

A Renewed Commitment on
Sustainable Development

Communication Of Engagement

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Our renewed commitment on Sustainable Development

In recent years, the centrality of sustainable development has been increasingly established. The most significant event is represented by the approval of the new Agenda for Sustainable Development, "Transforming our World: The 2030 Agenda for Sustainable Development", which has redefined, with a transversal and integrated approach, the global goals aimed to meet the challenges of the coming three decades. The Agenda is a global pact to "leave no one behind" and calls upon all organizations – public, private, profit and non-profit – and civil society to become partners along the path to achieve common goals.

Fondazione Eni Enrico Mattei (FEEM) is a leading institution in the field of research on a wide range of environmental, energy and economic issues at both local and global levels. As such, FEEM is aware of its important role in the promotion and implementation of the Ten Principles of the UN Global Compact and the 2030 Agenda, which are areas of primary concern of FEEM activities and research that are aimed at developing and implementing tools for achieving the Sustainable Development Goals (SDGs).

Thanks to the interdisciplinarity of its research, the attention devoted to integrated themes and approaches, collaborations and networks, FEEM can give a key contribution to the promotion of a sustainable future by developing theoretical and applied research projects, disseminating knowledge and supporting the key players of sustainable development.

FEEM's Code of Conduct commits the organization to act in line with UNGC Principles, encourages sustainable behavior from an environmental and social point of view, promotes the responsible use of natural resources in daily activities (**Principles 7, 8 and 9**) and underlines the importance of human relationships (**Principles from 1 to 6**). Furthermore, the Code rejects corruption and lack of transparency by implementing the tools to counter them (**Principle 10**). In 2015, FEEM adopted a new "Organisational, Management and Control Model" pursuant to Italian Legislative Decree 231/2001 including a new Surveillance Body, which monitors the functioning, effectiveness and compliance to the Model. The "Organisational, Management and Control Model" was updated in 2021. Furthermore, since 2019 FEEM adopted a whistleblowing directive.

In order to bring about a pervasive change, FEEM is constantly involved in networking activities to enhance the skills of its researchers and to reach out to all policy levels. For this purpose, FEEM is the national office and hosting institution of several major international networks in the field of sustainable development, including the **Global Compact Italian Network** Foundation (GCNI) and the **Sustainable Development**

Solutions Network (SDSN Italy), an initiative that aims at contextualizing the 2030 Agenda into the local Italian reality.

Following the above considerations, FEEM's participation in the Global Compact (GC) represents the opportunity of pursuing action at both the national and international level. The alignment of goals between the GC and FEEM is a very important lever of sustainable development in the global change path. For this reason, **the Foundation renews its commitment to the initiative of the UN Global Compact and its Ten Principles in order to promote a more sustainable culture able to support a responsible and inclusive global growth.**

Research activities

FEEM's is a leading international institute providing cross-cutting rigorous analysis on Economy, Energy and Environment at a global and local scale. We carry out independent high-quality research, with the mission of addressing the world's greatest challenges to foster a widespread understanding of global issues among stakeholders and to contribute to policy engagement.

FEEM has conducted high-level research on sustainable development since its origin, emphasising different issues that cover both the economic development and climate change, and focusing on solution initiatives enabling the achievement of the 2030 Agenda.

This focus has allowed FEEM to establish itself, throughout the years, as an internationally recognized research center and a think tank with a solid reputation for policy advocacy activities. This position has become increasingly consolidated thanks to FEEM's active participation in the most important international key-events dedicated to the 2030 Agenda and sustainable development issues (such as the T20, think tank for the G20, the HLPF, the UN General Assembly, the ICSD, COPs, etc.).

To better align FEEM's core activities with the new directions of international research on sustainability, and to respond to its stakeholders' requirements and to the new challenges that the world is facing, in 2021 FEEM has renewed and reorganized its research programmes.

In recent years attention has mounted among applied economists on monitoring the behavior and the interconnections between key energy variables, indicators of climate change, the macroeconomy, commodities and financial markets. For that reasons, the **Econometrics of the Energy Transition program**, that promotes research aimed at modelling and forecasting fundamental energy variables and their interrelations with climate and financial indicators, commodity markets and macroeconomic aggregates,

where the common denominator is the use of advanced econometric techniques. The research programme *Econometrics of the Energy Transition* develops along three, intertwined research lines, namely:

- Climate econometrics;
- Energy finance econometrics;
- Oil market econometrics.

The research programme **Labour in the Low-carbon Transition** studies topics related to the effect of climate policies, green subsidies and broad green deal plans on the structure of the economy. The particular focus on labour market effects across workers with different skills and qualifications is the entry point of the research agenda conducted within this programme. The concept of skills is crucial to understand both the distributional effects of climate policies and the building up of a comparative advantage in key sectors, such as renewable energy generation, electric vehicles and storage technologies. The programme will be organized in four projects.

The first project explores the structural features of the low-carbon transition: the skill content of green and brown jobs, the relationship between job creation and green productions and other structural aspects of the low-carbon transition related to innovation, comparative advantage, emission and productivity dynamics.

The second project examines the effect of several policies on the employment dynamics of workers with different skills, considering both the winners and the losers in the labour market and the effect of policies on wages and profits. A related objective of this project is to examine the effect of deindustrialization in European local labour markets, with a particular focus on displaced workers in carbon-intensive industries.

The third project is on the political-economy of the low-carbon transition. It will seek to understand the extent to which distributional effects along several dimensions affect the formation of political preferences for green policies as well as the role of low-carbon and fossil fuel lobbies in shaping the political process at the European level.

The fourth project builds a disequilibrium model to assess the transitional costs associated with the reallocation of workers from high- to low-carbon jobs. The idea is to construct a theoretical framework to quantify the transitional costs of the low-carbon transition, the role of distributional effects and of emerging political resistances on the outcomes of transition towards a low-carbon economy.

The **2030 Agenda and Sustainable Development research program** aims at supporting the new strategic direction of sustainable development defined by the UN on September 15, 2015, by developing innovative research tools to interpret and manage the complexity that characterizes the current socio-economic system. The pursuit of this objective requires an overview of the situation and an integrated thinking approach to link Fondazione Eni Enrico Mattei's projects to the global context; the development of assessment tools and models to implement sustainable development at international, national and local levels; the creation of stakeholder networks to stimulate debate in scientific and public spheres and to support policy-makers in their respective choices.

To pursue these goals, the program collaborates with public and private bodies and research centres for the analysis and development of tools enabling the implementation of the UN Agenda, and with the communities through initiatives to raise awareness on issues related to sustainable development.

The 2030 Agenda is made by three sub-programs.

The first sub-program is entitled "Policies and Sustainable Development", and it produces analyses useful for the 2030 Agenda localization at the local and national scales, in order to increase the awareness of civil society concerning sustainability-related topics. At the same time, the project will utilize the developed models and implemented research to support different actors, whether they are public or private policy-makers, in the definition of socio-economic and environmental policies to be adopted in their respective territories.

The second, entitled "SDGs' Interconnections", has seen the development of an accurate literature review concerning existing indicators and index-building processes for sustainable development, with the consequent identification of quantitative methods of analysis on the topic of SDGs' interconnections. Within the project, an appropriate quantitative methodology will be selected, to be applied initially to in-house data, which could finally lead to the creation of ad hoc innovative methods and models in order to capture synergies and trade-offs existing among the Sustainable Development Goals.

The third sub-program, "Solutions and Tools for Sustainability", aims at the elaboration of ideas and tools to promote the 2030 Agenda, able not only to disseminate the culture of sustainable development and to increase the awareness of institutions and civil society in terms of nowadays challenges, but also and mainly to support at empirical and practical level public and private bodies towards the achievement of the Sustainable Development Goals.

The **Modelling the Energy Transition** program is a research program aimed at studying the energy transition in dynamic settings and under uncertainty by developing economic models with both a micro and macro approach. Within the programme, different types of models are studied, with the aim of exploring how different methodological approaches can have different impacts and solutions while studying environmental and energy economics.

The activities of the MET programme concern two specific area:

- ABM – Agent Based Model and
- EEUMs – Environment, Energy, Uncertainty Models.

ABM – Agent Based Model for Energy Transition

The activities in this area aim to develop Agent Based Models on multiple sectors, with a special focus on energy sectors and their environmental impacts. Using Agent Based Models allows to grasp the heterogeneity of the economic agents at sectoral level, with the goal of providing new perspectives and insights to the economic research. In 2022 the program intends to consolidate the development of the MATRIX (Multi-Agent model for Transition Risks) model by including a specific module for climate change, mitigation policies and environmental awareness of households and consumers (demand-side approach). The agents' heterogeneity of the AB Model represents the building block of the economic processes' dynamics and makes it possible to study at best the endogenous shocks of such processes.

EEUMs – Environment, Energy, Uncertainty Models

The activities in this area aim to deepen the issue of uncertainty within the framework of environmental and energy economics, with a focus on renewable resources, the use of new technologies and the role of information for the decarbonization process. To this end, models based on the representative agent, strategic models and macroeconomic models will be used for an analysis of the dynamics of the traditional and renewable energy markets. The analysis is also focused on the study of systemic and idiosyncratic shocks at economic and environmental level and on the role of information in energy market phenomena.

The Technologies for the Energy Transition research programme aims at analyzing the social and economic aspects of technological innovation in the energy sector.

Energy transition is the most pressing priority of our time: only a fully carbon-free energy sector can underpin long-term inclusive growth and resilient societies. A successful transition requires a rapid deployment of new technologies, which, unfortunately, is not within reach. According to the latest IEA's Sustainable Development Scenario, almost 35%

of the cumulative emissions reductions by 2070 hinge on technologies that are currently at large prototype or demonstration phase, and around 40% on technologies that are not yet commercially deployed at a large scale. The contribution of technologies at large prototype or demonstration stage to emissions reductions are even higher in heavy industry and long-distance transport, where not commercially available and scalable options for achieving deep emissions reductions exist today. Hence, this decade requires innovative thinking and smart policies to speed-up the deployment of new energy technologies. In the end the trajectory of the energy transition will be determined by:

1. How the cost and technical performances of competing technologies evolve through innovation;
2. How policy makers will regulate and support innovation;
3. How consumers will change their preferences and consumption patterns.

The program is based on three activities:

- Analysis of national hydrogen strategies – NAHyS: The project aims at determining the internal coherence of each national strategies and their level of comparability in terms of ambitions, targets, costs, and policies. The project will provide a final and comprehensive comparison tool;
- Modelling energy transition in the Italian electricity and gas system – ITET: the project, taking advantage of the Plexos simulation software, will develop scenarios of decarbonization and transition of the Italian electrical and gas system, quantifying the economic and social impacts for the various stakeholders;
- Stochastic cost-benefit analysis for the energy transition – Stoc-CBA: the energy transition requires the management and mitigation of important risks, typical of the innovative process, on the one hand, and the construction of large infrastructures on the other. The project aims to develop an innovative cost-benefit analysis that will make it possible to better assess the risks and their economic consequences, defining a process of optimal allocation of public resources based on more effective indicators, such as the economic value at risk.

Climate Change Adaptation program, that aims to deepen the understanding of adaptation mechanisms, focusing in particular on the development of innovative integrated modelling tools, especially at the micro level.

The rationale stands in the fact that problems deriving from present and future impacts of climate change have increasing relevance for global societies and economies. Much has been done for mitigation, in terms of research and policies, with the aim of limiting emissions and controlling the dynamics of global warming and its consequences in terms of direct and indirect impacts. Historically, less attention has been dedicated to

adaptation, i.e. to the set of measures and actions needed immediately and in the future to limit the impacts that already act on natural and socio-economic systems.

Being based in Venice, the programme starts from local adaptation issues, mainly linked to the prospect of the progressive rise of the average sea level, and then broadens the view towards similar situations at international level, to consolidate the development of methods and tools that may have general validity and broad application potential.

FEEM People

People and intellectual capital are FEEM's key resources. It is through the work of FEEM researchers and staff that FEEM disseminates knowledge and awareness of sustainable development.

FEEM works with institutions to support the economic and social fabric of our Country (Principles from 1 to 6 and SDG 8).

In 2021 there were 96 people working at FEEM, 66% of them were researchers. Rejecting any kind of discrimination, the gender audit yields a balanced mix in the organization: the 45% of FEEM people were women in 2021. The average age in 2021 shows that FEEM is a relatively "young" organization: about 40 years.

FEEM pursues flexibility in its organization structure. FEEM stimulates its people to achieve personal goals and supports them in developing improved capacities.

Communication and dissemination

Communication activities are a strategic tool for the disclosure and dissemination of research themes and results. FEEM is globally recognized for its publications – among which working papers occupy a prominent position – and, at national level, for the organization of events on issues of sustainable development in support of policy-making, the private sector and informed public.

FEEM has published 2,867 Working Papers (WP) since 1993, along with 68 Policy Briefs since 2009 and 30 Reports since 2017. Regarding dissemination activities to a wider audience other than academic Books, FEEM has published the four-monthly journal on sustainable development, *Equilibri*, in collaboration with the university press *Il Mulino* since 1997. This journal has been recently converted into a digital magazine called *Equilibri Magazine* which collects FEEM's voices and comments on sustainable development. Moreover, FEEM

launched in 2017 the Percorsi Series which publishes research projects on local and national issues.

The organization of events has always been a strategic activity for positioning the Foundation in the national and international debate, for disseminating the research outputs related to sustainable development and for developing the network and involving FEEM's target audiences: policy makers, academia and scientific community, enterprises, institutions and the wider public. In 2021 FEEM organized 65 events: 41 webinars and seminars, 12 education & training activities, 8 conferences and other events. Finally, FEEM has always been engaged in the organization of educational events for young people, particularly in training and developing the ideas coming from national and international talents. Training and support for scientific careers is achieved through the active participation (with both "incoming" and "outbound" researchers) to Marie Curie individual fellowship programs, but also through internships and through the organization of Schools of high scientific value, such as the School on Spatial Analysis and Policy Evaluation, the Fall School "Souths of the World", the Summer School on Urban Wealth and Wellbeing and the "Dynamic and Spatial Modelling for Environmental Economics" in partnership with IAERE (Italian Association of Environmental and Resources).

Policy advocacy and partnerships

FEEM regularly maintains and develops interactions with the academic and research world – essential link to ensure research quality and scientific rigor – and renews the dialogue with the private sector, including Eni, public institutions and civil society, thanks to an intense networking activity (**SDG 17**).

FEEM supports public institutions through policy advocacy activities aimed at raising awareness on key issues of sustainable development and based on the results and on the scientific rigor of the research produced. With the business world, FEEM collaborates for creating sustainable value, supporting the private sector in the identification of the actions and tools needed to strengthen, monitor and report its contribution to sustainable development.

Finally, the Foundation actively involves civil society in the debate on the main international issues by organizing public events, involving some of the leading world experts, and training initiatives on FEEM research themes, and in particular on climate change, energy and social innovation.

Support to policy making at national and local level

At the national level, FEEM has contributed to policy making through a constant relationship with the Ministries. Moreover, FEEM actively participated in preliminary discussions and debates around the regionalization of the SDGs, creating and supporting institutional networks to spark a dialogue on the Agenda 2030 at the local level and participating in meetings with national and international working groups on the topic.

Finally, at local level, FEEM has supported the policy making process through a strict collaboration with local institutions for the sustainable development of the local territory (**SDGs 8 and 12, Principles 3, 4, 5, 6**). In particular, FEEM has a regional office in the Basilicata region since 2007 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.

Fondazione Eni Enrico Mattei is the hosting institution of the Sustainable Development Solutions Network (SDSN) Italia, which is part of the UN Sustainable Development Solutions Network (UN SDSN), and participates in the working groups of the National Forum for Sustainable Development (MEIT).

Networking

In order to promote knowledge and awareness and SDGs implications across the different components of Italian society, FEEM is constantly involved in research and dissemination activities that promote the understanding of the implications and opportunities arising from the 2030 Agenda for the different actors in order to stimulate the construction of a strategic framework for the implementation and monitoring of sustainable development (**SDG 17**).

Since 2015 FEEM hosts **SDSN Italia**: the network has the goal of promoting SDGs in Italy by developing activities and projects consistent with international programs led by SDSN, particularly in the fields of education, test and collection of innovative practices on the various topics covered by 2030 Agenda, dissemination of solutions and tools developed in the academic, business and public organizations worlds. SDSN Italia also aims to promote dialogue between national, regional and global initiatives for the SDGs, through the dissemination of international excellence in Italy, but also through the international promotion of the experiences conducted by companies and organizations in our country. The Italian hub of the network also aims to foster dialogue among the subjects that wish

to carry out concrete projects with a high impact on common objectives, favoring a positive relationship between academia and the private sector in the context of a coherent strategy for Italy. With the aim of concretizing the 2030 Agenda within the national context, in 2017 FEEM, in collaboration with SDSN Italia started developing *ad hoc* tools for the public administration, to link its activities to the Agenda 2030.

FEEM can ensure the creation of useful synergies between the two networks, in particular to support the contribution of Italian companies to SDGs, also as a founding member and as the Italian office of the **Global Compact Network Italia** Foundation (GCNI) since 2013, to raise awareness of the importance of the 2030 Agenda in Italian economic entities, institutions and society.

Following the development of multi-stakeholder partnerships for sustainable development as a key means of implementation recognized by the United Nations to effectively achieve the Goals, FEEM has strongly promoted an alliance between Global Compact Network Italia and SDSN Italia with the aim to raise awareness of all institutional, economic and social actors on the national territory for promoting actions that contribute to an effective achievement of Sustainable Development Goals.

Thanks to this network of partnerships, as well as to research and dissemination activities, FEEM contributes to the concrete implementation of the 10 Principles of the Global Compact and, in particular, to the realization of the implementation strategy of the Sustainable Development Goals.