FONDAZIONE ENI ENRICO MATTEI

FEEM NEW VISION

Perugia November 22, 2018

Fondazione Eni Enrico Mattei

FEEM: New Vision, New Approach to Research Activities

FEEM is an international research center that communicates with **institutions** and **public decision makers**, **universities** and **research centers**, with **Eni** and the **corporate world**, **to tackle the challenges of global change.**

2019 – 2021 Aims

- pursuing **new** and **frontier research topics**, assuming the traditional **climate change** topic as **one of the key variables** of FEEM activities
- resuming the **capacity to communicate with the broader public**
- becoming an increasingly **corporate research foundation**
- having a greater focus on the **local dimension**
- establishing FEEM as **focal point of a broad network of different competences, skills** and **experiences**

A frontier Think Tank

- forecasting and preempting topics and **trends** to understand contemporary complexity
- advancing knowledge – or producing **disruptive** knowledge – for the scientific community

Interdisciplinary research and real-world applications

- activities with a **broad** and **interdisciplinary** vision and new approaches
- **cross-fertilization** across different research areas
- general scenarios ➡ thematic focuses ➡ **field applications**

A Corporate Foundation that stands by Eni

- **synergic strategies**
- **complementary expertise** to the Founder's activities
- **applied research** on the territories where Eni operates

Fondazione Eni Enrico Mattei

A New World, New Frontiers of Research

Climate Change

- a universally acknowledged reality
- fine tuning: from the models to the impacts/solutions
- role of technology

FEEM

THE FUTURE, EXPLAINED

Global Governance

- changes in the paradigm
- need of new interpretive tools
- policies, systems, people

REP

FEP

FACTS

- **Decarbonization** of the energy systems
- Universal **access** to energy
- **Geopolitics** of energy
- New regulatory **policies**
- Energy transition in **cities**
- Role of financial markets and **firms**
- New paradigms of **sustainable development**

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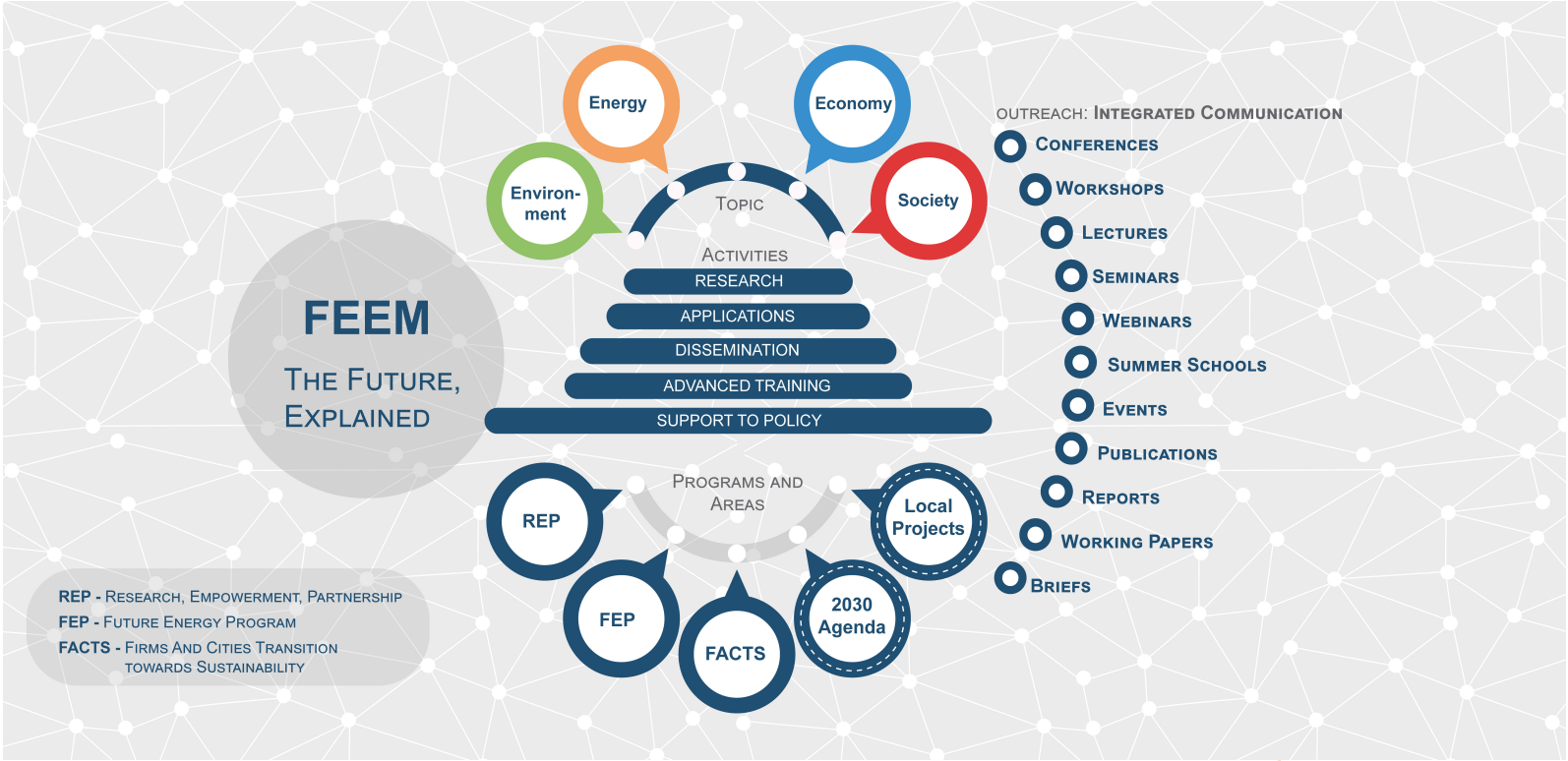
FEEM 2019 NEW VISION. *The Future, Explained*



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2030 Agenda – Integrating the SDGs: Sustainable Food Chain Project

NEW innovative project that cuts across FEEM's Research Programs with a specific focus on SDGs 2 and 12. The project will draw on research, dissemination and local activities.

FRAMEWORK

A number of issues threaten **food chain sustainability** in the near future:

- the world population will hit **9.6 billions by the mid 2050s**
- the global energy and water demand will rise by 80% and 55%, respectively, by 2050 (OECD)
- **food production** will have to **increase by 60% by 2050** (FAO)
- the impact of **climate change** (CO_2) on the **quality** and **nutritional properties** of crops needs to be investigated
- trade **globalization** ensures **availability** of all types of food regardless of the season with a **huge** and **non diversifiable energy cost** for transport

AIMS

- To investigate the two frontier topics connected to Food Value:
  - **Carbon footprint**
  - the **Nutritional Impoverishment/Land Use** nexus

2 ZERO HUNGER

12 RESPONSIBLE CONSUMPTION AND PRODUCTION

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2030 Agenda – Integrating the SDGs: Sustainable Food Chain Project

POSSIBILE ACTIVITIES

- analysis and identification of **field crops** capable of adapting to **climate change**, in particular to the elevated atmospheric concentrations of CO_2
- identification of **guidelines** for product tracking and related **carbon footprint** (food miles), with the Trade Impact Index (TII)
- **publication** of the TII in a **scientific journal**, agreement with UN COMTRADE for the access to trade and production chain data
- development of a user-friendly (App, web solution) **platform** to look up the quantitative forecasting models and **sustainability analysis** of the agrifood chain
- studies linked to nutrition, kick-off conference to disseminate knowledge on and raise awareness of **food sustainability,** use of new communication means and **innovative technologies** (food computer)
- possible installation of a food computer **prototype** in FEEM
- **comparative** analyses of food production costs/benefits in **food computer** versus conventional **agrifood chain** (carbon impact, agricultural yield)
- **socio-economic sustainability** and **impacts** generated by using the **food computer** in the **agrifood chain**
- analysis of trade-off between **sustainability** of **low-carbon diets** and **cultural acceptance**
- development of a **circular economy** model for **food** focused on energy diversification and overall environmental cost
- development of **multidisciplinary analyses** to collect the results of field experiments, new technologies and elaboration of guidelines for a circular economy

NETWORKING

MIT, CNR, ENEA, FAO, Universities (e.g. UniBo, UniBas, Faculty of Agriculture UniMI, UniMib, UniPg), Ministry of Agricultural Policies, Local Authorities (Regions, Municipalities), Council for Agricultural Research (CRA), ALSIA, schools, farmers, Trade Associations (Coldiretti, Confederazione Italiana Agricoltori)

PARTNERSHIPS

High involvement potential of private food companies (e.g. Barilla, Slow Food, Eataly)

New Proposal: DigIT

Partnership: Politecnico di Milano (Polytechnic University of Milan)

AIM

- to launch a joint FEEM - Politecnico di Milano initiative on **Technology Foresight** to assess and understand the state-of-the-art of **scientific** and **technological** frontiers that can radically change society

ACTIVITIES

- **preliminary mapping** of **international interdisciplinary research** initiatives
- **focus** on the medium-long term **technological development** aimed at achieving economic, environmental and social sustainability with the needs of **People** at its core;
- **development of scouting skills** and forecasting future technological **scenarios**
- engagement of additional **institutional actors**