



## Eni and CNR partner for sustainable development and practical research in Italy

A long-standing joint project is underway to build four research centres of excellence in southern Italy and to promote sustainable environmental and economic development in Italy and the wider world

*Lecce, 24 March 2019* –Massimo Inguscio, President of the Italian National Research Council (CNR), and Claudio Descalzi, Eni CEO, following their meeting held last May, signed today a Joint Research Agreement (JRA), to set up four linked research centres in southern Italy. Also, in attendance were Prime Minister Giuseppe Conte, Minister for Southern Italy Barbara Lezzi and the President of the Apulia Region, Michele Emiliano. At the operational and research centres, lab researchers will work in four key areas, all crucial to the decarbonization of the energy sector, sustainable growth, promoting the circular economy and bioeconomy, innovative and sustainable water systems and agricultural techniques. The four key areas are:

- Arctic climate change, in Lecce;
- Magnetic confinement for the creation of clean fusion energy, in Gela;
- Sustainable and innovative management of the water cycle, in Basilicata;
- Agricultural methods with lower CO<sub>2</sub> emissions, in Portici.

All the centres will have laboratories dedicated to these research projects. The objectives, activities and resources will be defined and agreed upon by Eni and CNR.

The joint research conducted by the Eni-CNR laboratory at the CNR Nanotec Institute in Lecce is dedicated to analysing and quantifying climate processes linked to the destabilisation of the Arctic cryosphere, in particular the permafrost and the effects of it melting into the Arctic Ocean. These processes are extremely significant. They could increase the current rate of global warming and reduce environmental quality. Eni and CNR's joint effort has led to the first Italian laboratory for the integrated study of the Arctic

cryosphere. It will take measurements in the field, make satellite observations and use numerical modelling.

The Ettore Maiorana Eni-CNR centre for fusion energy in Gela will carry out cutting-edge research on the properties of plasma, superconducting magnets and power plants that exploit the material properties and advantages of fusion. The centre will work on methods for transporting and storing electric power, communicating with other CNR centres already working in Sicily in these fields. The Eni-CNR joint project will also develop technological skills and knowledge of innovative techniques and validation methods for fusion energy. It will do so by leveraging Eni's expertise at the CNR research centres of excellence.

The Acqua Eni-CNR centre in Metaponto will develop scientific knowledge and promote innovative solutions and technologies for using water more productively and efficiently in agriculture, as well as mitigating the growing impact of drought in the Mediterranean and other strategic areas like the Horn of Africa, the Sahel and the Middle East.

Projects aimed at promoting the circular economy will be carried out as part of CNR's agricultural research in Portici. They will specifically involve studying decarbonization efforts in the agricultural industry, as well as how biomass waste can be used as a raw material for producing biofuels in Eni's bio-refineries. At the same time, there will be studies and projects to increase the development of sustainable agriculture that uses land for a variety of purposes and involves planting a wider range of crops. These methods support the bioeconomy, in keeping with the UN's Sustainable Development Goals and EU research programmes on the bioeconomy and agri-food.

Eni CEO, Claudio Descalzi, comments: "This collaboration with CNR is part of Eni's strategy of close cooperation with Italy's excellent research institutions. Weare proud to have nine active strategic agreements with some of the country's top universities and research bodies and to have invested over 67 million euros, demonstrating our commitment to the field of research and development."

CNR President, Massimo Inguscio, says: "The agreement between Eni and CNR is a unique example of a partnership between a major company and Italy's most important research body in terms of numbers of researchers, patents and ERC prizes. It will allow us to create synergy between the mutual skills in the joint laboratories in Italy. This partnership will produce innovations in research and technology on an industrial scale in the south, to the benefit of all of Italy and world wild. CNR and Eni researchers will work

together on the four key areas relating to decarbonization in the energy sector, promoting the circular economy and bioeceonomy, and supporting more efficient water systems and innovative agricultural techniques. This is in keeping with the key Sustainable Development Goals outlined in the UN's 2030 Agenda. At the same time, it will also promote solutions for and help mitigate the growing impact of drought in the Mediterranean and strategic areas like the Horn of Africa, the Sahel and the Middle East."

## **Company Contacts:**

Press Office: Tel. +39.0252031875 - +39.0659822030 Free phone for shareholders (from Italy): 800940924 Free phone for shareholders (from abroad): + 80011223456 Switchboard: +39-0659821

ufficio.stampa@eni.com segreteriasocietaria.azionisti@eni.com investor.relations@eni.com Web site: www.eni.com

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Press Office CNR - Consiglio Nazionale delle Ricerche tel. 06/49933383 cell. 333/2796719 fax 06/49933074 e-mail ufficio-stampa@cnr.it web site: www.cnr.it www.almanacco.cnr.it www.cnrweb.tv

