration of hazardous waste) or re-refining; both plants operate under special permits issued by the Prefects.

Chain financing

Since 2007, ADEME has funded the Compensation Scheme of collectors of waste oils and since 2006 has provided financial support to companies re-refining dark oils. The National Aids Commission (NAC) for oils since 2006 has provided a financial assistance scheme for businesses of dark oil re-refining with a yield of production below 40%; the financial support has a 7-year duration from the date of the first payment, with trend to decrease over time.

The cost of dark waste oil collection is mainly based on market value and recognized as re-refining oils used as fuel.

Whereas the collection and sale of the disposal center at present is not fully sustainable from an economic standpoint, the dark oils chain is also supported by public funding managed by ADEME .

Until 2006, the sales price of used oil collected was determined by ADEME on the basis of proposals from each disposer; but this system has often produced a deficit for collectors when the sales prices were lower than those during collection.

Since 2006, their sustenance comes from the compensation scheme supported by ADEME and the selling prices of collected oils are established freely between the collectors and disposal plants.

In Italy

On the basis of compulsory contributions paid by member companies placing oil consumption, the COOU guarantees payments to collectors, who work for free for the holders.

The Decree 166/09 also introduced a new task for COOU: to pay a fee to companies for re-refining, depending on market conditions of base oils reclamation, refining costs and the price obtainable following reuse of waste oil by combustion.

SUSTAINABILITY PERFORMANCE

The Sustainability Report provides a description of both the logic and choices enacted by the Consortium to reduce the impacts on the environment (environmental performance), distribute the wealth among its stakeholders and the economic system (economic performance) and contribute to development of the social context (social performance).
In particular, the sustainability of the COOU and its used oils chain is demonstrated by the following effects on the environment, economy and society:

- the management of used oil can prevent dispersal of hazardous waste into the environment.
- treatment of waste oils by regeneration avoids the environmental impacts associated with the production of new base oils, saving non-renewable fossil resources.
- management activities involve an optimization of economic resources available to the Consortium that redistributes wealth among the various stakeholders for improving the management system.
- System consortium generates national employment in its sector and contributes to the improvement of product quality.

With the involvement of the entire network of supply chain, the assessment of sustainability performance has achieved a representation of the data 83% of the value chain.

4.1 ENVIRONMENTAL PERFORMANCE

Collection

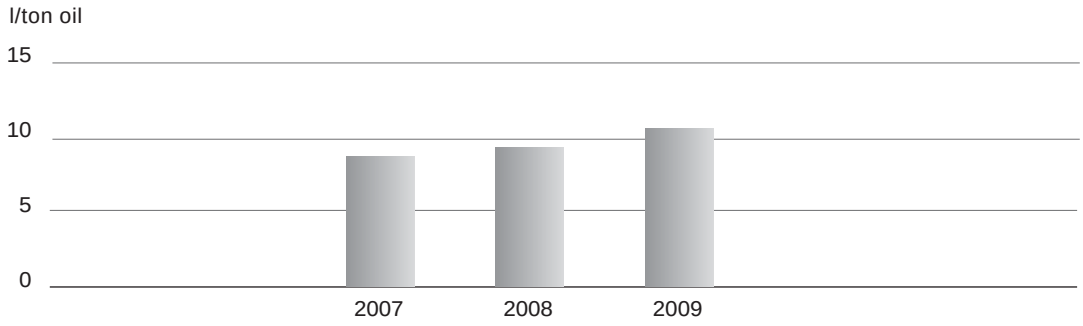
The collection network is organized on two levels of operation: it is run by both companies to collect directly from holders (primary collection) and the COOU (through third party carriers) from collectors to Consortium storages (secondary collection).
The environmental aspects of the collection concern the impacts associated with the use of vehicles for transferring oil; the environmental impact assessment for the activity of primary and secondary collection involved the consumption of fuel for transportation and related emissions into the atmosphere (Figure 4.1).

PRIMARY WASTE OIL COLLECTION

36 km/ton oil

Average distance covered in 2009 for primary collection

Fuel consumptions



CO_2 emissions

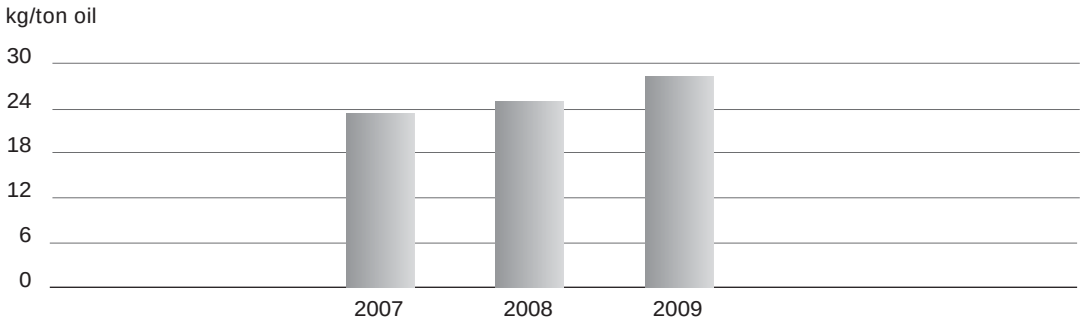


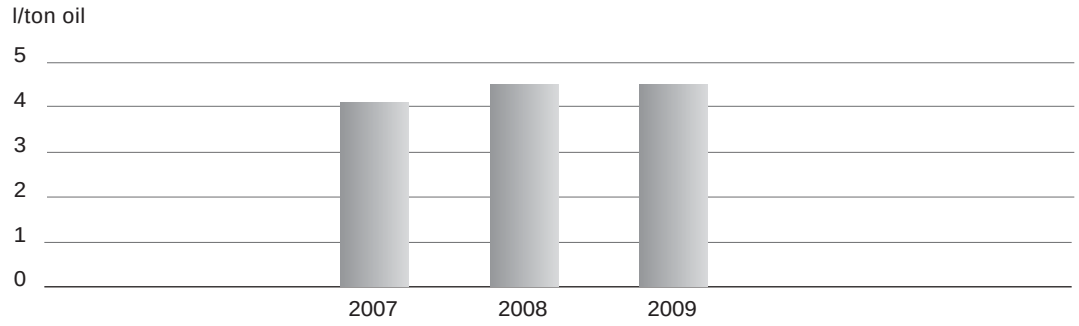
Figure 4.1

SECONDARY WASTE OIL COLLECTION

14,4 km/ton oil

Average distance covered in 2009 for secondary collection

Fuel consumptions



CO_2 emissior

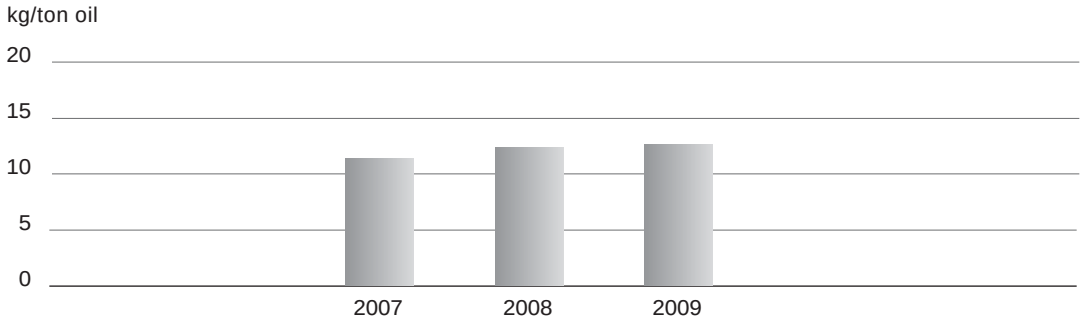


Figure 4.1

Environmental aspects of primary and secondary waste oil collection.

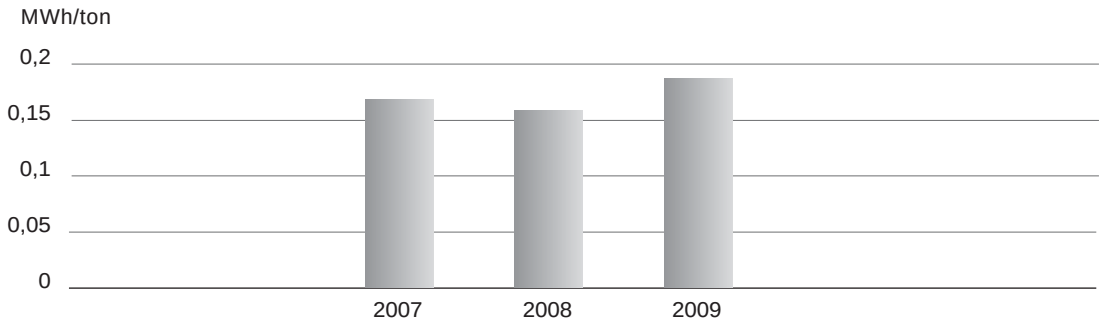
Storage and re-refining

The main environmental aspects associated with the activity of waste oil storage and re-refining are represented by energy consumption, water consumption, waste production, air and water emissions; these aspects were analyzed based on the specific data provided by refineries involved in the Consortium System.

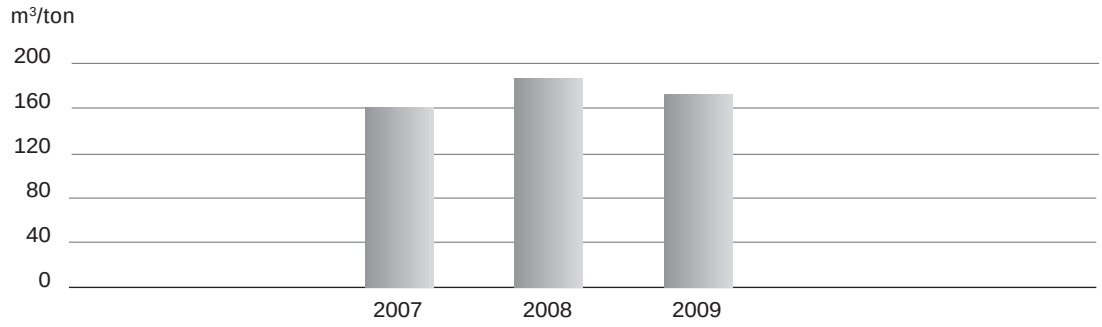
Figures 5.2, 5.3 and 5.4 show the trend of different environmental indicator related to waste oil re-refining activity.

Figure 4.2

Electricity consumption



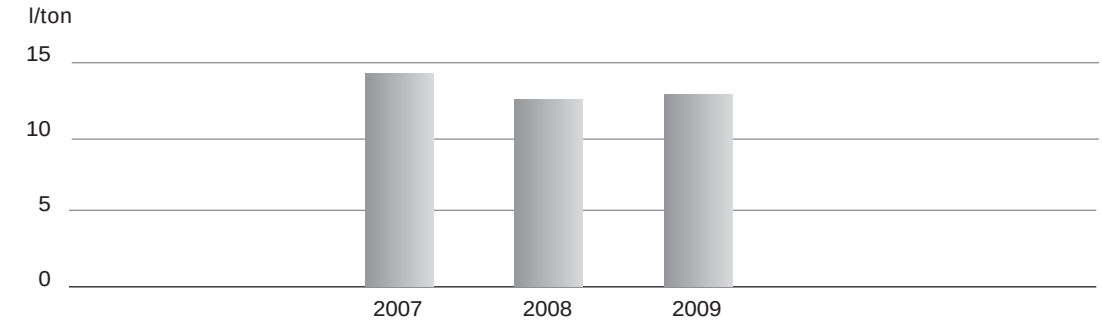
Natural gas consumption



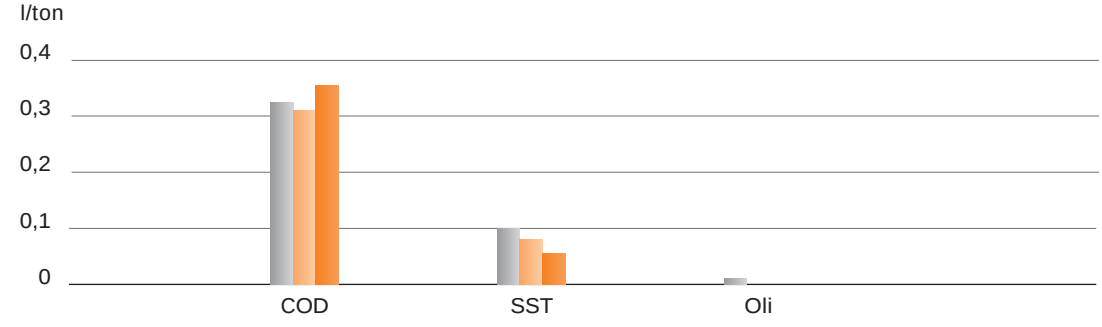
Energy consumption related to waste oil re-refining.

Figure 4.3

Water consumption

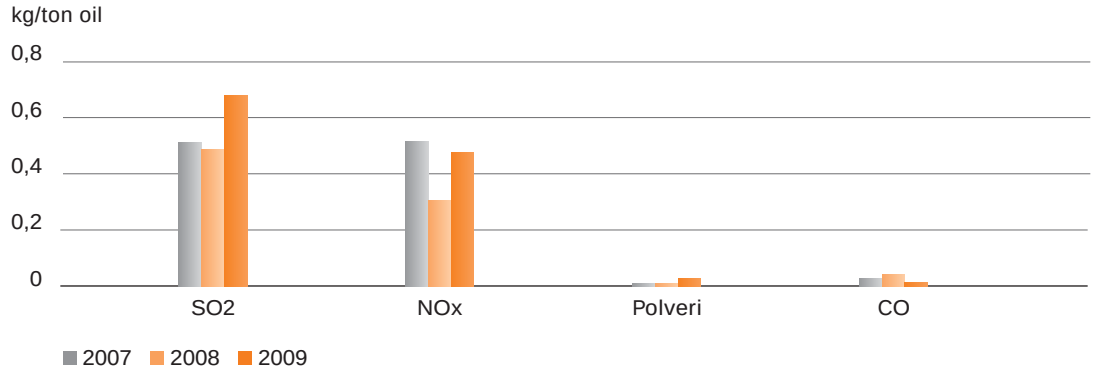


Water pollution



Water consumption and water emissions related to waste oil re-refining.

Air emissions



Waste production

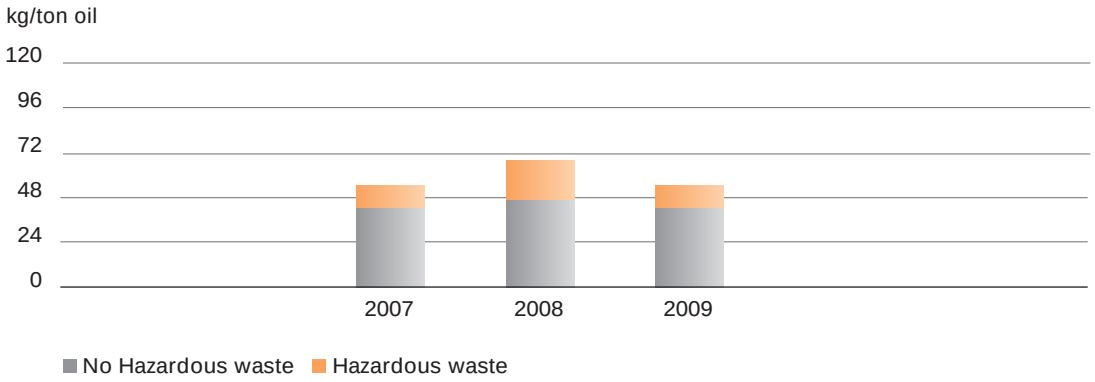


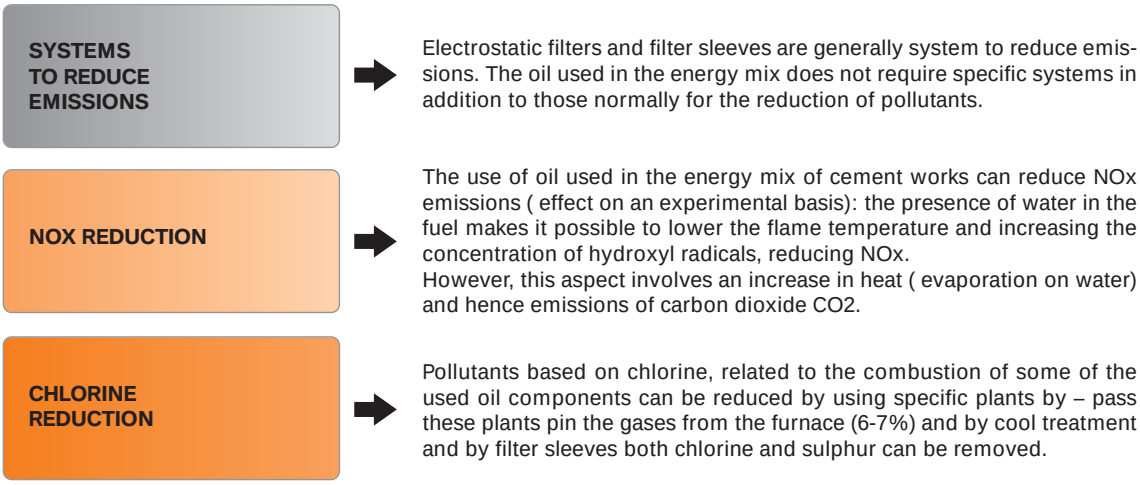
Figure 4.4

Air emissions and waste production related to waste oil re-refining.

Combustion

Air emissions represent the main environmental aspect related to waste oil combustion.
The process releases effluents containing pollutants (NOx, SOx, dust, etc.) that require careful management in order to limit the effects on the environment and human health (Figure 5.5). Nevertheless, the combustion process allows the recovery of energy, using calorific value of waste oil (about 9000 kcal/ kg). Based on information obtained from the combustion plants using waste oil as fuel, results clearly indicate a central role in contributing to the energy mix (electricity + fuels); in particular the contribution of waste oil in cement plants is between 7 and 20% while in bentonite plants it assumes even higher values (averaging 70% of the energy mix).

Figure 4.5



Emissions management aspects on combustion plants.

4.2 FINANCIAL PERFORMANCE

Effects of Economic crisis on Waste Recycle

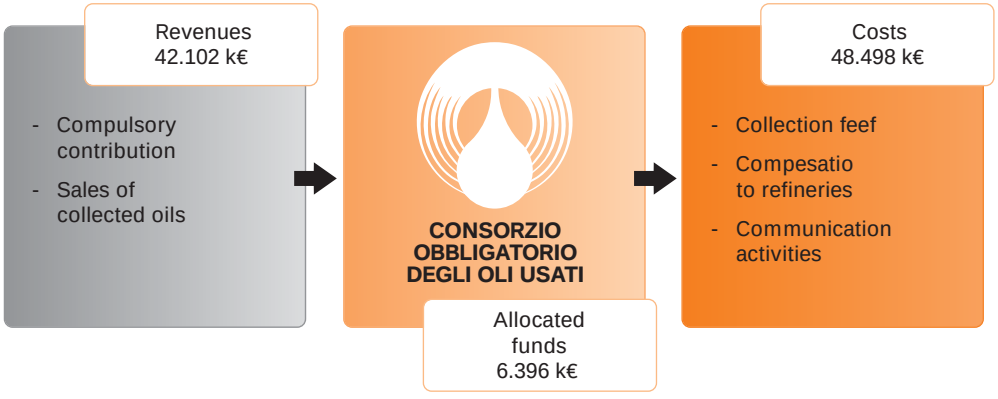
The economic crisis has affected primarily the commodity markets but also has effects on markets of recycled materials. As a result of the crisis, there has been a decrease of the price of raw and secondary materials with a contraction of recycled materials markets throughout Europe. The recession also yielded effects concerning the waste oil sector; in particular, the decrease of crude oil prices bring down the profit of the waste oils recycling (and the re- refining system) with reflections on the whole system recovery and recycle.

Economic aspects of COOU

In 2009 COOU had a negative balance of k€ 6,396 (total cost of k€ 48,498 k and total revenues of k€ 42,102) (Figure 5.6). The budget was balanced with specific funds (fund contribution differences) considering that the increase of compulsory contribution was not sufficient to restore the negative value.

Figure 4.6

COOU balance 2009



COOU Financial flows in 2009.

CASH INFLOWS

In 2009, total revenues were 42,102 k€ ; they mainly depend on compulsory contribution (k€ 29,390) and sales of oil for re-refining and combustion (the so-called "production value" equal to j12,278 k€).

The contribution of production value is less than in past years due to the following factors

- the increase of the compulsory contributions to contrast the effects of economic crisis
- the decline of the lubricants market.

The production value was strongly influenced by the economic crisis: sales showed a decline of 61.5% compared to 2008; in addition, the sales prices were much lower than last year: the sale of oil to refineries was performed at an average price lower than 2008 (- 58.4%) while for oil to combustion plants, the average price was lower than 2008 (51%).

CASH OUTFLOWS

In 2009, the total costs were k€ 48,498 (already subtracted the value of stocks).

The largest share comes from the cost of production, represented by costs directly related to collection, amounting to k€ 42,224, and management (overheads, staff, consultancy fees for the statutory bodies for communication activities, depreciation etc.) amounting to 6,819 k€ .

4.3 SOCIAL PERFORMANCE

Social aspects of the waste oil chain

To provide a comprehensive overview of aspects relating to the theme of sustainability, the 2009 Report also includes some social indicators related to subject belonging to waste oil chain; the main indicators focus on personnel composition and product quality and responsibility.

PERSONNEL OF WASTE OIL CHAIN

The analysis of the workforce engaged in the supply chain management of waste oil shows that the employment of women is quite low, even if at circa 24% in collection. The percentage of workers with graduate degrees or high school certificate is 40% while over 85% of personnel have a long-term contract (Figure 5.7).

Type of contract work

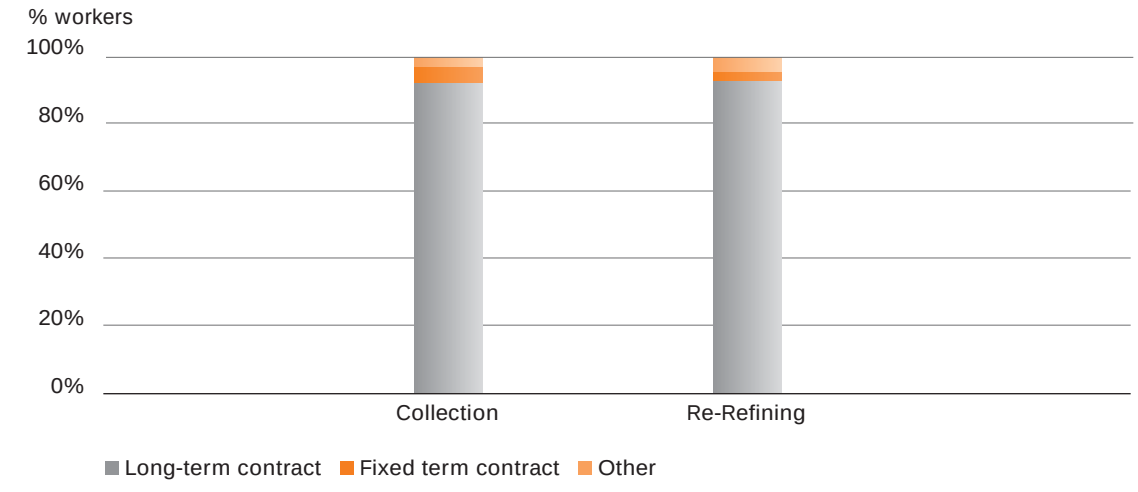


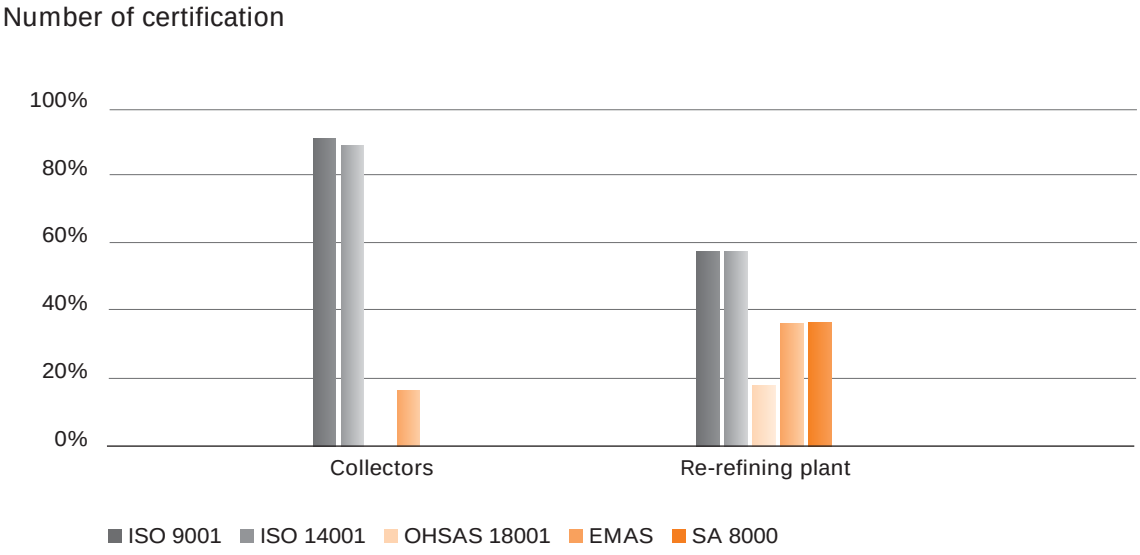
Figure 4.7

Type of contract work of the personnel involved in the waste oil chain.

PRODUCT QUALITY AND RESPONSABILITY

In this case the COOU has defined some indicators aimed to monitoring the quality aspects related to waste oil management; for example, Figure 5.8 shows the number of voluntary certification system implemented by the main players who belong to the waste oil chain.

Figure 4.8



→ Number of certification obtained by waste oil collectors and Re-refining plants.

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