

AGENCE NATIONALE DE LA RECHERCHE

# ANR AND SOIL

## SOIL RESOURCES AT THE CENTRE OF A WEB OF CONFLICTING ISSUES

Soil is the foundation of all human activities, particularly agriculture. But there is a growing need among today's industrial, energy, urban and mining sectors for more space and more primary resources such as water, materials, mineral resources and energy. This places soil resources at the centre of a web of often conflicting issues. International competition has given rise to a host of questions in this area, primarily relating to soil governance and competition for land use but also concerning the potential retroactive effects on climate regulation owing to the key role of soil in the water cycle and in the storage of organic matter, especially carbon.

## RESEARCH SUPPORTED BY ANR

Since it was set up in 2005, the French National Research Agency (ANR) has supported research into these issues by launching several thematic calls for proposals ("Ecosystems, Territories, Living Resources and Agriculture", "Vulnerability: Environments, Climate and Societies", "Global Environmental Changes and Societies", "Contaminants and Environments", "EcoTechnologies", "Adaptation: From Genes to Populations", "Transdisciplinary Studies on the Future of the Mediterranean") and other non-thematic calls. ANR has funded around a **hundred projects**, representing a total sum of nearly **€50 million**. These projects have mainly focused on the **environmental services** that the soil provides:

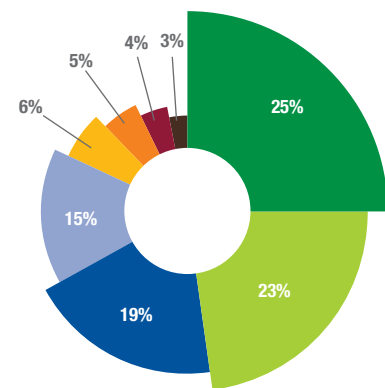
- ▶ climate regulation through carbon sequestration,
- ▶ water cycle regulation,
- ▶ availability and management of nutrients for agricultural and forestry production,
- ▶ role in maintaining biodiversity, particularly microbial diversity.

Some projects have also looked at the threats to these services as a result of land pressure or interactions with the climate system: the physical deterioration of soil through subsidence, erosion or soil sealing, and contamination from point source or diffuse pollution.

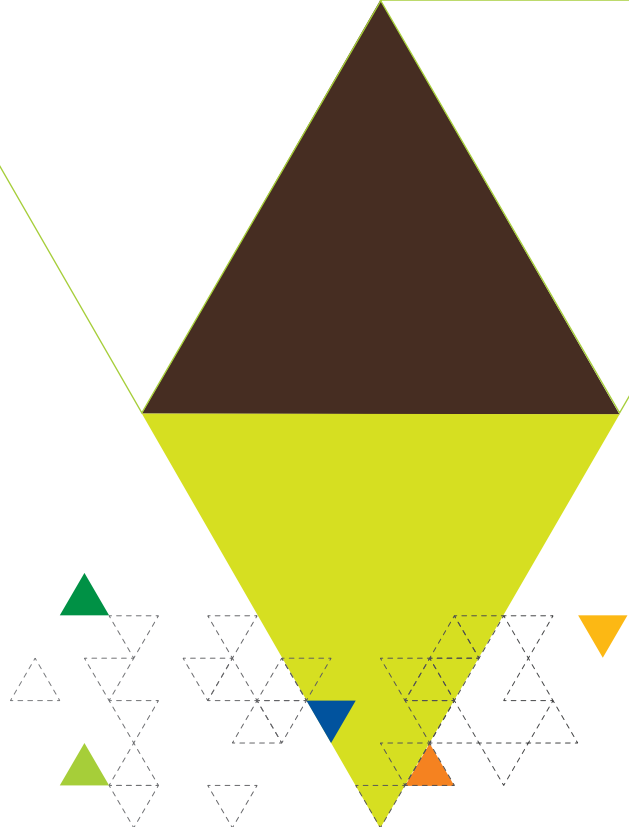
Since 2014, these thematic areas have been covered by Challenges 1 (Efficient resource management and adaptation to climate change), 3 (Industrial renewal) and 5 (Food security and demographic challenges) in ANR's Work Programme.

MORE THAN  
**430 RESEARCH  
TEAMS**  
SUPPORTED

### FUNDING AWARDED FROM 2005 TO 2014 FOR SOIL RESEARCH, BY THEME



- Soil and the water cycle **€12.3 M**
- Contaminated soil **€11.5 M**
- Biodiversity/soil ecosystem **€9.5 M**
- Biogeochemical processes **€7.2 M**
- Carbon sequestration/GHG **€2.7 M**
- Human and social sciences **€2.3 M**
- Land use/urbanisation **€1.9 M**
- Cultural practices and fertility **€1.4 M**



## AGRICULTURAL SOIL: IDENTIFYING FUTURE RESEARCH QUESTIONS

In 2012, at the request of ANR's Scientific Committee for the Environment and Sustainable Development, the Steering Committee for the Agrobiosphere programme and the AllEnvi National Thematic Alliance, ANR launched a prospective consultation of the scientific community with the aim of identifying the most relevant research topics. The conclusions of this consultation are available on the ANR website.



## PROJECTS FOR SCIENCE

ANR IS THE LEAD MANAGER OF THE "INVESTMENTS FOR THE FUTURE" PROGRAMME FOR THE RESEARCH AND HIGHER EDUCATION COMPONENT (€22 Bn).

MORE THAN **12 000 PROJECTS** FUNDED SINCE 2005

## THE FRENCH NATIONAL RESEARCH AGENCY:

- ▶ Contributes to the development of science and technology
- ▶ Rallies teams around societal and S&T challenges
- ▶ Speeds up knowledge creation and technology transfer and fosters academia-industry partnerships
- ▶ Promotes collaborative work and interdisciplinary dialogue
- ▶ Prepares a new generation of talents
- ▶ Facilitates European and international collaborations

## WORK PROGRAMME

- ▶ A funding scheme that fits in with existing national and European instruments
- ▶ A generic call for proposals...
- ▶ ... and a number of additional specific calls (European and international calls, Hosting High-Level Researchers...)