Introducing
the French National Research Institute
for Agriculture, Food and Environment

2021
The French National Research Institute for Agriculture, Food and Environment (INRAE)

Our mission came into being in January 2020, through the successful merger of the French National Institute for Agricultural Research (INRA) and the French National Research Institute of Science and Technology for the Environment and Agriculture (Irstea).

Our mission is twofold
- to produce and share scientific knowledge contributing to solve major challenges in Europe and in the world concerning agriculture, food and the environment
- to build on our research in order to foster innovation, provide expertise, and lend support to public policy makers at international, European and national level

INRAE – a world leader in agriculture, food and the environment

“Humanity and the Earth are facing global challenges that call for new research objectives. As a public research institute, serving the common good, INRAE is fully committed to carry out science dedicated to life, humans, and the Earth that uncovers solutions to our most pressing concerns.”

Philippe Mauguin
INRAE’s CEO
Looking to 2030, we have defined our scientific priorities and objectives for the next decade. They arose from a collaborative, participative process that took place both internally and outside of our institution, welcoming contributions by international experts.

Our roadmap: INRAE 2030

- **SP 1** Responding to environmental challenges and their associated risks
- **SP 2** Accelerating agroecological and food transitions while answering socioeconomic challenges
- **SP 3** Building a bioeconomy based on the efficient circular use of resources
- **SP 4** Promoting a holistic approach to health
- **SP 5** Facilitating transitions by mobilizing data sciences and digital technologies

- **PP 1** Placing science, innovation, and expertise at the centre of society-policy dialogue
- **PP 2** Reinforcing our engagement with academic, European, and international partners
- **PP 3** Establishing social and environmental responsibility as a common objective

INRAE 2030
Building a sustainable future through shared science and innovation
Our organisation

Our eighteen research centres reflect INRAE’s involvement locally at the heart of regional dynamics, carrying its commitment to the European Research Area and international collaborations.

In order to meet the challenges facing both science and society, we are developing metaprogrammes, scientific coordination programmes, on topics requiring systemic interdisciplinary approaches.

14 research divisions

- Action & Transitions
  Christophe Soulard
- Agroecosystems
  Philippe Hinsinger
- Animal Genetics
  Edwige Quillet
- Animal Health
  Muriel Vayssier-Taussat
- Animal Physiology & Farming
  Françoise Medale
- Aquatic Ecosystems & Water Resources
  Mohamed Naaim
- Ecology & Biodiversity
  Catherine Bastien
- Economics & Social Sciences
  Pierre Dupraz
- Food, Bioproducts & Waste
  Michael O’Donohue
- Human Nutrition & Food Safety
  Lionel Bretillon
- Mathematics & Digital Technologies
  Hervé Monod
- Microbiology & the Food Chain
  Sylvie Dequin
- Plant Biology & Breeding
  Isabelle Litrigo-Chiarelli
- Plant Health
  Marie-Hélène Ogliastro
Our key figures

Our people

- 2,005 researchers
- 3,179 engineers
- 3,045 technicians
- 1,850 PhD candidates
- 2,029 interns

Our staff in 2020:
11,000+ people

50.5% 49.5%

- 75% tenured staff
- 25% contractual staff

Budget in 2021

€ 1,045.44 million

22.9%

77.1%

public service subsidy
own resources

More on partnerships and innovation in 2020

- 15 innovation fields
- 450+ partners
- 380 new research contracts with socioeconomic partners
- 116 new disclosed inventions and value-added results
- 45 patent applications
- 69 new licenced patents, know-how, software & plant variety rights
- 212 start-ups created since 1999

HR Excellence label of the European Commission

Equality and Diversity at Work certification

Public Service Subsidy Own Resources

2020
Our contribution to global challenges

an integrated approach

INRAE is a top contributor (ranked 7th or less) worldwide on research concerning SDGs 2, 12, 13, 15 and is ranked 14th for SDG 6 clean water.

“INRAE has a responsibility to tackle this century’s global challenges. With its integrated approach to agriculture, food and the environment, INRAE will be able to identify and develop solutions with multiple applications, which can, for example, facilitate the agroecological transition and the transition to healthier and more sustainable dietary regimes, while combating climate change, land degradation, water scarcity and food insecurity.”

Jean-François Soussana
INRAE’s Vice-President of International Policy, member of the Intergovernmental Panel on Climate Change (IPCC)
International scientific cooperation

Our co-publications with others in 150 countries around the world

(Web of Science Data, DipSo processing - DRI July 2021)

A set of instruments to structure international scientific cooperation:

- **LIA** - International associated laboratories where scientists from INRAE and its international counterparts work together to build long-term shared projects of excellence.

- **2RI** - International research networks focused on specific themes.

- **JLC** - Joint linkage calls funded to foster new professional relationships and the creation of collaborations, with a specific focus on young scientists.

more than 20 projects ...
We have the ambition to drive research initiatives bringing together national, European and international partners on priority themes contributing to the 2030 Agenda: the International Research Initiatives (IRIs). An IRI is a shared vision, a roadmap, a strategic research agenda shared by an international community of researchers and the facilitation of this community.

An IRI aims to:

- Rally the international scientific community around major challenges and align research efforts on key issues;
- Favor comparative approaches to achieve better complementarity and consistency;
- Scale up scientific cooperation and production on key issues;
- Build up funding opportunities at national, European and international levels.

Current IRIs:

- Soils and Climate Change
- Intestinal Microbiota and Health
- PREZODE (Preventing Zoonotic Disease Emergence)
- Agroecological crop protection
- Forest and agroforest adaptation to climate change
- Agroecological transitions for food systems facing water scarcity and climate change
Advancing European research

Our scientific strategy is aligned with European priorities (Green deal, Horizon Europe). We have developed a leadership in European networks through Joint Programmes Initiatives and public-private partnerships at European level such as the Animal Task Force.

Our institute is very active in a range of European projects, as a coordinator and a partner, and contributes to leading European research infrastructures.

We are involved in:

- More than 300 European projects (H2020), coordinating 94
- 6 European infrastructures (ESFRI), coordinating 1 – IBISBA.EU
- 6 European infrastructure projects coordinated by INRAE – EPPN2020, AquaExcel 2020, VetBioNet, SmartCow, PigWeb, IBISBA 1.0.

The 1st beneficiary of Horizon 2020 Societal Challenge 2 “Food Security, Sustainable Agriculture and Forestry, Marine, Maritime and Inland Water Research and the Bioeconomy” in 2019

A driving force for a European roadmap on pesticide-free agriculture, behind the initiative «Towards Chemical Pesticide-free Agriculture» – 34 European research institutes from 20 countries.
Research infrastructures open to researchers from abroad

along with support for training, innovation and the development of technology. The RI’s are also linked, internally and externally, to form a support framework at national and European levels.

INRAE’s research infrastructures (RIs) supply scientific communities with data production and processing services,

Research infrastructures cover major thematics areas of our institute: Environment, Forest & land use, Agriculture, Human nutrition & health, Bioeconomy

Environment

- ICOS
  Integrated Carbon Observation System
- LIFE RI
  Living In Freshwaters and Estuaries
- AnaEE
  Analysis and Experimentation on Ecosystems
- IN-SYLVA-France
  Adaptive Forest Management
- OZCAR and RZA
  Observation of Critical Zones and Drainage basins
- Theia, PNDB, Dinamis
  National data infrastructure for Earth system science

Nutrition, bioeconomy

- PROBE
  Platform for Profiling Properties of Food and Biobased Products
- CALIS
  Consumers/Food/Health
- IBISBA (European, coordinated by INRAE)
  Industrial Biotechnology Innovation and Synthetic Biology Acceleration

OMICS

- IR Génomique
  Genomics
- BioinfOmins
  Bioinformatics for Omics
- MetaboHUB
  metabolomics & fluxomics

Resources, agronomy, phenotyping

- RARe (European)
  Agricultural and Environmental Biological Resources Centers
- EMER’IN
  Emerging Infectious Animal and Zoonotic diseases
- LiPh4SAS
  Livestock Phenotyping for Sustainable AgroecoSystems
Providing expertise and policy support

At INRAE we place great emphasis on giving society the scientific and technical knowledge, tools and methods needed to clarify, design, implement and evaluate public policies. Our expertise contributes to the development and implementation of international agreements, as well as to European Directives, national and local policies.

At international, European and national level, we provide support and expertise throughout the entire public policy lifecycle.

- INRAE provides scientific expertise and support to multilateral institutions (FAO, World Bank, CGIAR, UNEP)
- We are involved in a number of international initiatives, emanating from our contributions to major international events (UN Climate Change Conferences, UN Biodiversity Conferences, World Water Forums)
- 18 framework agreements signed with public non-academic partners
- 21 collective scientific assessments, foresight studies, and advanced studies over the last 5 years
- 10 sustainable operational activities to support public policies

- Roles, impacts and services provided by European livestock production
- Agrimonde-Terra: to explore what the future holds for food security and land use
- Storing carbon in soils: the potential in France (4 per 1000 initiative)
- Epidemiological surveillance platform

Jean-François Soussana about working for the Intergovernmental Panel on Climate Change (IPCC)
Open science

Innovative peer review processes from methodology to the findings of our research

Digital infrastructures to manage and disseminate data and knowledge, in keeping with national and European policies

Building long-term relationships with non-profit organisations based on trust

Strong support given to participatory research.

Involving international peers

- to define our scientific orientations
- to assess our institution
- to select INRAE Awards recipients

They also take part in our Scientific and Ethics Committees.

Every year, our international jury selects the recipients of our INRAE Awards to honour their scientific excellence and expertise. Watch our 2020 recipients tell us about their work:
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Join us:
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