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DGRME - Annual Report 2014

Activity 2013

Ministry of Economic Development
Directorate-General for Mineral and Energy Resources

DGRME - Annual Report 2014

Activity 2013

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Introduction

The year 2013 was a year marked by lights and shadows for the sector of raw materials and energy raw materials.

With regard to raw materials, the enduring housing crisis impacted negatively the sector in Italy. However, despite the declining domestic production, the raw materials industry was able to react with an increased commitment to foreign countries for those sectors where it was possible (stone and marble, and relating equipment).

Backed up by positive numbers at international level, the hydrocarbons exploration and production sector in Italy, however, did not express its potential nor it achieved its objectives.

The international situation at the time of the publication of this report (April 2014), highlights the importance of energy independence for EU countries. With a development of renewable energy remarkably pronounced and incentivized, in fact, Italy remains among the major European countries the most vulnerable. Excluding the nuclear power industry and new developments for coal (unless an actual start of CCS projects will take place), with imports of gas by pipeline subject to great risk both from north and south, and a limited regasification capacity, it is essential that the contribution of the domestic fossil resources be at a level at least equal to that envisaged by the National Energy Strategy.

In 2013 production of oil and gas remains on the upturn line started in 2009, but the very low exploration activity and the increasing administrative and territorial difficulties in the execution of exploration, appraisal and development wells, suggests that already in 2014 the effects of the stop of new activities will become visible, with the first contraction of production and employment. Numerous international operators, long present to invest in Italy for its production potential and awaiting to obtain the necessary permits and authorizations for years, may leave the country, attracted by the growing prospects of other Mediterranean areas, where there is an ongoing strong and rapid development of exploration activity, particularly offshore.

On the contrary, the National Energy Strategy, approved in 2013, provides for a gradual increase in domestic production, up to reaching in 2020 the levels of the 90s. To achieve this result, which is technically feasible with the potential of reserves of the country, it will be necessary to adopt, as soon as practicable, a different policy aimed at consulting the local communities involved and to promote more efficient administrative processes.

The results of this year, in fact, are not very encouraging: although there was a slight increase in the total production of hydrocarbons (+2% compared to 2012), which confirms the slow but steady increasing trend of the recent years, a strong decrease in gas production (-10%) is recorded due to the natural decline in production from mature fields and the halt of many projects awaiting authorization.

Although the exploration and production sector of hydrocarbons appears to have had in this year more shadows than lights, it cannot be ignored that a number of important positive elements have affected the activities dealt with every day by the Directorate-General for mineral and energy resources.

Although slowly, the increase in the storage capacity is proceeding (increase of 5.18% over the previous year) and there are ongoing programs to ensure a greater peak capacity to cope with possible emergencies.

Data relating to safety and environment are utterly important. The sector is characterized by a growing and strong reduction of accidents and injuries, especially offshore. In 2013, the preparation of the Offshore Safety Directive, offered the possibility to make a broad and analytical comparison with other EU countries, with significant results presented in detail in this report. Many are the reasons for these results, which are not common in Italy: the presence of a few very experienced operators; the in-depth knowledge of the territory and the reservoirs; the use of new technologies through the constant upgrading of existing facilities; the supervision carried out through numerous inspections, controls and measures, as detailed in this report, carried out by a competent authority, UNMIG, which has developed its expertise since the 50s. The awareness of these high quality performances must be an incentive to do better. With this perspective should be regarded the numerous initiatives, described herein, that see engineers and specialists from the Directorate General to interact at national and international level to maintain a high level of information and update in a constantly evolving industry.

Several other areas of activity, gradually introduced in the range of competences of the Directorate General, are included in this report. From the geothermal activity, to the program of construction of methane gas network in southern Italy, the activity relating to expropriation, the complex system for control of production and royalties, all illustrated with the criticalities due to the current Italian situation. For each one, regulatory interventions have been implemented in order to gradually overcome the existing obstacles, as described herein.

In 2013, the foundations for important developments were laid: the reshaping of marine areas open to new activities and the identification of an area of the Balearic sea, contiguous to Spanish and French exploration areas, will allow the development of an area with great prospects of interests for hydrocarbons, within the limits set by current environmental regulations and the highest standards of safety.

With particular reference to safety of offshore operations, finally in 2013 a major step forward was made with the adoption of the already mentioned Directive by the European Parliament 2013/30/EU, approved in June 2013, and now under implementation in the member states. The aim of the directive is to set high minimum safety standards for the prospection, exploration and production of hydrocarbons offshore, reducing the probability of occurrence of major accidents, limiting their consequences and increasing the protection of the marine environment. The Directorate General immediately began to deal with all the relevant Governmental

departments and the stakeholders to build a scheme of transposition which works as an effective tool to further improve the already high level of safety standards and to coordinate the competences of the various entities responsible for offshore safety.

DIRECTOR GENERAL
Ing. Franco Terlizzese

DIRECTORATE-GENERAL FOR MINERAL AND ENERGY RESOURCES

Structure

The Directorate-General for Mineral and Energy Resources (DGRME) consists of a Staff Office and 8 Divisions.

Divisions II, III and IV are the UNMIG Offices - [National Mining Office for Hydrocarbons and Geo-resources](#) - located in the territory, in Bologna, Rome and Naples. Division V, whose offices are located in Rome outside the Ministry, is made of the Laboratories for analysis and testing for the mining and energy sector.

The structure of the Directorate-General is composed of 89 resources, of which 71 are employees of the Ministry, with various professional profiles - administrative, technical, legal - and 18 are seconded from controlled entities, universities and scientific institutions.

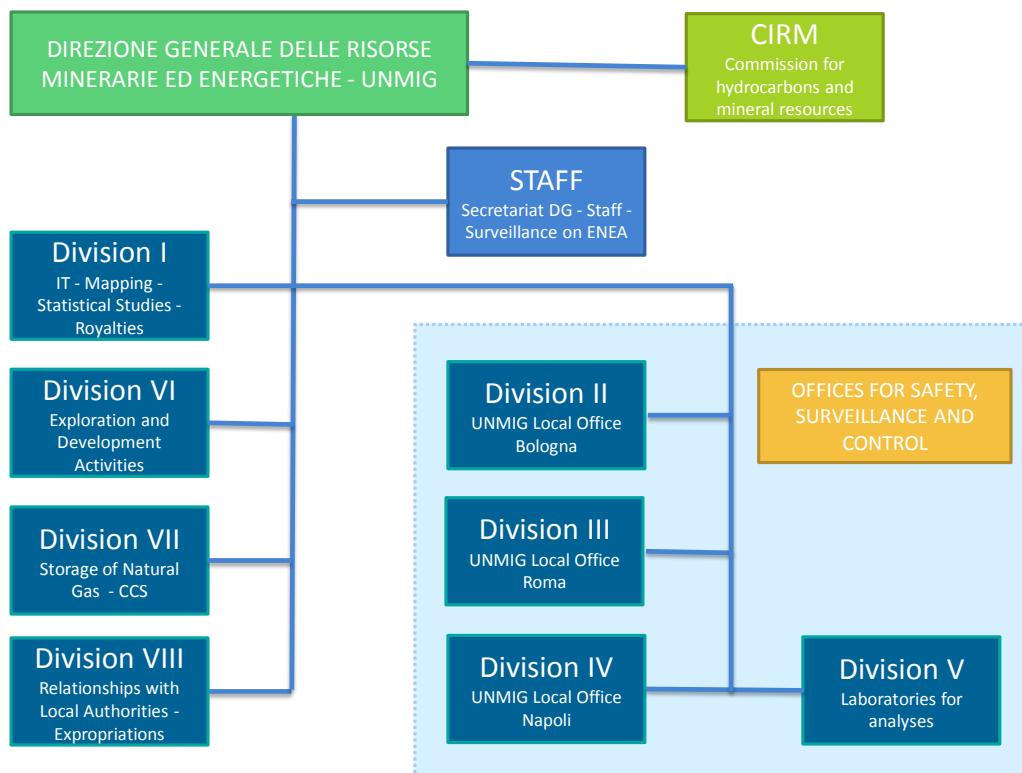


Figure 1 - Organogram of DGRME

The Directorate-General is supported by a technical advisory body, the [Commission for hydrocarbons and mineral resources](#) (CIRM), established by decree of the President of the Republic, dated 14 May 2007 n. 78. The current structure of CIRM was defined by [Ministerial Decree of 9 August 2013](#).

Furthermore there are agreements in place with ANIM, Assomineraria (the Association of the mining industry), AITEC, Bicocca University (Milan), CRIET, GEAM and protocols of intents with Lazio Region / Sicily Region / Calabria Region / Lombardy Region.

Functions

The Directorate-General for Mineral and Energy Resources carries out the following tasks, as defined by [Decree of the President of the Republic 28 November 2008 n. 197](#) “Rules for the reorganization of the Ministry of Economic Development”:

- ❖ definition of the priorities, guidelines and development programs for the mining sector at national level and regulations related to it;
- ❖ functions and tasks of National Mining Office for Hydrocarbons and Georesources - UNMIG Division;
- ❖ relationships with the international organizations, the EU bodies, the public authorities of other States in the mining sector;
- ❖ fostering of agreements with regional and local public offices to ensure that the conditions and procedures for exploration and exploitation of mineral and geothermal resources with strategic interest for the country are consistent throughout the national territory;
- ❖ planning, authorization, management and control of the activities of prospection, exploration, exploitation and storage of mineral resources, in particular of oil and gas resources, and the related offshore plants;
- ❖ definition of bilateral, multilateral and international agreements at the European level for the exploration and exploitation of the mineral resources in the international waters and promotion and support of the hydrocarbon and mineral resource development in other countries of particular relevance for the policy of security of supply and national competitiveness;
- ❖ development of technologies for the capture, transport and storage of carbon dioxide;
- ❖ technical regulations for the production, transport and storage facilities for energy and for the mining safety.

Each Division of the Directorate-General has specific tasks, which were established by [Ministerial Decree of 22 June 2012](#) “Modification of the Ministerial Decree of May 7, 2009 for the identification of non-general management offices of the Ministry of Economic Development”.

In particular, UNMIG Offices (Divisions II, III and IV) organize and carry out surveillance activity, with reference to verifications, safety of installations, inspections, accident prevention, health and safety of workers, and also with respect

to the application of the rules of mining police, both onshore and offshore, in the field of prospection, exploration, exploitation and storage of hydrocarbons. These functions are in addition to the functions concerning the technical and administrative management of the activities of exploration, research, exploitation and storage of hydrocarbons, natural gas and CO₂ performed by the holders of prospection and exploration licenses and exploitation and storage concessions in the territories.

The local jurisdiction of UNMIG offices extends both in mainland Italy, where the granting of mining activities is carried out in consultation with the regions concerned, and in the marine areas under the national jurisdiction.

In particular the territorial jurisdiction in which UNMIG offices operate is divided into:

- ❖ **Division II** - UNMIG Territorial Office of Bologna: Piemonte, Liguria, Lombardia, Veneto, Friuli-Venezia Giulia, Emilia-Romagna and the relevant territorial sea and continental shelf;
- ❖ **Division III** - UNMIG Territorial Office of Rome: the regions of Tuscany, Umbria, Marche, Lazio, Abruzzo and Molise and the relevant territorial sea, Sicilian Sea and continental shelf;
- ❖ **Division IV** - UNMIG Territorial Office of Naples, Campania, Basilicata, Puglia and Calabria and the relevant territorial sea and continental shelf.

The Laboratories of analysis and testing for the mining and energy sector - **Division V** - carry out checks on explosives for mining use, campaigns for inspection, sampling and chemical analyses of minerals derived from activities in the mining sector, controls in the field of environmental pollution to the extent covered by the mining sector.

The functions of the Divisions I, VI, VII and VIII are the following:

- ❖ **Division I** - Digitalization, cartography, statistics and royalties - Digitalization and standardization of processes, national mapping, studies and statistics, Official Bulletin of Hydrocarbons and Geothermal Resources (BUIG), processing and management of royalties data.
- ❖ **Division VI** - Research, production of hydrocarbons and geothermal resources - Award, extension, amendment, revocation of licenses and concessions for the production of hydrocarbons, minerals and geothermal resources from the underground, onshore and offshore.
- ❖ **Division VII** - Natural gas storage, carbon capture and storage - Award, extensions, modifications, approval of work programs, revocation of licenses for the storage of natural gas and CO₂.
- ❖ **Division VIII** - Relationships with the Regions, local authorities, EU and international bodies, expropriation - Promotion of agreements and arrangements with regional and local authorities for the exploration and development of mineral resources of strategic interest for the country. Office for expropriations in the energy field.

It should be noted that these competences at this moment in time are under revision in line with the implementation of the [Decree of the President of the Council of Ministers of 5 December 2013 n. 158](#), entered into force on the 8 February 2014.

Communication

Website

The communication of data under the competence of the Directorate General is made via the website <http://unmig.mise.gov.it>, which, in addition to informing on the mineral rights conferred and on the administrative processes, provides a set of data of general interest, such as production of hydrocarbons, revenues from royalties, lists of wells, platforms, treatment and collection plants, as well as a space for spreading knowledge and an informative section on industry regulations.

Amongst the areas of interest, information is available also on activities under the responsibility of DGRME: exploration and exploitation of hydrocarbons, storage of natural gas, geothermal activities, capture and storage of carbon dioxide (CCS), activities of the solid minerals sector, and information on the activities of coordination, participation and promotion carried out at regional and international level, events organized by the Directorate-General and those in which it took part.

Published on the website, is also the Official Bulletin of Hydrocarbons and Geothermal Resources (BUIG), that is, the official document with monthly update of the submitted applications, the awards of new titles, the lists of titles in force and the current news and notices connected with the hydrocarbons exploration and production and the storage of natural gas and, in particular, the new regulations or notes.

In 2013 the area with restricted access (intranet DGRME) was enriched. This area is used for the management of data and information for internal use and the exchange of statistical data between headquarters and regional UNMIG offices.

Events

In 2013, the Directorate-General participated in numerous events in Italy and abroad, providing also reports, papers and slides, thus strengthening the interaction and the dialogue with stakeholders, citizens, institutions and operators.

The main events are listed below:

OMC 2013 (Offshore Mediterranean Conference & Exhibition)

Ravenna 20-22 March 2013.

The Directorate General participated with its own stand in this event. During the event the Annual Report 2013, referred to activities of year 2012, was presented, together with a special publication dedicated to offshore activities, supplemental

to the Official Bulletin of Hydrocarbons and Geo-resources (BUIG), Year LVII No. 2.

The Directorate General held 2 sessions with the presentations: [Storage Capacity Prospects in Italy](#) and [The Offshore Safety in O&G Industry: a new regulatory framework](#).

On this occasion the Director-General, Mr. Franco Terlizzese, highlighted the relevance of the OMC for the Ministry, in a moment in time when Italy is particularly interested to exploit the national mineral and energy resources - always with full respect of the environment and with the most modern safety standards - also in view of the beneficial effects to employment and economic growth, as specified in the National Energy Strategy. This contemplates, among its objectives, to bring by 2020 the hydrocarbons production to the same level of the 90s, which implies doubling the contribution of the domestic production to the national energy requirement.

<http://www.omc.it>

<http://unmig.mise.gov.it/unmig/info/omc2013/omc2013.asp>

CO₂GeoNet Open Forum

Forum “Are pilot-scale CO₂ storage projects the way forward for CCS in Europe?”
San Servolo (VE) 9-11 April 2013.

CO₂GeoNet Open Forum is part of the CGS Europe Project. The Directorate-General presented a paper entitled “[Implementation of EU CCS Directive in Italy](#)”, which covered the state of transposition of Directive 2009/31/EC into national law.

<http://www.co2geonet.com>

Outlooks of the research activity for the sustainable development of geothermal power generation in Italy

Rome 16 April 2013.

Organized at the Ministry premises by the Italian Geothermal Union (UGI) and patronized by the Ministry of Economic Development. The meeting focused on the outlooks of the research activity for the sustainable development of geothermal power generation in Italy. Speakers included representatives of many companies in the sector, Universities, CNR-IGG (Institute of Geology of the National Research Council), INGV (National Institute of Geo-physics and Volcanology), National Council of Geologists, representatives of energy sector of the regions Emilia Romagna, Tuscany, Umbria, Campania, Sardinia and Lombardy, members of the CIRM (Commission for Hydrocarbons and Mineral Resources of the Ministry).

<http://unmig.mise.gov.it/unmig/info/avvisi/avviso46.asp>

CSLF- Technical Group Meeting and Technical Workshop

Rome 16-19 April 2013.

The CSLF (Carbon Sequestration Leadership) is an international body, set up at ministerial level, with the mission to foster development and deployment of CCS technologies, through international cooperation aimed at overcoming the main technical, economic and environmental hurdles, promoting public acceptance. The organization of the meeting in 2013 was entrusted to Italy and operationally to ENEA (National Agency for Energy Efficiency). The Directorate General attended with the presentation titled “[Italian Law on CO₂ Storage](#)”, aimed to explain the state of the transposition of the CCS Directive and the initiatives to meet public consensus.

<http://www.cslforum.org>

New technologies at the service of the environment: from energy efficiency to CO₂ capture and storage (CCS)

National workshop, Rome 3 May 2013.

Organized by the FareAmbiente, a well-known environmental association in Europe. The initiative is part of a broader information campaign addressed to institutions and citizens aimed to raise public awareness on the issues of fighting climate change. FareAmbiente considers CCS “a strategic activity, as recognized also by the European Union, through several projects funded by the Community”. The Directorate General attended with a paper aimed to illustrate [The role of CCS in the National Energy Strategy](#).

<http://www.fareambiente.it>

Safety and insurance aspects of offshore E&P activities: the new European regulatory framework

Workshop, Rome 15 May 2013.

Organized by the Directorate-General at the Ministry. Attended by experts of the Public Administration, the European Commission, the Ministries of Foreign Affairs, of the Environment and the Transport, the Port Authorities, the Universities and the representatives of the main environmental organizations (Greenpeace and Legambiente) and business organizations (Assomineraria and Confitarma). During the meeting the Directorate-General presented the progress of the ascending phase of the Proposal for a Directive on the safety of offshore operations and the state of the international regulatory framework on safety and environmental protection.

<http://unmig.mise.gov.it/unmig/info/avvisi/avviso49.asp>

European strategies of de-carbonization: what role for CO₂ capture and storage?

Workshop, Rome 16 May 2013.

The meeting was proposed as an opportunity to reflect and make proposals among institutions, associations and companies on the real perspectives and future role of CCS as the main option for the cut of greenhouse gas emissions. The Directorate-General participated in the Round Table at the end of the two technical sessions on World's Energy Outlooks and Strategies and CCS Projects.

<http://wec-italia.org/>

SAFE Master (Environmental Sustainability Energy Sources)

Rome 29 May 2013.

The SAFE Master offers an important opportunity for interaction and exchange among students, academia, industry and institutions, helping the flow of communication and training from operators, both private and public, and central and peripheral authorities.

The Directorate-General contributed to SAFE with lectures on the role and tasks of the Directorate itself, with particular reference to the issues of acceptability of the mining activities by the territories and the bureaucratic burden and slowness of the central and local authorities involved in the technical and administrative procedures.

<http://www.master.safeonline.it>

European Minerals Day

Vipiteno (BZ) 24-26 May 2013.

The objective of the European Minerals Day is to raise awareness of the importance of industrial minerals both in the everyday life and in the European economy as a whole. To achieve this objective, during the Minerals Day, initiatives were undertaken across Europe, the last of which in Italy, in a calcium carbonate mine of Vipiteno (BZ). The Vice President of the European Commission, Antonio Tajani, attended the meeting together with the Director-General.

<http://www.mineralsday.eu/>

<http://unmig.mise.gov.it/unmig/info/avvisi/avviso50.asp>

Research Project on the Energy System (RSE), GEO WebGIS

Conference, Rome 2 July 2013.

The event was organized by RSE - Research on Energy System - which presented one of its products - GEO WebGIS - created as part of the research system for the use and reuse of several public data. GEO WebGIS was initially developed to support the research and modeling of potential deep geological reservoirs for CO₂ storage in the context of CCS projects; RSE has also expanded its application to other fields such as geothermal use and the storage of natural gas. The peculiarity of the instrument is to integrate different types of information, e.g. geological, regulatory information. The data contained in WebGIS can be extracted and discharged in digitized format, allowing further processing and analyses by the user. All the themes of interest can be displayed and processed through a single graphical interface that can be a useful support to decision makers in the energy field.

www.rse-web.it

Summer School on CCS Technologies

Carbonia 24 July 2013

The summer school organized by UniCa (University of Cagliari - Department of Mechanical, Chemical and Materials Engineering), ENEA and Sotacarbo was designed to provide university students of the MSc degree (or equivalent courses) and PhD researchers from various training programs a wide deepening of the topics and issues that concern the CCS technologies.

The Directorate General participated with the presentation of the paper [European and National Regulation: State of implementation of Legislative Decree 162/2011](#).

<http://www.sulciscssummerschool.it>

Offshore Northern Seas Exhibition And Conferences 2013

Stavanger (Norway) 26-28 August 2013.

Responding to the invitation of the Norwegian delegation taking part in March 2013 in the OMC conference in Ravenna, a delegation from the Directorate-General participated in the ONS, the annual meetings of companies with interests in the oil and gas sector in Norway. The 2013 edition was dedicated to the ONS service companies and it was an opportunity to have side meetings with the Norwegian authorities.

<http://10times.com/offshore-northernseas-exhibition>

Italian Forum of Earth Sciences Geosciences for the Society

Pisa 16-18 September 2013.

The Forum helped to emphasize the role that geosciences play for the civil society and industry professionals in providing the knowledge required to plan the future of our country in an appropriate and sustainable manner. The Directorate-General participated in the works with the Plenary lecture [Hydrocarbons: perspectives and criticalities](#) and the poster [ViDEPI project data utilization for sites characterization in CCS, geothermal and hydrocarbons projects in Italy](#).

<http://unmig.mise.gov.it/unmig/info/avvisi/avviso57.asp>

Planning and Sustainable Use of Geothermal and Thermal Resources

Meeting, Perugia 22 October 2013.

The event was organized by Umbria region and UNESCO. During the meeting, open to central Governmental authorities, local bodies, the scientific and academic world, industry and environmental groups, the Region presented the final report on the "Study of the geothermal areas of Umbria region". There was also a discussion on issues related to the knowledge and the proper utilization of geothermal resources, in order to launch a debate useful for the development of geothermal energy as a renewable energy source.

<http://www0.regione.umbria.it>

<http://unmig.mise.gov.it/unmig/info/avvisi/avviso59.asp>

Raw Materials University Day

University of Rome "La Sapienza", 6 December 2013.

The initiative of the University Day on Raw Materials was promoted by the Directorate-General for Enterprise and Industry, the European Union under the European Innovation Partnership (EIP) on Raw Materials and set up to propose integrated strategies to address issues related to the access to raw materials, in order to reduce the EU's dependency on imports, increasing the efficiency of resource use and to put Europe in the frontline in the raw materials sector.

<http://cerimoniale.uniroma1.it/?q=node/49>

<http://unmig.mise.gov.it/unmig/agenda/dettaglionotizia.asp?id=127>

NATIONAL ENERGY STRATEGY

The Ministry of Economic Development and the Ministry for the Environment and the Protection of Land and Sea approved with [Inter-ministerial Decree 8 March 2013](#) the [National Energy Strategy \(SEN\)](#) document.

The National Energy Strategy (SEN) pursues 4 main objectives:

- ❖ reduce the gap in the cost of energy between Italy and the major OECD countries;
- ❖ reach and exceed targets dictated by the EU Climate and Energy Package 2020, and in the path towards de-carbonization (Roadmap 2050);
- ❖ ensure security, continuity and quality of energy supply, reducing the dependence from foreign countries;
- ❖ boost economic growth in a leading sector such as the energy sector .

In summary, the objective is to valorize according to sustainable criteria the resources of our subsoil, mainly natural gas, to bring by 2020 the domestic production of hydrocarbons to the levels of the 90s, thus obtaining a significant reduction on the energy bill, quantifiable in approximately 5 billion euro/year.

This objective can be easily achieved also by leveraging technological leadership, held by the major Italian companies (including service companies) and other companies operating in Italy, which overall are ready to invest in Italy 15 billion euro of private funds, creating up to 25,000 new jobs. The achievement of this target will not imply any use of any form of public incentive.

The areas of responsibility of the Directorate-General concern the national sustainable production of hydrocarbons and the modernization of the governance system.

The SEN strategy requires that the domestic production of hydrocarbons be performed within a suitable regulatory framework so as to ensure always increasing levels of safety and environmental protection. To such purpose the following actions have been implemented:

- ❖ protection of environment and coastal and protected areas: [Ministerial Decree of 9 August 2013](#) redefined the marine areas open to the activity and carried out a reconnaissance of marine areas open to the presentation of new applications, which are now reduced by half compared to the previous setting;
- ❖ high safety standards for workers and infrastructure: regulations that establish and increase the specific requirements for those who intend to operate in deep water ([Directorial Note of 21 February 2014](#));
- ❖ activity for a prompt implementation of the new [Directive 2013/30/UE](#) on offshore safety.

In addition, through a careful and prudent optimization of the energy infrastructures existing and to be built for the achievement of the foreseen level of production, the increase of domestic production will be accompanied by a reduction in the total number of installations both on land and at sea, to guarantee a fully sustainable development from an environmental, as well as socio-economic, point of view.

In order to increase the economic and employment impact in the interested territories, the Ministry of Economy and Finance in consultation with the Ministry of Economic Development recently issued the [Ministerial Decree of 12 September 2013](#) for the implementation of Article 16 of the Decree Law of 24 January 2012 n. 1, which, in line with the SEN principles, sets out the measure and the methods for the use of a portion of the fiscal revenues deriving from new projects for the development of the territories where the mining activities that generated such revenues take place.

HYDROCARBONS

The Directorate-General for Mineral and Energy Resources, with its central and peripheral structures, is the competent authority for the issuance of exploration licenses and development concessions for liquid and gaseous hydrocarbons.

As already mentioned, in the evaluation of the work programs included in the applications for mining titles, and in other cases provided by law, the Directorate General shall request the opinion, not binding, of the Commission for Hydrocarbons and Mineral Resources (CIRM), in which the relevant Governmental Authorities are represented (in addition to the Ministry of Economic Development, the Ministry of the Environment and the Protection of Land and Sea, the Ministry of Education, University and Research, ISPRA, the General Attorney of the State) together with regional representatives.

In accordance with environmental legislation, the Directorate General coordinates its activity with the Ministry of the Environment and the Protection of Land and Sea and with the Regions, which are in charge of the environmental compatibility assessment of upstream projects, respectively, in the offshore and onshore.

These projects are subject to the procedure of verification of environmental submission and/or to the environmental impact assessment by the Ministry of Environment or by the Region concerned. The exploration licenses and development concessions for onshore projects are issued by the Ministry of Economic Development, through decree of the Director General of DGRME, with the concurrence of the Regions concerned.

The involvement of local communities is guaranteed by the role played in the process by the Municipalities and the Provinces concerned, which give their opinion on the execution of the projects and of the plants and verify the compliance of the works with the urban planning.

In the procedures for the issuance of exploration licenses and exploitation concessions offshore, the Ministry of Transport and the Ministry of Agriculture and Forestry are also involved.

The following paragraph illustrates the updated data at 31 December 2013, which are useful to outline the Italian situation with regards to exploration and production of hydrocarbons.

Exploration and production of hydrocarbons

Mining Titles

As at 31 December 2013 the following titles are in force on the Italian territory:

- ❖ 115 [exploration licenses](#) (of which 94 onshore, and 21 offshore)
- ❖ 200 [exploitation concessions](#) (of which 134 onshore and 66 offshore).

It should be noted that the activities of hydrocarbons exploration and production take place in a limited number of mining titles and in very small portions of them: in the face of a total area covered by onshore mining titles equal to 38,259 km², the areas actually interested by exploration and production activities are 16 km² equal to 0.04% of the total. The extension of the mining titles represents in fact the area within which these activities might potentially be carried out, if there are no restrictions and if they are authorized.

The Italian Regions with the highest number of mining titles, for the most part inactive and awaiting authorizations are Emilia Romagna, Lombardy and Basilicata - as shown in Table 1 ¹.

REGION	LICENSES	CONCESSIONS
Abruzzo	12	9
Basilicata	11	20
Calabria	0	3
Campania	2	0
Emilia-Romagna	35	37
Friuli-Venezia Giulia	0	1
Lazio	6	1
Lombardia	14	17
Marche	9	19
Molise	5	7
Piemonte	7	1
Puglia	2	14
Sardegna	1	0
Sicilia	5	14
Toscana	2	2
Veneto	1	1
TOTAL	94	134

Table 1 - Mining titles onshore - Update 31 December 2013

¹ In Tables 1 and 2 the mining titles belonging to one or more regions/zones are computed each time for each region/zone they belong to.

As for the offshore activities, licenses fall into 7 areas (Zones A, B, C, D, E, F and G) as shown in Table 2 and Graphs 1 and 2.

MARINE AREAS	LICENSES	CONCESSIONS
ZONE A	8	39
ZONE B	5	20
ZONE C	4	3
ZONE D	2	4
ZONE E	1	0
ZONE F	2	3
ZONE G	3	0
TOTAL	21	66

Table 2 - Mining Titles offshore - Update 31 December 2013

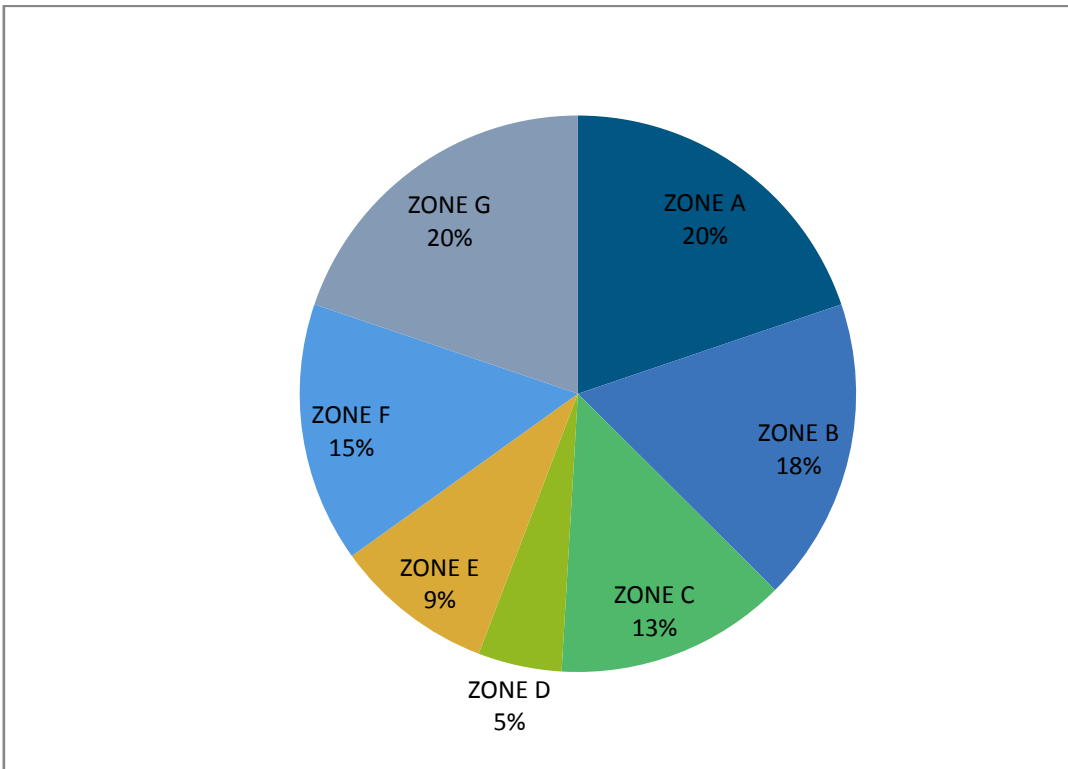


Chart 1 - Percentage of areas under exploration licenses per sea Zone - Year 2013

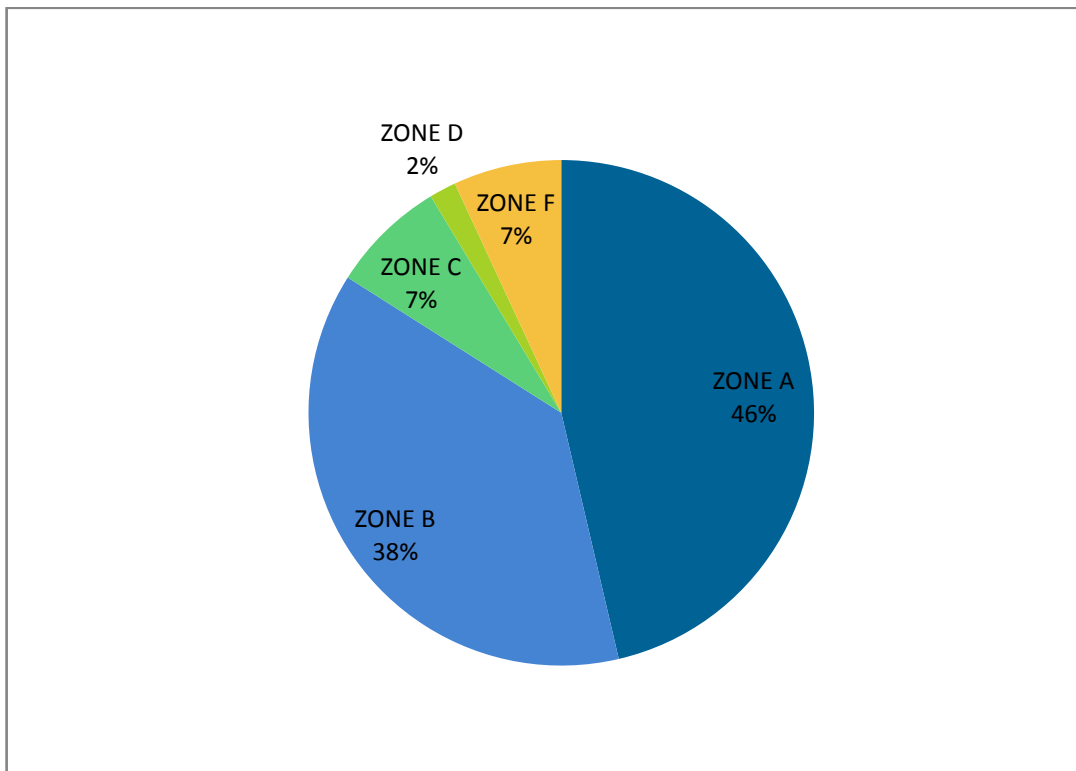


Chart 2 - Percentage of areas under exploitation concessions per sea Zone - Year 2013

Compared with the year 2012, as shown in Table 3 and in Charts 3 and 4 the number of exploration licenses and exploitation concessions has remained constant.

In addition, Table 3 and Charts 3 and 4 show clearly that in the last five years, while the number of exploitation concessions was almost constant, the number of exploration licenses had a positive peak between 2010 and 2011 due to the restart of works of the [CIRM](#) commission, after a period of stalemate, and the simultaneous obtainment of the necessary concurrence (“Intesa”) from the regions concerned.

Year	LICENCES			CONCESSIONS			TOTAL
	Onshore	Offshore	Total	Onshore	Offshore	Total	
1993	64	65	129	135	54	189	318
1994	89	63	152	138	54	192	344
1995	82	64	146	133	58	191	337
1996	95	53	148	126	58	184	332
1997	107	55	162	125	57	182	344
1998	134	56	190	137	59	196	386
1999	119	55	174	156	67	223	397
2000	100	48	148	153	68	221	369
2001	95	45	140	150	69	219	359
2002	90	40	130	135	69	204	334
2003	69	34	103	146	69	215	318
2004	68	27	95	140	69	209	304
2005	60	30	90	140	69	209	304
2006	64	29	93	133	66	199	292
2007	58	32	90	131	67	198	288
2008	71	27	98	129	66	195	293
2009	72	25	97	131	66	197	294
2010	92	25	117	132	66	198	315
2011	96	25	121	133	66	199	320
2012	94	21	115	134	66	200	315
2013	94	21	115	134	66	200	315

Table 3 - Mining titles for hydrocarbons - Time Series 1993-2013

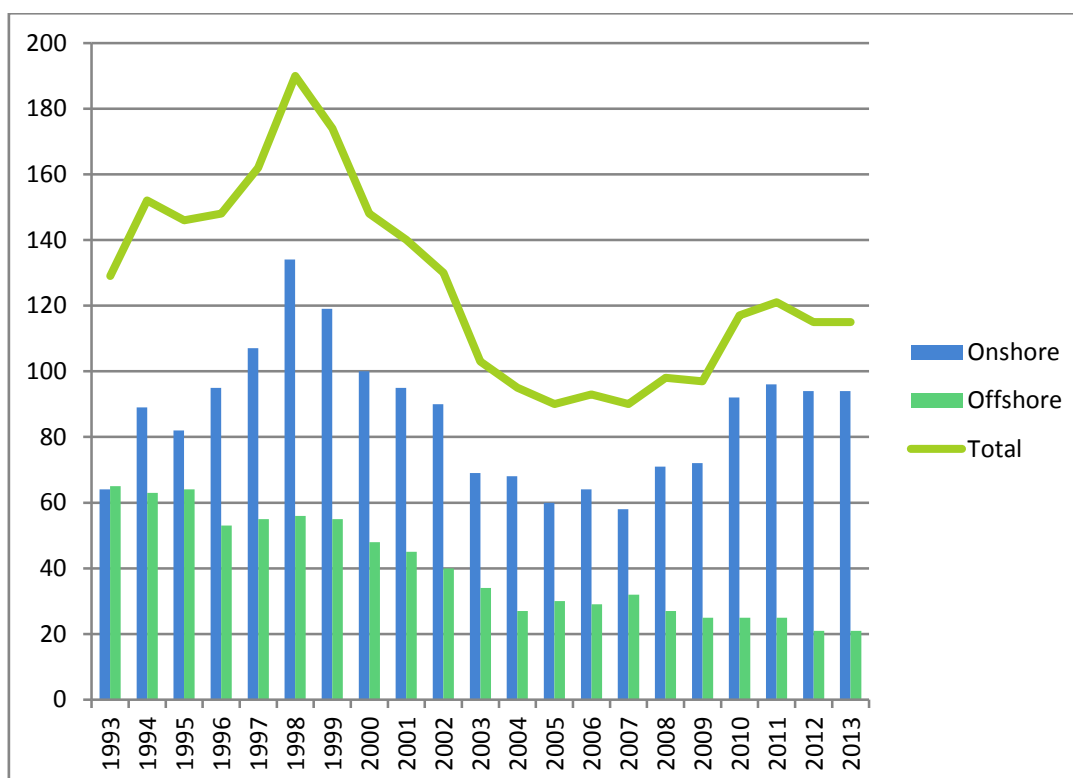


Chart 3 - Number of Licenses - Time Series years 1993-2013

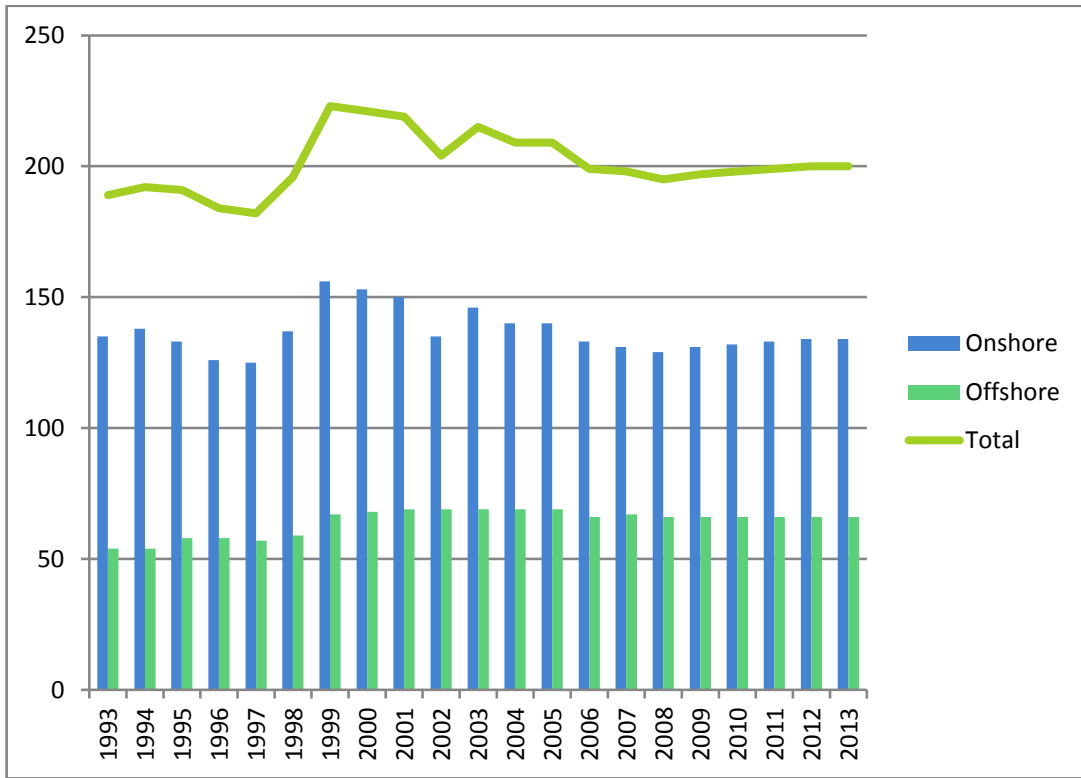


Chart 4 - Number of Concessions - Time Series years 1993-2013

Drilling activity

In 2013, drilling activities were carried out on 23 wells (Table 4), almost entirely in offshore exploitation concessions or storage concessions already in operation since longtime.

These data show how the activities of the operators are currently almost exclusively oriented to optimize the development of existing fields, rather than to the research and development of new resources.

In the course of 2013, drilling activity involved 22 stations, for a total of 46,365 meters drilled. In detail 2 are related to exploration activities, while the remaining are related to: 5 development wells, 7 work-overs on existing wells, 6 storage wells and 2 monitoring wells.

As regards the well completion activities², in 2013, 16 wells were completed, of which:

- ❖ 15 of the 22 wells with drilling activity ongoing in 2013 (7 wells are still to be completed)
- ❖ 1 well with drilling completed prior to the beginning of 2013

Of the 16 wells completed, 12 were successful gas wells, 3 were successful oil wells and 1 was a dry hole.

² Completion: the preparation of a well already drilled in order to start production from it. Following drilling operations, it consists in opening the production levels, dropping down in the well the production kit, together with the valves for controlling the flow and the safety, and any down hole pumping systems, and the installation of the production christmas tree on the wellhead.

N.	Well Name	Scope	meters	Spud	End (a)	Result
1	ALLI 2 OR	Development	2.115	25/09/12	18/04/13	Oil
2	ANNAMARIA 16 DIR	Development	1.675	10/01/13	23/04/13	Gas
3	ANNAMARIA 17 DIR	Development	2.063	07/01/13	10/03/13	Gas
4	ARMIDA 004 DIR A	Development	4.331	19/08/13	(b)	
5	BARBARA D 36 DIR B	Workover	1.986	28/10/13	(b)	
6	BORDOLANO 022 DIR	Storage	1.866	17/01/13	06/06/13	Gas
7	BORDOLANO 023 DIR	Storage	2.023	03/09/12	14/11/13	Gas
8	BORDOLANO 024 DIR	Storage	1.931	03/09/12	20/11/13	Gas
9	BORDOLANO 025 DIR	Storage	1.996	28/01/13	(b)	
10	BORDOLANO 026 DIR	Storage	1.883	27/12/12	(b)	
11	BORDOLANO 027 DIR	Storage	1.973	27/12/12	(b)	
12	BRENDA 004 DIR A	Workover	(c)	06/08/12	27/01/13	Gas
13	CERVIA B 021 DIR B	Development	4.021	24/12/12	29/07/13	Gas
14	CERVIA B 024 DIR B	Workover	2.722	20/12/12	04/03/13	Gas
15	CUPELLO 26 DIR A	Monitoring	928	19/12/12	04/02/13	Gas
16	EMILIO 8 DIR B	Workover	620	01/09/13	01/12/13	Gas
17	GRADIZZA 001	Exploration	1.030	05/08/13	01/09/13	Gas
18	ROSPO MARE 330 ST	Workover	4.189	07/03/13	14/05/13	Oil
19	ROSPO MARE 334 ST	Workover	4.779	01/03/13	31/07/13	Oil
20	SABBIONCELLO 053	Monitoring	56	20/11/12	24/01/13	Gas
21	SANT'ANDREA 001 DIR ST1	Exploration	2.816	07/06/13	(b)	
22	TEMPA ROSSA 2 DIR ST	Workover	449	06/10/13	(b)	
23	TRECCATE 004 DIR A	Workover	913	05/10/12	22/07/13	Dry

Table 4 – drilling activities with specification of purpose - Year 2013

(a) Column "End" indicates the date of the end of the activity that coincides with the date of completion, for wells with a positive outcome, or by the date of shut off, for dry holes.

(b) Drilling still in progress at December 31, 2013

(c) Drilling completed before January 1, 2013

In 2013, the number of new drilling declined, in line with the trend of the last decade and there was a progressive reduction in the exploration of new accumulations.

In particular in the last five years (Tables 5 - 6 and Charts 5 - 6), 171 new wells were completed, of which only 12 were exploration wells (7.02%). The downward trend is more significant for offshore activities: in the last 5 years no new exploration wells were drilled.

YEAR	EXPLORATION					
	ONSHORE		OFFSHORE		TOTAL	
	n.	meters	n.	meters	n.	meters
1993	24	72.426	6	10.123	30	82.549
1994	14	30.142	10	23.467	24	53.609
1995	19	55.017	8	14.793	27	69.810
1996	22	67.664	10	27.550	32	95.214
1997	22	62.800	11	30.266	33	93.066
1998	23	62.962	9	18.794	32	81.756
1999	12	25.763	6	12.374	18	38.137
2000	14	35.721	6	19.065	20	54.786
2001	9	21.610	2	2.325	11	23.935
2002	3	3.016	5	11.200	8	14.216
2003	5	11.576	5	8.658	10	20.234
2004	10	22.223			10	22.223
2005	7	15.085			7	15.085
2006	12	17.906	3	9.139	15	27.045
2007	9	15.925	1	3.517	10	19.442
2008	4	7.274	3	6.673	7	13.947
2009	3	5.627			3	5.627
2010	3	4.183			3	4.183
2011	1	715			1	715
2012	4	5.554			4	5.554
2013	1	1.030			1	1.030

Table 5 - drilling for exploration purposes
Time Series years 1993-2013

YEAR	DEVELOPMENT AND OTHER					
	ONSHORE		OFFSHORE		TOTAL	
	n.	meters	n.	meters	n.	meters
1993	13	16.770	21	37.414	34	54.184
1994	9	14.447	46	128.733	55	143.180
1995	19	41.380	10	26.375	29	67.755
1996	17	23.920	27	87.911	44	111.831
1997	16	34.259	10	29.285	26	63.544
1998	26	35.912	17	41.448	43	77.360
1999	14	24.476	12	28.086	26	52.562
2000	14	18.949	19	27.058	33	46.007
2001	14	52.781	15	39.086	29	91.867
2002	15	23.506	7	19.699	22	43.205
2003	9	35.182	21	28.380	30	63.562
2004	7	18.105	22	41.189	29	59.294
2005	9	16.632	24	49.399	33	66.031
2006	14	21.597	17	29.714	31	51.311
2007	13	17.886	15	33.027	28	50.913
2008	18	41.803	7	14.330	25	56.133
2009	29	37.124	20	37.770	49	74.894
2010	11	28.889	17	23.568	28	52.457
2011	14	23.474	22	31.621	36	55.095
2012	14	21.361	17	24.561	31	45.922
2013	7	18.949	8	26.386	15	45.335

Table 6 - Drilling Activity for development purposes
Time Series years 1993-2013

YEAR	TOTAL	
	n.	meters
1993	64	136.733
1994	79	196.789
1995	56	137.565
1996	76	207.045
1997	59	156.610
1998	75	159.116
1999	44	90.699
2000	53	100.793
2001	40	115.802
2002	30	57.421
2003	40	83.796
2004	39	81.517
2005	40	81.116
2006	46	78.356
2007	38	70.355
2008	32	70.080
2009	52	80.521
2010	31	56.640
2011	37	55.810
2012	35	51.476
2013	16	46.365

Table 7 - Drilling Activity
Time Series years 1993-2013

The research of new oil fields saw its greatest period of expansion in the early 90s with about a hundred new wells per year drilled, mostly for exploration purposes. From the second half of the 90s the number of new drillings has gradually decreased, and particularly in the last decade, there has been a progressive decrease in the research for new accumulations.

The limited exploration activity is mainly due to the difficulty and the time length required for issuing the [licenses](#) and the necessary authorization for drilling. The status of the processes for the issuance of [exploration licenses](#) and [development concessions](#) is constantly updated on the website of the Directorate-General.

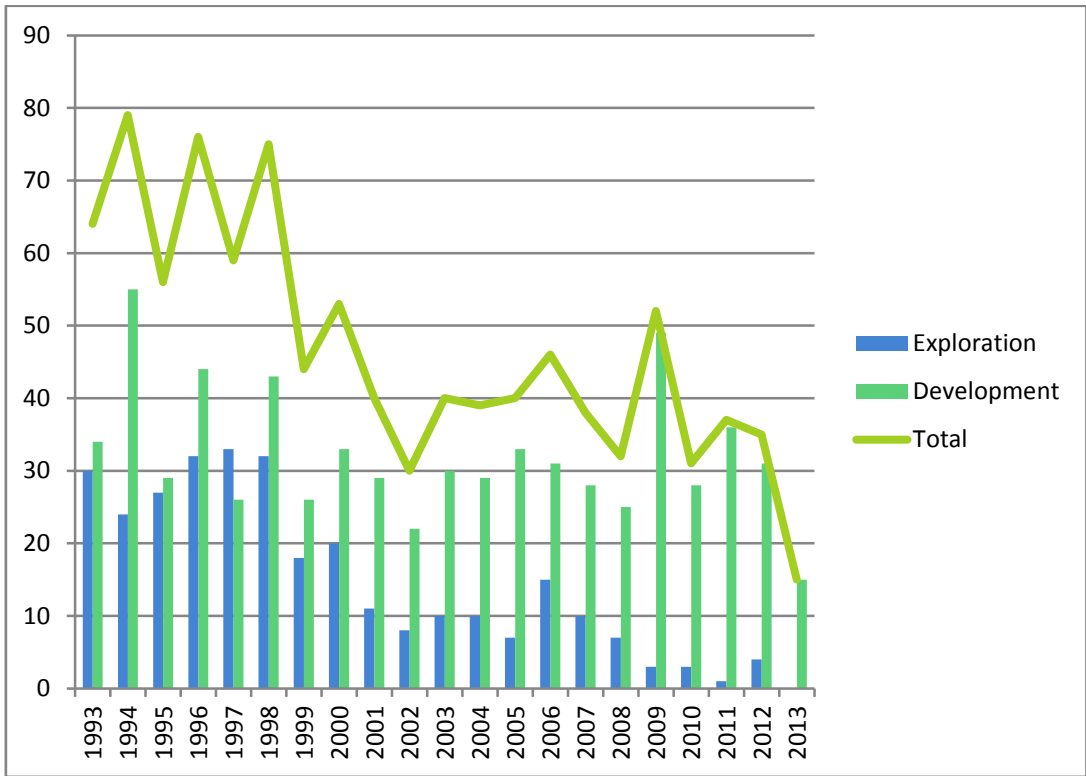


Chart 5 - Number of wells drilled - Time Series years 1993-2013

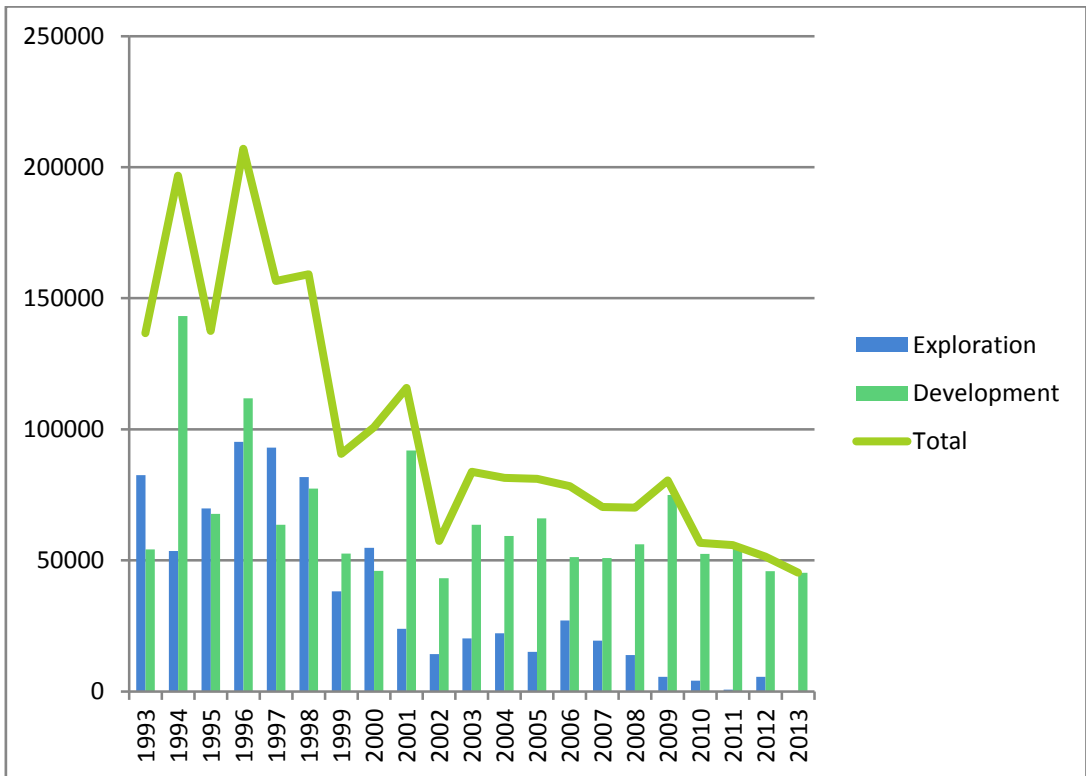


Chart 6 - Meters drilled - Time Series years 1993-2013

Hydrocarbons findings

Only one hydrocarbon discovery was made in year 2013 with the GRANDIZZA 001 exploration well, drilled in the exploration license LA PROSPERA in the province of Ferrara. As part of the exploration activity, a second well was spud but as of 31 December 2013 has not yet been completed.

In Tables 8 and 9 the list of findings is reported for both gas and oil for the period 2003 to 2013.

YEAR	WELL NAME	PROVINCE/ MARINE ZONE	LOCATION
2003	CAPPARUCCIA 001 DIR	AP	ONSHORE
	ANNAMARIA 002	Zona A	OFFSHORE
	ARMIDA 001 DIR A	Zona A	OFFSHORE
	PANDA OVEST 001	Zona G	OFFSHORE
2004	ABBADESSE 001 DIR	RA	ONSHORE
	CIVITA 001 DIR	CH	ONSHORE
	MONTE DALL'AQUILA 001 DIR	CT	ONSHORE
	MONTE GUZZO 001 DIR	AP	ONSHORE
	SANTA MADDALENA 001 DIR	BO	ONSHORE
2005	MEZZOCOLLE 001 DIR	BO	ONSHORE
2006	CODOGNO 001 DIR	CR	ONSHORE
	COLLE SCIARRA 001 DIR A	TE	ONSHORE
	FILICI 001 DIR A	MT	ONSHORE
	FONTE FILIPPO SUD EST 001	CH	ONSHORE
	LONGANESI 001	RA	ONSHORE
	RIPALTA 061 OR	BO	ONSHORE
	SILLARO 001 DIR	BO	ONSHORE
	VITALBA 001 DIR	CR	ONSHORE
	BENEDETTA 001 DIR	Zona A	OFFSHORE
	ARGO 001	Zona B	OFFSHORE
2007	COLLE SCIARRA 001 DIR B	TE	ONSHORE
	MONTE PALLARO 001 DIR	CH	ONSHORE
	MONTE PALLARO 002 DIR	CH	ONSHORE
2008	MONTE DELLA CRESCIA 001 DIR	AN	ONSHORE
	CASSIOPEA 001 DIR	Zona G	OFFSHORE
	ARGO 002	Zona G	OFFSHORE
2009			
2010	MASSERIA MORANO 001 DIR	AN	ONSHORE
2011			
2012	CASA TIBERI 001	AN	ONSHORE
2013	GRADIZZA 001	FE	ONSHORE

Table 8 - GAS - Hydrocarbons Findings - Time Series 2003-2013

YEAR	WELL NAME	PROVINCE/ MARINE ZONE	LOCATION
2003	AGRI 001	PZ	ONSHORE
	AGRI 001 OR A	PZ	ONSHORE
2004	TRESAUTO 001 DIR	RG	ONSHORE
2005			
2006			
2007			
2008	OMBRINA MARE 002 DIR	Zona B	OFFSHORE
2009			
2010			
2011			
2012			
2013			

Table 9 - OIL - Hydrocarbons Findings - Time Series 2003-2013

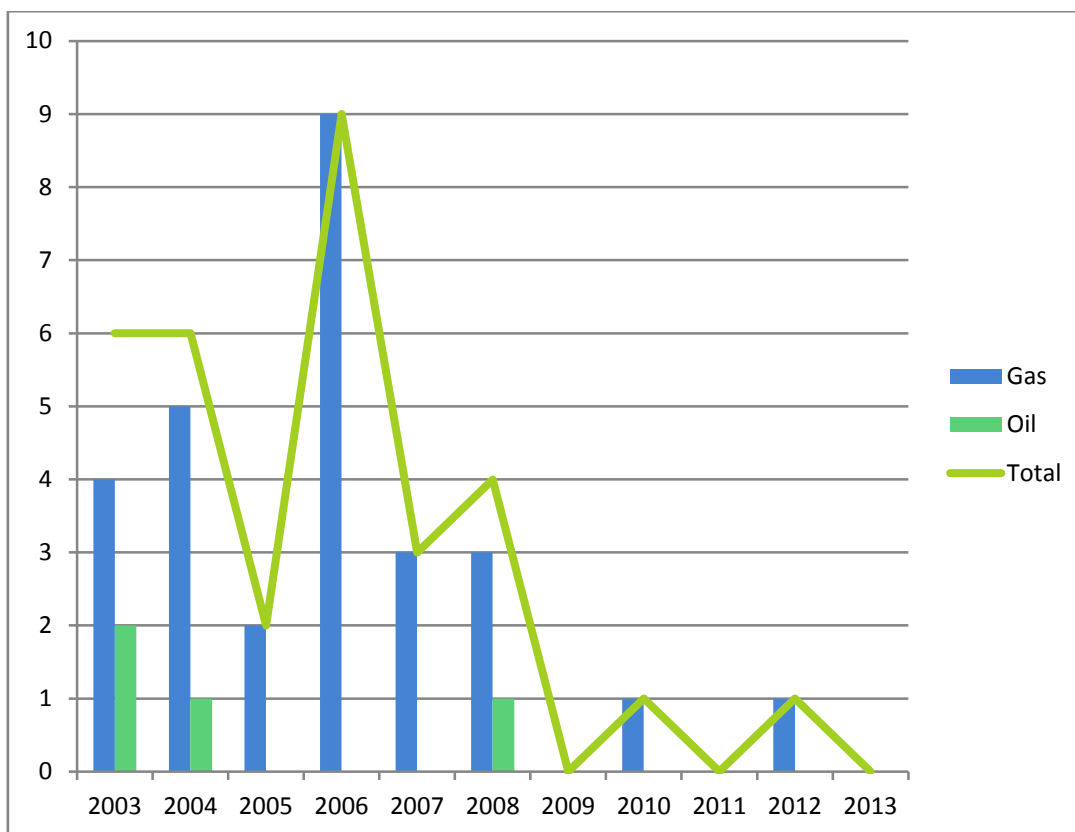


Chart 7 - Number of findings - Time Series years 2003-2013

Production activity

Table 10 shows the time series of hydrocarbons production in the last decade . In year 2013, the [production of hydrocarbons](#) recorded a slight increase for the crude oil (+2%), compared to the previous year, and a decrease for natural gas (-10%).

As shown in Charts 8 and 9, the last decade was characterized, in the first phase, by a steady decline of production, with minimum values recorded in 2009. For what concerns oil, a more recent period of growth can be seen, that began in 2010 and was confirmed by data production of 2013. For natural gas, after an initial improvement started in 2011 and continued in 2012, production in 2013 restarted to decrease again recording the historical minimum of 7.71 billion of Sm³.

Year	GAS (Sm ³ x 10 ⁹)			OIL (t x 10 ⁶)			GASOLINE (t x 10 ³)		
	Onshore	Offshore	Total	Onshore	Offshore	Total	Onshore	Offshore	Total
1993	4,82	14,65	19,47	3,11	1,51	4,62	13,00	7,00	20,00
1994	4,58	16,06	20,64	3,61	1,26	4,87	12,00	6,00	18,00
1995	4,29	16,09	20,38	4,09	1,12	5,21	22,00	6,00	28,00
1996	4,09	16,13	20,22	4,39	1,04	5,43	17,00	5,00	22,00
1997	3,92	15,54	19,46	4,87	1,07	5,94	17,00	5,00	22,00
1998	3,64	15,53	19,17	4,08	1,52	5,60	18,00	4,00	22,00
1999	3,33	14,29	17,62	3,40	1,59	4,99	17,00	5,00	22,00
2000	3,66	13,11	16,77	3,20	1,36	4,56	25,00	6,00	31,00
2001	2,94	12,61	15,55	3,11	0,96	4,07	23,00	8,00	31,00
2002	2,79	12,15	14,94	4,47	1,03	5,50	22,00	11,00	33,00
2003	2,68	11,32	14,00	4,54	1,00	5,54	24,74	5,58	30,33
2004	2,38	10,54	12,92	4,46	0,95	5,41	23,00	6,00	29,00
2005	2,41	9,55	11,96	5,32	0,77	6,09	22,55	4,02	26,58
2006	2,33	8,51	10,84	5,06	0,70	5,76	20,87	3,03	23,90
2007	2,35	7,28	9,63	5,08	0,76	5,84	20,20	1,40	21,48
2008	2,26	6,81	9,07	4,69	0,53	5,22	22,31	0,67	22,99
2009	2,00	5,90	7,90	4,00	0,50	4,50	22,00	0,30	22,30
2010	2,10	5,80	7,90	4,40	0,70	5,10	25,00	0,20	25,20
2011	2,30	6,00	8,30	4,60	0,64	5,24	22,90	0,14	23,04
2012	2,47	6,07	8,54	4,90	0,47	5,37	19,54	0,13	19,67
2013	2,43	5,28	7,71	4,76	0,72	5,48	17,56	1,23	18,79

Table 10 - Production of hydrocarbons - Time Series 2003-2013

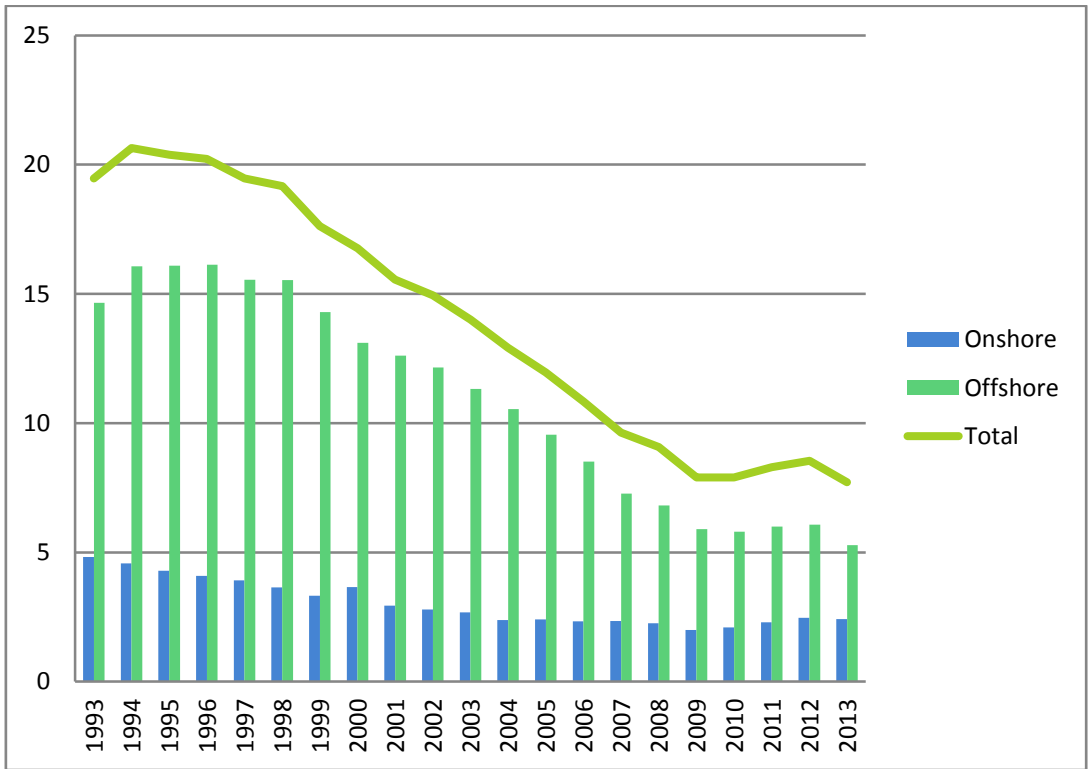


Chart 8 - Production of gas (billion cubic meters) - series years 1993-2013

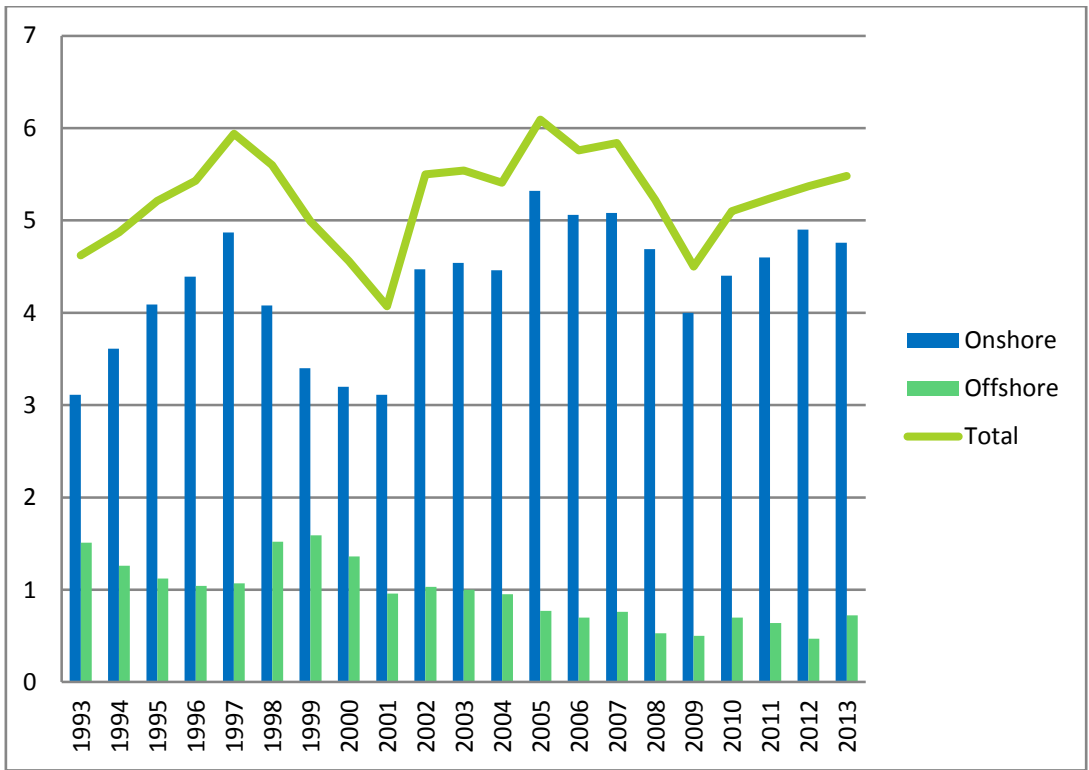


Chart 9 - Oil production (million tons) - Time series years 1993-2013

Natural gas production

For what concerns [natural gas](#), production in 2013 was 7.71 billion cubic meters, with a decrease of 10% compared to 2012 production (8.54 billion cubic meters), as already noted.

Most of the production, as shown in Table 11 and in Chart 10, comes from offshore concessions (5.28 billion cubic meters equal to 69% of national production - NP) located in Zone B (11% NP) and especially in Zone A (47% NP), while for the onshore production (2.42 billion cubic meters or 31% NP), Basilicata region is the largest producer of gas with 1.27 billion cubic meters (16% NP).

Region/Zone	2013	2012	% variation 2013/2012	% on total domestic prod.
Abruzzo	48,59	40,33	+20%	1%
Basilicata	1.270,94	1.292,11	-2%	16%
Calabria	9,06	9,87	-8%	0%
Emilia Romagna	277,40	291,19	-5%	4%
Lombardia	20,43	20,79	-2%	0%
Marche	108,46	99,65	+9%	1%
Molise	52,23	62,42	-16%	1%
Piemonte	19,77	25,04	-21%	0%
Puglia	270,79	297,46	-9%	4%
Sicilia	343,94	324,28	+6%	4%
Toscana	1,17	1,20	-3%	0%
Veneto	1,74	2,10	-17%	0%
TOTAL ONSHORE	2.424,53	2.466,44	-2%	31%
Zona A	3.633,02	4.086,18	-11%	47%
Zona B	812,43	1.153,42	-30%	11%
Zona C	16,45	4,00	+311%	0%
Zona D	791,98	829,86	-5%	10%
Zona F	30,27	0,30	+100%	0%
TOTAL OFFSHORE	5.284,16	6.073,76	-13%	69%
TOTALE	7.708,69	8.540,20	-10%	100%

Table 11 - Production of gas in 2013 split by region/marine area [$\text{Sm}^3 \times 10^6$]

Oil production

As for the oil, in 2013 there was a production of 5.48 million tons, with an increase of 2% compared to 2012 (5.37 million tonnes), as already mentioned.

As reported in Table 12 and in Chart 11, most of the production comes from onshore concessions (4.76 million tons equal to 87% of national production - NP), located especially in Basilicata (72% NP) and Sicily (13% NP).

It should be noted, however, that the increase in oil production in 2013 over the previous year is due almost exclusively to offshore concessions. In fact, the onshore production had an overall decrease (-3%), with the sole exception of Sicily (+5%).

Region/Zone	2013	2012	% variation 2013/2012	% on total domestic prod.
Basilicata	3.940,46	4.033,42	-2%	72%
Emilia Romagna	25,60	30,99	-17%	0%
Lazio	0,25	0,28	-11%	0%
Molise	4,76	5,56	-14%	0%
Piemonte	73,25	148,57	-51%	1%
Sicilia	714,22	679,70	+5%	13%
TOTAL ONSHORE	4.758,54	4.898,52	-3%	87%
Zona B	221,31	181,82	+22%	4%
Zona C	301,47	286,89	+5%	5%
Zona F	201,45	2,48	+100%	4%
TOTAL OFFSHORE	724,23	471,19	+54%	13%
TOTALE	5.482,77	5.369,71	+2%	100%

Table 12 - Production of oil in 2013 split by region/marine area [t x 10³]

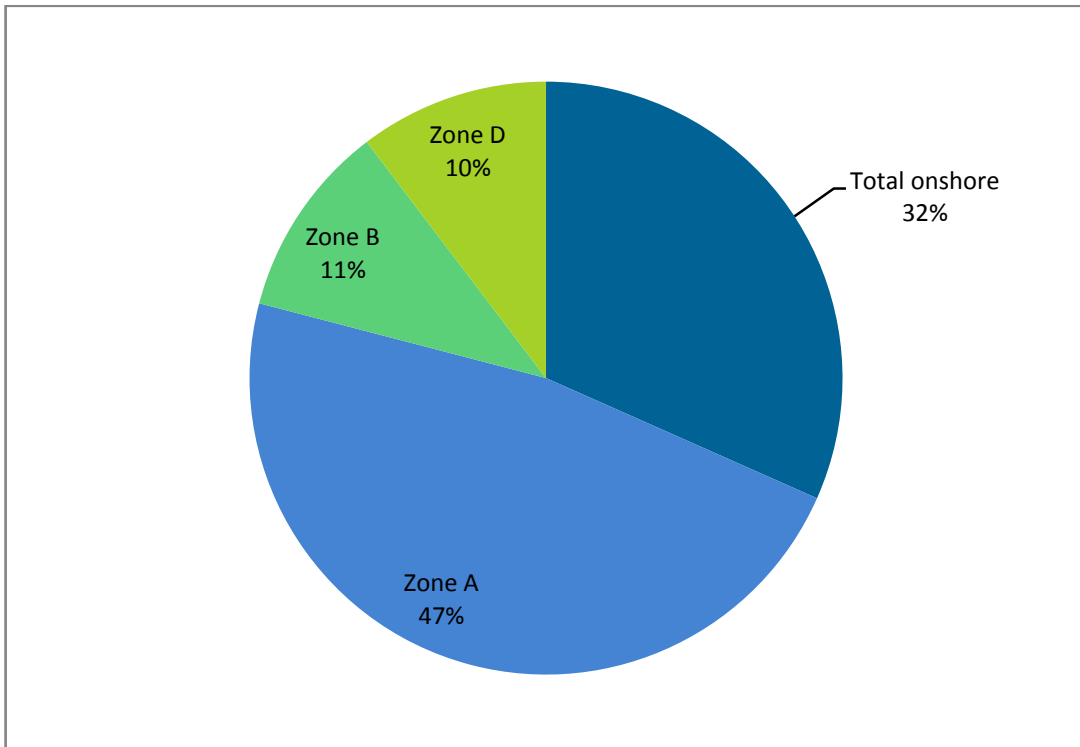


Chart 10 - Natural gas production by area - Year 2013

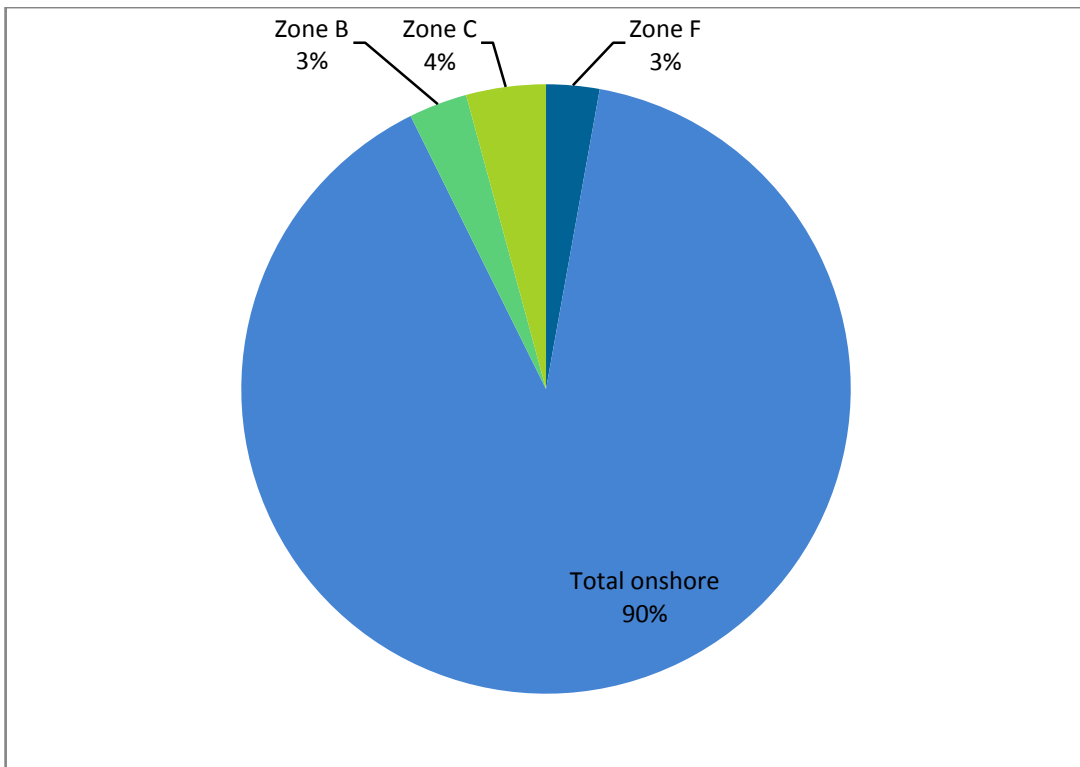


Chart 11 - Production of crude oil by area - Year 2013

Reserves

The reserves data at 31 December 2013, subdivided in proved³, probable⁴ e possible⁵, according to the International Classification, show a reduction of about 5.4 % for gas and approximately 2.9% for oil, with respect to the figure at 31 December 2012, after subtracting the production obtained in 2013.

With regard to the location of proved reserves, 59% of the total national gas is located offshore, and 40% in zone A in particular, while oil reserves are located for nearly 90% onshore, and for the most part in Basilicata (Charts 12 and 13).

GAS (Smc x 10 ⁶)				
	Proved	Probable	Possible	% Proved
Northern Italy	2.651	2.319	50	4,7%
Central Italy	715	1.181	394	1,3%
Southern Italy	18.060	19.580	7.928	32,1%
Sicily	1.636	713	392	2,9%
Total ONSHORE	23.062	23.793	8.764	41,0%
Zone A	22.501	15.234	8.101	40,0%
Zone B	6.009	6.810	2.545	10,7%
Zone C+D+F+G	4.631	12.718	2.464	8,2%
Total OFFSHORE	33.141	34.762	13.110	59,0%
TOTAL	56.203	58.555	21.874	100,0%

Table 13 - NATURAL GAS Reserves at 31 December 2013

³ Proved reserves are those estimated quantities of hydrocarbons which, on the basis of geological and reservoir engineering data available, can with reasonable certainty (probability greater than 90%) be commercially recoverable, under the technical, contractual, economic and operating conditions existing at the moment considered.

⁴ Probable reserves are those quantities of hydrocarbons which on the basis of geological and reservoir engineering data available, can be recovered with reasonable probability (greater than 50%), under the technical, contractual, economic and operating conditions existing at the moment considered; the elements of residual uncertainty may be related to the extension or other reservoir features (mining risk), the economics (at the conditions of the development project), the existence or suitability of the transportation system or selling market.

⁵ Possible reserves are the quantities that are estimated to be recoverable with a significantly lower probability (largely below 50%) with respect to probable reserves, or which present worse economics with respect to the established limit.

OIL (t x 10 ³)				
	Proved	Probable	Possible	% Proved
Northern Italy	501	322	0	0,6%
Central Italy	57	2.480	737	0,1%
Southern Italy	64.993	79.331	48.497	81,5%
Sicily	5.956	4.808	3.515	7,5%
Total ONSHORE	71.508	86.941	52.749	89,7%
Zone B	3.420	1.013	0	4,3%
Zone C	4.462	2.098	104	5,6%
Zone F	335	18	0	0,4%
Total OFFSHORE	8.217	3.128	104	10,3%
TOTAL	79.725	90.069	52.853	100,0%

Table 14 - OIL Reserves at 31 December 2013

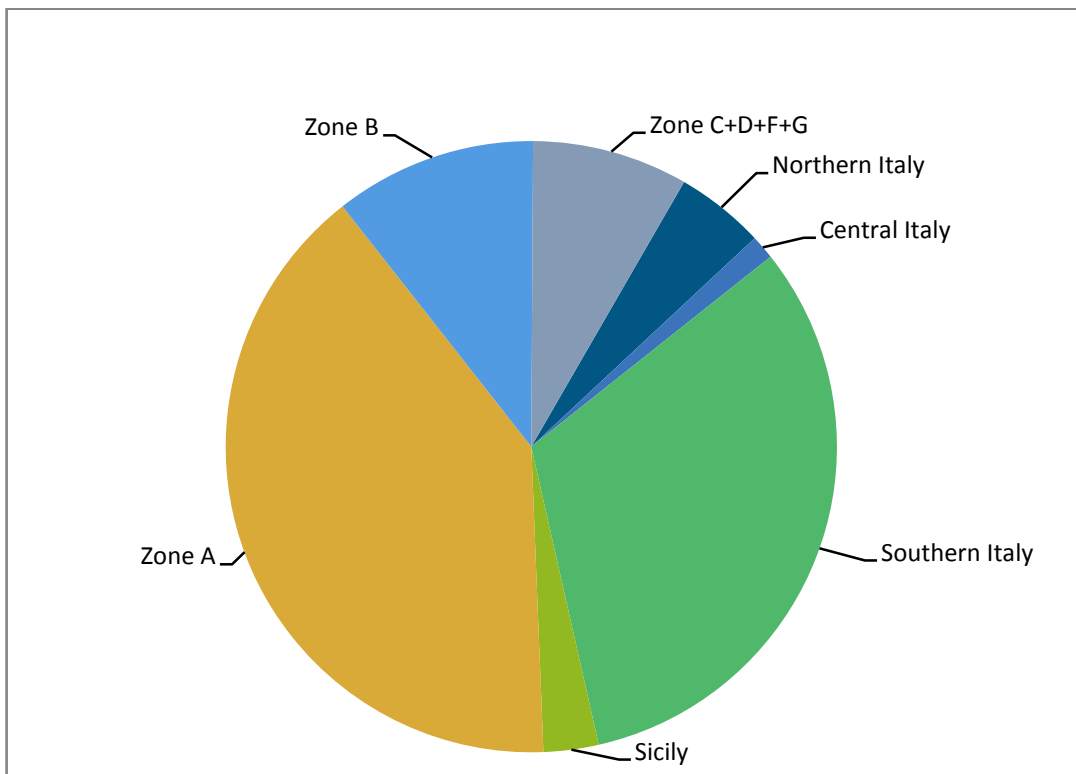


Chart 12 - Proved reserves of GAS by region / marine zone at 31 December 2013

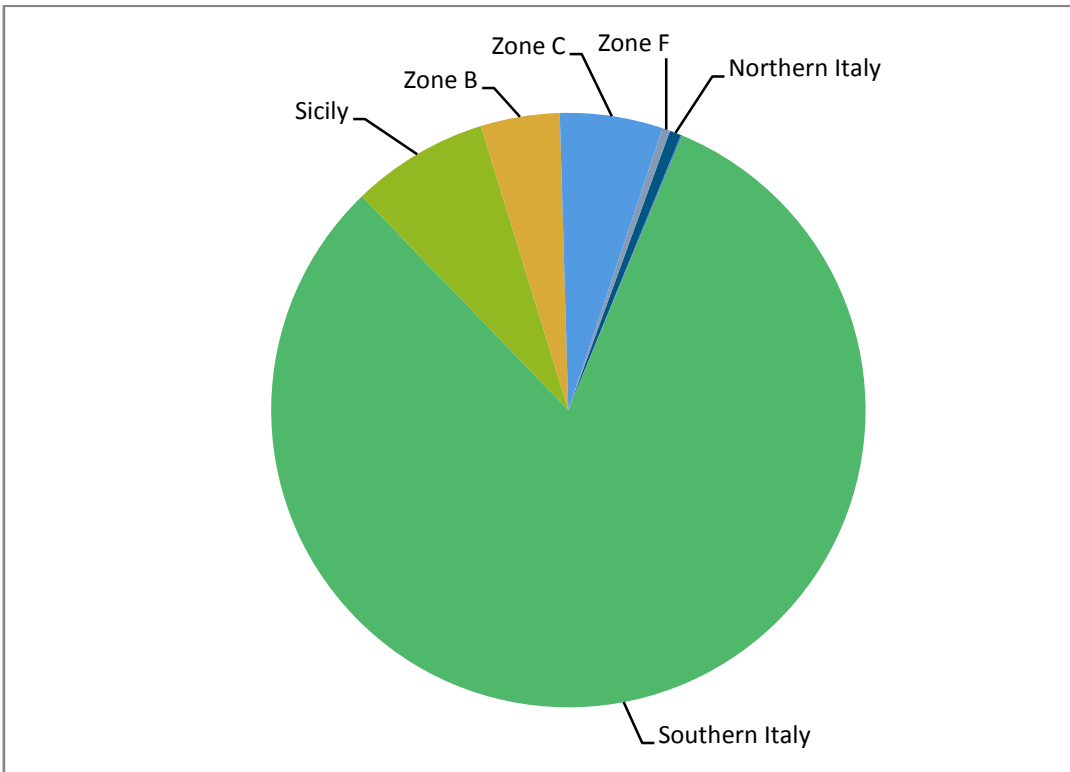


Chart 13 - Proved reserves of OIL by region / marine zone at 31 December 2013

The hydrocarbon resources available in the subsurface do not appear in the statistics reported here. They are based on estimates which are rather changeable. The almost total absence of new research campaigns over the past 5 years, as well as compromising the replacement of reserves produced, does not allow to improve the understanding of the hydrocarbons potential of the country, which overall is still considered significant, particularly in some frontier areas.

Royalties and Hydrocarbons Bonus

From year 2008, the valorization of the hydrocarbons production quotas for the calculation of royalties is based on market mechanisms.

In year 2012, liquid hydrocarbons were valorized at the average price of the crude extracted from each concession, on the basis of the direct sales of the crude produced, or referring to the prices of similar crudes on the international market, taking into account the differentials of production yields; for gas production, the quantities allocated to the State were sold by the GME (Energy Markets Operator), via a dedicated platform reserved to production quotas for the payment of royalties, to which the operators of the natural gas market have access.

The offer did not get bids at the minimum price put for the sale. This price was equal to the QE 2012 (index of the energy cost of the gas raw material defined by the Authority in 2012), which proved to be too high for the gas quantities offered, even in the colder months (October-March). In this case, the sector regulation establishes that the same operators that put the gas on the market for royalty purposes shall retain the unsold lots for themselves and correspond to the State the QE value for those quantities.

The final data of the royalty revenues are shown in Chart 14, split by recipient and including any payments made for specific law purposes (Fund for the reduction of the fuel price, pursuant to art. 45 of [Law 23 July 2009, n. 99](#); Quota for the protection of the marine environment and the safety of offshore facilities, ex art. 35 of [Decree Law 22 June 2012, n. 83](#)). It is worth underlying that the quotas of production that operators correspond to the State, the Regions and the Municipalities is determined only by the quantities in excess of a certain production threshold in each concession, and that in year 2013, operators paid fees for the sale of production quotas of 2012, and also for the sale of the remaining production quotas of 2011.

The total amounts paid during year 2013 were about 419 million Euro. These data are on the website of Directorate-General, together with the royalty revenues from the previous years, starting from 2008.

<http://unmig.mise.gov.it/unmig/royalties/2013/2013.asp>

Recipients	Proceeds (€)
State	79.085.172,25
Regions	195.374.521,41
Communes	32.358.564,01
Fund for Fuel Price Reduction	93.224.035,28
Safety and Environm. Quota	19.445.698,36
Total	419.487.991,31

Table 15 – Proceeds from royalties in 2013 split by recipients

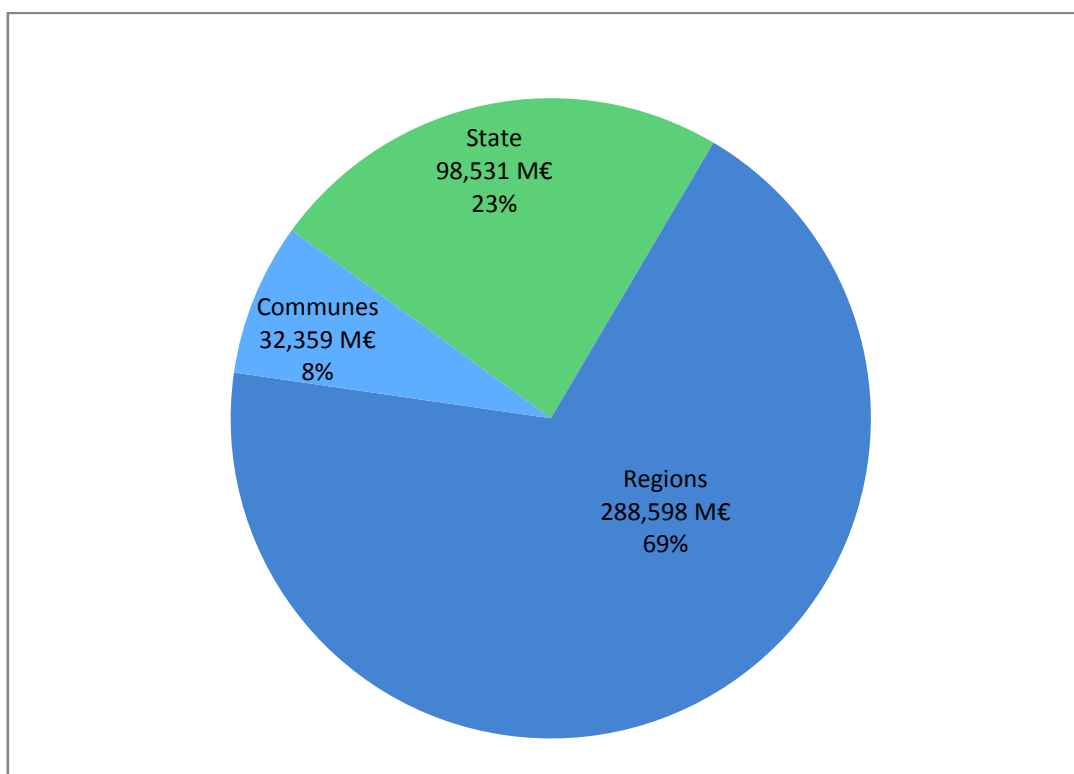


Chart 14 - Proceeds from royalties in 2013 split by recipients

Among the published data it is possible to find those related to the increase of 3% of the royalty rate (about ~ 93 M€). This is the amount that the holders of production concessions onshore paid to the Fund for the reduction of the retail fuel price, allocated to residents in the regions concerned by mining activities, as established by the Law of 23 July 2009 no. 99.

In application of the rules governing the allocation of the Fund for the reduction of the retail fuel price in 2013, an amount of approximately €140 was granted to each resident in Basilicata Region through a special pre-paid card, managed by the Italian Mail service, to be used for the purchase of fuel at stations with card payment systems.

Additional amounts of the Fund were transferred to the regions of Calabria, Emilia - Romagna, Marche, Molise, Piemonte and Puglia, in relation to the mining activity in their respective areas.

However, the State Council, with [Ruling of the Council of State no. 4134 of 6 August 2013](#), accepted the request of the Veneto Region to allocate part of the Fund to the regions with regasification activities, including through fixed installations offshore. At the moment of this publication, the elaboration of an Inter-ministerial Decree is ongoing, which will implement the decision of the Council of State and allow the restart of the money provision.

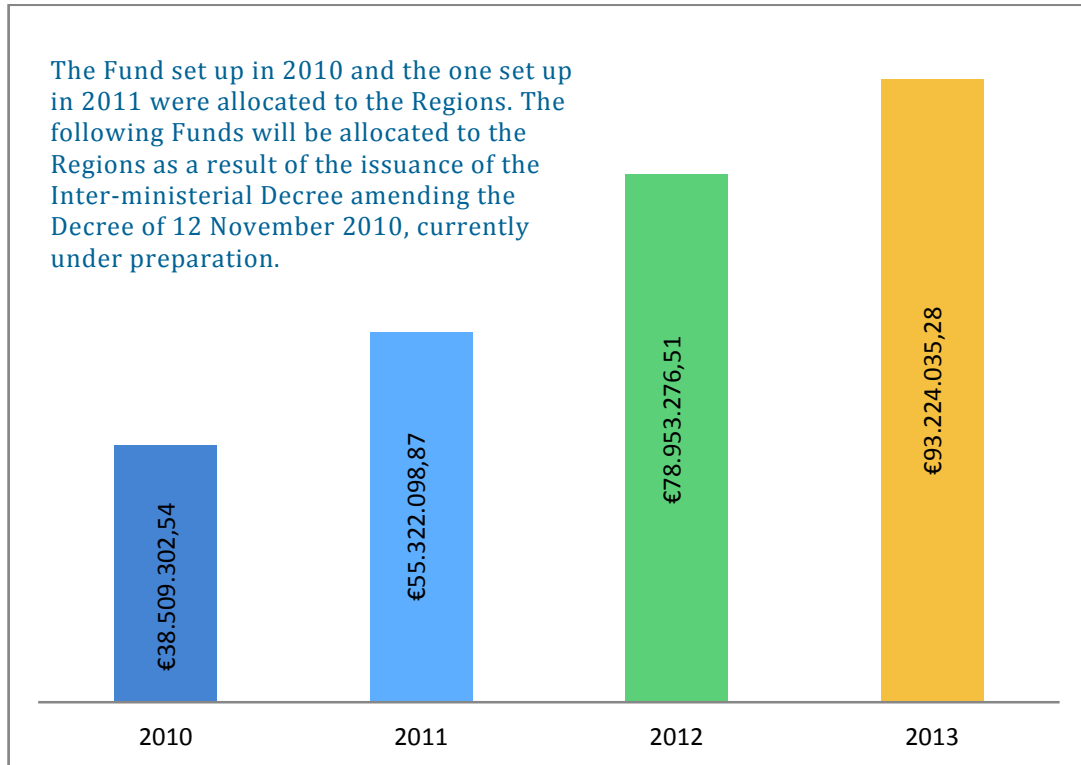


Chart 15 - Amounts related to the annual set out of the Fund for the reduction of the retail fuel price

Chart 15 shows the data pertaining to the Funds for the reduction of fuel prices collected in the period 2009-2012, on the basis of Law no. 99/2009.

In the website of the Directorate-General are published also the payments made by titleholders of offshore concession for the 3% increase of royalty rate (about ~ 19 M€), pursuant to Article 35 of [Decree Law 22 June 2012, n. 83](#), as of the 26 June 2012.

The relative amounts were entirely paid to the State and allocated for 50% to the Ministry of the Environment and the Protection of Land and Sea, in order to ensure full implementation of the monitoring and counteracting of marine pollution, and for the remaining 50% to the Ministry of Economic Development to ensure the full performance of the activities of supervision, and of safety and environmental control on the offshore exploration and production plants.

Finally, Table 16 and Chart 16 show the list of upstream operators that paid royalties for the production of liquid and gaseous hydrocarbons, and the proportion of the relative share paid in 2013.

Company	Payments (€)
Eni	248.146.975,22
Shell Italia E&P	129.568.157,53
Ionica Gas	19.802.373,39
Edison	12.935.865,23
Adriatica Idrocarburi	4.585.288,74
Eni Mediterranea Idrocarburi	1.655.586,57
Gas Plus Italiana	1.085.568,82
Medoilgas Italia	911.148,90
Padana Energia	797.026,91
Total royalties 2013	419.487.991,31

Tabella 16 - Royalties paid in year 2013 split by oil company

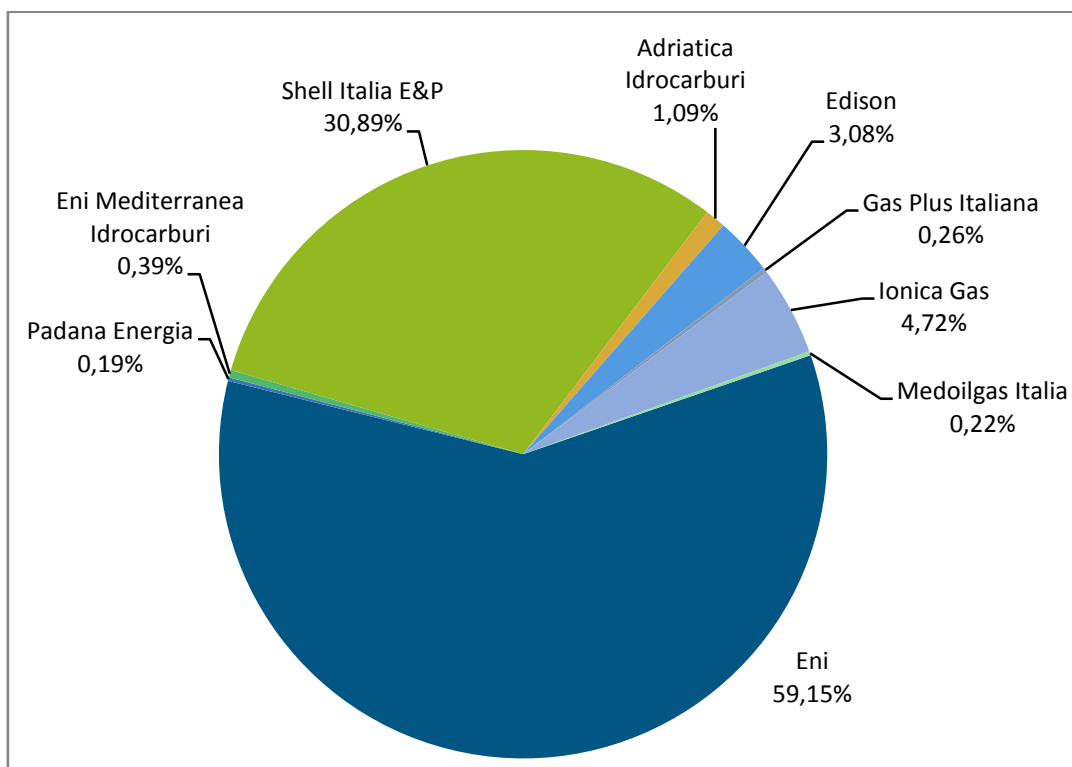


Chart 16 - Royalties paid in year 2013 split by oil company

Updating of ViDEPI Project

The [ViDEPI Project](#), “Visibility of data pertaining to the oil and gas exploration activity in Italy”, was created with the objective to make the technical documents and data relating to oil and gas exploration in Italy easily accessible to the public. The available documents concern only mining titles that have been terminated (these documents in fact become public a year after the termination of the title) and were filed as of 1957 at the Ministry of Economic Development.

The project, made possible thanks to the collaboration between the [Italian Geological Society](#) (SGI), the Ministry of Economic Development and [Assomineraria](#), consisted of an initial collection of the documentation, subsequent classification, scanning and geo-referencing, and finally the publication of the documents on the web.

The paper documents retrieved and processed, were entrusted to the [Library of the scientific and technological area of Roma Tre University \(BAST\)](#).

Published data (for a total of about 22 Gb):

- ❖ 1,586 sets of closed mining titles;
- ❖ 4,072 technical reports and relative annexes (Annexes 6,723)
- ❖ 2,197 well final profiles;
- ❖ 578 lines of recognition seismic;
- ❖ 1,935 seismic lines acquired within mining titles.

The project, started in 2005, was completed in October 2009 with the publication of data updated to 31 December 2007.

In the years following the closure of the project, further documentation was made available as a consequence of the cessation of new mining titles. All the paper documents were collected and transferred to the Library of scientific and technological area (BAST), where they can now be consulted.

Some of the material has been scanned and pdf documents were published on the project website as annual updates (years 2008/2009, 2010, 2011 and 2012). The four annual updates were published as appendices but not linked to the database; the documents have not been classified and integrated into the project and the geo-referencing of the location data has not been made.

Review of the project

The updating of the project consists of two objectives:

- ❖ Integration in the database and geo-referencing of data that have become available in the years following the closure of the project.
- ❖ Review of classification of documents and amendment of errors.

Two working groups have been created acting in parallel, each dedicated to one of the objectives of the project review.

The activities to be undertaken are:

- ❖ Acquisition and translation of the digital mapping
- ❖ Geo-referencing of the data update 2009-2012
- ❖ Review of the classification of the documents and amendment of errors
- ❖ Review of the project website

The work began in September 2013; the conclusion of the first phase is foreseen within the first half of 2014

Storage of natural gas

The storage of natural gas underground is a process that allows the injection of gas into the porous rock of a depleted reservoir that already contained it, bringing it to a certain extent, to its original state. Storage is needed to respond in real time to the requests of the gas market; to allow to manage the production facilities and transportation with adequate margins of flexibility and, above all, to deal with situations of lack or reduction of supplies, or crisis of the gas system (for example in the case of very harsh weather conditions or blocks of supply from foreign countries).

Capacity in 2013

With reference to the number of active storage fields in Italy and the concessions in force, the same data of 2012 are confirmed for year 2013. In fact, no new concessions were granted, nor new sites started.

There are 10 active storage fields in Italy, 8 of which operated by Stogit, and 2 operated by Edison Stoccaggi, all made in depleted gas fields, while 15 are the concessions in force. <http://unmig.mise.gov.it/unmig/stoccaggio/concessioni.asp?tipo=IAT>

The working gas⁶ available for the gas year 2012/2013 (1st April – 31st March) was 16,430 million standard cubic meters, of which 4,600 reserved to strategic storage, with an increase of 5.18% with respect to the previous year. The maximum nominal peak of withdrawal of the system was 277.8 million standard cubic meters per day with an increase of 1.16% with respect to gas year 2012/2013.

There are ongoing proceedings for the issuance of six new concessions and for the expansion of existing concessions. <http://unmig.mise.gov.it/unmig/istanze/elenco.asp?tipo=CST&ord=A&numerofasi=4>

⁶ Working Gas is the amount of natural gas that can be withdrawn or injected according to the market demand; it is not the entire gas present in the reservoir, as a part of it cannot be withdrawn in order to maintain an adequate minimum operating pressure. Part of the working gas is retained in the reservoir to make up the strategic reserve (currently 4600 million cubic meters) required to overcome any critical situations, such as interruption or slowdown of imports, exceptional weather conditions, etc. The use of such quantities of gas is set out by decree of the Ministry of Economic Development, as required by D.Lgs.164/2000 and related implementation decrees.

With regard to the concession [CUGNO LE MACINE STOCCAGGIO](#) released in 2012 to Geogastock SpA (Basilicata Region), preliminary works were carried out for the safety of the installations to be transferred from ENI (holder of the original mining concession) to Geogastock. On 14 November 2013, the accessorial goods and workplace responsibilities were transferred to Geogastock, upon verification of the UNMIG Territorial Office of Naples. The preparation works for the storage site should allow the entry into operation of the site in 2016, providing 700 million standard cubic meters of additional storage capacity and 10 million standard cubic meters per day of peak.

ENVIRONMENT AND SAFETY

With regard to the issues concerning the health and safety of workers, and the preservation and protection of the environment, the Directorate-General has a very important role, as through its central offices, the UNMIG offices and the Laboratories of analysis and testing, it supervises the proper conduct of the works and the compliance with the safety standards in the workplace in the entire sector of prospection, exploration and production of hydrocarbons, including offshore activities.

Specifically with reference to offshore activities, it is worth underlying the essential role played by the Directorate-General: the table for the national transposition of Directive 2013/30/EU was, in fact, established within the Directorate-General.

In addition, the Directorate-General participates with two representatives to the EU Authority Offshore Group (EUOAG), the European Commission's advisory group on themes related to offshore safety and also to the ratification process of the Offshore Protocol for the Mediterranean Sea, signed by Italy on 14 October 1994 and entered into force on 24 March 2011.

As part of the check and inspection activities, additional control campaigns and surveys are carried out by the Directorate-General, together with the regular activities performed by UNMIG Offices and the Laboratories, which require the joint action of the Divisions and/or the cooperation with other Directorate-Generals of the Ministry and other bodies.

UNMIG Offices - Bologna, Rome and Naples

UNMIG Offices (Divisions II, III and IV) are responsible for carrying out verifications and controls of the safety of installations, for the prevention of accidents, the safety and health of workers, both on land and at sea and perform the technical and administrative management of activities within the exploration and prospecting licenses, exploitation concessions and storage of hydrocarbons, natural gas, and CO².

Surveillance

In 2013 the following inspections were carried out by the UNMIG Territorial Offices:

- ❖ 256 production inspections, which allowed the verification of hydrocarbons productions obtained in the concessions also with the aim to assess the royalties proceeds;
- ❖ 4555 verifications of pressure equipments, lifting equipments, grounding equipments;
- ❖ 390 inspections of drilling rigs/production rigs (with an increase of 100% compared to 181 inspections carried out during the year 2012);
- ❖ 92 inspections for other purposes (e.g. public utility, urgency occupation, wire lines, injuries, etc.).

	Production Inspections	Checks of equipment systems and plants	Inspections of drilling rigs and production rigs	Public Utility and emergency occupancy	Wire lines, injuries, other
January	12	256	39	0	6
February	14	368	49	0	13
March	28	164	43	0	14
April	15	347	33	0	12
May	26	481	36	0	8
June	15	501	38	0	5
July	13	344	14	1	12
August	18	332	10	0	1
September	41	209	41	0	1
October	40	617	44	1	6
November	24	529	27	0	5
December	10	407	16	0	7
Total	256	4555	390	2	90

Table 17 – Inspection activity year 2013

Authorizations

The UNMIG Territorial Offices granted during year 2013, the following authorizations:

- ❖ 33 authorizations for geophysical activity
- ❖ 9 authorizations for drilling of new wells
- ❖ 8 authorizations for shut off
- ❖ 66 authorizations for workover on existing wells
- ❖ 100 authorizations for the start of the works on existing installations
- ❖ 183 authorizations for operation of new installations
- ❖ 795 authorizations of other type

As an example, it should be noted that the authorization to the drilling of new wells, in addition to the evaluation of the technical aspects of operations, involves:

- ❖ management of the Conference of Services in which the opinions of other authorities concerned are acquired (Region, City Council, other agencies);
- ❖ participation in the works of the Regional Technical Committees (CTR) for the assessment of storage projects subject to the Seveso law.

	Geophysical Activity	Drilling	Works on Plants	Operation of Plants	Miscellanea
January	3	9	9	11	79
February	7	11	10	6	92
March	4	7	3	7	123
April	3	8	10	28	33
May	1	7	4	13	103
June	2	7	10	12	52
July	1	6	11	27	55
August	0	4	9	16	46
September	3	3	8	12	44
October	5	11	5	25	35
November	1	5	13	17	36
December	3	5	8	9	97
Total	33	83⁷	100	183	795

Table 18 - Authorizations granted in year 2013

⁷ The 83 permits to drilling activities are related to the execution of 9 new wells, shut off of 8 wells no longer in use and 66 workover on existing wells.

Injuries

As part of the activities of exploration, exploitation and storage of hydrocarbons (with the exception of onshore Sicily), a total of 16 injuries⁸ were recorded in 2013. The figure in 2013 shows a significant reduction (-55%) compared to the previous year. There were no fatalities in 2013.

Of the 16 accidents considered, 12 occurred in the execution of oil and gas activities, the remaining 4, which related to concessions / licenses and therefore properly reported to the UNMIG Offices, are not specific of the O&G activities, but occurred in mining areas or during the journey from home to work. The circumstances of the 4 incidents are reported below: *“The injured while lifting a bucket of water for cleaning, accused severe back pain”, “the injured, during a transfer by company car, nearly collided head-on with a car coming from the opposite direction”, “the injured walking and awaiting the arrival of Vibro, fell accidentally bumping on the ground with his right hand”, “the injured, going back home from work, getting out of his car procured himself an injury to his right knee”.*

Of the 16 injuries, 31% is classified as “severe” (with a prognosis of more than 30 days) and 69% is not severe

	Light	Severe	Total	Total (O&G only)
Onshore	4	2	6	3
Offshore	7	3	10	9
Total	11	5	16	12

Table 19 – Injuries year 2013.

In the offshore activities 10 injuries were recorded. In the onshore activities the number of accidents is 6, of which 3 occurred in storage sites and are not closely related to the O&G activities.

Considering the total number of reported injuries (equal to 16) and the total number of hours worked (equal to 9,638,033), in 2013 the recorded LTIF⁹ (Lost Time Injury Frequency) was equal to **1.66**. This highlights the significant reduction (-58%) of the value of the indicator compared to 2012 UNMIG data point (LTIF in 2012 was 3.93 equal to 36 injuries per 9,159,503 hours worked).

⁸ Throughout the section, the term "injury" means an injury that is relevant for statistical purposes which resulted in an absence from work for more than 3 days.

⁹ According to OGP (International Oil & Gas Producers Association), the LTIF is defined as “The number of lost time injuries (fatalities + lost work day cases) per 1,000,000 work hours”, which represents the index of frequency of accidents involving absence from work, calculated with reference to 1 million hours worked.

Other useful elements of comparison are international statistics on accidents in the O&G sector developed by OGP (International Oil & Gas Producers Association). The OGP has calculated in 2012 an LTIF global scale of 0.48¹⁰, an LTIF at European level of 0.91 and an LTIF for Italy of 1.55. However, in making the comparison between UNMIG and OGP data, it should be considered that, for the purposes of OGP data consolidation, some types of incidents that need to be included for the Italian law are not included in the OGP statistics (e.g. incidents occurring during the preparation of food for personal consumption or arising from activities conducted outside working hours¹¹).

In addition to the LTIF, the indicators for the assessment of historical incidents in the energy and mining activities are the number of incidents occurred during production activities per million TEP produced and the number of incidents occurred during drilling activities per meter drilled. Both indices showed improvements compared to 2012 as shown in the following tables.

Drilling	1995	2009	2010	2011	2012	2013
Metres drilled	137565	80521	56640	55810	51.476	45.335
Incidents occurred	121	24	12	13	19	4
Aggregated Index 1 [incidents/m drilled]	8,80E-04	2,98E-04	2,12E-04	2,33E-04	3,69E-04	0,88E-04
Index variation wrt year 1995		-66%	-76%	-74%	-58%	-90%

Table 20 - Incidents Year 2013 - Historical Index 1 (incidents/meters drilled)

Production	1995	2009	2010	2011	2012	2013
Gas [Billions Smc]	20,4	7,9	7,9	8,3	8,5	7,7
Oil [Millions Ton]	5,2	4,5	5,1	5,3	5,4	5,4
Total [Millions TEP] (*)	21,5	10,82	11,4	11,94	12,2	11,6
Incidents Occurred	125	27	35	15	15	2
Aggregated Index 2 [incidents/millions TEP]	5,81	2,50	3,06	1,26	1,23	0,17
Index Variation wrt year 1995		-57%	-47%	-78%	-79%	-97%

Table 21 - Incidents Year 2013 - Historical Index 2 (incidents/million TEP produced).

[*] 1 Mm3 di gas = 800 TEP

It is worth noting that, for the determination of the two indices in 2013, only the injuries occurred, respectively, in drilling and production operations, in the course of the activities, were taken into consideration, as shown in the following Table 22. The approach is different than as done in the previous years when in the two groups were

¹⁰ The aggregate OGP 2012 refers to the O&G activities of 49 oil companies operating in 107 countries and is listed on the Safety performance indicators - 2012 data - Report No. 2012s - June 2013. Rev1.3 November 2013.

¹¹ Ref. Health & safety incident reporting system users' guide, 2010 date - Report No. 444 - May 2011.

computed also incidents which had occurred in the production or drilling sites, although not strictly related to the activities in question. The exclusion of “non-related” operations, though counted in the LTIF, strengthens the effectiveness of the indices for the purpose of monitoring, highlighting any criticalities existing in the two key activities of the sector. In comparing the values of the indices in the past years it is therefore necessary to take into due consideration the methodological change made.

The table below shows the classification of incidents divided by activity:

	Light	Serious	Total
Pipe Lines	1	0	1
Plants	0	0	0
Installations	1	0	1
Drilling	2	2	4
Production	2	0	2
Immersion	0	0	0
Geophysical prospection	1	1	2
Shipping/helicopters	0	0	0
Other activities	4	2	6
Total	11	5	16

Table 22 - Incidents Year 2013 - Classification incidents by activity.

It shows how, with the exception of the item “other activities”, the largest number of incidents is concentrated in the category “drilling”.

Table 23 shows the classification according to the cause of the incident:

	Light	Serious	Total
Slips / falls	4	2	6
Falls of objects	0	0	0
Machineries	3	1	4
Manipulations of objects	2	0	2
Fires / explosions	0	0	0
Electricity	1	0	1
Dangerous substances	0	0	0
Ionizing radiations	0	0	0
Blowouts	0	0	0
Others	1	2	3
Totale	11	5	16

Table 23 - Incident Year 2013 - Classification by incident cause.

It is noted that slips and falls constitute a major cause of incidents. In respect of injuries related to the use of machinery, two occurred of them during the use of lifting systems and two during the use of tools (grinders).

In conclusion, in 2013 the trend of reduction of incidents at work in the energy-mining sector, already evident in the previous years, is fully confirmed. All 2013 indicators (LTIF, incidents in drilling per meter drilled, production incidents per million TEP) reflect the decrease. The activity with the highest number of incidents is drilling. The main causes of incidents are slips, falls and the use of machinery, which represent areas of intervention on which actions must be undertaken to further improve safety performances.

Laboratories for analysis and testing in the mining and energy sector.

Environmental monitoring

Control of emissions

During 2013, the surveillance activity on emissions conveyed in atmosphere by collection and treatment plants for liquid and gaseous hydrocarbons proceeded as usual.

Three analysis campaigns were performed on gaseous effluents coming out of the chimneys of the combustion plants pertaining to the hydrocarbons treatment plant [VAL D'AGRI OIL CENTRE](#). Analyses were carried out also on the atmospheric emissions from the natural gas processing plants of [CASALBORSETTI](#) and [RAVENNA MARE](#) and from the offshore platforms "[ROSPO MARE B](#), [BARBARA T2](#), [GARIBALDI K](#) and [CERVIA K](#).

In particular, the following checks were made:

- ❖ [VAL D'AGRI](#) Oil Centre Eni S.p.A.;
- ❖ [CASALBORSETTI](#) Gas Plant, Eni S.p.A.;
- ❖ [RAVENNA MARE](#) Gas Plant, Eni S.p.A.;
- ❖ [ROSPO MARE B](#) Platform, Edison S.p.A.;
- ❖ [BARBARA T2](#) Platform, Eni S.p.A.;
- ❖ [GARIBALDI K](#) Platform, Eni S.p.A.;
- ❖ [CERVIA K](#) Platform, Eni S.p.A.

Check of liquid effluents

Sampling and analyses of liquid effluents (water layer separated from the liquid and gaseous hydrocarbons) from "BARBARA T2" platform and [VAL D'AGRI OIL CENTRE](#) of Eni S.p.A., and from the [CAVONE OIL CENTRE](#) of Padana Energia S.p.A. were performed.

Samplings on [BARBARA T2](#) platform and the subsequent analysis of emissions and liquid effluents were carried out within the framework of cooperation between the Directorate-General and ISPRA (Institute for Environmental Protection and Research),

in order to carry out joint controls foreseen in the [Integrated Environmental Authorization \(AIA\)](#) for offshore plants, as defined by [Legislative Decree April 3, 2006 n. 152](#) and subsequent amendments, Art. 29 decies, paragraphs 1 and 3.

In the context of the AIA controls, the technical staff of Division V and the Rome UNMIG Office carried out in the month of September 2013 the joint inspection for ordinary control of "BARBARA T2", Eni S.p.A. compression platform located in the offshore Adriatic sea, in coordination with the technical staff of ARPAM (Regional Agency for Environmental Protection of the Marche Region) for the verification of compliance with the monitoring plan foreseen in the [Integrated Environmental Authorization for the plant](#).

Gas quality control

During 2013, Division V performed a controlling campaign of the quality of the natural gas produced and/or stored in the national territory. Molecular composition¹² and physical properties¹³ of gas were determined.

The sampling is normally done immediately prior to the injection in the distribution networks.

Checks were carried out at the following gas production, processing and storage sites:

TREATMENT AND PRODUCTION PLANTS:

- ❖ [SORESINA](#), eni S.p.A.
- ❖ [CAVIAGA](#), eni S.p.A.
- ❖ [PISTICCI GAS](#), eni S.p.A.
- ❖ [CENTRO OLIO VAL D'AGRI](#), eni S.p.A.
- ❖ [ROSETO](#), eni S.p.A.
- ❖ [CANDELA miscela](#), eni S.p.A.
- ❖ [CANDELA gas povero](#), eni S.p.A.
- ❖ [CANDELA gas dolce](#), eni S.p.A.
- ❖ [SAN POTITO](#), Edison stoccaggio S.p.A.
- ❖ [RAVENNA MARE](#), eni S.p.A.
- ❖ [CASALBORSETTI](#), eni S.p.A.
- ❖ [RUBICONE](#), eni S.p.A.
- ❖ [FANO](#), eni S.p.A.
- ❖ [FALCONARA](#), eni S.p.A.
- ❖ [GARAGUSO](#), Edison S.p.A.
- ❖ [LARINO](#), Edison S.p.A.
- ❖ [SANTO STEFANO MARE](#), Edison S.p.A.
- ❖ [PINETO](#), Adriatica idrocarburi S.p.A.
- ❖ [TORRENTE TONA gas associato](#), Adriatica idrocarburi S.p.A.

¹² The control tool utilized was a portable gas chromatograph, model μ GC 3000, made by Agilent.

¹³ The physical properties of the gas are obtained by calculating the molar composition as required by Decree of Ministry of Economic Development February 19, 2007: "Approval of the technical regulation of the physical and chemical characteristics and of the presence of other components in the fuel gas to be conveyed" (65 GUN of March 19, 2007)

- ❖ [TORRENTE TONA gas povero](#), Adriatica idrocarburi S.p.A.
- ❖ [CARASSAI](#), Adriatica idrocarburi S.p.A.
- ❖ [S. BENEDETTO](#), Adriatica idrocarburi S.p.A.
- ❖ [GROTTAMMARE](#), Adriatica idrocarburi S.p.A.
- ❖ [CAPPARUCCIA](#), Adriatica idrocarburi S.p.A.
- ❖ [SAN GIORGIO MARE](#), Edison S.p.A.
- ❖ [CASTELLARO](#), Edison S.p.A.
- ❖ [CASSIANO](#), Edison S.p.A.
- ❖ [RAPAGNANO](#), Apennine energy s.r.l.

STORAGE PLANTS:

All operated by the gas storage company STOGIT S.p.A.

- ❖ [BRUGHERIO STOCCAGGIO](#)
- ❖ [SETTALA STOCCAGGIO](#)
- ❖ [CORTEMAGGIORE STOCCAGGIO](#)
- ❖ [MINERBIO STOCCAGGIO](#)
- ❖ [SABBIONCELLO STOCCAGGIO](#)
- ❖ [FIUME TRESTE STOCCAGGIO](#)
- ❖ [RIPALTA STOCCAGGIO](#)
- ❖ [SERGNANO STOCCAGGIO](#)

Analyses of natural gas in the offshore compression platforms were also carried out. On these plants the natural gas coming from the production platforms is compressed before being sent to treatment plants onshore.

COMPRESSION PLATFORMS:

All operated by Eni S.p.A.

- ❖ [CERVIA K](#)
- ❖ [ANGELA ANGELINA](#)
- ❖ [GARIBALDI K](#)

As to the solid minerals, Division V carried out a characterization and classification of a sample of the treatment residues of sand extracted from the mine "Piana della Battaglia" in the Commune of Castelpagano (BN) held by the company "Accornero S.p.A." and treated in the plant of Riccia (CB).

Environment in the workplace

As part of the environmental and safety of workers, Division V carried out [measurements of the noise](#) in the headquarters of MISE in Via Molise n. 2.

Suitability for use of explosives

Division V performs technical inquiries for the assessment of the suitability of explosives, blasting accessories and ignition means for the use in the mining activities, as required by the Ministerial Decree of 21 April 1979.

The list, approved annually, contains explosive products that, according to the classification under Title VIII of the Decree of the President of the Republic 9 April 1959, n. 128, are accepted for the use in the mining activities in compliance with the requirements of the Ministerial Decree 21 April 1979.

For the year 2013, the list explosives was approved by [Directorial Decree of 22 April 2013](#).

Later in the year, the list was amended and supplemented by the following decrees:

- ❖ [Directorial Decree of 12 June 2013](#)
- ❖ [Directorial Decree of 31 July 2013](#)
- ❖ [Directorial Decree of 4 September 2013](#)
- ❖ [Directorial Decree of 30 October 2013](#)

Joint activities: Control campaigns and surveys

Val d'Agri

A specific control campaign was performed on the activities carried out in the first quarter of 2013 in the [VAL D'AGRI](#) concession.

The activities carried out by the Divisions I, IV, V and VIII, concerned: verification of adequacy of the production capacity of each well; expected production and production actually obtained and recorded in the oil centre; checking of the operations performed in the well area, along the connecting pipelines and in the oil centre; analysis of gas composition and API degree of liquid hydrocarbons produced in the concession; analysis of effluents from the treatment of hydrocarbons produced.

From the surveys, it was found that the activity in progress, equipments, installations and facilities were all compliant with the relevant authorizations and with the industry regulation.

Special attention was paid to the verification of the correspondence between the productive capacity of wells, the envisaged monthly production communicated to the UNMIG Territorial Office of Naples (Division IV) and the actual quantities produced.

The difference found between the 3 figures (production capacity, monthly production program of the company for the first quarter of 2013 and actual production) is mainly due to the existing gas treatment plants of Val d'Agri Oil Centre (with a gas treatment capacity of 3.1 MSm³/d) that are insufficient to treat the full production capacity of the wells in the Cerro Falcone area, come recently into production, characterized by a high gas production. With the completion of the fifth gas treatment line, currently under construction, the Val d'Agri Oil Centre will be able to treat up to 4.66 MSm³/d of gas, allowing the scheduling and use of the maximum production capacity of the existing wells, equal to 4.56 MSm³/d. The investment planned is 250 Million euro, and the expected work duration is 20 months.

The results of the analysis showed that the wastewaters are constituted by production waters characterized by a constant composition over time.

In relation to the investigations carried out on natural gas and the determination of the API degree of the liquid hydrocarbons, it was found that the characteristics of the oil and gas are substantially constant over time.

Emilia Romagna: post-earthquake study

Following the earthquake occurred in Emilia Romagna on 20 and 29 May 2012 a scientific-technical Commission was established on 11 December 2012, by decree of the Head of the Department of Civil Protection of the Presidency of the Council of Ministers, at the request of Vasco Errani (President of the Region), as Special Commissioner for the earthquake, with the task of assessing the possible relationships between the hydrocarbons exploration activities and the increase of seismic activity in the area affected by the earthquake.

The Director-General for Energy and Mineral Resources, Mr. Franco Terlizze, as one of the members of the Commission, contributed to the study by providing data related to the mining activities carried out in the area.

The aim of the Commission was to produce a report which, on the basis of technical and scientific knowledge currently available, could give indications whether the earthquake in the region might have been triggered by the subsurface activity.

The final composition of the Commission was set out by Decree of the Head of the Department of Civil Protection of 8 May 2013, after which the Commission started the works immediately.

At the time of this publication the works of the Commission are terminated. The final report was forwarded to the Special Commissioner for the earthquake, who announced it on the 16 April 2014. Consequently, the document was published on the website of the Directorate-General for Mineral and Energy Resources <http://unmig.mise.gov.it/unmig/agenda/dettaglio-notizia.asp?id=175>.

The actions necessary to implement the recommendations contained in the report of the Commission are currently undergoing.

NATIONAL ACTIVITY

Monitoring and regulation

In the course of 2013, the evolution of the legislation with potential impact on the mining activities and on the authorization procedures under responsibility of the Directorate-General was continuously monitored. On the basis of the changes of the main sources of law, an update of the secondary legislation.

Below is a brief description of the modifications to the main sources of law and the consequent impacts on regulatory/authorization/management activities under responsibility of the Directorate-General.

[Inter-ministerial Decree of 8 March 2013](#) - Approval of the National Energy Strategy

With this decree, the document containing the National Energy Strategy (SEN) was approved. The document expresses the main objectives to be pursued in the coming years, tracing the basic choices and priorities for action.

[Ministerial Decree dated 9 August 2013](#) - Redefinition of the area "E" and reconnaissance of marine areas open to the presentation of new applications.

With this decree, the "marine areas" were reshaped in order to better preserve the coasts and protect the environment, through the closure to new business of the Tyrrhenian sea areas, the areas within 12 miles of the coasts, and the protected areas, with the simultaneous delineation of a new marine area in the Balearic Islands sea, adjoining existing research areas of Spain and France.

The resulting total area open to new activities is now reduced by over 45% (from 255 thousand to 139 thousand square kilometers), moving the new activities to areas that are far from the coast.

This revision is aimed at enhancing and strengthening the upstream sector in sea areas that are more promising in terms of oil and gas potential, always in compliance with the environmental limits set by the regulations in force (Article 6, paragraph 17 of the [Legislative Decree of 3 April 2006 n. 152](#)) and the highest levels of safety required by [2013/30/EU Directive](#) of the European Parliament on the safety of offshore operations, approved in June 2013, and under implementation in Italy.

Therefore, the marine areas in relation to which it is possible to submit new applications for the prospection and exploration of hydrocarbons are those reported in the map published on the website of DGRME <http://unmig.mise.gov.it/unmig/cartografia/zone/zone.asp> and reported in Figure 2.

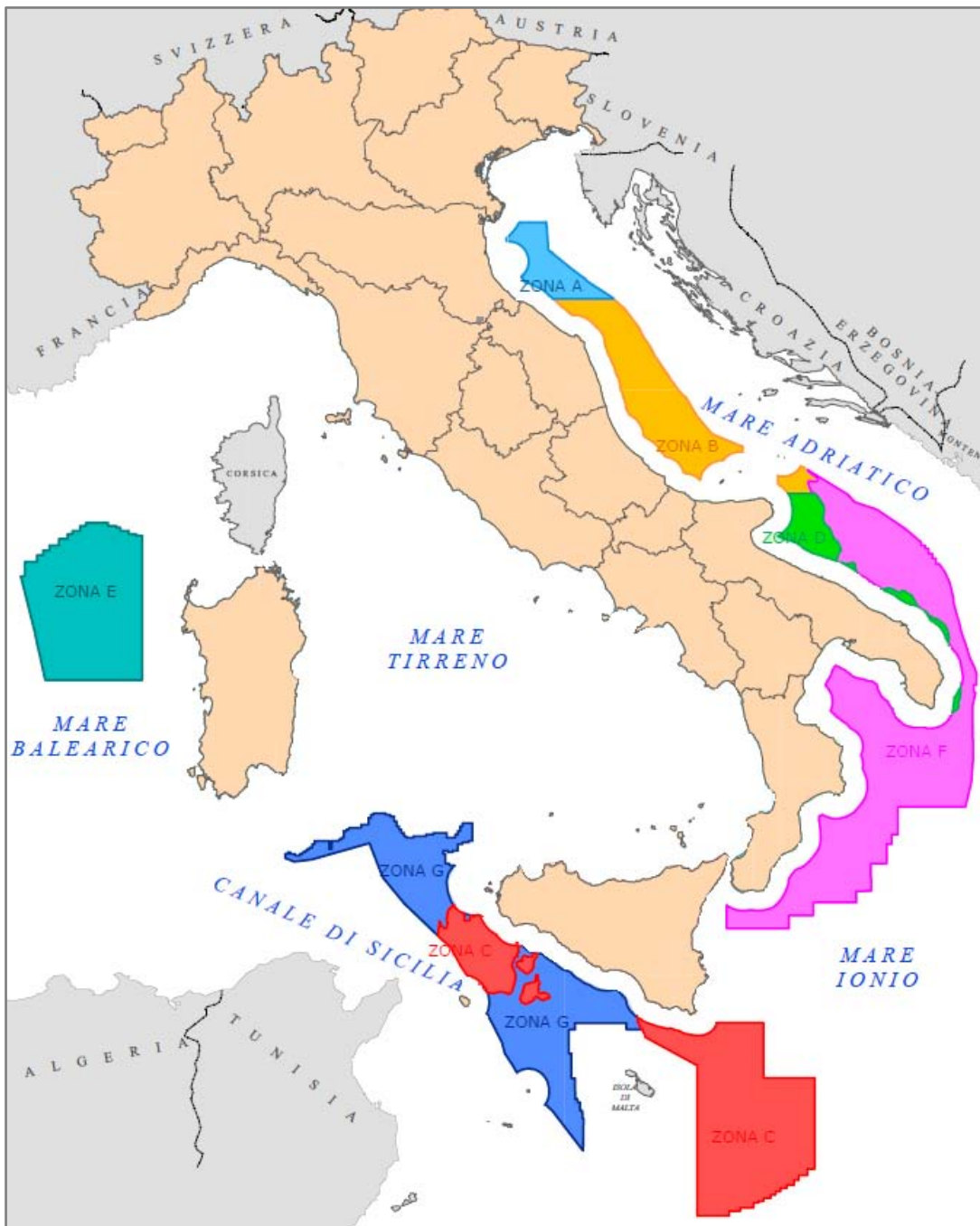


Figure 2 - Map of Marine Zones open to new applications of hydrocarbons exploration

[Ministerial Decree 12 September 2013](#) Development of Strategic National Energy and Mineral Resources.

This decree implements Article 16 of the Decree Law of 24 January 2012, n.1, converted with amendments into Law 24 March 2012, n. 27, giving indications on how to detect the higher fiscal revenues actually produced by new hydrocarbons projects. It describes the method of allocation of a portion of such increased revenue to the development of infrastructure and employment projects for the growth of the territories in which production installations are located and the neighboring areas.

Such decree, which mainly deals with tax and fiscal issues, states in particular that:

- ❖ a share of the “IRES revenue” paid by taxpayers (ATECO coding B06), equal to 30% up to € 130,000,000 and to 15% on the excess, is allocated to the territories mentioned in Article 16 of Decree Law 24 January 2012, n. 1;
- ❖ the passive recipients of the rule are only those companies constituted after the entry into force of the Decree, holding concessions and mining licenses and implementing new development projects not yet authorized, for which new investments are needed;
- ❖ the new development projects falling within the scope of the regulation are onshore projects located in regions under ordinary statute;
- ❖ a fund is set up in the budget of the Ministry of Economic Development, fed by the aforementioned revenues;
- ❖ the capacity limit of the fund amounts to 50 million euro per year;
- ❖ recipients of the fund are the territories where the new production facilities are installed and the neighboring territories;
- ❖ the allocation of the fund is managed by the central administration of the State with the involvement of the local authorities through appropriate framework agreements;
- ❖ the procedures for implementing the above measures by the local authorities are governed by the principles of the Code of Public Contracts, as well as the rules of transfer of funds on the basis of the progress of expenditures.

Commission for hydrocarbons and mineral resources - CIRM

For the execution of the institutional activities under its responsibility, the Directorate-General for Energy and Mineral Resources requests the opinion of the Commission for Hydrocarbons and Mineral Resources (CIRM). CIRM - set out by Decree of the President of the Republic 14 May 2007, n. 78 which brings together in a single body the powers previously assigned to four committees, now removed - is the technical advisory body that expresses mandatory opinions, not binding, with regard to: exploration and exploitation of mineral resources, CIRM sez. a); safety of exploration and production activities, CIRM sez. b); determination and payment of royalties, CIRM sez. c). The activity of the Commission is not remunerated in any way, as its members, including the external ones, are appointed as an honorary title.

Through [Ministerial Decree 9 August 2013](#), CIRM was set out again for the period 2013-2016, following the positive opinion of the Council of State on Article 12, paragraph 20 of the D.L. 95/2012, converted into Law 7 August 2012 n. 135. The State Council has recognized the need to rely on the expertise of the highly specialized members of the Commission for the acquisition of technical advice, as provided by law, for the administrative proceedings under the responsibility of the Directorate-General.

In the course of 2013, CIRM members met:

- ❖ sez. a) once, on 12 December 2013.
- ❖ sez. b) twice, on 15 October 2013 and 12 December 2013.
- ❖ sez. c) once, on 6 March 2013.

Construction of methane gas network in Southern Italy

The methane gas network industry had its origins in the early eighties. As a result of repeated oil crises, the Italian Government adopted various measures to reduce the risks linked to possible new crisis and, among these, the decision to strengthen the methane gas distribution network in the south of the country in order to reduce the dependence on petroleum products (the municipal gas distribution networks were concentrated mainly in the north of Italy).

The directions of the National Energy Plans (PEN) for the years 1978 to 1980 were implemented through Law of 28 November 1980 n. 784, which granted subsidies for the construction of methane gas distribution networks and for the technical and financial support to municipalities or their consortia involved.

The technical investigation for the granting of these provisions was carried out by the "Cassa per il Mezzogiorno" (National body established in the early '50s to foster and

promote the development of Southern Italy) and, after its dissolution, by the Ministry of Industry (now Ministry of Economic Development) to which the competence was transferred. The "General Program" of construction of the methane gas network in the south of Italy, started with CIPE decision of 11 February 1988, was to be implemented in a "Three-year operating period", to be followed by a "Two-year operating period", according to the original forecast.

In actual facts, this is still undergoing due to the remarkable number of municipalities involved (more than 2,500) and to the continuous reduction of the financial resources that the State allocated to its implementation, through the various financial laws, until they have been exhausted from year 2004 onwards.

Between the first implementation phase and the "General Program", as at 31 December 2013 a total of 1,887 initiatives were funded in exactly the same number of communes, of which 677 initiatives funded by the Law 7 August 1997, n. 266, on which the Ministry of Economic Development was more directly engaged. The total expenditure by the State amounts to ca. 2 billion euro, to a large extent already incurred.

As the numbers can prove, the effort has been significant and the result achieved extremely comforting.

However, the target set has not been reached, due to the high number of municipalities still awaiting the benefits of the financial incentives "promised" by the State.

In this context, the issue of "Cilento" assumes a particular relevance. This is indeed a sub-mountainous region of the province of Salerno, which extends itself for 3210 square km and includes 80 municipalities, plus other 15 municipalities located in contiguous areas, for a total of 95 municipalities, representing 60% of the entire province of Salerno and a population of 270,000 inhabitants.

Almost all of the above municipalities are left without a natural gas distribution network, although most of them was duly registered in the lists annexed to the resolution of 18 December 1986, by which CIPE sanctioned the "eligibility to financing" as per law 784/80, followed up by law 266/97.

In this sense, Cilento represents a real "anomaly" in the context of the construction of methane gas network in southern Italy, whereas all the other regions have almost completed the program of network construction in their own territories, mostly thanks to the financial contributions provided by the referred laws and marginally with the direct intervention of the Regions.

To try to give a solution to the completion of the network construction program in the south of Italy, and particularly to the construction program in "Cilento", Article 1, paragraph 319 of the Law of 23/12/2013, n. 147 (Stability Law), has allocated the sum of 20.0 million euro for each of the years from 2014 to 2020.

The development of a set of measures by this Ministry is currently under way, so as to allow the early startup a new phase of funding (i.e. "Plan" for the completion of the construction of methane gas network in southern Italy; CIPE resolution governing the granting of public contributions).

With regard to the management of the "Program", a new initiative was launched in 2013 in the town of Borbona (RI) and procedures were put in place for testing 35 interventions of network construction, bringing to 550 the number of global initiatives executed and in operation.

The implementation of the projects of variation for 92 municipalities belonging to the Calabria basins known as CL 01, CL 02, CL 05, CL 08 and CL 22 went on in 2013.

Expropriation for public interest

The procedures of expropriation for public interest for the construction of energy infrastructure are implemented under request of the companies which, even if authorized to carry out energy infrastructures, were not able to conclude arrangements for the use of the goods necessary to implement their projects, recognized as public interest.

To allow companies to acquire the property or other rights needed for the implementation of their projects, or energy programs, the expropriation documents are issued in accordance with the procedures established by [Decree of the President of the Republic, 8 June 2001 n. 327](#), containing the Unique Act of all the regulations on expropriation for public interest.

The decree of the President of the Council of Ministers of 5 December 2013, n. 158, in force as of 2014, setting out the rules for the reorganization of the Ministry of Economic Development, has kept within the Directorate-General for Energy and Mineral Resources the function of unique Office for expropriation in the energy sector.

The operators that build pipelines which contribute to strengthening the National Gas Network, as well as the companies that implement projects for the construction of additional energy infrastructure, address their requests to the unique Office that, in its quality as Expropriation Authority, puts in place the procedures and issues the necessary decrees aimed at ensuring the use of the relevant goods for public interest and an appropriate compensation to the owners.

The Directorate-General has given full accessibility to the public through the webpage <http://unmig.sviluppoeconomico.gov.it/unmig/espropri/espropri.asp>, where it is possible to find detailed information concerning public expropriation activity under obligation of publication on the Official Bulletin of the Republic of Italy. This was done with the aim to pursue the objective of an effective public communication and to allow

transparent disclosure of the administrative activity related to expropriation for public interest, especially in relation to local contexts where infrastructures are built in order to implement the National Energy Strategy.

During 2013, the Office carried out 28 executive decrees necessary to perform expropriation for public interest, in the same number of municipalities (expropriation of land, the establishment of permanent easements, temporary occupation of areas related to the research activities and the development of energy programs). The chart below shows the number of expropriation acts published, divided by type (decrees and orders) and scope (infrastructure of the mining sector and of the gas system). As to the electrical system, during the year 2013 there were no expropriation decrees issued with the obligation of publication.

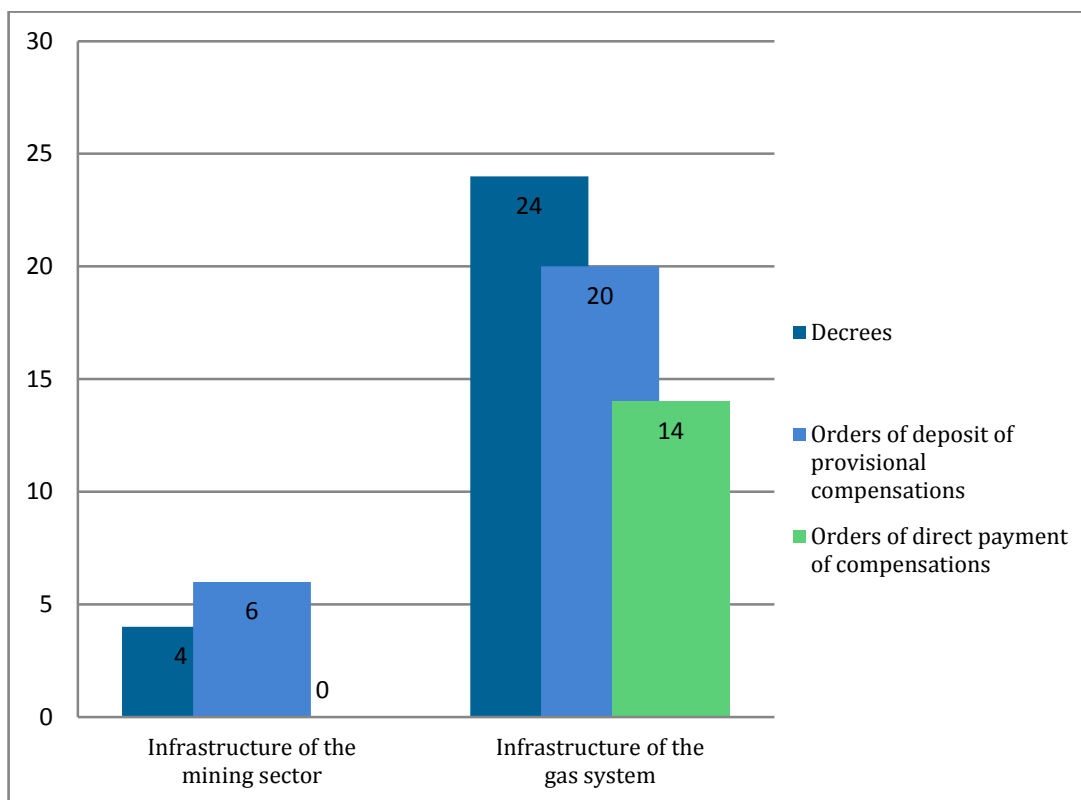


Chart 17 - Expropriations for public interest split by type and field of application

Project for basic research in the mining sector

With the enactment of Law 752 of 6 October 1982, “Rules for the implementation of mining policy”, an organic support activity from the State to the mining industry has taken start. Article 4 of Law No. 752/82 states “Basic Mining Research consists of data collection, documentation and mining bibliography; systematic geological-structural and mineralogical surveys and studies for the scope of mining research; geological, geophysical, geochemical, geotechnical, geostatic and reservoir prospection activities, elaboration of all interpretations and relevant illustrative studies [...]”. Law n. 752 was subsequently amended and modified by Law 246/84.

The research activity began in 1986 for a period of about 10 years and was fully funded by the State, for a total cost of about 140 billion to 150 billion lira. The aim of the research was to provide background data for the evaluation of the existing mineral potential and to point out signals of mineralized bodies in order to ascertain deposits and reserves (operational research) and especially to obtain a first set of direct and indirect traces on the presence of mining targets and on their nature. The basic mining research has provided a preliminary inventory of the presence, the nature and size of the mineral resources.

In the period 1985–1994, 68 agreements with research institutions were signed.

The results:

- ❖ global census of known mineral events; about 8.200 events highlighted;
- ❖ definition of geological and structural contexts of mineralization and characterization of deposits and models types;
- ❖ preparation of a computerized data base on the information collected and build up of a bibliographic database;
- ❖ verification and consequential amendments resulting from the work of geological and geochemical control on the ground.

Deliverables: bibliography and documents (11446), geological-structural maps (74), mineralization and metallogenic maps (80), geo-mineral sheets and sounding sheets (8703), thematic maps (41), samples collected (1936), samples analyzed (1638), heavy mineral fractions examined (1506), paper volumes (about 560).

The academic and scientific world showed high interest in these findings and asked to be made aware of the immense heritage of knowledge. This has originated the need to make the basic mining research available to the public.

Therefore, in 2013 a program was started up that provides for the recovery of all the information collected and the publication on the web in a new database made for this purpose. The aim is to facilitate the consultation of the material now available only in paper format.

Collaboration with other administrations

The Laboratories of analysis and testing for the mining and energy sector carry out, since a long time, scientific work in collaboration with the University; in particular, in 2013 a relationship of cooperation was put in place with the Department of Archaeology of Bologna University, Ravenna branch, for the chemical and mineralogical characterization of samples of archaeological finds from excavations done in the Middle East area.

Archaeological finds were analyzed and characterized coming from the archaeological excavation of Kafir Kala, in the region of Samarkand, Uzbekistan and from a tribal tomb discovered in Daba, in the north of Oman, at the base of the Musadam peninsula.

INTERNATIONAL ACTIVITIES

Offshore Directive / EUOAG / Offshore Protocol

The supervisory activities of the Directorate General, and the UNMIG Offices in particular, include offshore activities. On these, a special emphasis was placed following the accident in the Gulf of Mexico (which involved the “Macondo well”) in April 2010. The European Commission responded to this occurrence, by launching an in-depth analysis of the rules adopted by the European Union and the individual Member States.

On the basis of these findings, on the 27th October 2011, the European Commission adopted a Proposal for the regulation of the safety of the offshore oil and gas exploration and production (Offshore Regulation) with the aim to set high minimum standards for the safety of the offshore exploration and production of hydrocarbons, reducing the probability of occurrence of serious accidents, limiting their consequences and therefore increasing, the protection of the marine environment. Over the course of three different EU Presidencies (Poland, Denmark and Cyprus), the Council, through its Working Party on Energy (EWP) analyzed the proposal and submitted several amendments.

Under the Irish Presidency, the Directive Proposal was adopted first by the Council of the European Union, then by the European Parliament and finally published in the Official Journal of the European Union on the 28th June 2013, as “[Directive 2013/30/EU](#) of the European Parliament and of the Council of 12th June 2013 on the safety of offshore oil and gas operations and amending Directive 2004/35/EC”.

The Directorate-General has actively participated in the works through the formulation of comments and proposals aimed at increasing the European safety standards. In particular, the working group accepted the Italian proposal to include in the legislation the adoption of tools such as the “black box”, which were already introduced in our system as a result of technical investigations following the accident in the Gulf of Mexico, and which will become part of the common safety heritage in all Member States. With the European Commission Decision of 19th January 2012, the EU set up the Offshore Authority Group (EUOAG), represented by experts appointed by the competent authorities of the Member States and providing advice and support to the European Commission on all technical aspects relating to the offshore hydrocarbons sector with respect to safety and environment.

Currently, the Directorate-General coordinates the working groups for the national transposition of Directive 2013/30/EU and participates in the process of ratification of the Protocol to the Offshore Mediterranean Sea, executed by Italy and entered into force in 2011. In addition, two Italian representatives are part of the [EU Offshore Authority Group \(EUOAG\)](#), a high-profile consultative group of European Commission on issues regarding offshore safety. The experts in the EUOAG represent their

respective regulatory authorities and, in some sessions, they meet with the industry operators, in recognition of the fact that the regular exchange of experience between regulators and industry, the identification of common best practices, as well as the improvement of the implementation measures, are fundamental aspects of an effective regulatory regime.

With reference to the issue of “protection against pollution from offshore activities”, this Directorate-General concluded in 2012, in coordination with the competent offices of the Ministry of the Environment and the Protection of Territory and Sea (MATTM), the technical assessment of the proposal to ratify the “Protocol for the Protection of the Mediterranean Sea against Pollution Resulting from Exploration and Exploitation of the Continental Shelf and the Seabed and its Subsoil” (Offshore Protocol).

The [Offshore Protocol](#) was adopted the 14th October 1994 by the Contracting Parties to the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean Sea (the Barcelona Convention, adopted in 1976 and strengthened in 1995 through its extension to coastal areas of the Mediterranean sea). The Parties are essentially the 21 states of the Mediterranean sea and the European Union.

The Barcelona Convention is the framework agreement for the protection of the Mediterranean sea to which a number of Additional Protocols are linked (7 today), which represent the legal instruments completing the Convention and ensuring its concrete application in the relevant sectors, through specification of the principles set forth therein and referring to different types of pollution.

In particular, the Protocol - signed by 11 Contracting Parties (including Italy), and so far ratified by 6 of them (Albania, Cyprus, Libya, Morocco, Syria and Tunisia) plus European Union - entered into force on 24th March 2011. It provides a series of measures to prevent, reduce, combat and control pollution resulting from the following activities:

- ❖ exploration activities, such as geo-seismic surveys, the taking of samples and exploratory drilling;
- ❖ exploitation activities, such as construction of facilities aimed at exploiting resources, including drilling, extraction, processing and storage, transportation via pipeline and loading of vessels, maintenance, repair and other auxiliary operations;
- ❖ scientific research on seabed and subsoil resources.

The framework covers the entire life cycle of offshore installations (including provisions relating to authorization, construction, operations, decommissioning), and provides for cooperation between the Contracting Parties to the Convention. In particular, it regulates the activities of exploration and exploitation of the continental shelf, the seabed and its subsoil, imposing the obligation (already existing in Italy) to obtain an authorization for the conduct of such activities to be executed in line with the best available technologies.

Such ratification is now a matter of priority, especially after the European Union adhered to the Protocol on 17th December 2012 (Council Decision 2013/5/EU).

The ratification by the Italian regulators has been called for by Resolution of the 13th Permanent Commission of the Senate, approved the 15th June 2011, which commits the Government “to take all the necessary procedures for the ratification of the Protocol Offshore of the Barcelona Convention, and work to ensure that the implementation of the Protocol is recognized as a priority in the activity of the Barcelona Convention for the biennium 2012-2013”.

Despite these premises, the Protocol has still not been ratified. At the moment of this publication, the draft law scheme for ratification of the offshore Protocol is under final scrutiny of the Parliament.

Technical table Italy-Malta

The bilateral working group - started in 2012 to verify the feasibility of joint oil and gas activities on a part of the “disputed” areas - continued its work during 2013 with two bilateral meetings.

For the purposes of carrying out joint activities, in compliance with the Italian regulations for the oil and gas operations, DGRME adopted a decree to expand the marina area “C” in the Sicily Channel and later, in March 2013, forwarded to the Ministry of Foreign Affairs (MAE) a draft TECHNICAL PROPOSAL, identifying an area on which to develop joint exploration, and including the proposal to establish a Commission to study the legal aspects related to this issue.

Relationship between Italy and Norway

Italy and Norway have been working together for long time for the establishment of a Bilateral Energy Forum which should include in its structure governments, public authorities and industry.

In view of the forthcoming Italian Presidency of the EU Council, the Directorate-General has engaged in 2013 in a series of institutional missions in order to reinforce the dialogue on energy and environmental matters between the two countries, which had begun at institutional level in March 2009. This concerned in particular, the exploitation of oil and gas and mineral resources, the new European legislation on the safety of offshore operations (Directive 2013/30/UE), the sharing of best practices and the joint development of new technologies, the preservation and sustainable development of the Arctic region, especially in the light of Italy's new status (Observer) in the Arctic Council, and the possible cooperation on renewable energies and CCS (Carbon Capture & Storage), research matters in which Norway and Italy are heavily involved.

In particular, in the months of August, October and November 2013, the Directorate-General was involved in several meetings in Norway with the Competent Authority for Supervision and Control (Petroleum Safety Authority), the Norwegian Ministry of Foreign Affairs and Ministry of Petroleum and Energy.

Arctic Council

The Arctic Council was established in 1996 with the Declaration of Ottawa and it is defined as an intergovernmental forum to promote cooperation between the Arctic States (and non-Arctic), the indigenous populations and the non-governmental organizations for the peaceful and ecologically sustainable management of issues relevant for the Arctic region, with particular attention to the consequences produced by climate change (new shipping routes, fishing exploitation, unexplored mineral resources, economic development of the population).

Members of the Arctic Council are eight Arctic States with territory above the Arctic Circle (Canada, the Kingdom of Denmark representing Greenland and the Faroe Islands, Finland, Iceland, Norway, Russian Federation, Sweden, USA) and the six organizations of the indigenous populations (five hundred thousand people over the four million inhabitants of the Arctic) with the status of "Permanent Participant".

Decisions at all levels of the Arctic Council are exclusive right of the eight Arctic States, with the involvement of the representatives of the indigenous populations. Non-arctic States, inter-governmental and inter-parliamentary organizations and non-governmental organizations can be admitted to the Arctic Council with the role of Observers.

On the 15th May 2013, with the Declaration of Kiruna, Italy has acquired the status of Observer alongside other European countries already in the role such as France, Germany, the Netherlands, Poland, Spain, UK. In 2013, in addition to Italy, this status was granted also to the People's Republic of China, Japan, the Republic of Korea, the Republic of Singapore and the Republic of India. Currently, Observers Member States of the Arctic Council are twelve.

The primary role of the Observers is to contribute to the work of the Council, making available their experience, competence and resources within the working groups.

In November 2013, a delegation of DGRME participated to the half-year organizational meeting of the EPPR Working Group (Emergency Prevention, Preparedness and Response), held in Tromsø, following the invitation of the Ministry of Foreign Affairs to enhance the Italian participation to the Arctic Council.

The task of the EPPR Working Group is to define appropriate tools to respond immediately and effectively to emergencies related to human activities in the Arctic Ocean, with particular regard to the activities related to marine traffic and offshore exploration and production of hydrocarbons. Specifically, the Working Group pursues these objectives through the exchange of information and best practices, the development of effective tools for risk assessment, the identification of improvements for the prevention programs and the emergency response and preparedness at local, national and international level.

The participation of the Italian delegation to the EPPR Working Group allowed, through exchange of views with the delegates of the Council, to share knowledge and expertise on the emergency response and preparedness in the offshore sector. In this way the Directorate-General contributes to the achievement of the strategic objective to place the national oil and gas production in the pathway of the experience of the Northern European countries, as explicitly stated in the Italian National Energy Strategy.

Proposal for a directive to the maritime planning and coastal management

In March 2013, the Commission proposed a new legislation to create a common framework for the maritime spatial planning and integrated management of the coastal zones of the European Union.

Without prejudice to the right of the individual EU countries to plan their maritime activities independently, this will harmonize the planning of the shared maritime zones, at local, regional and national level, through compliance with a set of common minimum requirements.

The genesis of the Proposal for a Directive must be sought in the competition for marine space (installations for renewable energy, aquaculture, hydrocarbons facilities, laying of cables and pipelines, etc.), which highlighted the need for an

efficient management to avoid potential conflicts and create synergies between different activities.

This Directorate-General participates with its representatives in the meetings of the inter-ministerial coordination group, led by the Ministry of Transport, and aimed to follow the work of the Fishery Group of the European Union Council, within which the proposal for a Directive is currently being analyzed.

Raw Materials Supply Group (RMSG)

The Raw Materials Supply Group (RMSG) was established in the '80s under the leadership of the European Commission, Directorate-General for Enterprise and Industry, and includes representatives from industries, environmental NGOs, EU Member States, in order to analyze and affect the activities relating to the supply of raw materials.

In the course of the plenary meetings held in Brussels in 2013, in which Italy was represented by DGRME, the status of the activities initiated in the previous years was checked and new proposals were considered, as follows:

- ❖ Review of the European List of Critical Raw Materials (CRM): the CRM list is under revision based on updated data. The EU approach is based on a relative concept of criticality: a material is critical when it risks a shortage of availability and its impact on the economy is stronger than other Raw Materials. The criticality is based on the economic relevance of the raw material (assessed on the basis of its gross added value in the EU) and on the supply risk (determined by the geopolitical position and the concentration of a given raw material).

A preliminary revision of the list has increased the number of CRM from 14 to 21 currently, depending on the environmental risk that is taken into account. The count could increase further if the PGM (Platinum Group Metals) and REE (Rare Earth Elements) are fully differentiated.

Furthermore, it was recommended to consider the inclusion of coking coal in the CRM list and the Commission's commitment in the battle against the illegal export of waste was reiterated.

The goal is to update this list every three years. In addition, it is expected that in future works other materials considered "close" to the criticality (e.g. rhenium, tellurium) will also be included.

In order to strengthen the international dialogue regarding Raw Materials, in 2013 a workshop was held in Brussels EU/USA/Japan on critical issues related to them.

- ❖ Report on the indicators of the national mining policies: the results of the report on the indicators of the national policies for the oil and gas sector were presented. The questionnaire was sent to all 27 Member States. Replies were delivered also by the industry. The degree of completeness and quality of responses varies considerably between Member States, and it depends in part on the fact that the required information is not always recorded through a centralized system. The data collected provide a solid basis for further in-depth investigations. A second data collection may be made in 1-2 years.

- ❖ Study on the evaluation and exchange of good practices for the sustainable supply of raw materials in the EU: the study aims to evaluate and exchange good practices for the sustainable supply of raw materials within the EU.
- ❖ Progress of commercial negotiations: the European Union maintains commercial relationships with countries outside the EU through its commercial policy, which is one of its exclusive jurisdiction. This means that the EU, and not the individual Member States, negotiates international commercial agreements, in close cooperation with the Council and the European Parliament.

The bilateral negotiations, completed or currently in progress, are as follows:

- ❖ Canada. On 18 October 2013, the European Commission President, José Manuel Barroso, and the Canadian Prime Minister, Stephen Harper, reached a political agreement on key elements of a global economic and commercial agreement (CETA). It is the first free trade agreement between the European Union and a G8 country.
- ❖ TTIP. The negotiations on Transatlantic Trade and Investment Partnership (TTIP) began with an initial meeting held in the period 8 to 12 July 2013 in Washington DC. The negotiating groups defined their approaches and ambitions in twenty different areas covered by the TTIP, including customs duties and technical standards for goods on both sides of the Atlantic. The second meeting, which took place from 11 to 15 November 2013 in Brussels, focused on the commercial rules and the regulatory component of TTIP;

The Commission has brought forward some elements of the legislative proposal it intends to present in the first months of 2014 on the traceability of minerals from conflict zones. The project is currently being examined by the Impact Assessment Board. In the event of a favorable opinion, the DG Trade will start the internal approval procedure, which should be completed by March. The initiative was inspired by the law enacted in the United States (known as the Dodd-Frank Act) which requires that, as of 2014, U.S. companies listed on the stock exchange prove that all the products derived from their activities, contain gold, tin, tungsten and tantalum from areas not affected by conflicts, that is, from different geographical areas than the Democratic Republic of Congo, and the countries bordering it, and that in any case are produced by mine operators that comply with the law of their own country.

European Innovation Partnership (EIP) on Raw Materials

The partnership promotes innovation throughout the supply chain of critical raw materials (research, exploration, extraction, processing, refining, recycling and substitution), involving also regulatory frameworks and international cooperation. Following a call for expression, the Italian candidacy was presented which led to the appointment by the European Commission of the Italian representative within the project. During 2013, the Italian partners have contributed to the definition of the Strategic Implementation Plan under the coordination of the Sherpa Ministry of Economic Development. The Strategic Implementation Plan (SIP) was approved in September 2013 providing an extensive number of actions within the three building blocks technological, non-technological, international. Following approval of the SIP, the European Commission launched a Call for Commitments expiring in February 2014.

The Strategic Implementation Plan of EIP has addressed the necessary actions, priorities and guidelines to help achieve the 2020 EU industrial policy, to increase the sector's share of GDP up to 20%, to define a policy of efficiency of the use of resources, ensuring the sustainable supply of raw materials for the European economy and society. The SIP provides, with regard to these objectives, a set of actions, with specified priorities, within the three building blocks technological, non-technological and international cooperation. In particular, the actions supported by Italy, concerning KIC (Knowledge and Innovation Community), recycling from RAEE (waste from electrical and electronic equipment) and sustainable mining, found their space in the final document.

In the year 2013 two meetings were held in Rome between the Italian representatives. The first in March, in which the following priorities were established: KIC, recycling from RAEE, sustainable mining. The second in November, during which a report was made concerning the contributions to the definition of the SIP. In addition, in the month of December the EIP Annual Conference was held, during which the Strategic Implementation Plan and the guidelines for the Call for Commitments were officially presented.

International Study Groups on Copper, Nickel, Lead & Zinc

The Directorate-General represents Italy in the three International Study Groups looking at the worldwide monitoring of produced and used quantities of Nickel, Copper, Lead, Zinc and predicting their trends in the medium term.

In the course of 2013 two meetings were held that addressed the concerns regarding the increasing difficulties of the operators due to the decrease in demand as a result of the global crisis and the reduction in the available financial resources.

As part of the meetings, two joint seminars were held: the first, in April, on the “Financial Aspects of Metals industry: price volatility, investors activity and funding projects”, during which representatives of the London Metal Exchange, Citigroup, UNCTAD, Investec Asset Management and Raw Materials Group (RMG) intervened and provided information on the worldwide commercial trade; the second in October, on the theme “By-Products of copper, nickel, lead and zinc, including their role as critical materials”, focused on the problems relating to the production, recycling, trading, use and replacement of the by-products of these metals. The presentations provided an overview of the international situation, the future outlook, and the relationship between government policies and industry developments.

Based on the global statistics of production and consumption, the expected trends for the four metals examined are reported here:

- ❖ Nickel: Nickel production and its consumption show a lower growth than in the last years. The implementation of the Indonesian ban on export of nickel in 2014 could affect both exported quantities and prices, while exports of nickel from the Philippines increased. The main global production of nickel was 1.61 Mt in 2011, rose to 1.76 Mt in 2012 and may reach up to 1.91 Mt in 2013. INSG forecasts show an increase to 1.97 million tons in 2014. These indicative production data do not take into account the uncertainty concerning the production of nickel pig iron from China.
- ❖ Copper: the results of the preliminary estimate of world production of copper were presented, together with the mining projects that will start in the period 2013-2015, contributing to the strong growth in mining production in the years 2014-2015. The improvement in macro-economic forecasts for 2014 should increase world consumption and, with the growth of additional supply, the world production should greatly exceed the demand. However, no official data is available from China and the estimates were made based on data obtained from unofficial sources.
- ❖ Lead: an increase in global demand for refined lead metal is foreseen both in 2013 and in 2014. In China a demand increase is expected in both years, mainly due to further increases in the car production, as well as the continued expansion of the mobile phone system, including the development of the largest 4G network in the world. After the drop in demand in both 2011 and 2012, European demand, rising in 2013, is expected to rise also in 2014.

Increases expected in India, the Republic of Korea, Mexico and Thailand will be partially offset by a decrease in the use of this metal in Japan. From the data provided by the Member States and the operators in the sector, there was a small surplus of refined lead metal in the global market in 2013, while in 2014 there could be a deficit for the first time since 2009.

- ❖ Zinc: After declining in 2012, the global demand for refined zinc metal was growing in 2013 and will continue in 2014. Based on the information received from Member States, it can be said that the world's supply of refined zinc metal will continue to exceed demand both in 2013 and in 2014. However in 2014 it is expected that the surplus will be lower compared to the last four years.

Extractive Industries Transparency Initiative (EITI)

The [EITI - Extractive Industries Transparency Initiative](#) is an organization founded in 2002 that operates worldwide, with the aim of promoting the transparency of mining activities at local level, especially in the states in which the mining activities are developing (Africa and South-East Asia). It is a body that assembles government representatives of Member States, international organizations, private investors and representatives of civil society. The purpose of the initiative is to involve all possible stakeholders to foster the development of the areas and economies in which the mining sector is expanding.

EITI aims to be a guarantor that the exploitation of resources be done, in the aforementioned areas, according to well-defined rules and standards, trying to generate revenues that will help these states in the growth and development of a stable economy, reducing poverty. Through supervision of the transparency in the payment of royalties and proper management of the revenues generated by mining activities, an effort is made to track and direct resources to the territory, pursuing a global growth from the socio-economic point of view.

In the EITI by-laws a plenary conference is foreseen, every other year, and three Board Meetings per year.

Italy is represented by a representative of the Directorate-General, in cooperation with the Ministry of External Affairs.

Ministry of Economic Development

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