



ANNUAL REPORT 2012



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ENRICO MATTEI



FEEM is entitled to Enrico Mattei, the founder of Eni and an economic leader in the national industrial system and international relations of the post-war period.

Born in Acqualagna (Pesaro) on April 29, 1906, Enrico Mattei became one of the leaders of the antifascist resistance movement in Northern Italy during World War II. After the peace declaration in 1945, Mattei was appointed by the government bankruptcy trustee of the distressed state-owned oil company Agip.

Instead of liquidating the company, Mattei successfully developed its business, starting an involvement with energy markets lasting 18 years. The unexpected discovery of natural gas in the Po Valley, the development of the business of extracting and marketing it, and his dedication to promoting legislation to regulate domestic energy markets constitute the most salient aspects of Mattei's early activities. In 1953, he was appointed Chairman of Ente Nazionale Idrocarburi (Eni), the state-owned energy company that he forcefully wanted and contributed to establish.

Mattei led the Eni group combining vision with pragmatism: the new terms of association offered to oil producing countries, the measures taken to contain the final energy prices to consumers, the launch of a large and modern domestic petrochemical and nuclear industry, the off-shoring of qualified engineering expertise to operations abroad, the focus on research, innovation and meritocracy witness his managerial skills, combined with a genuine commitment to economic and social progress.

During the expansion phase in Eni's history, Mattei died tragically in an aircraft crash on October 27, 1962 in the skies of Bascapè (Pavia). The key role he had assigned to culture, research, and cooperation represent the most valuable legacy for the Foundation that carries his name.

MISSION



FEEM is a nonprofit, nonpartisan research institution devoted to the study of sustainable development. Founded by the Eni group, officially recognized by the President of the Italian Republic in 1989, and in full operation since 1990, FEEM has grown to become a leading research centre, providing timely and objective analysis on a wide range of environmental, energy and global economic issues.

FEEM's mission is to improve through research the quality of decision-making in public and private spheres. This goal is achieved by creating an international and multidisciplinary network of researchers working on several innovative projects, by providing and promoting training in specialized areas of research, by disseminating research results through a wide range of outreach activities, and by delivering directly to policy makers via participation in various institutional fora.

FEEM's operations are inspired by some guiding principles. FEEM sets a bold research agenda addressing big questions and emerging issues in the economic and social context. While strictly linked with the academic community, it embraces intellectual curiosity and supports risk-taking in pursuing research. Its agenda emphasizes "real world" issues and the policy relevance of the outputs.

FEEM brings together researchers from various fields at different levels of experience, in order to fertilize ideas and foster the accumulation of human capital inside and outside the organization.

FEEM promotes excellence, boldness of ideas and creativeness, but quality, rigor and impact remain the distinctive features of its activity. Research outputs are theoretically sound, fact-based, and generally validated by the scientific community through peer review processes. FEEM aims at translating analyses into practical ideas, and at presenting them in user-friendly formats to inform and shape the public debate.

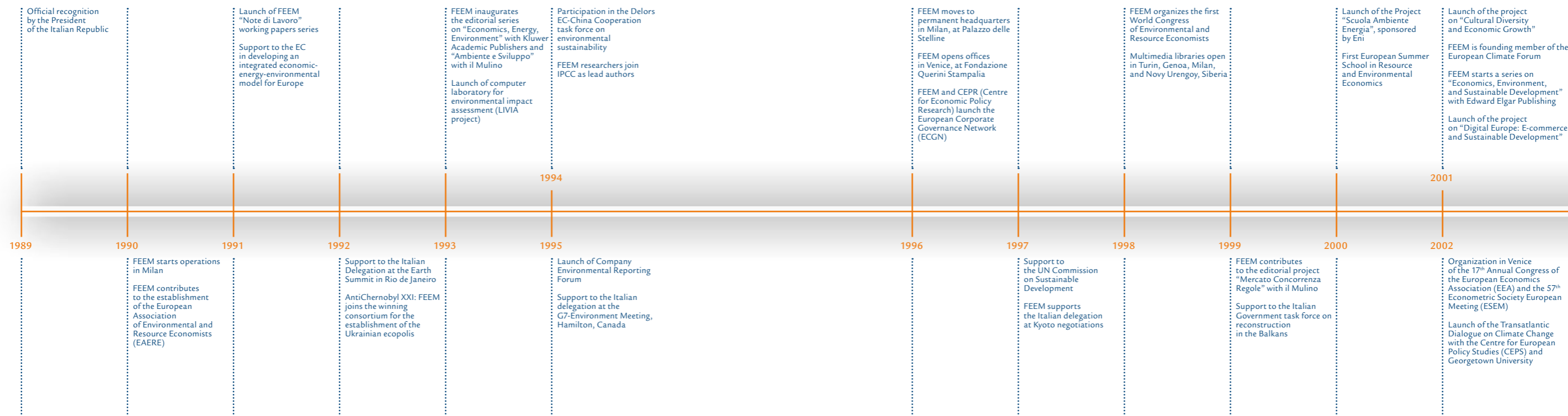
While remaining thoroughly Italian in location and perspective, FEEM promotes the international dimension of its activities by selecting topics of global relevance, by creating networks and partnerships in various countries, and by attracting researchers trained and working abroad.

OUR HISTORY

The formal date of establishment is June 7, 1989, when the President of the Republic officially recognized FEEM's legal status. However, the project of establishing a research foundation entitled to Enrico Mattei was drafted by a commission of Eni executives and external experts in 1982, and finally endorsed in 1986.

The first board meeting took place in 1987, and set down the landmark principles for future activities. FEEM would have an international profile in terms of researchers involved, topics addressed, quality of output and networks. Furthermore, it would not operate as a grant-making institution, but it would conduct independent research with its own human capital and coordinated programmes. In its long-standing activity FEEM has remained faithful to these principles. The relationship between the economy, energy and the environment has always been the main focus of FEEM research activities. Today, FEEM has grown to become a leading international research center in economics, providing timely and objective analysis on a wide range of environmental, energy and global economic issues.

Sustainable economic development is an area where FEEM has gained a strong reputation in the academic community and policy spheres. In the early 90s FEEM researchers started analyzing the interaction between finance and the environment and the innovative (and now widely used) instruments such as emission permits and catastrophe bonds in the context of international and intergenerational risk-sharing. The international and strategic dimension of environmental issues has also been the focus of extensive investigation. As the story of the Kyoto protocol shows, environmental issues are global and must be addressed at a global level. FEEM researchers had foreshadowed the difficulties of inking international climate agreements, suggesting that issue-linkage, i.e. increasing the items in the negotiations agenda, could lead to more efficient solutions.



These initial intuitions prompted new strands of environmental research, ranging from sustainable energy to natural resources management and biodiversity.

The expertise gained in this field over the years has led FEEM to contribute to the prestigious and important scientific work carried out by the IPCC (Intergovernmental Panel on Climate Change) and to provide technical support to entities and institutions, such as the Italian national and regional governments, the United Nations, the European Commission and the European Environmental Agency.

FEEM research on economic development has explored other key aspects, such as knowledge and human capital. Over the years research in this area broadened its scope to cover a variety of issues ranging from R&D, education and human capital, knowledge creation and diffusion, to multiculturalism and economic growth, tackling topics such as the emerging global urban system, the new sources of

competitiveness in the global economy, and culture and diversity in capitalism.

FEEM has support-to-policy in its DNA. However, useful advice to decision makers is seldom delivered by the research community if incentives and institutional constraints are not taken into account. Embracing a “political economy” approach is essential, and FEEM has promoted studies in this field, addressing issues such as incentives, information and market failures, the role of lobbies and organized interests in collective decision-making, and the mechanics of self-regulation in financial markets, anticipating the critical issues of the financial crisis. Within this strand of research, FEEM has developed a series of cutting-edge projects, which consolidated its scientific reputation in corporate governance, privatization, and regulation. Today, FEEM is considered one of the most authoritative sources on privatization, and sought for advice by international organizations and governments.

Since the early 90s FEEM also started investigating the relationship between the firm and its stakeholders, well before “corporate social responsibility” became one of the buzzwords in the business sphere. In this early stage, FEEM developed path-breaking methodologies to assess the environmental and social impact of activities in the balance sheets, and assisted several companies in drafting innovative reports, including its founder Eni.

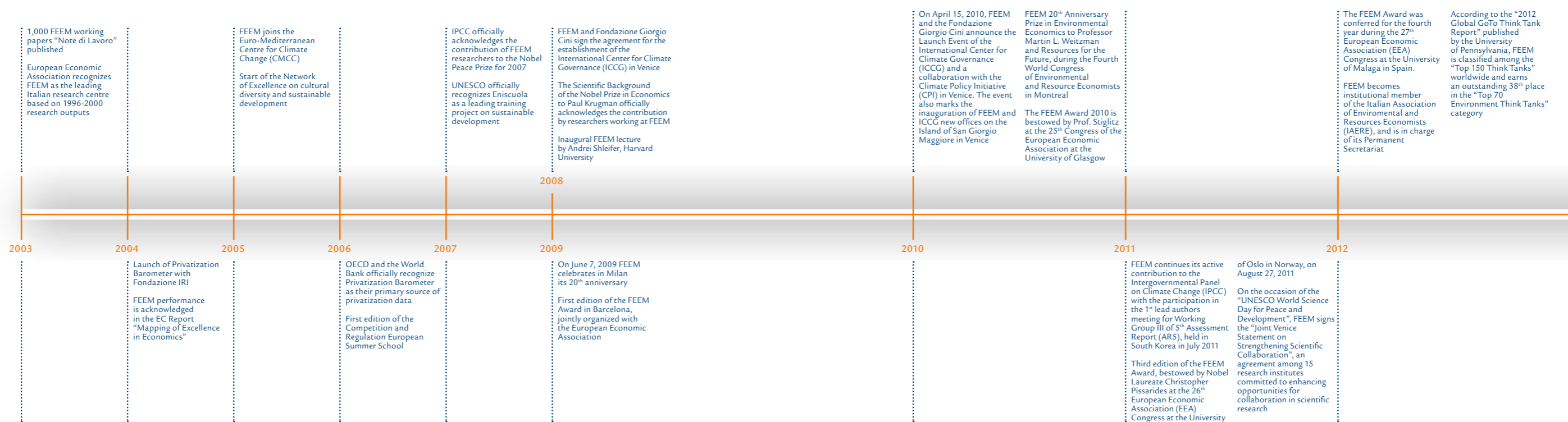
Successful research is primarily a cooperative venture, and FEEM has always strived to create strong links with the international scientific community and partnerships with leading institutions. The reader can find a comprehensive list of our main partners in our chronology. Worthy to mention is the collaboration with the European Economic Association in the organization of landmark events, such as the launch of the FEEM Award, the prize for young economists. More recently FEEM established a partnership with the Fondazione Giorgio Cini for the creation of the International Center for

Climate Governance (ICCG) aimed at fostering links between the scientific community and the policy sphere to improve decision making on climate change.

In June 2009 FEEM celebrated its 20th anniversary and established the FEEM 20th Anniversary Prize in Environmental Economics to reward researchers who have most significantly contributed to the development of the field of environmental and resource economics over the last 20 years.

In 2011 and 2012 FEEM consolidated its research activities around three research programmes on:

- i) “Climate Change and Sustainable Development”;
- ii) “Energy: Resources and Markets” and
- iii) “Economy and Society”. The “Report on Activities” section describes them in greater detail.



GOVERNANCE AND ORGANIZATION

FEEM is an independent foundation officially recognized by the President of the Italian Republic in 1989. FEEM has been founded by Eni and 9 of its subsidiaries with an initial endowment of 13 million Euros.

The governance rules, functions and powers of FEEM bodies are set out by the Bylaws. FEEM is guided by a Board of Directors with complete powers for the ordinary and extraordinary administration. The Board is composed of fifteen members - eight of whom are independent - and it is chaired by Paolo Scaroni, CEO of Eni. The Board of Directors is committed to overseeing the main activities of the Foundation, approving the annual budget and related activities.

FEEM bodies also include the Scientific Advisory Board (Comitato Scientifico), made of qualified experts from the scientific, academic and cultural communities and appointed by the Board of Directors. The Scientific Advisory Board provides recommendations on research activities and oversees the work in progress.

The Audit Committee (Collegio dei Revisori), in compliance with the Italian legislation, is composed of three qualified and certified accountants and its Chairman is appointed by the Italian Minister for Economic Development.

The Executive Director enacts the decisions of the Board of Directors, managing and coordinating the activities of the Foundation, including its offices and staff.



In 2007 FEEM voluntarily adopted an organizational, management and control Model pursuant to Legislative Decree 231/2001 and established a Surveillance Body (Organismo di Vigilanza) for its implementation and subsequent updates. In 2008 and 2009 FEEM reviewed its organization and implemented a new Model. Within this process, FEEM also defined the key values and principles for its external and internal activities and drafted a Code of Conduct as an integral part of the Model.

Everyday activities are organized and carried out within four main areas operated by permanent staff: (i) Administration, Finance and HR; (ii) Communication and External Relations; (iii) Research, and (iv) Special Projects.

FEEM's headquarters are located in Milan, in an aisle of Palazzo delle Stelline, a former XV Century monastery fully restored in 1998. This is where the head office, the library and the facilities for events and seminars are located, and most of the staff and residential researchers work. Since 1996 FEEM holds offices also in Venice, where important research projects, congresses and seminars are carried out. In 2010 FEEM moved from Palazzo Querini Stampalia and inaugurated new prestigious offices on the Island of San Giorgio Maggiore just in front of St. Mark's Square. In 2008 FEEM also established the local site of Viggiano, in the Basilicata region.

Governance

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 Paolo Scaroni - Chairman
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 Raffaella Leone
 Stefano Lucchini
 Alberto Meomartini
 Joaquín Navarro-Valls
 Angelo Maria Petroni
 Roberto Poli
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Executive Director
 Giuseppe Sammarco

Scientific Advisory Board
Chairman (tbn)
 Francesco Casetti
 Vincenzo De Luca
 Lord John Eatwell
 Eliana La Ferrara

Audit Committee
 Claudio Genovese - Chairman
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 Alberto Giussani

Surveillance Body
 Joaquín Navarro-Valls - Chairman
 Luca Farinola
 Claudio Genovese

As of May 2013

Organization

Administration, Finance and HR
 Luca Farinola - Head of Administration

Projects Office and Fund-raising
 Riccardo Tarquini - Head
 Mariaester Cassinelli
 Martina Marian
 Valeria Papponetti

Collaborators
 Fanny Liotto

Research Programme Officers
 Monica Eberle
 Valeria Papponetti
 Laura Pellizzola

Collaborators
 Irene Bellin
 Martina Gambaro

Accounting and Personnel
 Stefano Maiocchi
 Gabriella Olgiati
 Roberta Ranzini
 Claudia Richichi

Budget Control
 Linda Isola - Head

Facilities Management
 Francesca Carobba - Facility Manager, Venice
 Linda Isola - Facility Manager, Milan

Secretarial and Support Activities
 Sveva Caputo
 Nancy Elera
 Sonia Foschini
 Francesca Polatti

Collaborators
 Lilith Casanova

ICT Office
 Luca Signorelli - Head
 Luisa Imperato

Collaborators
 Carlo Busetto
 Fabio Fornasari
 Paolo Gittoi
 Nicola Sanavio

Library
 Emanuela Ragnolini

Communication and External Relations
 Valentina Milella - Head of Communication and External Relations

Events
 Rita Murelli

Collaborators
 Elena Ferro
 Angela Marigo
 Viktoria Pusker
 Chiara Zanandrea

Publications
 Barbara Racah - Publications Office Manager

Collaborators
 Pasquale Alferj

Research Dissemination
 Chiara Raffaelli

Collaborators
 Jacopo Crimi

Special Projects
 Cristiano Re - Special Projects Coordinator

Andrea Bellati
 Emanuele Ferrari
 Andrea Portaluppi
 Filippo Tessari

ENERGY POVERTY AND ACCESS TO ENERGY IN DEVELOPING COUNTRIES

How should the billions of people still lacking access to electricity and relying on traditional biomass for heating and cooking be addressed without jeopardizing our climate? Whilst one of the crucial challenges of sustainability is to tackle climate change, the most urgent priority when talking about development is to eradicate poverty, as explicitly indicated by the main theme of Rio+20. Indeed, one of the current pillars of poverty is the lack of access to energy. It is no wonder that the UN Secretary General declared that 2012 would be the year of “Sustainable Energy for all”, turning the focus of the political debate towards Rio+20 and towards access to energy in the context of climate change mitigation.

To contribute with research insights to this 2012 ambitious Policy Agenda, on March 12-13th FEEM organized in Venice the International workshop on “Energy Poverty and Access to Energy in Developing Countries”. The workshop was held back to back with the Energy Think conference “Sustainable Energy for All” jointly organized by eni and Legambiente. On this occasion, main institutions such as the International Energy Agency (IEA), the Royal Institute of Technology (KTH), the Centre for European Policy Studies (CEPS), the International Institute for Applied Systems Analysis (IIASA) and the European Bank for Reconstruction and Development (EBRD), presented and discussed latest research results in the field.

The workshop was closed by Fatih Birol, chief economist of the International Energy Agency (IEA), who held a *Lectio Magistralis* on the critical trends of climate change and energy poverty arising from the latest World Energy Outlook.

The scholars participating in the workshop agreed on the fact that providing universal access to energy by 2050 is a daunting task, in particular as it has to be synergized with greenhouse gas mitigation. However, combining the two objectives is possible, but special attention must be devoted to tailoring solutions to the local context and the availability of resources. Current expenditure needs to be multiplied by 5.3, rising from the US\$9.1 billion spent in 2009 to US\$50 billion per year by 2030, half of which in sub-Saharan Africa. There is thus broad consensus among international agencies on the need to upscale existing financial flows, but most importantly the different efforts currently being made need to be better streamlined into a global strategy.

International initiatives need to be merged into dedicated and concrete actions, such as teaching single countries how to draft their own plan to improve energy access. However, this implies knowing the energy access situation of each individual country. This information would be difficult to obtain, given the problem of data availability, mainly due to data being collected at the household level. Nevertheless, existing poverty mapping performed by several countries could be used as a proxy for energy poverty. Still, an area where research is particularly important and that has not yet been clearly and thoroughly addressed is the assessment of the variety of positive social and educational benefits of reducing energy poverty. During the workshop, the experts stressed the importance and complexity of the multiple dimension of the issue of energy access. For instance, the common understanding of energy poverty is mainly referred to physical access in developing countries, however, financial access may be relevant too, and not only in developing countries.



As pointed out by the European Bank for Reconstruction and Development, for example, in transition countries the introduction of renewables in the energy mix could help low income households afford energy access. However, Rio+20 outcomes proved to be largely disappointing, with no major progress achieved, especially for what concerns the combined issues of climate change and poverty eradication. Indeed, as also exemplified by FEEM's workshop, Rio+20 fixed ambitious objectives way beyond its scope by establishing the achievement of 'A Green Economy' in the context of sustainable development and eradication of poverty as this approach tackles a number of issues that had already failed to be addressed by the international community on previous occasions.

NEW CHALLENGES AND OPPORTUNITIES FOR EUROPEAN GAS MARKETS



European gas markets are in a turmoil. The shale gas revolution in the US and its impacts worldwide, the economic crisis in Europe, the completion of the EU's internal energy market and resulting conflicts with some external suppliers, the widespread and important renewable energy programmes in EU member states as well as the EU's long-term decarbonisation goals, all contribute to the unprecedented uncertainty of European gas markets.

For this reason, and in order to discuss mid-to long-term challenges and opportunities for European gas markets, on 13-14 December 2012, FEEM organized in Milan the first edition of its annual "Gas Talks", a closed-door brainstorming workshop on "New Challenges and Opportunities for European Gas Markets", gathering high-level worldwide experts from the academia, international organizations and the industry.

The workshop was structured around four main sessions: 1) Mid-to long-term European gas demand outlook; 2) New gas supply potential for Europe; 3) EU-Russia Gas Partnership: Challenges and opportunities; 4) Global shale gas potential and its impact on European gas markets.

- 1) The ambitious EU decarbonisation targets have led to an unprecedented uncertainty of EU future gas demand. The implementation of a climate-based energy policy is challenged by technical problems related to electricity system balancing, timely and large-scale availability of CCS and tight EU countries' public budgets. Instead of a profound energy change, there is the risk that the European economy will slowly trudge along a path of energy efficiency and emission reduction. In any case natural gas can play an important and cost-effective role in the transition towards a low carbon economy.
- 2) Expectations that the world's three major regional gas markets would become ever more closely linked via flexible LNG supply were put on hold with the emergence of the US shale phenomenon from 2008 onwards as North America, requiring minimal LNG imports, effectively de-linked from the rest of the world. Beyond 2015, new sources of LNG supply from North America, Australia and East Africa will accelerate such arbitrage activity, although the scale and timing of these new waves of LNG are subject to considerable uncertainty.
- 3) The restructuring of the Russian gas industry should be left to the market and not to DG Competition. Gazprom will have to adjust to new supply realities and pricing formulas. If put under additional political pressure from Brussels, however, the Russians will likely rally around the flag and adopt a position that serves neither security of supply nor security of demand in Europe. Either each Party adapts its approaches in order to reflect the other Party's interest - or it is not a strategic partnership.
- 4) Over the medium term, unconventional gas production is expected to continue to expand, primarily in North America. Outside this region, tight gas and coalbed methane will be the largest contributors to incremental production.

The participants acknowledged in particular the importance of these informal and closed door brainstorming workshops which allow the in-depth discussion of issues of mutual importance. Properly understanding the positions and constraints of the other party is the first step to constructively elaborate new and compromise approaches.

BRIDGING THE GAP ON CLIMATE GOVERNANCE

While climate change issues are at the center of the research agenda, the policy and public spheres often lack the awareness necessary to effectively address this global and complex challenge.

The International Center for Climate Governance (ICCG) - founded in 2009 as a joint initiative of FEEM and Fondazione Giorgio Cini - addresses the information gap between science, policy and society spheres by exploring different means for communicating the interdependencies among the economic, social, cultural, ethical, and political aspects of climate governance.

As part of a first set of policy-oriented efforts to promote a multidisciplinary approach to climate change, the ICCG developed and manages three 'observatories' that provide updated information and news on activities related to climate change and its governance. The ICCG observatories are user friendly online tools that showcase the positions of various stakeholders in order to identify the areas of shared interests which may evolve into concrete policy proposals in the field of climate change mitigation and adaptation.



In particular:

1. *The Climate Policy Watcher* offers an accurate snapshot of current climate and energy policies both at national and international level, by providing news, in-depth analyses and updates on official documents as they become available.
2. *The Think Tank Map* displays the organizations working to influence the policy sphere through environmental and climate research, their projects and activities currently under development, and their collaboration with other entities.
3. The third observatory, *Best Climate Practices*, maps the concrete and effective actions carried out at several levels in order to deal with climate change and pointing out the wide range of initiatives that could be implemented by politics, economics, institutions, enterprises and researchers, to easily make a difference.

To further enhance the awareness of the general public and to bridge the information gap between science and society ICCG explores new means for communicating climate change problems and solutions that may overcome existing language, cultural or cognitive barriers. Complex issues - such as the cost of extreme events for society, the effects of global warming on cultural heritage, or the perceptions and representations of risk - can be communicated differently, and made accessible to a non-academic audience particularly at the national and local level, where the knowledge gap is still important.

In 2012, the series of ICCG seminars and lectures were held in Italian and a set of video interviews is available on the web to summarise the main outcomes of the different events. The blog of Professor Carlo Carraro - launched in 2012 under the auspice of ICCG - is also targeted to a broad national audience: the ICCG Director regularly discusses in a non-technical language the latest research insights referred to hot climate policy issues.

Art, in its various forms, can represent another effective way of communicating with the public beyond an exclusively rational level, involving different segments of society through emotions. In 2012 ICCG hosted a scientific theatre play and a literary contest for unpublished short stories, while the second edition of the ICCG Think Forward Film Festival presented 25 films and gathered 650 attendees. The Festival also offered a specific educational programme devoted to teaching sustainability and animation techniques in primary and junior high schools.

In only three years, the International Center for Climate Governance has considerably broadened the spectrum of its activities and - also thanks to FEEM's long-standing experience in the topics at stake - rightly earned its place among the best factories of ideas at both the national and international level.

CLIMATE CHANGE AND SUSTAINABLE DEVELOPMENT RESEARCH PRIZES



In October 2012 FEEM and the Euro Mediterranean Centre for Climate Change (CMCC) organized their first joint Convention to present and discuss latest research on climate change and sustainable development economics. The event, which will be replicated each year in fall, was meant to strengthen the synergies between the two research communities and to assess the overall quality of research.

The 2012 FEEM-CMCC Convention agenda was structured in four thematic sessions around three key areas: *i)* Climate Change Modeling and Policy (Impacts and Adaptation), *ii)* Natural Hazards and Extreme Climate-related Events and *iii)* Empirical Assessment. Latest research by FEEM and CMCC was presented by junior and senior researchers along with key note speeches by international leading scholars, including Prof. de Zeeuw (Tilburg University), Prof. Hoel (University of Oslo), Prof. Gerlagh (Tilburg University), Prof. Pratson (Duke University) and Prof. Alberini (University of Maryland).

The convention offered an opportunity for exchanging ideas about new trends and future developments of research, and in order to encourage and stimulate the production of high quality and impact studies, two awards for scientific production were granted to the most effective and outreaching papers: 1) the Award for the Best Presentation at the Convention and 2) the Best Research Paper Award. The Selection Committee chaired by Carlo Carraro and composed of Anna Alberini, Reyer Gerlagh, Lincoln Pratson, and Massimo Tavoni assigned:

1. the *Award for the Best Presentation at the Convention* to the paper “Migration, cultural diversity and innovation: a European perspective” co-authored by Valentina Bosetti, Cristina Cattaneo and Elena Verdolini.

The research extends the standard framework of the determinants of knowledge creation beyond the number of researchers and the available knowledge stock, shedding light on the importance of the composition of the research team and in particular of its ethnic diversity, which boosts innovation. The research finds that countries that are relatively more efficient in allocating highly educated foreigners to highly skilled occupations truly gain in innovative capacity while the design of pro-skilled migration laws displays a positive relation between diversity and innovation. By increasing diversity, foreigners also positively affect natives’ productivity, as new ideas are likely to arise through the interaction of diverse cultures and approaches in problem solving. In this paper, the authors reinforce the hypothesis that complementarities rather than substitutability exist between natives and foreigners, with the complementarity arising through the different cultures and attitudes that foreigners display with respect to natives and with respect to one another.

2. the *Best Research Paper Award* to the study “Assessing the Economic Impacts of Climate Change. An Updated CGE Point of View” by Francesco Bosello, Fabio Eboli, and Roberta Pierfederici.

This award was assigned on the basis of web statistics and indexes to a work that has proved to be the most outreaching paper of the year for number of downloads from FEEM websites and which tackle issues traditionally at the mainstream of FEEM research. What emerges from this work, where input to the Computable General Equilibrium Model (CGE) comes from a wide set of up-to-date bottom-up impact studies, is that for a temperature increase of 1.92°C in 2050 - if compared to pre-industrial levels - global GDP losses could amount to approximately 0.5% with severe regional differences. In Europe, the Northern countries are expected to slightly benefit from the evaluated temperature increase, while Southern and Eastern Europe are expected to moderately suffer from climate change. The most vulnerable countries are the less developed regions, such as South Asia, South-East Asia, North Africa and Sub-Saharan Africa, with the most exposed sector being agriculture, and the impact on crop productivity being by far the most important source of damages. The effect of market-driven adaptation partly reduces the direct impacts of temperature increases, leading to lower damage estimates. Nonetheless, these remain positive and substantive in some regions pointing out why market-driven adaptation cannot be the only solution to the climate change problem.

ROBUST MITIGATION SCENARIOS FOR THE POLICY PROCESS

The Intergovernmental Panel on Climate Change (IPCC) is now working on the Fifth Assessment Report, and plans to release it in 2013/14. In view of this important deadline, the IPCC's call to the Integrated Assessment Modeling (IAM) community to provide updated scenarios elected 2012 an important year to prove the maturity of the community.

The research priorities pursued by the IAM community, indeed, include the development of new scenarios that could be employed by climate modellers in the improvement of prospective ensembles of numerical experiments for both the near and long term. The final aim is to present a set of harmonized scenarios on a series of common assumptions across models, providing policy makers with recommendations that are robust to the different models' characteristics.

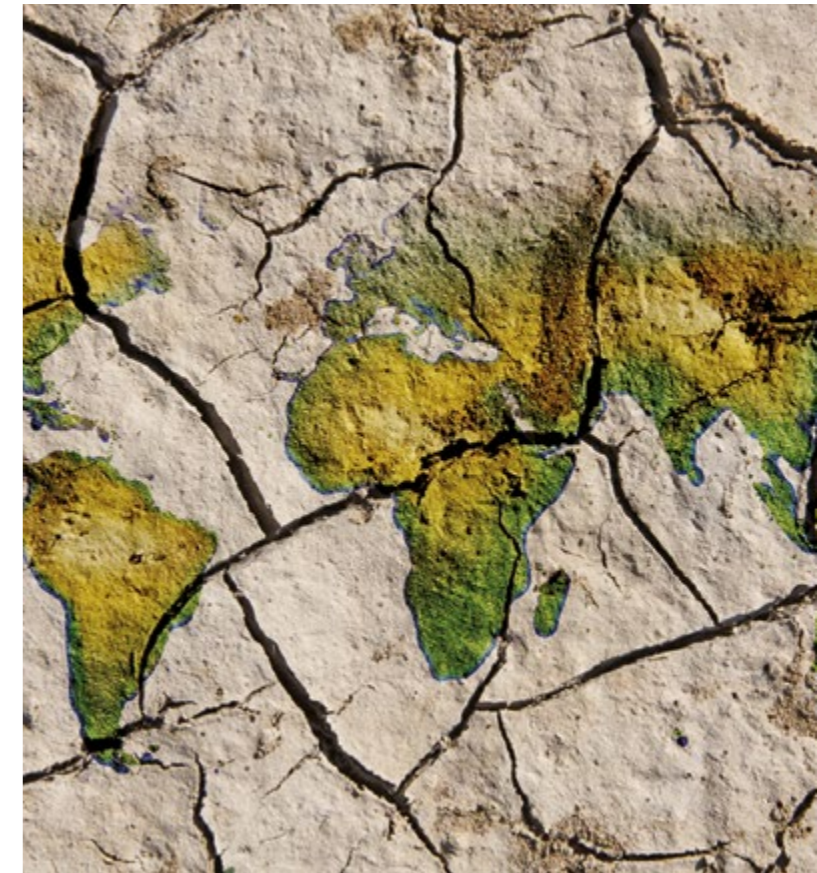
As member of the Integrated Assessment Modeling Consortium (IAMC) and, since 2012, of the Scientific Steering Committee, FEEM provided to the IPCC Database 406 updated scenarios with a significant level of detail on optimal and second best policies. These include different climate and energy policy architectures, as well as varying assumptions about socioeconomic growth and fossil fuel resources, and performance of technologies associated with greenhouse gas mitigation.

This impressive number of scenarios is the outcome of FEEM's ongoing involvement in several EC-funded research projects centered around a core group of European Integrated

Assessment Modelers and institutions such as the Potsdam Institute for Climate Impact Research (PIK), the International Institute for Applied Systems Analysis (IIASA), and the Utrecht University. These medium-term collaborations among research institutions contribute to the strategic consolidation of the IAM community and tools beyond the time horizon of the single research projects carried out at FEEM or the efforts produced within the different Energy Modeling Forums.

For instance, the "Assessment of climate change mitigation pathways and evaluation of the robustness of mitigation cost estimates" as part of the AMPERE project are aimed at implementing realistic - rather than idealized - policy options. The comparison exercises enhance the understanding of which peculiarities or assumptions of the different models may have an important role in driving the results. These insights are of particular relevance when looking at "Low climate impact scenarios and the implications of required tight emission control strategies" within the LIMITS project, which combine a focus on a 2°C temperature target with realistic and fragmented policies in the short term. The project is of particular policy relevance as it focuses on mitigation costs for the five major economies, considers different burden allocations, and reviews multiple benefits of climate mitigation strategies.

While further peer-reviewed outcomes of this research stream are still being produced, a broader and more ambitious objective has already been reached. This is the establishment of a strong and effective international research community capable of exchanging data, but more importantly knowledge. Not only do comparison exercises allow for a review of alternate assumptions, distinctive model attributes and the robustness of results, but they also foster learning among different



research teams and the implementation of different assumptions or attributes to improve the models. For instance, models traditionally strong in the representation of the energy system can learn from FEEM's large experience in modeling technological change dynamics, and vice versa. This allows for rapid improvements in the quality and the level of details within Integrated Assessment Models.

The focus of the IAM community for the years to come is on model transparency, validation and diagnostics through the systematic and transparent documentation of existing models, model - specific input datasets and new methodologies to enhance the comparability and interpretability of results for both the scientific community and stakeholders.

FEEM IS AMONG THE TOP THINK TANKS WORLDWIDE



According to the “2012 Global GoTo Think Tank Report”* published by the University of Pennsylvania, FEEM has been classified as one of the “Top 150 Think Tanks” worldwide and earned an outstanding 38th place in the “Top 70 Environment Think Tanks” category.

The Global GoTo Think Tank Index is the result of an international survey of over 1,950 scholars, public and private donors, policy makers, and journalists who helped rank more than 6,500 think tanks using a set of 18 criteria developed by the Think Tanks and Civil Societies Program (TTCSP) of the University of Pennsylvania. The purpose of the rankings is to help improve the profile and performance of think tanks while highlighting the important work they do for governments and civil societies around the world.

The rankings are particularly flattering for FEEM’s initiatives. Indeed, both FEEM and its institutional partner CMCC (Euro-Mediterranean Center on Climate Change) are among the top 150 Think Tanks, while the International Center for Climate Governance (ICCG), founded in 2009 as a joint initiative of FEEM and Fondazione Giorgio Cini, ranks in the Top 70 Environment Think Tanks worldwide after only a few years of activity.

Besides confirming the leading position of the United States, the report gives an interesting overview of the regional distributions and trends of Think Tanks around the globe. A deeper insight into Climate Think Tanks is provided by the ICCG Think Tank Map**, which includes more than 260 research organizations studying climate change governance that can be filtered by specific topic, country and region.

* The “2012 Global GoTo Think Tank Report” is available at: <http://www.gotothinktank.com/2012-global-goto-tank-index-report/>

** The ICCG Think Tank Map is available at: <http://www.thinktankmap.org/Default.aspx>

REACHING OUT: FEEM ON iTUNES U

The ability to be technologically innovative, the swift adjustment to change and the intuition to make the most of the huge potential offered by new digital tools, are key elements of an integrated and effective communication strategy.

Combining the traditional channels for the dissemination of scientific outcomes with the internet and the new media is crucial to reach not only the academia but the broader general public of the civil society.

With this objective in mind, in 2012 FEEM has decided to launch a new channel for the dissemination of scientific information out of the academic sphere through one of the currently most popular platforms for sharing and providing multimedia educational content: iTunes U, a dedicated area of the Apple iTunes Store devoted to the world of research and offering free of charge content from leading educational institutions around the world.

Traditionally at the forefront in the field of new technologies, FEEM has been the first non academic research Foundation in Italy to join iTunes U.

Today there are approximately 400 institutions on iTunes U, including some of the most prestigious international universities such as Duke, Yale, Cambridge, MIT, Oxford, Stanford and UC Berkeley, and cultural institutions of worldwide renown such as the MoMA or the New York Public Library and international or non profit organizations such as UNESCO and TED.

As of the end of 2012, ten Italian Universities also participate in the project, namely Federico II University of Napoli, LUISS Guido Carli, Modena e Reggio Emilia, Trento, Tuscia, Insubria, Trieste, Padua, Pisa, and Bocconi University.

By launching its new site on iTunes U, FEEM has decided to use new tools to put at the public's disposal the knowledge and studies in the field of sustainable development and, more in general, on the environmental, energy and global economic issues at the core of its research for over twenty years.

For FEEM, joining iTunes U has meant becoming part of a large, ever-increasing community of universities and institutions that have decided to share their knowledge with the digital community at large, which includes not just students and researchers, but also users with a special interest in such topics and people from all over the world.

For the launch in November 2012, over 150 documents have been uploaded to FEEM's site, including scientific articles and working papers, interviews to Nobel laureates and experts, laboratories and educational experiments in physics, chemistry and biology for middle school students. But this is only the beginning of an ambitious educational program that FEEM will update weekly and monthly, by uploading interviews with the experts in economics, energy and the environment, video recordings of workshops and seminars, ad hoc collections describing FEEM's research activities and projects, publications, and training and educational multimedia material. All contents are and will be downloadable free of charge on computers, iPhones, iPods and iPads.

FEEM's site on iTunes U, is available on the iTunes U section of iTunes Store at <https://itunes.apple.com/it/institution/fondazione-eni-enrico-mattei/id499827802>

FEEM on iTunes U



PUBLICATIONS



MULTIMEDIA



RESEARCH AND EDUCATION



4TH EDITION OF THE FEEM AWARD A PRIZE FOR ECONOMIC IDEAS

Fostering the investment in human capital in order to advance the frontiers of knowledge is our ultimate objective. The FEEM Award, a prize for the most innovative ideas by young economists, yields a double dividend: rewarding scientific discovery and promising young scholars.

The FEEM Award is organized jointly with the European Economic Association (EEA) and aims to reward new ideas addressing key economic issues at the European and global scale. Both theoretical and empirical papers are considered without any restriction of topics.

The award is given to the authors of the three best papers presented by young economists at the Annual Congress of the EEA. Eligible candidates should be less than 30 years of age and no more than 3 years past a PhD defense. The selection committee consists of the Program Chairman of the Annual Congress of the EEA, one member nominated by the Executive Committee of the EEA, and one by FEEM.



The 2012 FEEM Award was conferred for the fourth year during the 27th European Economic Association (EEA) Congress at the University of Malaga in Spain.

The prize was presented on August 28, 2012 by FEEM Head of Communication Valentina Milella and EEA President Jordi Galí before the Schumpeter Lecture by Gilles Saint-Paul, Toulouse School of Economics (TSE).

The FEEM Award winners have been selected among over 500 papers by the FEEM Award Commission, composed of Prof. Armin Falk (University of Bonn and EEA Representative), Prof. Philip Lane (Trinity College Dublin and EEA Programme Chair) and Prof. Matteo Manera (University of Milan-Bicocca and FEEM Representative).

The three winners of the fourth edition of the FEEM Award are:

- Fadi Hassan, London School of Economics, with a paper entitled: “The Price of Development”
- Itziar Lazkano, University of Wisconsin - Milwaukee, with a paper entitled: “Intergenerational Externalities and Sustainable Growth”
- Julia Schmidt, Graduate Institute (IHEID) Geneva, with a paper entitled: “Technological Standardization, Endogenous Productivity and Transitory Dynamics”

Interviews with Prof. Gilles Saint-Paul and the 2012 FEEM Award winners are available on FEEM channel on You Tube (<http://www.youtube.com/user/FEEMchannel>) and iTunes U (<https://itunes.apple.com/it/itunes-u/feem-award-2012/id577739758?mt=10>).

RESEARCH

Overview

FEEM conducts research on a wide range of climate change and sustainability, energy and economic issues. The starting point of FEEM research is the realization of the high level of complexity of the problems emerging in the global economy, and more particularly the need to foster awareness on the interaction between the firm and the environment, the economy and energy scenarios, corporate and cultural responsibility.

In particular, FEEM aims at promoting innovative research across the various dimensions of the global environmental and energy challenges in order to improve the analysis of the economics and policies of mitigation and adaptation to climate change and build up a strategic socio-economic analysis of the energy policies needed to support the transition to a low-carbon and more sustainable world. This objective is pursued through a multidisciplinary approach to scientific research on sustainability and to the study of the human and social dimension of economic progress and civilization.

Along these lines, in 2012 FEEM has consolidated its research activities around the three research programmes on:

- i) Climate Change and Sustainable Development
- ii) Energy: Resources and Markets
- iii) Economy and Society.



Research programmes and related activities follow the strategic guidelines stated in FEEM's mission. Ongoing research is thus rigorous, fact-based, interdisciplinary, and international in terms of the composition of research teams and topics addressed.

FEEM's research staff includes experienced international research leaders with key responsibility in the design and implementation of projects, senior and junior residential researchers working in the offices of Milan, Venice, and Viggiano, and research associates, typically affiliated to a university or to other research institutions and involved in specific projects.

In 2012, FEEM carried out 42 research projects, 34 of which financed by the European Commission or third parties. Related activities included the organization of 83 scientific conferences and workshops, 57 scientific seminars and 2 summer schools. Overall, these events attracted over 5,000 attendees. In 2012, FEEM published 100 working papers in the "Note di Lavoro" series, three thematic issues of the journal on sustainable development "Equilibri", and 51 articles on the e-journal covering the areas of environmental and energy economics and policy, the "Review of Environment, Energy and Economics", Re3. Finally, in late 2012 FEEM has launched a new website on iTunes University, expanding its presence on the web.



“Climate Change and Sustainable Development” Programme

The research programme on Climate Change and Sustainable Development addresses the two inter-related issues of climate change and sustainable development and a corollary of key topics in the field of environmental economics.

The programme builds upon twenty years of successful FEEM research in the field. In the specific area of climate change, FEEM has achieved a leading position in the international research community, as a result of the in-house development and application of several methodologies for the economic analysis of climate and energy policies.

FEEM models address world-wide vulnerability to changes in climatic conditions, and investigate the economics of mitigation and adaptation to these changes. In the specific area of sustainable development, FEEM research covers a variety of issues: sustainable management of natural resources, the economics of natural hazards and extreme events, and the use of indicators to measure sustainability and growth beyond GDP.

FEEM can also rely on a strong research team of applied economists who investigate the economic performance of various environmental and climate policy instruments. The twofold goal of this research programme is to contribute to science while guiding policies and informing the public debate.

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Areas

Climate change integrated assessment modelling

Research on the economics of climate change at FEEM addresses both mitigation and adaptation issues, building upon consolidated modeling tools for climate policy analysis developed over more than twenty years of work. On the mitigation and adaptation side, FEEM is positioned at the forefront of international research through the use of the energy-economy-climate WITCH model, specifically designed to assist in the study of the socio-economic dimensions of climate change.

This innovative hybrid top-down bottom-up model helps policy makers understand the economic consequences of interaction across mitigation and adaptation policies. On the impact side, FEEM investigates climate change consequences on the world economy through the use of ICES, a recursive-dynamic computable general equilibrium enriched with realistic representation of land, forestry and water uses dynamics. The model is designed to assess the final welfare implication of climate change impacts, capturing the production and consumption substitution processes at play in the social-economic system as a response to climate shocks.

Through modeling and policy analysis, this research area investigates the economic dimension of existing and new mitigation instruments and technologies for climate stabilization. It assesses the full costs of climate change impacts and adaptation and provides a comprehensive and integrated

background to support Climate change policy and governance analyses. Currently, specific attention is being paid to the role of uncertainty in the mutual responses of climate and socio-economic systems.

Climate change policy and governance

The climate change policy research area investigates alternative options for future international climate agreements, with the goal of advancing knowledge in the area of coalition and network formation and of applying it to the analysis of the process of international climate negotiations. In order to better understand the mechanisms at work when social dilemmas, as the provision of global climate quality, are present, FEEM is also working with laboratory experiments on individual interactions.

In particular this research area intends to improve the economic analysis of climate policy and governance, assessing the effectiveness of current governments' pledges in reaching the accepted stabilization targets and providing an overall economic valuation of possible international climate strategies. FEEM also performs economic assessment of compliance with domestic or international mitigation targets through alternative policy schemes, including international emissions trading and REDD+. Also, this area of research focuses on climate finance, investigating the nature and amount of financial efforts needed to support the technological transformation

towards a low-carbon economy and to adapt to the impacts of climate change, already tangible in many of the most vulnerable regions of the world.

Climate-related innovation and technological change

Research on new energy technologies, innovation, and the drivers of technological change is one of FEEM's leading research areas. Although crucial in the design of future scenarios, the dynamics of innovation, adoption and diffusion of energy technologies are yet to be fully understood. In particular, the lessons learned from the rich innovation literature, ranging from economics to engineering and history, need to be extended and confirmed with respect to technologies that can help ease the energy security issue, climate change and other environmental challenges.

FEEM research in this field aims to improve the dynamics of technological change embedded in FEEM Integrated Assessment Models, through the estimation of parameters that are crucial to the diffusion of different technologies, together with a better understanding of the role of institutional factors, such as IPR protection, in hindering or promoting different technologies. Modeling improvements in this field are supported by empirical work on patents and diffusion models, aiming to provide the data needed to address novel research questions on the peculiarities of innovation and diffusion dynamics in

climate-related technologies. In addition, to elicit the future probabilistic cost of future technologies and their potentials for penetration, we employ expert elicitation techniques. Through the latter, judgments and information obtained from the experts allow the assessment of subjective probabilities of specific outcomes, such as the potential breakthrough on innovative technologies as a response to R&D programs.

Natural hazards and extreme climate-related events

FEEM conducts research on economic and social impacts of natural hazards, disaster risk analysis and governance, economic and financial policies for risk mitigation and sharing, and adaptation to climate change-amplified extreme events. Working closely with and on behalf of a wide range of authorities, international and civil society organizations, FEEM has notably contributed to advancing the evidence-based disaster risk reduction culture in Europe and beyond. FEEM's research outputs are informing the implementation of disaster risk reduction policies, and the development of comprehensive disaster risk and climate adaptation strategies in low income and small island developing states. Next to the initial emphasis in improving the assessment of welfare losses and vulnerability to single and multiple concomitant and consecutive hazard events, FEEM's research has increasingly focused on financing disaster risk reduction

and climate adaptation. Our expertise and long-term experience in both fields have made it possible to help bridge the risk and climate change communities, advancing therefore the policy dialog.

Management of natural resources

Within the field of natural resource management, FEEM conducts research on policy assessment and decision making, water economics, forestry, agriculture and food security. As a result of long-term commitment to policy-relevant research, FEEM has developed several decision support systems, freely available and used by academics and experts. The policy analysis and decision support employs a modular framework for managing participatory processes - known as NetSyMoD "Network Analysis - Creative System Modelling - Decision Support" - that has found application in a wide range of policy domains including integrated water resources management, climate change adaptation in specific contexts of coastal, mountain and rural areas. Furthermore, FEEM analyses a range of economic instruments for water resource management, such as tariffs, taxes and fees, payments for ecosystem services, risk transfer schemes and public private partnerships and their role in meeting Europe's environmental objectives.

Sustainability and growth beyond GDP

This research area aims to analyze the main challenges and risks posed by pursuing unconditional

economic growth at global level, thus contributing to increase the knowledge for detecting and possibly reducing the trade-offs between economic growth and environmental preservation. The focus is primarily on the decoupling between materials required to produce commodities for final consumption (or polluting emissions from energy production) and economic growth. Part of our analyses also relies upon an increased knowledge of technological aspects via extended accountability incorporating by-products and energy/material flows into production processes. Besides and more broadly, FEEM pursues an integrated approach for the analysis of sustainable development and green economy issues exploiting the multidisciplinary research skills and analytical instruments developed over more than twenty years of work.

With the development of the FEEM Sustainability Index, those issues are analyzed not only from the socio-economic and environmental perspectives, but also from a cultural and sociological perspective. In fact, FEEM SI is a composite index which, through a complex procedure of computation and aggregation of a number of indicators for a range of scenarios, gives a comprehensive measure of current and projected sustainability for the world's countries, thus suggesting effective measures to improve future sustainability through policy making.



“Energy: Resources and Markets” Programme

The Research Programme on “Energy: Resources and Markets” carries out socio-economic analysis in a vital area which will become even more strategic in the coming decades.

Energy supply is adjusting to the globally rising population and standards of living. It must ensure development where it is most needed, while pursuing the transition to a low-carbon inclusive growth. Current resources suffice to meet demand but research must look ahead. Where and how will the transition to a low-carbon economy occur? How can it be made safe, affordable, and sustainable? The deployment of efficient and clean technologies to produce sustainable energy for all must be supported by adequate institutional and market structures. Key issues to be considered for balanced energy policies are access to sustainable energy, energy security and the implementation of a global green growth policy.

FEEM aims at generating high-quality research on the economics of energy, taking the long-term perspective which characterizes public policy making and environmental management. It must also provide insight into the short-term perspective typical of markets and investors. The core activities of the “Energy: Resources and Markets” research programme focus on issues that are peculiar to the energy sector alone. Specific topics include the drivers of changes in demand and supply, the role of globally integrated markets in ensuring efficiency and stability, the interrelationship between energy and economic development, the energy poverty problem, and the role of governance and institutions of energy policy. At the same time, there is strong interaction between the research activities in this programme and in the “Climate Change and Sustainable Development” field.

Research in this programme has been organized into three areas that investigate energy resources, demand and supply from an economic, environmental, and policy and governance perspective.

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Areas

Energy and the economy

Energy is crucial to feed the rapid economic growth of emerging and developing economies and to maintain the high consumption standards in the developed world, while undergoing the technological 'revolution' needed to meet the climate challenge.

In particular, reducing energy poverty and promoting energy access in the developing world is a necessary condition to promote its economic and social development.

Moreover, since different patterns of consumption and growth in emerging economies are likely to have important repercussions on the international energy markets and technology development, a better understanding of the drivers of energy demand at the global and regional levels is needed, and is one key focus of FEEM research in this area.

Through policy analysis and quantitative instruments, FEEM research analyses the most important socio-economic determinants of energy consumption, such as demographic and urbanization dynamics, patterns of income growth and distribution, as well as changes in lifestyles and market prices. On the supply side, FEEM research investigates the main effects of the increasing integration of global energy markets, in terms of market efficiency, security of supply, decision-making processes and so forth, accounting for the supply of both conventional and unconventional fossil resources, as well as for uncertainty in

technological innovation in the energy sector. In this regard, FEEM research also aims at developing an economic assessment of technological change and of the portfolio of investments in energy technologies needed under a set of plausible future scenarios.

Another key issue of this area is energy price, in particular the oil price. Whatever the future energy scenario, the oil price will play a central role, because it heavily affects environmental and energy policies and consumption patterns. This is why FEEM addresses the issue of financial speculation in the oil market and the determinants of the oil price, defining the concept of financial speculation, describing its role in the oil derivatives market (volatility and price) and elaborating statistical models to explain what determines the price of oil. Additional information on this project ("Financial speculation in the oil market and the determinants of the oil price") is available on FEEM's website.

In the light of FEEM's growing interest in energy markets, the "EU Energy Model" project in cooperation with eni - started in 2011 - was concluded in 2012. The main aim of this research was to update and review eni's model for forecasting the final energy consumption of European countries. The activities within this strand of research have continued throughout 2012 with a new project aimed at designing a new European model for electricity generation. Related to the electricity market, at the end of 2012 FEEM has also started

the new European research project **ADVANCED** (Active Demand Value ANd Consumers Experiences Discovery), exploring how smart customers can participate in active demand and energy system efficiency. Active demand management can contribute to improving the reliability and stability of the networks by increasing overall system flexibility and efficiency with a positive effect on the economic market.

Energy policy and governance

The globalization of energy markets, the urgency of global environmental problems such as climate and land use change, and the need to ensure the affordability and security of energy supply require an increased level of cooperation between strategic players on the global scene. A successful and effective governance of energy policies is crucial to address these global challenges.

FEEM research in this field is developed both at the international and at the European and country level. At the international level, research focuses on the scope for building institutions to manage more effectively the global energy challenges, helping to make progress also in international climate policy. The design of institutions for energy governance at the international level is obviously influenced by geopolitics - strongly driven by world countries' endowments in energy sources, that may vary with the development of more widely distributed sources such as non-conventional fossil fuels

- and by the country level of economic development and associated democratization. The inclusion of the issue of security of energy supply is central to research in this field given the high interdependence between energy policies and energy markets. With regard to energy policies, the first edition of the FEEM Gas Talks was held in Milan on 13-14 December 2012. The FEEM "Gas Talks" are closed-door brainstorming workshops gathering high level international experts (from the academia, international organizations, industry) to discuss mid- to long-term challenges and opportunities for European gas markets. An in-depth analysis of the main ideas on the European gas market that emerged during the event can be found in the Highlights session of this report.

In 2012 FEEM has also continued research in the MEDPRO project, exploring the key challenges that countries in the Southern Mediterranean region (from Morocco to Turkey) will have to cope with in the next decades, and aiming at delivering the best scientific underpinning for future policy decisions to be taken at both domestic and EU level within the European Neighbourhood Policy (ENP) and the Union for the Mediterranean (UfM) frameworks. In this project FEEM leads the activities related to: the elaboration of oil and gas market scenarios; the analysis of renewables and energy efficiency potential in the Southern Mediterranean; the sustainable development and management

of resources. This project has been concluded in February 2013 with a final conference in Brussels which aimed at disseminating the final MEDPRO scenarios for 2030, policy implications and recommendations to the EU policy makers and public as a whole. The final conference completed the series of High-Level Stakeholders Meetings organised in November 2012 in Tunis and in January 2013 in Cairo.

In 2012 research on the European project POLINARES (Policy for Natural Resources) has also continued and was concluded with the final conference "Accessing Oil, Gas and Minerals in a Changing World" which took place in Brussels on 28th November 2012. The overall objectives of the POLINARES project were to identify the main global challenges relating to competition for access to oil, gas and mineral resources, and to propose new approaches to collaborative solutions for the various policy actors, including the EU.

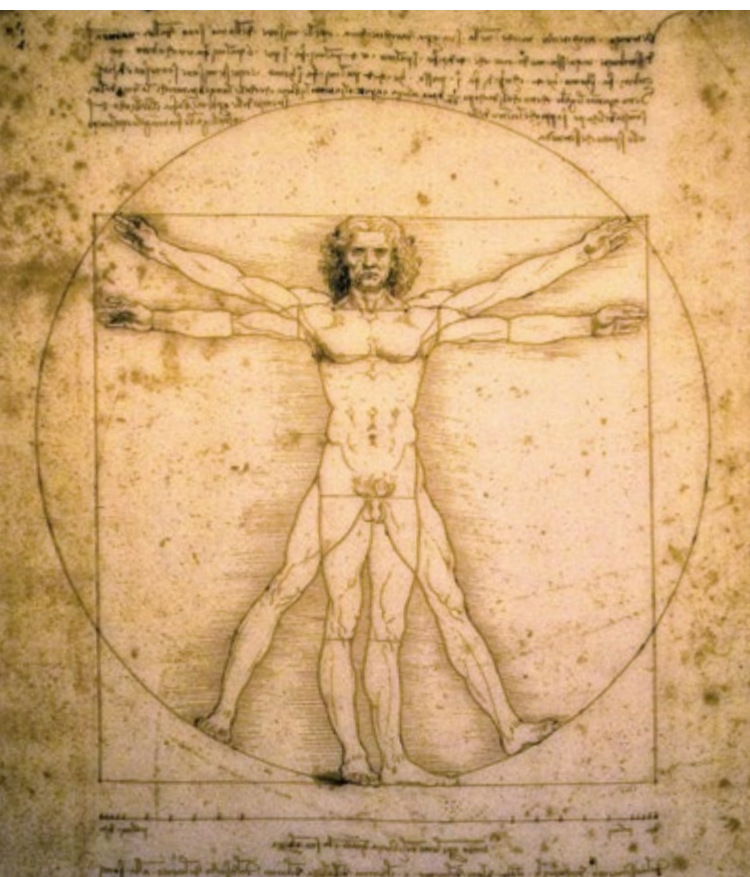
Energy and the environment

Climate change is certainly one of the most studied environmental impacts of energy production and consumption, due to the fundamental role played by energy in generating greenhouse gas emissions. However, besides contributing to global warming, energy production and consumption impact on many other environmental factors such as local air pollution, land use and water utilization, enhancing environmental and

socio-economic vulnerability particularly in the developing and fast-growing world. FEEM research in this area thus aims at providing an integrated assessment of the interaction between the energy system, the environment and the economy. It focuses on the environmental impacts of energy consumption on CO2 emissions, soot, food and water quality, and the opportunities for effective mitigation strategies.

Overall, this research stream at FEEM helps to inform decision makers on the full costs and potential trade-offs of different technology options and aims at improving the energy-environment-economy modelling by better representing the full costs of energy sources.

The research activities within the European project THINK have continued in 2012 with the drafting of reports elaborated by the other partners of the interdisciplinary think tank that act as consultants to the European Commission. Also the research on renewable energy and environmental sustainability has continued to be developed in the joint FEEM-eni project called RESA (Renewables and Energy State Aid) that analyses how State aids have affected and will affect new energy policies. To date the analysis has been extended to all countries of the EU27 area after a first step research which focused on the main European countries.



“Economy and Society” Programme

The research programme on “Economy and Society” promotes a multidisciplinary approach to scientific research on sustainability and on the human and social dimension of economic progress and civilization. It addresses a wide range of topics and promotes studies and activities with a broad external impact.

In 2012 most of the work done in this area consisted of in-depth analyses preparatory to the redefinition of the role and contents of the research programme as suggested by FEEM’s Board of Directors: enlargement of the research area to widen the range of topics, promotion of studies and activities with a broader external impact, and dissemination of research content by making it accessible and understandable for a public of non-experts.

Manifold indications emerged during these discussions. First of all, the Board of Directors expressed an interest in studying the ongoing geopolitical and economic paradigm shifts, and in opening up research to the human and social sciences that investigate development at both the process and individual level. A key concept that should characterise the activities in this domain is the development of human society in all its dimensions (economic, social and political).

In particular, FEEM should aim at contributing to a dynamic and perspective analysis of the topics investigated, providing a key to interpret current events, to imagine the future and the role of policy decisions in determining future scenarios. Another key concept informing the programme is the need for an anthropological and social perspective that complements the technical tools conventionally devoted to the analysis of growth processes and economic and political balances. This approach would extend the investigation to include the human and social dimensions of development.

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As of December 2012

Secondly, FEEM should be a catalyst of ideas, debates, lectures and new studies in these fields. The research program should mainly rely on external authoritative experts and leading scholars who will be involved in FEEM's activities when appropriate, on a rotation basis.

Finally, seizing this opportunity, FEEM intends to gain visibility and reputation by reaching out to a heterogeneous public thanks to new, specific initiatives that would appeal to a wider external audience and to the media. Such initiatives will be identified in early 2013 in order to start the programme's activities within the current year according to the indications received.

Along with the work done to support the redefinition of the programme's activities, research was successfully carried out on the following topics: new sources of competitiveness in the global economy; corporate sustainability; third sector's contribution to welfare progress and employment; privatisation and institutions, and Euro-Med cultural and political issues.

On the topic new sources of competitiveness in the global economy, FEEM is involved in a project funded by the Volkswagen Foundation (GLOBAL LINKAGES project) that focuses on Europe's global linkages and the impact of the financial crisis: policies for sustainable trade, capital flows, and migration.

Since 2007 the financial crisis has damaged Europe's global linkages in international trade, direct investments, capital flows, and labour migration. Working closely with the other partners in the project, FEEM uses newly available global data on bilateral migrant stocks and other international transactions to draw a comprehensive picture of the interaction between international migration, trade, and foreign direct investments at the global level.

Under the second topic - corporate sustainability - FEEM's research efforts aim at monitoring the evolution of the "social responsibility" concept, together with the implementation of tools to integrate sustainability policies and measures within organisations and local contexts.

The focus is on gaining awareness of the complexity of social responsibility, which has moved from the original "corporate" context toward the public and "not for profit" world. In the field of local sustainable development, FEEM provides research support to companies and local institutions in order to analyse the socio-economic context of the territory in which companies operate and to evaluate the economic, social and environmental impacts related to the presence of companies at national and local level, with a focus on the local content of oil and gas companies.

FEEM also pursues its research on the not for profit sector in its activities carried out in the Basilicata region. The project - aimed at backing the third sector (Support-Ter project) and based in FEEM's offices in Viggiano - is a laboratory of ideas and actions to promote collaboration between public institutions, the private sector and communities in order to support the development of the not-for-profit sector in this Italian region.

On the privatisation and institutions topic, FEEM has also contributed to the leading European observatory on privatizations, the Privatization Barometer (PB), financed by KPMG since 2010. Since 2004 the PB has become the official provider of privatization data to OECD and the World Bank. The new annual report on the development of privatizations in 2012 is forthcoming.

In 2012 FEEM has continued exploring Euro-Med cultural and political issues. The project addresses the growing strategic relevance of Turkey for the overall Euro-Mediterranean region, with a particular focus on EU-Turkey energy relations and on the crucial role of natural gas in enhancing energy cooperation between these two major players.

SPECIAL PROJECTS

Special Projects Coordinator, Cristiano Re

FEEM in Basilicata

FEEM's office in the Basilicata region opened in early 2008 in Viggiano, a town located in the heart of Val d'Agri, as part of an agreement signed by eni for the exploitation of the oil and gas fields in the area. FEEM's mission is to contribute to the economic and social development of the region, and to support eni in its plan to develop the local resources and skills through networking, research activities and advanced training. Human capital and innovation are key drivers of economic growth, and leveraging on the existing networks and skills is central to the process of local endogenous growth.

Activities in the Basilicata region are carried out by a staff of residential researchers and collaborators in coordination with FEEM headquarters and in close cooperation with private and public local institutions. Activities are focused on three main areas: (i) research, (ii) advanced training and education and (iii) support to decision-making.

FEEM's research efforts in the region are directed to the study of energy-related issues and to the analysis of sustainable tourism as an opportunity for local development.

Finally, FEEM regularly organizes summer schools focusing on energy and sustainability issues, and training activities on energy and environment through seminars, labs, scientific theatre shows and e-learning activities.



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As of May 2013



FEEM in Basilicata - Focus on: Sustainable Tourism and Local Development in Basilicata

FEEM's Viggiano office has, in recent years, started a series of studies on sustainable tourism. This research work produced important results in 2012, which steadily influenced the project work of its local office in "Lucania", modern day Basilicata.

Sustainable tourism is an economic activity that produces wellbeing, environmental protection and local development, all at the same time. Enhancing the value of the various resources available is fundamental to promote local development and increase the appeal of the area to tourists. The best way for this process to take place is by analysing the territorial context in all its aspects (environmental, economic, social) so as to achieve a complete vision of what exists already and to implement the development initiatives that are best suited to the specific features of the territory.

The eight research projects undertaken by FEEM in this region are part of this approach, starting with the opportunities to enhance the value of the natural and cultural heritage of modern Basilicata, and considering tourism as one of the engines to promote employment that could generate economic and social progress.

The projects examine interconnected topics and they can be considered pieces of a jigsaw. All together they form a complex picture of interdependent parts which illustrates both the broad synergies existing among the various proposed activities and the single guiding principle that inspires them.

The first research project is focussed on the study of the potential of the Appennino Lucano-Val d'Agri-Lagonegrese National Park ("PNAL") for sustainable tourism, and analyses the relationship between tourism, protected areas and local development. The study starts with an overview of the environmental, social and economic fabric of the Park, followed by a survey of its tourism potential including 15 interviews with representatives of the principal local bodies, and a field study carried out by administering and analysing 620 questionnaires for Park users. It emerged from these investigations that the park can become an important tourism destination in the medium to long term, but that for this to happen, there is a need for a series of interventions to strengthen the visibility of the national park, and improve its usability.

After this first study, the ecotourism research activity focussed on exploration of the park's resources, and in collaboration with the Park Authority, on a process to obtain certification to become a Member of the European Charter for Sustainable Tourism. To determine the true tourism potential, an assessment was made that took account of the demand and supply (hospitality structures, resources and services for tourists). It emerged that although the hospitality system of the Park has some important critical aspects, they could be resolved by the structure owners with the support of the managing body and cooperation

between the structures themselves. From this perspective, the European Charter for Sustainable Tourism could represent a tool for planning the tourism development of the Park that could encourage participation and concerted action by all the operators in the sector.

A third research project is "Green Road Basilicata" (GRB), which developed from the idea of promoting a "model" of tourism development based on the integration of the seaside holiday offer, and specifically that of the Ionic Coast of Basilicata, with the offer of the mountains of Val d'Agri and Val Camastra.

The field study confirmed the extent to which the tourism of the Region is principally proximity tourism (over 65% of those asked came from neighbouring regions of Italy, and just 12% were resident in North Italy). The positive finding was that 91.1% of the sample declared that they would be willing to visit places in the mountains of the interior of Basilicata if an integrated cost-interior product were available. These considerations and analysis led to the idea of designing a tourism product based on combining the world of the seaside holiday and the mountains, with particular reference to historical-cultural and nature destinations. To do this, three "thematic itineraries" were developed, one cultural and one "naturalistic", which could make the flows of the Ionic Coast less seasonal, and also build a tourism product that is in line with the more modern market.

The idea for the fourth project "*enerAGRIa - Il parco dell'energia della Val d'Agri*" (the Val d'Agri energy park) developed from the presence in Val d'Agri of several different types of energy source. The proposal was to create a broad thematic energy park giving life to a network of municipalities and territories characterised by the presence of infrastructure dedicated to the use of the different sources of energy present. The park would enable energy themes to be examined in depth, with specifically established laboratory-points offering an innovative way to get experience, as it would not be conceived as a classic fixed display, but as an exhibition area

“exploded” throughout the territory. The enerAGRIa project initially produced a publication containing a description of the energy resources present in the local area and the tourism and learning opportunities offered by an energy park. This publication was followed by an investigation carried out by interviewing those responsible for the school trips of 100 middle and high schools. From the results of the research, it emerged that 56% of the subjects interviewed stated that they agreed that the proposal was an attractive one. The appreciation grew when the energy tourism proposal was addressed to students: in fact, approximately 65% of those interviewed declared that they were “wholly in agreement” in considering energy tourism an innovative way of making known sources of energy and the ways in which it is produced. As part of this project, dissemination and training actions targeted at students were carried out – using the Learning Week formula – on the subject of the dissemination of energy culture.

Another important initiative was the promotion, in April 2012, of the i.school of the University of Tokyo School of Design by the Milan Polytechnic, in collaboration with FEEM and the Tramutola Pro Loco (tourism information office), called the MARU PROJECT (an Italy-Japan cultural exchange project). At the end of the study it emerged that the enerAGRIa project can represent a major opportunity for the tourism of the valleys (as shown by the organisation of the energy-themed Learning Weeks), which in part contrasts the conviction that the presence of activities related to energy production is solely negative for tourism.

The fifth project centres on the macro-theme of archaeology and, specifically, on promoting the Grumento Nova archaeology park. This is a response to the need to design and implement strategies to leverage the prominent resources of the territory, to create an articulated offer in multiple sectors with innovative content. The campus was conceived as an integrated polyfunctional complex in the territory that combines hospitality with training, as a leisure/

training activity container and, finally, as a tourism attracter. The campus, in partnership with the scientific community and the university training bodies, could develop short and medium-term training courses for students, postgraduates and professionals. In addition, to promote the territory’s cultural heritage, there could be a technological upgrading of the Grumentum Archaeological Museum using new multimedia technologies, transforming it into an interactive museum. The creation of a system of services integrated with the territory to complement to training/hospitality needs of the campus is fundamental. It is thought that this will be possible thanks to the design of a prototype smart city that combines more rational use of energy with the integration of clean technologies. The campus hospitality has been designed with the form of a disseminated hotel. The wealth of uninhabited houses in the Grumento area led to the idea of creating a disseminated hotel that could accommodate both seasonal tourists and the students and professionals attending courses at the campus.

The sixth project is “Albergo Diffuso” (AD – disseminated hotel). The disseminated hotel model is an innovative structure that, making use of the potentials of the location, offers the same services as a small hotel, bringing abandoned houses back to life, producing income and offering an original experience for their guests. Thanks to the experience it has acquired in this area, FEEM has organised a conference with the Marsico Nuovo municipality entitled “*Le nuove frontiere del turismo – l’ospitalità diffusa nel borgo antico di Marsico Nuovo*” (The new frontiers of tourism – disseminated hospitality in the ancient town of Marsico Nuovo). The initiative saw the participation of some of the best known experts in specialised tourism in disseminated hotels, restructured property and hospitality. This initiative was followed by an investigation in the valley territory with the objective of collecting all information available on the de facto status of the territory, to be used to make the hill towns attractive to investors. This investigation led to the identification of a design hypothesis consisting

of the creation of a website that brings together and organises all the information and tools needed to regenerate the hill towns. The decision to work on more than one hill town developed out of the idea that if several different municipalities were put on the internet, and their potential combined in a single pathway, it would be possible to create a complete and diversified product with greater prospects of success.

Another research activity started in the sector of investigations linked to sustainable tourism focussed on film-induced tourism in Basilicata. The work carried out by FEEM presents an analysis of the existing literature on these topics and the results of the local investigation into the relationship between cinema and tourism, with a focus on Basilicata. Specifically, the study monitored the effects of the film entitled “Basilicata coast to coast” – one of the most recent products – on the promotion of the territory. The investigation confirmed that the cinema can play a crucial role in promoting the image of the territory of Basilicata. The film analysed can be considered a targeted marketing initiative that laid the foundations for the creation of a Basilicata brand, and strengthened the positioning of the region on the tourism scene. However, the film was not followed by an evolution of the local offer that was capable of creating products in line with the potential tourism demand created. So the role of a regional film commission, which in addition to its principal task of attracting film productions to the area, could promote a coordinated action between the film promotion initiatives and tourism operators, appears to be essential. The research work undertaken by FEEM in this field has stimulated both national and international interest. FEEM researchers involved have presented papers at many conferences, expounding on the principal results of the study.

Finally, as part of this project, a Summer School entitled “*Il Cineturismo come opportunità di Marketing Territoriale per lo sviluppo locale*” (Film-induced tourism as a territorial marketing opportunity for local development) was

organised and held in Matera and Policoro in June 2012.

After the first part of the film-induced tourism study, a second research project was defined with the aim of investigating the topic in greater depth. The growing interest in films shot in Basilicata, and the birth of the Lucana Film Commission in 2012 represent major opportunities for tourism in Basilicata that need policies for image building and the promotion and development of film tourism actions.

Finally, the last project concerns the institutional website www.valdagriturismo.com. This site, created to promote and enhance the value of tourism in the Alta Val D’Agri region through the participation and collaboration of public bodies, private bodies, not for profit companies and community associations, is an information tool for tourism services. The website promotes the resources and services of the Val D’Agri, updated with events in the territory and proposing themed routes and GPS itineraries. It is possible to find different sections that refer to the food and drink offered, nature routes, sports activities, archaeological and cultural itineraries and energy routes. The site has been online since September 2011 and, given its success, other small towns in the area have asked if they can promote their territory through the website.

Eni Award Scientific Secretariat

Since 2003 FEEM supports eni in organizing the Scientific Secretariat of the prestigious eni Award. The prize was officially launched in July 2007 to replace and extend the former Eni-Italgas Prize, which in 2006 had reached its XIX edition.

The award is promoted by eni in order to encourage basic and applied scientific research within the national and international scientific community, to provide incentives for technological development and innovation, to promote a better use of energy sources and help new generations of researchers to emerge.

Over the years the award has gained a solid reputation as one of the most important scientific prizes in the fields of energy and environment and today it is considered the “Nobel Prize for Energy” by the international scientific community for several reasons: the increasing number of projects submitted by researchers all over the world, the worldwide network of universities and research centers and the prestige of the Scientific Commission that includes renowned international scientists and two Nobel Prize Laureates.

The number of applications submitted in 2012 for the 2013 edition confirmed the promising trend of new applications, rising from the 52 submissions of the first Edition to the 1155 candidatures of the present year, therefore consolidating a network of high-profile researchers belonging to the international energy and environmental research élite. More information on the eni Award is available at www.eniaward.net

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As of May 2013

Eniscuola and Schoolnet

Since 2000 FEEM supports eni in carrying out educational projects such as Eniscuola and Schoolnet. The projects aim at providing pupils and teachers of lower-middle schools with advanced teaching support on the subject of energy, sustainability and environment and at increasing the use of the Internet as a fundamental tool for learning and acquiring information.

Both projects are web-based and use multimedia technology for dissemination. A broad range of learning support systems are provided and they can all be downloaded by the pupils.

Eniscuola's main tool is the www.eniscuola.net website. The website has over 3,000 pages with documents, pictures, graphs, charts, experiments, games and interviews with national and international scientists including Nobel Prize Laureates.

The Eniscuola project has been acknowledged by UNESCO's Italian National Commission and is part of the United Nation's Decade of Education for Sustainable Development, by contributing to spread its goals and ideals.

In July 2010, the Italian Ministry of Education, University and Research proposed to eni to collaborate in the digital school project “*Scuola Digitale*” in order to innovate the didactic system using information technology and communication tools.

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As of May 2013

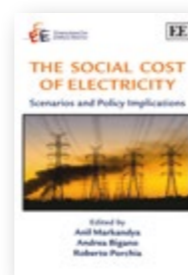
PUBLICATIONS

FEEM has a broad range of publications addressed to both the academic and non academic readerships.

At present FEEM has two **Editorial Series**:

Edward Elgar Publishing, FEEM Series on “Economics, the Environment and Sustainable Development”

Editorial Board:
Carlo Carraro (Series Editor)
Kenneth Arrow
William Baumol
Partha Dasgupta
Karl-Göran Mäler
Ignazio Musu
Henry Tulkens



Il Mulino, FEEM Series

Editorial Board:
Giuseppe Sammarco (Series Editor)
Geminello Alvi
Carlo Carraro
Gianmarco I.P. Ottaviano
Alberto Quadrio Curzio
Domenico Siniscalco
Guido Tabellini

Recent Titles:

Diversità e sviluppo sostenibile: una relazione possibile
by **Dino Pinelli**
published with **il Mulino**.



In 2012 FEEM has published a volume with **Springer-Verlag Italia**.
Morality and Corporate Governance: Firm Integrity and Spheres of Justice,
by **Giulio Sapelli**.



FEEM circulates a series of **Working Papers** in English (FEEM “Note di Lavoro”) collecting the output of research in the field of economics, energy and the environment. FEEM **Note di Lavoro** are included in the Social Science Research Network (SSRN), the electronic bibliography by the American Economic Association (EconLit), the Research Series in Agricultural and Applied Economics (AgEcon), the Research Papers Series in Economics (RePEc), the Berkeley University Press (BePress) and the German National Library of Economics (ZBW).



Since 2011 FEEM publishes an open-access, online e-journal, the **Review of Environment, Energy and Economics - Re3**, a tool for the dissemination of the work and research-based policy analysis of FEEM researchers and leading international scholars, covering the areas of the environment, energy and economics (Re3 at: <http://re3.feem.it>).



Since 1997, in cooperation with the publisher “il Mulino” FEEM publishes the journal for sustainable development **EQUILIBRI**, targeted to a broad audience of readers.

Editorial Board:
Giuseppe Sammarco (Editor)
Geminello Alvi
Carlo Carraro
Massimo Livi Bacci
Danilo Mainardi
Domenico Siniscalco



Since 2009, FEEM also publishes an electronic bi-monthly newsletter **FEEM News**, providing updates and highlights on research, events and publications.



Since 2012 FEEM distributes an electronic monthly bulletin **Re3News**, with a short editorial focused on the “Editor’s Choice” and the latest contributions published in its e-journal, Re3.



INTRODUCTION



Accounting for the contribution to the cultural, scientific and economic progress of the society in which one operates is an interesting exercise for companies of all stripes. For non profit organizations utilizing private and public resources in the pursuit of their mission, “social” reporting and accounting is an imperative.

Indeed, conventional balance sheets and financial statements are fundamental reporting tools, but they fail to disclose the actual performance of non profit institutions in terms of impact and relevance for their respective stakeholders.

FEEM has been a frontrunner in company social reporting, and has applied best practices and principles in communication to stakeholders throughout its long-standing activity. For this reason, since 2008 FEEM decided to resume the publication of a fully-fledged social report.

Given the increase in the scope and quantity of activities, a social report is fundamental to provide not only qualitative and descriptive information, but also to provide objective indicators and statistics about the overall results from the operations. We claim that the numbers provided represent clearly not only the impact of activities, but also an overall evaluation of all the inputs that contribute to our productivity. Among them, human capital is obviously fundamentally important.

This social report aims at showing that during the 2010-2012 period FEEM has operated as a responsible organization towards all its major stakeholders: *(i)* our people, *(ii)* the research community, *(iii)* the policy sphere, *(iv)* young generations and *(v)* the general public.

Our people

Human capital is without doubt the most important input for FEEM's activities. It is mainly composed of researchers, often with a post-graduate diploma, and classified in different categories according to career advancement and profile: *senior* researchers are defined as such when they have a Ph.D. and have performed research for at least 2 years under FEEM contracts *or* they have no Ph.D. but have performed research for 5 years under FEEM contracts. They are typically experienced research leaders with key responsibility in the design and implementation of projects. *Research associates* are typically affiliated to a university or to other research institutions and are involved in contingent projects. Staff includes full-time employees and non permanent staff involved in support activities for specific projects.

FEEM's operations include a much larger number of collaborators than full time employees. This organizational mode is typical in the non profit sector and in research institutions, as it allows flexibility and reflects the high turnover rate of young researchers, typically moving to other institutions after a successful training period in FEEM.

In the 2009-2012 period staff activities have been streamlined and reorganized with the creation of the FEEM staff register in 2008. In 2012, the 28 full-time employees provide efficient secretarial and administrative support, and communication services for the organization of events, media relations and publications.

The gender audit yields a balanced mix in the organization, with a prevalence of women. Interestingly, this pattern is observed across categories, confirming the same balance by gender among researchers, non permanent staff and employees. In 2012 we can observe a slight increase in the international dimension (+2 %), and the average age is 35 years.

FEEM People	2010	2011	2012
Total headcount	166	167	193
By categories:			
Researchers	103	105	120
<i>Junior Researchers</i>	43 (42%)	46 (44%)	62 (52%)
<i>Senior Researchers</i>	24 (23%)	27 (26%)	27 (22%)
<i>Research Associates</i>	36 (35%)	32 (30%)	31 (26%)
Collaborators	36	35	45
<i>Support activities</i>	16 (44%)	16 (46%)	20 (44%)
<i>Special projects</i>	20 (56%)	19 (54%)	25 (56%)
Full-time employees	27	27	28
By sex:			
Male	70 (42%)	73 (44%)	86 (45%)
Female	96 (58%)	94 (56%)	107 (55%)
By nationality:			
Italian	139 (84%)	137 (82%)	155 (80%)
Non-Italian	27 (16%)	30 (18%)	38 (20%)
Average age (years)	37	36	35

Overall the educational profile of FEEM's people is very high: in 2012, 91% have a graduate degree, and 56 % also hold a post-graduate diploma. Among researchers, 90% hold a post-graduate degree. In particular, 60% of our researchers holds a Ph.D. which was obtained abroad in 56% of cases.

FEEM Researchers	2010	2011	2012
	103, of which	105, of which	120, of which
<i>Post-graduates</i>	79 (76%)	85 (81%)	108 (90%)
Master	42	73	90
<i>of which obtained abroad</i>	21 (50%)	49 (67%)	48 (53%)
Ph.D.	56	65	71
<i>of which obtained abroad</i>	29 (52%)	33 (51%)	40 (56%)

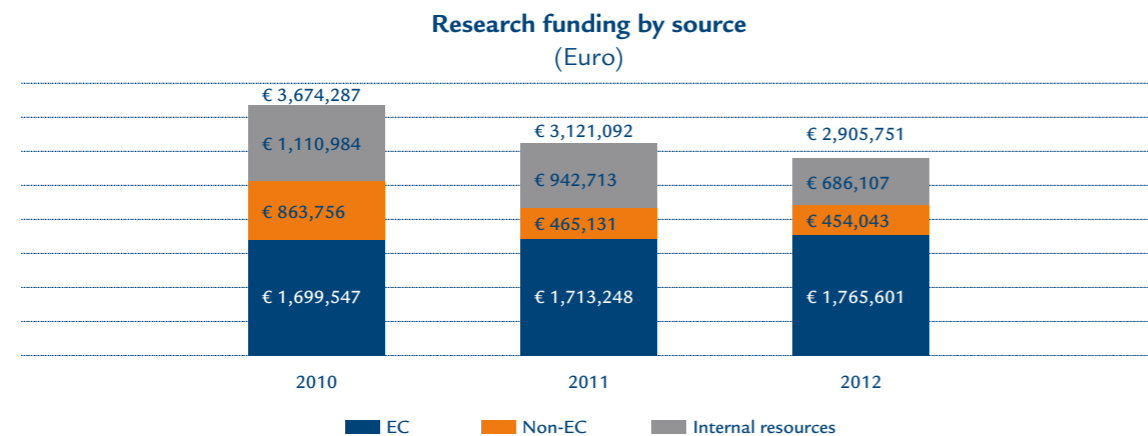
Research community

The research community is a primary stakeholder, which FEEM targets by carrying out research projects, by publishing high quality research, by organizing scientific events and training initiatives, and by managing large international networks.

Research projects

In 2012, FEEM has been actively working on 42 projects, 34 of which financed by third parties, and mainly by the European Commission.

FEEM projects	2010	2011	2012	2010-2012
Total research projects	49	47	42	138
of which				
<i>funded by the EC</i>	20 (41%)	30 (64%)	27 (64%)	77 (56%)
<i>funded by others</i>	10 (20%)	7 (15%)	7 (17%)	24 (17%)
<i>funded with own resources</i>	19 (39%)	10 (21%)	8 (19%)	37 (27%)
Average project duration (in years)	3.0	3.2	3.2	3.1



Over the years FEEM has achieved a high success rate in research funding under the European Commission, and in particular under the EC 7th Framework Programme on Environment (EC FP7 - Environment, including climate change), ranking among the best Italian research institutions.

In 2012 FEEM has been involved in five new multidisciplinary research projects, of which three within the EC Environment Programme, one within the Energy Programme and a third one in the Socio-economic Sciences and Humanities Programme.

Scientific publications

Publications are one of the most important outlets for the dissemination and certification of the scientific quality of FEEM's research output.

FEEM has two editorial series with Edward Elgar and il Mulino for books published in English and in Italian, respectively, and it circulates a series of working papers in English (FEEM "Note di Lavoro") targeted to the international research and academic community.

FEEM has published a total of 2,283 "Note di Lavoro" since the publication of its first working paper in 1993. FEEM "Note di Lavoro" are downloadable from FEEM's website since 1998, and have been gradually included in other platforms such as AgEcon, the Social Science Research Network (SSRN), RePEc, Berkeley University Press, ZBW and EconLit.

Since 2008 the "Note di Lavoro" are distributed only electronically, with substantial cost savings and unscathed impact and visibility. In 2012 the downloads from the Social Sciences Research Network SSRN totaled 26,660, while those from both RePEc and BePress were equal to 14,932. Downloads from AgEcon and ZBW have hit a record of 31,501 and 5,442 downloads, respectively.

Publications	2010	2011	2012	2010-2012
FEEM working paper series "Note di Lavoro"	160	100	100	360
of which				
<i>with at least one FEEM author</i>	27%	31%	39%	32%
N. of downloads from other websites (*)	89,751	79,367	78,535	247,653
of which				
<i>Social Science Research Network SSRN</i>	34,560	21,772	26,660	82,992
<i>Berkeley University Press</i>	20,848	24,987	4,956	50,791
<i>RePEc</i>	17,410	12,347	9,976	39,733
<i>AgEcon</i>	16,933	18,175	31,501	66,609
<i>ZBW</i>	-	2,086	5,442	7,528

(*) FEEM Note di Lavoro are included in the Economics Research Institutes Paper Series of Social Science Research Network SSRN, AgEcon, RePEc, Berkeley University Press, ZBW and EconLit. This table reports statistics from SSRN, AgEcon, RePEc, BePress and ZBW.

The percentage of Note di Lavoro authored by FEEM researchers in 2010-2011-2012 republished in peer-reviewed journals is equal to 34%.

In 2011 FEEM launched the open-access e-journal "Re3 - Review of Environment, Energy and Economics", a tool for the dissemination of the work and research-based policy analysis of FEEM researchers and leading international scholars, covering the areas of the environment, energy and economics. New contributions, mainly articles or interviews with videos, are published weekly, and an electronic bulletin "Re3News", with the latest contributions published in the e-journal, is distributed monthly. All the titles published in 2012 are listed in the Appendices.

Conferences and seminars for scholars

The organization of events is a fundamental activity for FEEM, since it allows the creation and maintenance of relationships with the scientific community at the national and international level. It also generates important spillovers in terms of research opportunities that can subsequently yield outputs in the form of projects, publications and networks.

Conferences are usually large-scale events on the topics of FEEM's research agenda, while workshops are typically used for the discussion of "work in progress" and brainstorming sessions. Seminars are primarily given by residential researchers and aimed at cross-fertilization between the different research areas and programmes. Seminars are also open to visiting scholars and to the local research community, and widely publicized through the web.

Over the 2010-2012 period, FEEM has organized a total of 249 scientific events for the research community, attracting over 15,000 registered participants.

Conferences and seminars for scholars	2010	2011	2012	2010-2012
Events for the research community	79	87	83	249
of which:				
Conferences, workshops and lectures	34 (41%)	35 (40%)	26 (31%)	95 (38%)
Seminars	45 (59%)	52 (60%)	57 (69%)	154 (62%)
Total events attendance	5,230	5,366	5,336	15,932
of which:				
Conferences and workshops attendance	4,490 (86%)	4,534 (84%)	3,041 (57%)	12,065 (76%)
Seminars attendance	740 (14%)	832 (16%)	2,295 (43%)	3,867 (24%)

In 2012, FEEM also organized, through the ICCG, other 15 events (10 seminars; 2 lectures; and 3 cultural events) attracting an attendance of about 1,000 participants.

Post-graduate training

Young researchers are very important stakeholders for FEEM and providing advanced training is thus one of the principal institutional activities. In this direction, FEEM organizes Marie Curie individual fellowships (sponsored by the EC), summer schools, and internships. Since 2000, FEEM organizes in co-operation with the European Association of Environmental and Resource Economists (EAERE) and the Venice International University the "European Summer School in Environmental Economics" (EAERE-FEEM-VIU), attracting every year young researchers from a large number of international universities. Since September 2010, FEEM jointly organizes with the EAERE and the Faculty of Agriculture of the University of Catania, the Belpasso International Summer School on Environmental and Resource Economics (Sicily, Italy). From 2005 to 2010 FEEM also regularly contributed to the scientific organization of the "European Summer School and Conference in competition and regulation" CRESSE.

In 2012 FEEM co-organized 2 summer schools and supported 4 Individual Marie Curie Fellowships and 10 internships.

Post graduate-training	2010	2011	2012	2010-2012
Summer Schools				
<i>Number of Summer Schools organized</i>	4	3	2	9
<i>Students</i>	124	60	60	244
Graduate researchers trained at the Fondazione				
<i>Internships</i>	2	5	10	17
<i>Marie Curie Individual Fellowships</i>	2	3	4	9

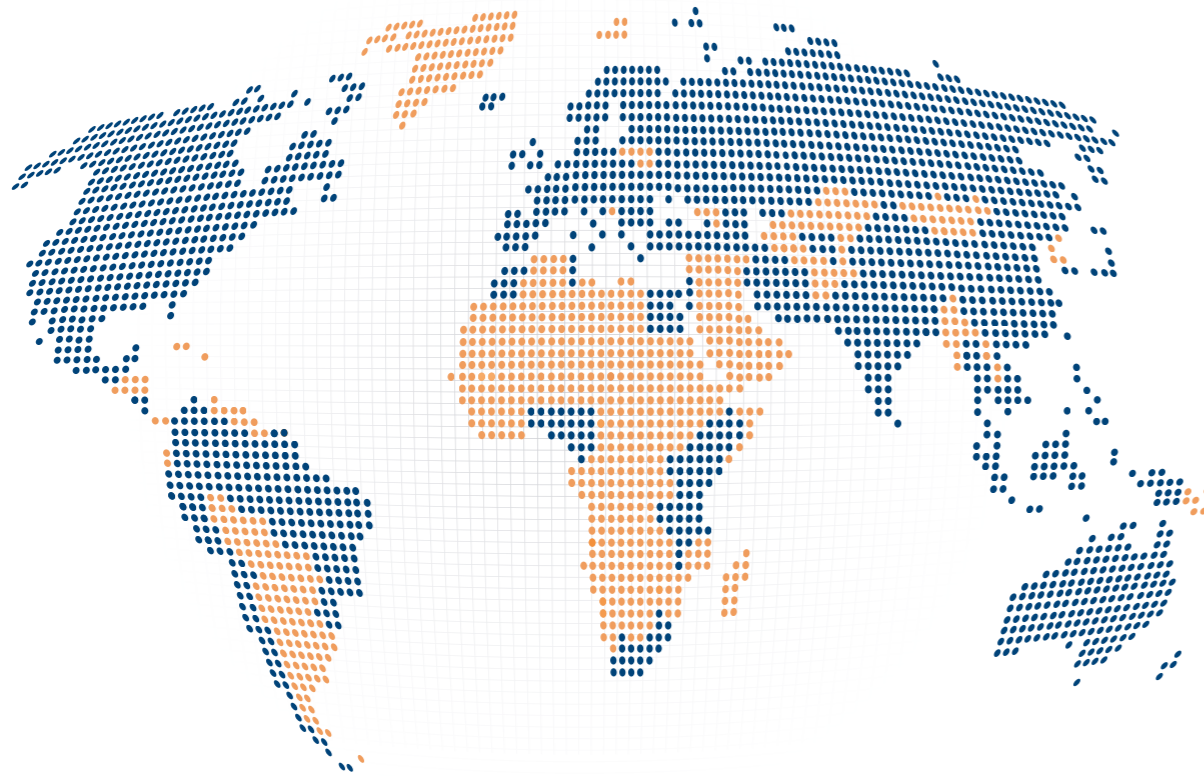
Fostering the investment in human capital in order to advance the frontiers of knowledge is FEEM's ultimate objective. For this reason, starting from 2009 FEEM regularly bestows a prize for the most innovative ideas by young economists. The prize (FEEM Award) is organized jointly with the European Economic Association (EEA) and yields a double dividend: rewarding scientific discovery and promising young scholars.

Networks

The international research network is certainly one of FEEM's most valuable intangible assets. Built up over the years by involving the best researchers and top research institutions on various projects, the network allows FEEM to remain acquainted with the state-of-the-art of scientific knowledge, to spread its results more widely and expose its human capital to international interaction. FEEM's global footprint is quite impressive: today, FEEM is linked via joint projects, partnerships or associations with over 600 research institutions operating in 89 countries around the world.

Over the years, FEEM has contributed to the creation of a number of thematic networks and associations, such as the Coalition Theory Network (CTN), the European Association of Environmental and Resource Economists (EAERE), the Italian Association of Environmental and Resource Economists (IAERE), and the Biodiversity and Economics for Conservation Economists network (BIOECON). FEEM is also institutional member of the European Economic Association (EEA), of the European Association of Environmental and Resource Economists (EAERE), of the Association of Environmental and Resource Economists (AERE), and of the Italian Association of Environmental and Resource Economists (IAERE). FEEM is entrusted with the management of the Permanent Secretariat of EAERE and, since 2012, also of IAERE. In recent years FEEM has also built new important partnerships with the Euro Mediterranean Centre for Climate Change (CMCC), the Fondazione Giorgio Cini for the creation of the International Center for Climate Governance (ICCG) in Venice, the Climate Policy Initiative (CPI), and Economics for Energy. Finally, FEEM is also involved in the International Energy Workshop network (IEW), the Integrated Assessment Modeling Consortium (IAMC), the Energy Modelling Forum (EMF), the Regional Modelling Exercise (RME) network, the Global Climate Forum (GCF), and the non-profit international student organisation CliMates.

FEEM Global Network



Albania	France	Malta	Slovak Republic
Australia	French Guiana	Mauritius	Slovenia
Austria	Germany	Mexico	South Africa
Azerbaijan	Ghana	Morocco	South Korea
Bangladesh	Greece	Montenegro	Spain
Belgium	Hong Kong	Nepal	Sri Lanka
Benin	Hungary	Netherlands	Sweden
Brazil	Iceland	New Zealand	Switzerland
Bulgaria	India	Nicaragua	Taiwan
Cambodia	Indonesia	Nigeria	Tanzania
Canada	Iran	Norway	Thailand
Chile	Ireland	Pakistan	Trinidad & Tobago
China	Israel	Palestine	Tunisia
Colombia	Italy	Peru	Turkey
Costa Rica	Japan	Philippines	Ukraine
Croatia	Kenya	Poland	United Kingdom
Cyprus	Latvia	Portugal	United States of America
Czech Republic	Lebanon	Principality of Monaco	Uruguay
Denmark	Lithuania	Romania	Uzbekistan
Egypt	Luxembourg	Rwanda	Vietnam
Estonia	Macedonia, Republic of	Russia	
Ethiopia	Malaysia	Serbia	
Finland	Malawi	Singapore	

Policy sphere

One of the characteristics of FEEM has always been the provision of technical assistance to national and international institutions. The past twenty years have seen a strengthening of FEEM's role as a provider of technical assistance to national and international institutions and policy makers. Indeed, through the rigor of its research, FEEM aims at improving the credibility and quality of decision-making in public and private spheres. This goal is achieved by creating an international and multidisciplinary network of researchers working on several innovative projects, by promoting training in specialized areas of research, by disseminating research results through a wide range of outreach activities, and by delivering directly to policy makers via participation in various institutional fora.

In 2012 the most significant and systematic collaborations have been. At the international level, with:

- United Nations:
 - › UN Framework Convention on Climate Change (UNFCCC)
 - › UN International Panel on Climate Change (IPCC)
 - › UN International Strategy for Disaster Reduction (UNISDR)
 - › UN Educational, Scientific and Cultural Organization (UNESCO)
 - › Food and Agriculture Organisation of the United Nations (FAO)
- European Union:
 - › European Commission:
 - DG Climate Action (CLIMA)
 - DG Energy (ENER)
 - DG Environment (ENV)
 - DG EuropeAid
 - DG Humanitarian Aid and Civil Protection (ECHO)
 - DG Research and Innovation (RTD), Cooperation Programme, People Programme, and Ideas Programme (European Research Council – ERC)
 - › European Environmental Agency (EEA)
 - › European Investment Bank (EIB)
 - › Privatization Agencies and Ministries of the main European Countries
 - › Volkswagen Foundation
- Academy of Sciences for the Developing World (TWAS)
- Asian Development Bank (ADB)
- Green Growth Knowledge Platform (GGKP)
- International Human Dimensions Programme (IHDP)
- Istanbul Policy Centre (IPC)
- Mercator Research Institute on Global Commons and Climate Change (MCC)
- Organization for Economic Co-operation and Development (OECD)
- The World Bank (WB)

At the national level, with:

- Bank of Italy
- EXPO Milano 2015
- Federazione Relazioni Pubbliche Italiana (FERPI)
- Fondazione Olivetti · Fondazione Sodalitas · Fondazione Symbola
- Global Compact Network Italia (GCNI)
- Italian Ministry for the Environment, Land and Sea
- Italian Ministry of Economy and Finance
- Italian Ministry of Education, University and Research
- Italian Institute for Environmental Protection and Research (ISPRA) and local public authorities for sustainable development matters (Lombardy Region; Lombardy Foundation for the Environment, FLA; Basilicata Region; Po River Basin Authority; City of Ferrara; City of Parma; Emilia Romagna Region; Emilia Romagna Agency for the Protection of the Environment)
- Italian Ministry for Foreign Affairs
- Local public authorities for matters concerning privatizations and liberalizations

General public

FEEM aims at fostering and encouraging a broader awareness and understanding of economic, energy and environmental issues, also within the civil society. This objective is pursued by using a variety of communication tools and outlets, ranging from the web to non technical publications, the organization of public conferences and roundtables, and the free access to FEEM facilities such as the Library, with a view to reinforcing the commitment towards the economic and social development of the country.

FEEM's presence on the internet started in the early 90s and today the web is still one of the main tools for FEEM to showcase its institutional activities to the general public. For this reason, FEEM's website (www.feem.it) - launched in 1994 and then completely renovated in 2009 - is constantly subject to updates and improvements in order to be always user-friendly, making information accessible and clear, and ensuring efficiency through a high-speed internet connection and dedicated line on the network of the Ministry for Higher Education and Scientific Research.

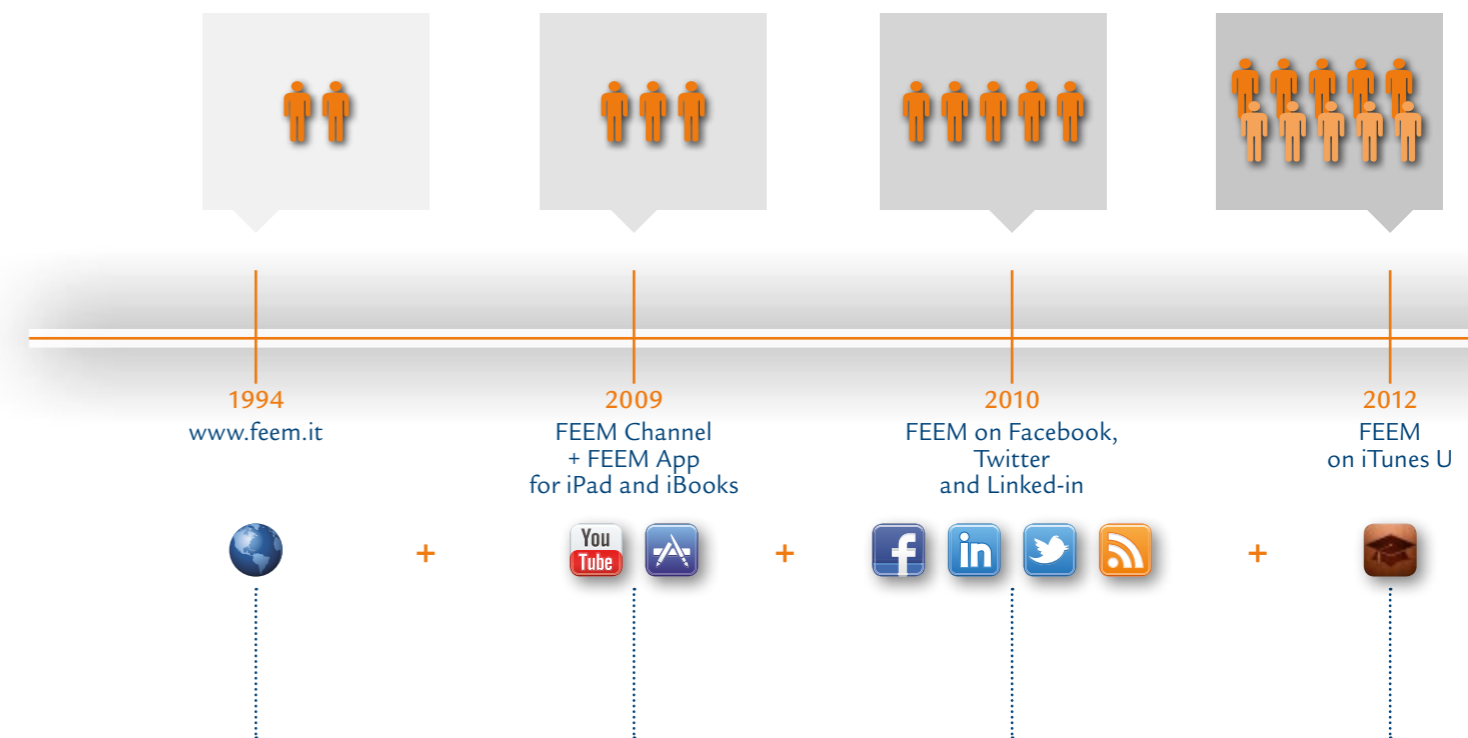
In this manner, and in order to keep the public regularly updated, FEEM also publishes a digital newsletter, FEEM News, bi-monthly mailed to over 7,000 stakeholders and subscribers, and a dedicated section of the website allows visitors to subscribe to the newsletter or other specific contents of interest, in order to receive updates by email or through *RSS feeds*.

In addition to the institutional website, FEEM shares the contents of its activities and research through satellite websites dedicated to specific research projects, summer schools, events or publications, and manages video sharing and social networking sites, such as a FEEM Channel on YouTube, and institutional pages on Facebook, Twitter and LinkedIn. More recently FEEM has also built up web applications for iPad and has successfully started developing collections of thematic eBooks, aiming at opening new windows on FEEM research and using additional instruments to provide information to the community of both institutional peers and individuals with shared interests.

Another digital tool that is worth mentioning as an e-publication targeted to the general public is FEEM's open-access journal "Re3 - Review of Environment, Energy and Economics", launched in 2011. Re3 has proven to be an effective tool to disseminate to a broader public the research work and policy analysis of FEEM researchers and international scholars on topics related to the environment, energy and economics. Short articles, written in a language devoid of technicalities, and interviews with videos, are published on a weekly basis, while an electronic bulletin "Re3News", with the latest contributions published in the e-journal, is distributed monthly.

The most important digital innovation carried out by FEEM in recent years, however, is represented by the launch, in 2012 of a new institutional website on iTunes U, the Apple portal devoted to the world of research and education. Traditionally at the forefront in the field of new technologies, FEEM is indeed the first non academic research Foundation in Italy to join iTunes U (See Focus on: "Reaching out: FEEM on iTunes U"). iTunes U, a dedicated area of the iTunes Store (www.itunes.it) launched in 2007 in the US, is currently the most important and globally recognized platform for sharing and providing free of charge multimedia educational content from leading educational institutions and at the beginning of 2013 has reached the milestone of over one billion content downloads. iTunes U features the world's largest online catalogue of free educational content from top schools and prominent organizations, and by making its contents available on iTunes U, FEEM is now able to promote its activities to an even broader audience all over the world.

FEEM on the internet, 1994-2012



FEEM also uses traditional communication tools aimed at reaching the general public. Since 1997 FEEM regularly publishes the journal *Equilibri* with il Mulino. The journal is targeted to a broad audience of readers, and over the years it has contributed to the understanding of sustainable development, emphasizing its complex economic, social and political implications. Today, new trends are reshaping the world's economic and political balances. In the quest for new paradigms, *Equilibri* aims at dealing with these issues, keeping a constant eye on energy, the environment and future global challenges. The three issues published in 2012 were devoted to core topics of today's global debate: the attempt to design a new political commitment for the environment at Rio+20, the United Nations Conference on Sustainable Development that took place in June 2012, twenty years after the 1992 Earth Summit; considerations on a new interpretation of the concept of growth in advanced societies in times of deep crisis; the challenge represented by extreme natural and economic events.

Besides events targeted to the scientific community, FEEM also organizes roundtables, book presentations, conferences and lectures usually open to the general public on various issues broadly related to sustainable development. Finally, FEEM also offers free access to its facilities and in particular to its Library in Milan. FEEM Library was opened to the public in 1997. Originally established for the needs of FEEM researchers, it has been enlarged over the years and now offers a collection of relevant interest for students and scholars. In the fields of natural resource economics, the holdings of the library are among the most updated in Italy, containing a great selection of books (5,362), scientific journals (754), electronic databases (11) and statistical yearbooks (14). In 2012 about 150 users had open access to the stacks. The reading rooms can seat 36 people.

The general public is also usually reached by media operators, representing certainly an important stakeholder for FEEM. The interest of the press in FEEM's activities has been considerable and broadly increasing.

Press coverage	2010	2011	2012	2010-2012
N. of citations by typology				
Articles, citations, press releases and announcements	346	579	618	1,543
Op-eds	10	7	2	19
Interviews	25	6	38	69
Total number of citations in national and local magazines and newspapers	381	592	658	1,631

In the last 3 years, FEEM activities have had a significant coverage in the traditional media, totaling overall about 1,631 citations or articles covering FEEM studies, research projects, events and other activities. In particular in 2012 FEEM registered a strong boost in the number of articles published in national newspapers and covering FEEM special projects and activities. The press review is downloadable from a new section of the website dedicated to the media, where journalists can find the updated and most significant articles and may subscribe to regular updates on FEEM research and related initiatives.

Young generations

FEEM supports eni in the organization of two educational projects for the middle school, Eniscuola and Schoolnet.

FEEM Educational projects for the middle school - Schoolnet

Numbers involved at middle schools	2010	2011	2012	2010-2012
N. of schools contacted	1,800	1,500	578	3,878
N. of educational seminars and laboratories	197	235	182	614
N. of students who attended direct teaching activities	8,180	8,840	11,920	28,940
N. of teachers involved in teaching activities	575	858	1,624	3,057

Both projects are based on the Internet and multimedia technology. Learning support systems are wide-ranging (text, images, graphs and charts, film clips, games, exercises, data bases and links to other sites) and can all be downloaded by pupils in order to conduct "multimedia research" or create their own site.

The Eniscuola project is based on a website (www.eniscuola.net) daily updated with over 3,000 pages with documents, eBooks, pictures, graphs, charts, experiments, games, and interviews with national and international scientists including Nobel prize laureates such as Alan J. Heeger, Sir Harold W. Kroto, Theodor W. Hänsch and Robert Coleman Richardson; Eni Award winners; scientists from the most important universities like University of California (Berkeley) or Massachusetts Institute of Technology. Eniscuola carries out its educational activities in cooperation with Regional School Departments, Universities and local government institutions. The project is also actively involved in the organization of numerous scientific and cultural events. Eniscuola regularly organizes seminars, laboratories and scientific theatre events in schools all over Italy. Eniscuola also began educational activities in Sicily (2009), in collaboration with enimed spa, and in Ravenna (2012), in collaboration with eni E&P and the Municipality of Ravenna.

In 2011, the e-learning project called "Imparare multimediano" (learning by multimedia) was concluded. Numerous Italian schools took part in it. The distance learning and training projects continue through eniscuola 2.0, a project designed to assist schools in the innovation process introduced by the new teaching technologies. The project was born from an eni-MIUR (the Italian Ministry of Education, University and Research) agreement protocol, signed in July 2010, in which eni undertook to provide multimedia contents on scientific topics and to teach the English language. Eniscuola 2.0 activities are carried out in three websites: learning object, smartenglish and clilnaction.

The Eniscuola project has been acknowledged by UNESCO's Italian National Commission and is part of the United Nations Decade of Education for Sustainable Development, by contributing to spread its goals and ideals.

The main purpose of the Schoolnet project (www.schoolnet.eni.it) is to encourage the exchange of ideas and information among some of the schools of the areas where eni operates, in Italy (Secondary Schools in Val d'Agri and Val Basento), Norway (Finnmark), Australia (Northern Territory), United States (Alaska), East Timor, Angola, Indonesia, Pakistan, Tunisia and Venezuela.

In 2012, students from the schools involved in the project were asked to write projects in electronic format to describe the culture, history and home environment of their country of origin, with the aim to promote knowledge and stimulate dialogue among different cultural identities. The theme of the project for the Schoolnet 2013 edition is: "Traditional festivities".

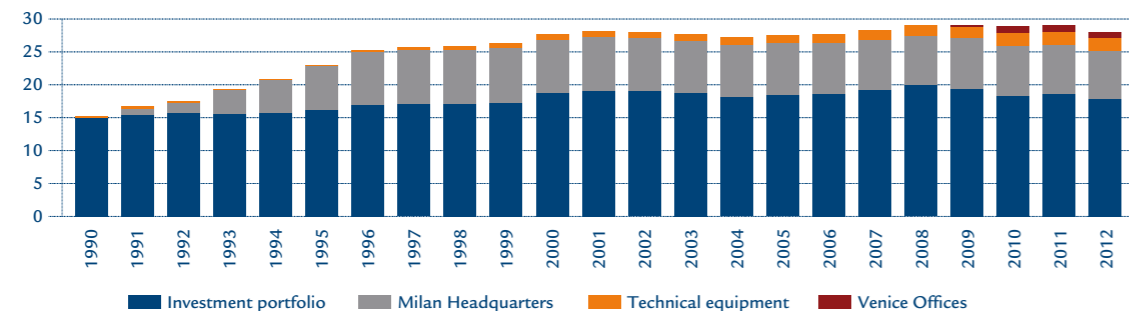
Endowment and asset growth

A key objective for the financial sustainability of FEEM activities is the conservation of its endowment and assets over time. Over the past twenty years, the assets of FEEM have grown from the initial endowment of 13.3 million Euros in 1989 to approximately 26.3 million Euros at year-end 2012. This increase is mainly attributable to the additional contributions from the founders, along with the inception and increase of the Studies and Research reserve fund in the early years, when receipts exceeded total costs. Returns from financial assets is another component of asset growth.

Contributions from the founders have financed in the early 90s the complete restructuring of FEEM's Milan headquarters at the prestigious Palazzo delle Stelline, while the Studies and Research reserve fund increased its capitalization, allowing the financing of extraordinary institutional activities.

The graph below shows the composition of FEEM's fixed assets net of depreciation. Over the past twenty years the overall value of the investment portfolio has grown from the initial 14.7 million Euros invested in 1989 to the present 17.8 million Euros, following a risk-averse investment strategy. The value of the lease on the headquarters building increased until 1998, when the restructuring was completed. In 2010 FEEM completed the restructuring of its new local site in Venice, an aisle of an historic building located on the Island of San Giorgio Maggiore, started in 2009.

Fixed Assets (Million Euros, net of depreciation)

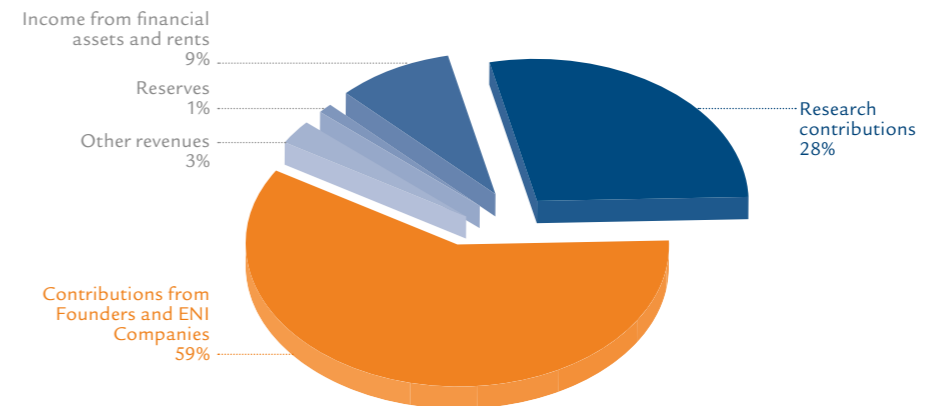


Revenues

Total revenues for 2012 amounted to 7,855,816 Euros. Contributions from Founders and eni companies represent the main source of funding for the annual budget, accounting for 59% of total revenues in 2012.

FEEM has developed a remarkable fundraising capability. External funding raised from third parties – mainly from the European Commission through the research framework programmes contributions, along with several domestic and international institutions – covers approximately 28% of FEEM's total revenues. In 2012 third party funding totaled 2.2 million Euros. Returns from the investment portfolio and rents represent 9% of total revenues. Financial assets, managed by professional asset managers, provided an annual income of approximately 0.6 million Euros in 2012. The remaining 4% comes from the use of the reserve funds and other extraordinary items. The revenues breakdown for 2012 is shown in the graph below.

Breakdown of Revenues 2012



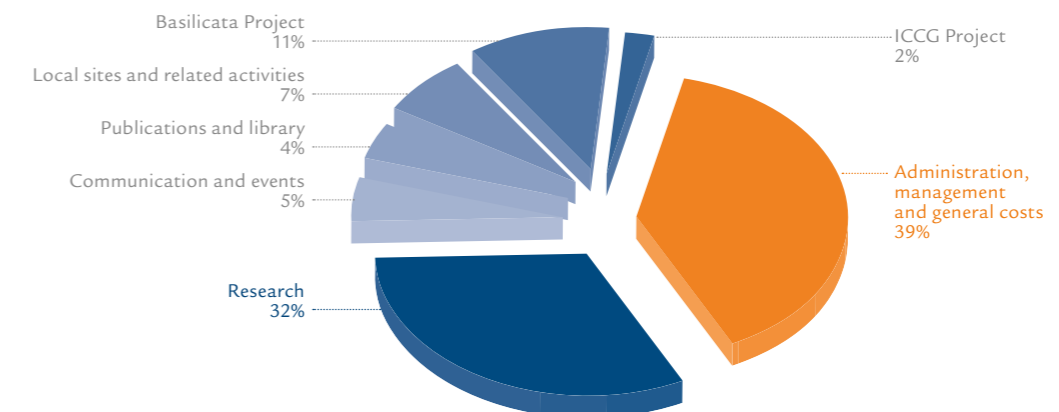
Spending

In 2012, expenditure for research projects and other institutional activities amounted to approximately 4.7 million Euros (61% of the total budget), whereas administration and management expenses amounted to 3.1 million Euros (39% of the total budget).

Although FEEM's institutional activities have significantly increased in recent years, the minimization of the fixed cost component and the flexibility of the organizational structure have allowed the allocation of the largest part of the annual spending to research and related activities, such as publications, communication, and dissemination initiatives. The increased personnel expenditure starting from 2009 is due to the implementation of an organizational restructuring plan effective from January 2009 with a two-fold effect: the consolidation in the staff of a limited number of direct employees in parallel with the minimization of contracted workforce hired for support activities.

The graph below shows the breakdown of expenditures in 2012 for administration/management (including also taxes and general costs) and for the institutional activities. The personnel expenditure has been classified accordingly.

Breakdown of Spending 2012



**Financial statement Balance sheet
(Euros)**

	31/12/2011	31/12/2012
FIXED ASSETS		
Tangible fixed assets	1,842,448	1,919,248
Intangible fixed assets	8,545,932	8,295,086
Financial assets	18,585,020	17,820,000
TOTAL FIXED ASSETS	28,973,400	28,034,334
CURRENT ASSETS		
Cash at bank and in hand	850,014	3,100,581
TOTAL CURRENT ASSETS	850,014	3,100,581
DEFERRED CHARGES	1,570,082	1,111,822
TOTAL ASSETS	31,393,496	32,246,737
	31/12/2011	31/12/2012
LIABILITIES		
Initial endowment	13,316,553	13,316,553
Grants from Founders	9,872,421	9,872,421
Studies and research fund	2,975,044	2,992,008
Surplus	86,964	102,275
TOTAL NET LIABILITIES	26,250,982	26,283,257
RESERVE FUNDS		
Investment portfolio fluctuation fund	755,453	755,453
Library fund	65,490	65,929
Reserve funds for future expenses	429,357	463,952
TOTAL RESERVE FUNDS	1,250,300	1,285,334
SEVERANCE INDEMNITY FOR PERSONNEL	144,149	200,391
DEBTS		
Suppliers	627,175	605,379
Other debts	318,438	609,259
TOTAL DEBTS	945,613	1,214,638
DEFERRED INCOME	2,802,452	3,263,117
TOTAL LIABILITIES	31,393,496	32,246,737

**Profit and Loss Account
(Euros)**

	31/12/2011	31/12/2012
REVENUES		
Income from financial assets	565,219	602,446
Rents	65,000	65,000
Contributions from Founders and eni companies	4,645,000	4,645,000
Research contributions	2,178,379	2,219,644
Other revenues	140,903	211,217
Reserves	152,561	112,509
TOTAL REVENUES	7,747,062	7,855,816
	31/12/2011	31/12/2012
EXPENSES		
Personnel	1,825,959	1,824,200
Researchers and non permanent staff	2,683,481	2,449,026
Statutory bodies	309,201	309,201
Travel expenses	629,872	619,516
Consumables	106,291	112,802
Services	1,116,560	1,071,637
Insurances	38,092	40,226
Rent and shared ownership expenses	162,213	170,688
Taxes	138,314	471,373
Reserves and devaluations	40,367	77,543
Depreciation	441,191	444,511
Other charges	168,557	162,817
TOTAL EXPENSES	7,660,098	7,753,540
Surplus	86,964	102,276

Art. 1 – Name

The “Fondazione Eni Enrico Mattei” is hereby established. The registered office of the Foundation shall be at the “Le Stelline” building complex, Corso Magenta 63, Milan.

Other branches or representative offices may be established in Italy and abroad to perform ancillary and other activities that are instrumental to promoting, developing and expanding the activities of the Foundation.

Art. 2 – Aims

The Foundation exists to contribute, through studies, research, training and information initiatives, to a broader awareness and understanding of economic, energy and environmental issues, at both local and global level.

In particular, the Foundation aims to:

- (a) carry out detailed research in the area of sustainable development, with particular emphasis on its environmental, economic and social aspects, in relation to the Italian development framework, the international context and technological innovation;
- (b) contribute with appropriate initiatives to the training of experts in the fields of interest stated in the Foundation’s bylaws;
- (c) study, particularly through international discussion and debates, issues of particular interest to the Eni Group relating to corporate governance and the planning of company research, in order to disseminate the most recent and up-to-date knowledge and guidance.

Such aims shall be pursued by the Foundation using appropriate data collection, research, training and information methods and tools, with particular regard to the corporate purposes of Eni, and also with a view to reinforcing the commitment of the Eni Group to the economic and social development of Italy.

Art. 3 – Instrumental, ancillary and associated activities

In order to achieve its aims the Foundation may also:

- (a) award prizes and scholarships;
- (b) buy and take possession of movable and immovable property, plant, equipment and materials that may be useful or necessary for the performance of its activities, and provide for their administration and management;
- (c) carry out banking and financial transactions and apply for subsidies, contributions and loans;
- (d) form companies, buy and sell investments and interests in companies or bodies, including those of a commercial nature.

The results of studies and research carried out by the Foundation shall be made available, in the first instance, to the Eni Group.

Art. 4 – Assets

The assets of the Foundation shall consist of:

- a) the contributions made by the founders, as detailed in the memorandum of association;
- b) payments from third parties;
- c) movable and immovable property allocated to assets;
- d) income allocated to increasing the assets, by resolution of the Board of Directors;
- e) investments and other interests held.

Art. 5 – Revenues

The Foundation’s revenues shall consist of:

- a) income from assets as referred to in article 4;
- b) contributions received.

Art. 6 – Management Bodies

The Management Bodies of the Foundation shall be the following:

- a) the Board of Directors;
- b) the Chairman;
- c) the Scientific Advisory Board;
- d) the Board of Auditors.

Art. 7 – The Board of Directors

The Board of Directors shall be appointed by Eni S.p.A. and consist of a minimum of 5 (five) and a maximum of 15 (fifteen) members, who shall remain in office for a period of three financial years.

The Board of Directors shall be chaired by the Chairman of the Foundation or, in his absence or impediment, by the most senior member of the Board, by age.

The term of office of board members shall expire and may be renewed when the financial statements for the third financial year are approved, provided that, by that date, the Board of Directors has been reconstituted.

In the event of a resignation from office, Eni S.p.A. shall arrange for the resigning Director to be replaced.

The mandate of a Director appointed in this way shall expire at the same time as that of the other Directors in office at the time of his appointment.

Art. 8 – Convocations and quorum

Meetings of the Board of Directors shall be called by the Chairman of the Foundation or, in his absence, by the most senior Director, by age.

The Chairman or, in his absence, the senior Director, by age, may also convene a meeting of the Board when requested in writing by a majority of the Directors.

A meeting of the Board of Directors shall be convened at least twice a year, by the end of November in order to approve the budget for the coming year and by the end of April in order to approve the final balance for the preceding year.

Convocations must be sent by registered letter sent at least 10 days prior to the date fixed for the meeting.

In case of need or emergency, the convocation may be sent by telegram or fax at least three days before the date fixed for the meeting.

The convocation must state the place, day and time of the meeting, as well as the agenda.

Meetings of the Board of Directors shall take place at the Foundation’s headquarters or at the venue stated in the convocation. Meetings may also take place by videoconferencing, provided that all participants can be identified and can follow the meeting and contribute in real time to the discussion on the matters being addressed.

If these requirements are met, the meeting of Board of Directors shall be deemed to have been held in the place where the Chairman and Secretary are physically present. Meetings of the Board of Directors shall be quorate if a majority of members are present and resolutions may be passed by a majority of those present.

The Chairman shall have the casting vote in the event of a tie. Resolutions regarding amendments to the bylaws, the transformation or closure of the Foundation, must be approved by a minimum of four fifths of the Directors in office. The validity of such resolutions shall depend on the approval of the relevant government authority being obtained.

Minutes shall be drawn up for all meetings of the Board of Directors and shall be signed by the Chairman and the Secretary.

Art. 9 – Duties and powers

The Board of Directors shall have complete powers for the ordinary and extraordinary administration of the Foundation. In particular it shall:

- a) appoint the Foundation’s Chairman from among its members;
- b) approve the annual budget and final balance;
- c) approve the annual programme of activities, in accordance with the purposes stated in the bylaws, having consulted with the Scientific Advisory Board;
- d) identify the actions to be taken in support of such programmes;
- e) appoint the Chairman and other members of the Scientific Advisory Board;
- f) appoint the Director of the Foundation and, if appropriate, a Deputy Director;
- g) if appropriate, delegate some of its powers to the Chairman, the Director of the Foundation and, if appointed, the Deputy Director;
- h) if appropriate, ask the Scientific Advisory Board to express opinions.

Art. 10 – The Chairman

The Chairman of the Foundation shall convene and chair meetings of the Board of Directors and shall be the legal representative of the Foundation.

In cases of emergency, the Chairman may take decisions that are within the remit of the Board of Directors, subject to ratification by the Board at its subsequent meeting.

The Chairman may appoint proxies to perform any administrative tasks assigned to him by the Board.

Art. 11 – The Scientific Advisory Board

The Scientific Advisory Board shall consist of a maximum of 12 (twelve) members, one of whom shall be elected Chairman, selected from among national and international scientific, academic and cultural experts, with particular attention being paid to their professional background and experience.

The Chairman and members of the Scientific Advisory Board shall remain in office for three years and may be re-elected.

The Chairman of the Foundation or a Board member specifically appointed by the Chairman of the Foundation shall attend meetings of the Scientific Advisory Board. Within the limits established by the Board of Directors, and in the context of the programmes it proposes, the Scientific Advisory Board shall:

- a) express its opinion on the annual programme of activities drawn up by the Board of Directors and ensure its implementation;

- b) make proposals for the Foundation’s research and study activities;

- c) provide considered opinions on issues submitted to it by the Board of Directors;

- d) make proposals to the Director of the Foundation regarding the appointment of individual project leaders;

- e) monitor work in progress and produce regular reports for the Board of Directors.

Meetings of the Scientific Advisory Board shall be convened by its Chairman and resolutions passed by simple majority.

Art. 12 – The Director

The Director of the Foundation shall:

- a) attend meetings of the Board of Directors and the Scientific Advisory Board in the capacity of Secretary;
- b) implement the decisions of the Board of Directors;
- c) manage and co-ordinate the activities of the Foundation, including its offices and personnel;
- d) appoint project leaders for individual research or study projects on a proposal from the Scientific Advisory Board.

Art. 13 – Financial year and reporting

The financial year shall begin on 1st January and end on 31st December of each year.

Subject to any legal obligations, no distribution of profits, management surpluses, funds or reserves shall be permitted during the life of the Foundation.

Art. 14 – The Audit Committee

The Audit Committee shall consist of three regular and two alternate members, appointed from among people enrolled in the register of auditors. Auditors shall be appointed as follows:

- a) one regular and one alternate auditor by the Minister for Economic Development, who shall also act as Chairman of the Audit Committee;
- b) the others by Eni S.p.A.

Auditors shall remain in office for a period of three financial years and may be re-elected.

Should one of the members resign, the new auditor shall be appointed by the person who appointed him. The office of the auditor thus appointed shall expire at the same time as that of the members in office at the time when he takes office.

Art. 15 – Winding-up of the Foundation

Should the Foundation be wound up, residual assets shall be donated for the public good in accordance with applicable legal provisions.

PUBLICATIONS, 2012

FEEM Working Papers “Note di lavoro”, 2012

- 1.2012_ [Valentina Bosetti, Michela Catenacci, Giulia Fiorese and Elena Verdolini: The Future Prospect of PV and CSP Solar Technologies: An Expert Elicitation Survey](#)
- 2.2012_ [Francesco Bosello, Fabio Eboli and Roberta Pierfederici: Assessing the Economic Impacts of Climate Change. An Updated CGE Point of View](#)
- 3.2012_ [Simone Borghesi, Giulio Cainelli and Massimiliano Mozzanti: Brown Sunsets and Green Dawns in the Industrial Sector: Environmental Innovations, Firm Behavior and the European Emission Trading](#)
- 4.2012_ [Sergios Athanassoglou and Valentina Bosetti and Gauthier de Maere d'Aertrycke: Ambiguous Aggregation of Expert Opinions: The Case of Optimal R&D Investment](#)
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- 10.2012_ [Nadia Ameli and Daniel M. Kammen: The Linkage Between Income Distribution and Clean Energy Investments: Addressing Financing Cost](#)
- 11.2012_ [Valentina Bosetti and Thomas Longden: Light Duty Vehicle Transportation and Global Climate Policy: The Importance of Electric Drive Vehicles](#)
- 12.2012_ [Giorgio Gualberti, Morgan Bazilian, Erik Haites and Maria da Graça Carvalho: Development Finance for Universal Energy Access](#)
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- 16.2012_ [F. Souty, T. Brunelle, P. Dumas, B. Dorin, P. Ciais and R. Crassous: The Nexus Land-Use Model, an Approach Articulating Biophysical Potentials and Economic Dynamics to Model Competition for Land-Uses](#)
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Books, 2012

- [Diversità e sviluppo sostenibile: una relazione possibile](#), by *Dino Pinelli*, *Il Mulino*
- [Morality and Corporate Governance: Firm Integrity and Spheres of Justice](#), by *Giulio Sapelli*, *Springer-Verlag Italia*

Equilibri, Rivista per lo sviluppo sostenibile, Il Mulino, 2012

- 1.2012_ [Rio + 20](#)
- 2.2012_ [Crescere diversamente](#)
- 3.2012_ [Eventi estremi](#)

Re3 - Review of Environment, Energy and Economics, 2012

- [The EU and Kyoto Protocol: Achievements and Future Challenges](#), by *Fabio Eboli and Marinella Davide*
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- [Challenge Ahead for Energy Economists](#), *Interview with Einar Hope*
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- [Rio+20: Real Progress towards Measuring Sustainable Development?](#) by *Fabio Eboli*
- [Energy Access in Rio+20](#), *Interviews with Arno Behrens, Laura Cozzi, Shonali Pachauri and Josué Tanaka*
- [Green Economy Needs a Carbon Price](#), *Interviews with Derek Eaton and Ottmar Edenhofer*
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- [FEEM Sustainability Index 2011: Methodological Approach and Main Results](#), by *Fabio Eboli*
- [How Do Lay People Perceive Climate-Change Related Risks?](#), by *Simone Cerroni*
- [Foreign Direct Investment, Multinational Enterprises and Climate Change](#), by *Francesca Sanna Randaccio*
- [The Economics of Forests in Climate Change](#), by *Annalisa Savaresi*

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Main Conferences and Workshops, 2012

International Workshop on
“Financial Speculation in the Oil Market
and the Determinants of the Oil Price”
[Milan, 12-13 January 2012](#)

International workshop on “Energy Poverty
and Access to Energy in Developing Countries”
[Venice, 12-13 March 2012](#)

3rd Annual Meeting of the LIAISE Network
of Excellence focused on Impact Assessment
[Derio \(Vizcaya\), 14-16 March 2012](#)

Presentation of the book: “C’era una volta
il prezzo del petrolio”, by Salvatore Carollo
- “Understanding Oil Prices. A Guide to What
Drives the Price of Oil in Today’s Markets”
[Milan, 20 March 2012](#)

Round Table: “Passaporto per Rio+20”
[Milan, 20 April 2012](#)

AMPERE Stakeholder’s Meeting
[Venice, 22 May 2012](#)

Pricing Water – towards an effective, efficient
and socially fair pricing schemes and financing
arrangements
[Venice, 8 June 2012](#)

2012 International Energy Workshop
[Cape Town, South Africa, 19-21 June 2012](#)

19th Annual Conference of the European
Association of Environmental and Resource
Economists (EAERE)
[Prague, Czech Republic, 27-30 June 2012](#)

FEEM Award Ceremony 2012, in cooperation
with the European Economic Association (EEA)
[Málaga, Spain, 28 August 2012](#)

12th IAEE European Energy Conference “Energy
Challenge and Environmental Sustainability”
[Venice, 9-12 September 2012](#)

14th Annual BIOECON Conference:
Resource Economics, Biodiversity
Conservation and Development
[Cambridge, England, 18-20 September 2012](#)

Water2Adapt Science Policy Event on Climate
Adaptation
[Venice, 26 September 2012](#)

Dialogue on Water Resources:
From Research To Livelihood Impacts
[Venice, 27-28 September 2012](#)

PASHMINA Final Conference:
“Are we equipped to assess the impacts
of future paradigm shifts?”
[Brussels, Belgium, 16 October 2012](#)

Climate Change and Sustainable Development
Economics - First Convention of CMCC
and FEEM Research Divisions on Climate
Change and Sustainable Development
[Venice, 22-24 October 2012](#)

1st CliMates International Summit
[Paris, France, 29 October - 2 November 2012](#)

CONNECT ME! Social inclusion, e-inclusion
and the WEB-based learning
[Milan, 22 November 2012](#)

“Accessing oil, gas and minerals in a changing
world”. Final Conference of the EU research
project POLINARES: EU policy for natural
resources
[Brussels, Belgium, 28 November 2012](#)

Policy Expert Workshop on “The Value
of Knowing Better: Assessment of losses
from natural hazards”
[Venice, 30 November 2012](#)

Regional Workshop for Central America
and Caribbean Region “Capacity Development
for Disaster Risk Reduction and Climate
Change Adaptation”
[Montego Bay, Jamaica, 3-5 December 2012](#)

FEEM-Ca’ Foscari University of Venice joint
UNFCCC side event on “The cost of climate
change adaptation: new findings, old gaps
and policy implications”
[Doha, Qatar, 5 December 2012](#)

Brainstorming Workshop on “New Challenges
and Opportunities for European Gas Markets”
[Milan, 13-14 December 2012](#)

Lectures, 2012

ICCG-Ca’Foscari Lecture by David Buckland,
Cape Farewell, UK:
“Climate is culture: where science meets art”
[Venice, 17 May 2012](#)

FEEM Lecture by Bahattin Buyuksahin,
International Energy Agency:
“The Price of Oil: Fundamentals vs Speculation
and Data vs Politics”
[Milan, 26 July 2012](#)

ICCG Lecture by Bruno Latour, Sciences Po
Paris, France: “What does it mean to bring
the fate of the Earth into daily politics?”
[Venice, 14 September 2012](#)

Seminars, 2012

The Validity of Subjective Risk Estimates
Elicited Via the Exchangeability Method:
An Experimental Investigation on the Presence
of Pesticide Residues in Apples
[Milan, 12 January 2012](#)

Envy in Othello: can effort explain such a tragic
issue?
[Milan, 17 January 2012](#)

Coping with Flood Risk by Improving
Adaptation Strategies: Integrating Scientific
and Local Knowledge, Enabling Stakeholder
Participation
[Venice, 19 January 2012](#)

Beyond GDP: Modelling Labour Supply
as a ‘Free Time’ Trade-Off in a Multiregional
Optimal Growth Model
[Milan, 26 January 2012](#)

Challenges of Integrating Renewable Electricity
Generation into Markets and Grids - the Case
of Germany
[Milan, 2 February 2012](#)

The Design of Robust Water Entitlement
and Allocation Systems: Lessons, Observations
and Recommendations from Australia
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Future Dynamics of Irrigation Water Demand
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Watershed under the Pressure of Climate
Change
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Regret Minimization and Utility Maximization:
The Approach and Four Case Studies
[Milan, 13 February 2012](#)

Modeling Ambiguity in Expert Elicitation
Surveys: Theory and Application to Solar
Technology R&D
[Milan, 16 February 2012](#)

Meta-Analysis of International Coral reef:
A Revisit to Recreational Values
[Milan, 23 February 2012](#)

What’s the weather today? It’s smiling with
some improvements over the weekend
[Milan, 1 March 2012](#)

The Landscape of Climate Finance
[Venice, 7 March 2012](#)

Homophily and Identity Bias in Social
Networks: Experimental Evidence
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Improving Land-Use Modelling in ICES to Assess Forest-Based Mitigation Potential and Costs
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The Demand for Energy of Italian Households
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Determinants of Renewable Energy Innovation: Environmental Policies vs. Market Regulation
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Domestic Politics and the Formation of International Environmental Agreements
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Innovation and Productivity
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Environmental Policy and Directed Technological Change: Evidence from the European Carbon Market
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Migration, Cultural Diversity and Innovation: A European Perspective
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Regime Shifts and Uncertainty in Pollution Control
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International Cooperation in R&D to Reduce Emissions: The Role of Spillovers and Absorptive Capacity
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The Equivalence of Strict Liability and Negligence Rule: A “Trompe l’oeil” Perspective
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Mapping Vulnerability and Exposure to Climate Change for Coral Reef Communities
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Long-Term Economic Growth and Environmental Pressure: Reference Scenarios for Future Global Projections
[Venice, 23 May 2012](#)

Adapting Cities to Climate Change: Challenges for Urban Policy Innovation
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Nuclear Power After Fukushima: Where is it Heading?
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Taxing Emissions Trading
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Tracking Emissions and Mitigation Actions
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Global Sensitivity Analysis and the Economics of Climate Change
[Milan, 21 June 2012](#)

Turning Down the Heat: Water Supply and Sanitation Service in Italy in the Aftermath of the Abrogative Referendum in 2011
[Venice, 28 June 2012](#)

El Niño and Mexican Children: Medium-Term Effects of Early-Life Weather Shocks on Cognitive and Health Outcomes
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Distributional Effects of Carbon Pricing in Ireland: A CGE Approach Using GTAP
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MEETmeTONIGHT - 2012 Researchers' Night
[Milan, 28 September 2012](#)

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[Venice, Padua, Verona, 28 September 2012](#)

Eating Behavior and Social Interactions from Adolescence to Adulthood
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The Cost of Abating CO₂ emissions by Renewable Energy Incentives
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Can Dispersed Biomass Processing Protect the Environment and Cover the Bottom Line for Biofuel?
[Milan, 18 October 2012](#)

International Technology Spillover and Developing Country Carbon Emissions
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Fifty years after his death, FEEM commemorates Enrico Mattei
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Impacts of Natural Disasters on a Dynamic Economy
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[Venice, 22 November 2012](#)

Technological Standardization, Endogenous Productivity and Transitory Dynamics
[Milan, 29 November 2012](#)

Think Forward Film Festival
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End-Use Residential Energy Demand: a MDCEV-GEV Model for the Joint Estimation of Perfect and Imperfect Substitute Goods
[Milan, 6 December 2012](#)

Fuel Prices, Emission Standards and Generation Costs for Coal vs. Natural Gas Power Plants
[Milan, 12 December 2012](#)

Implementation of a full air quality model in an integrated assessment model: the LEAQ model
[Milan, 13 December 2012](#)

Domestic Politics and the Formation of International Environmental Agreements
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Summer Schools and training conferences, 2012

European Summer School on Management of International Water
[Venice, 1 July 2012 - 7 July 2012](#)

Belpasso International Summer School on Environmental and Resource Economics: Sustainable Development: theory and measurement methods
[Belpasso, Sicily, 2 September 2012 - 8 September 2012](#)

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