



IRD in Thailand

A research institute on sustainability sciences in tropical countries

The French National Research Institute for Sustainable Development (IRD) is a multidisciplinary scientific institution that builds long-term partnerships for collaborative science adapted to the challenges of sustainable development faced by the countries in which it operates. IRD is a public institution operating under the joint authority of the French Ministry of Higher Education, Research and Innovation and the French Ministry of Europe and Foreign Affairs.

สถาบันวิจัยแห่งชาติฝรั่งเศสเพื่อ
การพัฒนาที่ยั่งยืนในประเทศไทย

French National Research
Institute for Sustainable
Development

IRD
Institut de Recherche
pour le Développement
FRANCE

Our purposes

Currently collaborating with scientists and institutions in more than 50 countries of the South throughout the world, our model of fair scientific partnership is based on co-constructed objectives and shared means, on an interdisciplinary, civic and committed approach for the achievement of the 2030 Agenda. IRD research covers a wide range of scientific disciplines and adapts to local scientific needs.

The IRD implements multidisciplinary research projects with its partners on both local and regional scales. The IRD provides researchers and students with human, financial and technological resources, and participates in the training of partners, by carrying out, in conjunction with its academic partners, capacity building actions which aim to contribute to the training of tomorrow's researchers and experts.



Our research

In Thailand, our unifying priority scientific issues, which integrate the Health, Biodiversity, Climate and Sustainable Cities cross-cutting challenges, are: One Health approach; Atmospheric and aquatic pollutions; Sustainable management of ecosystems.

SUSTAINABLE MANAGEMENT OF ECOSYSTEMS

Terrestrial and aquatic ecosystems provide regulating, provisioning, cultural and supporting services. These services are closely dependent on the health of ecosystems, the functioning of which can be altered by numerous anthropogenic and climate forcings, to which Southeast Asian countries are particularly exposed. The management of ecosystems to ensure their ability to provide sustainable services requires both a better understanding of their functioning and their vulnerability to global change, in order to propose science-based policies compatible with the challenges of sustainable development.

- ◆ Biodiversity modelling at multiple scales from wild ecosystems to regional processes **JEAI BIMOMS**
- ◆ Spatiotemporal dynamics of biodiversity at different spatial and temporal scales, under anthropogenic pressure **Research on evolutionary biology, paleontology and ecology**
- ◆ Machine learning and improvement of biodiversity measurements via remote sensing **Research on biodiversity using remote sensing**
- ◆ Vulnerable Indigenous Peoples: Attuning academic and indigenous knowledge to assess impact of global change on ecosystems and resources throughout the Indo-Pacific region **IRN Sentinel VIPs**
- ◆ Identifying and alleviating soil physical degradations to optimize sustainable food production **IRN COMPAC SOL**
 - ◆ Capture and storage of carbon in natural tropical forests **NATURAL FORESTORE**
 - ◆ Sustainability issue metaverse for building participatory learning environments **SIMPLE**
 - ◆ Study center of the land-ocean-atmosphere regional coupled system **IJL LOTUS**

HEALTH AND WELLBEING FOR ALL

Strengthening the healthcare system & control of infectious diseases

One of the main thrusts of our research is to contribute to the improvement of the health systems and the well-being of populations. Thus, most of our health programmes focus on the fight against the spread of infectious diseases.

- ◆ Implementation of a new Strategic TB case-finding, treatment and prevention public health pack in Thailand **CAPTHAI**
- ◆ Appropriate use of caesarean section **QUALI-DEC**
- ◆ Biology and control of mosquitoes as vectors of pathogens in Thailand **BIOVECTROL**
- ◆ Flaviviral transmission enhancer in mosquito saliva **VirSalivaEnhance**
- ◆ Worldwide Insecticide resistance Network **IRN WIN**

IRD IN ASIA

5 IRD representative offices

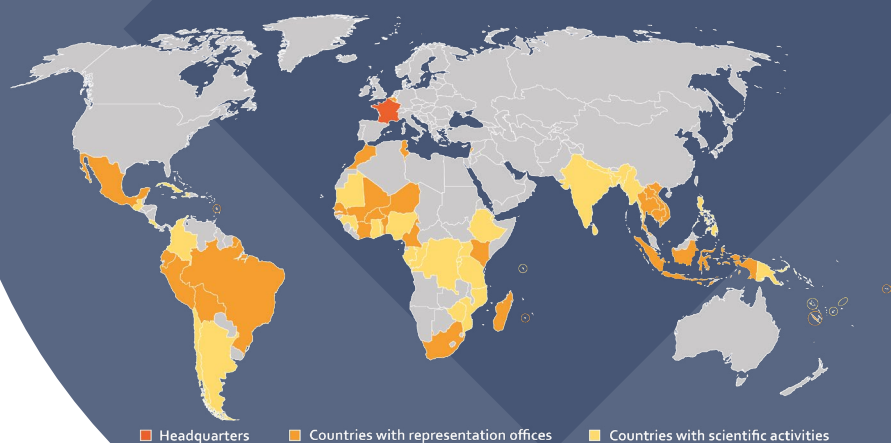
13 countries with research activities

33 assigned researchers

12 international research networks



IRD AROUND THE WORLD



One Health approach

As current global changes lead to an increased risk of the emergence of zoonoses but also of other types of diseases, understanding the modes transmission to humans, animals and plants is pivotal to better fight against and prevent the emergence of these diseases. The cross-cutting One Health approach, appears necessary to address together human, animal, plant and ecosystem health.

- ◆ The natural history of the emergence and reservoir of SARS-CoV2 **DISCOVER**
- ◆ Study on the biology of Tembusu virus, an emerging zoological virus **Research on the Tembusu viruses**
- ◆ Understanding and mitigating zoonotic spillover events in declining biodiversity hot-spots in Southeast Asia **IJL PRESTO**
- ◆ Exploring the relationships between farm animals, local knowledge, and the wider systems of agriculture and the environment **BufFarm One Health SEA**
- ◆ Ecology of environmental and zoonotic pathogenic bacteria and identification of pathogen survival and circulation factors in the compartments of the infection cycle **Research on the ecology of tropical infectious disease**
- ◆ In vitro study of mosquito-borne viruses **NEOCELL**
- ◆ Detection of viruses from double-stranded RNA **VDOSAGE**

ATMOSPHERIC AND AQUATIC POLLUTIONS

Over the past decades, Southeast Asian countries have experienced rapid economic growth, urbanization and industrialization, resulting in, among other things, the release of many pollutants into the environment, thus impacting human and environmental health, and creating socio-political issues.

- ◆ Impact of black carbon in South East Asia **IRN SOOT-SEA**
- ◆ Determination of fluvial flux of black carbon in the major rivers of the sub-region **Black Carbon river flux**
- ◆ Inverse modelling of black carbon emissions using real time data from networked sensors **BLACKNET**
- ◆ Socio-ecological drivers and consequences of air pollution in Northern Thailand **HAZE**
- ◆ Understanding the relationship between policy positions and health risks from air pollution in ten Asian and African cities **GLOBAL SMOG**

Our thai partners

- ◆ Burapha University
- ◆ Chiang Mai University
- ◆ Chulalongkorn University
- ◆ Kasetsart University
- ◆ Khon Kaen University
- ◆ Mahidol University
- ◆ Prince of Songkla University
- ◆ University of Phayao
- ◆ Suranaree University of Technology
- ◆ Asian Institute of Technology (AIT)
- ◆ Department of National Parks, Wildlife and Plant Conservation
- ◆ Land Development Department (LDD)
- ◆ National Research Council of Thailand (NRCT)
- ◆ National Center for Genetic Engineering and Biotechnology (BIOTEC)
- ◆ National Science and Technology Development Agency (NSTDA)

KEY FIGURES 2023



21

RESEARCHERS
WORKING IN THAILAND



18

ONGOING
RESEARCH
PROJECTS



446

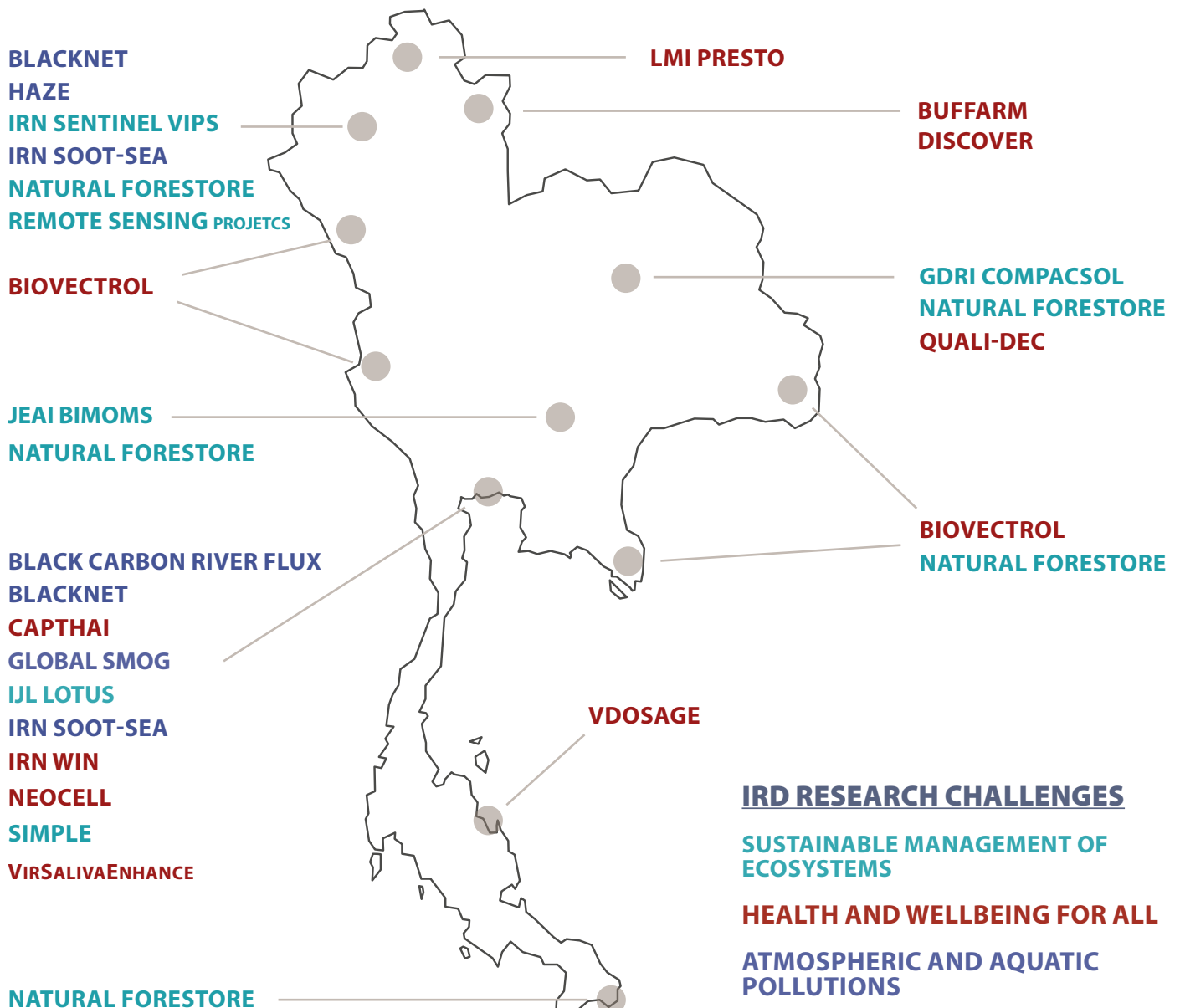
CO-PUBLICATIONS WITH
THAI PARTNERS
between 2018-2023



13

JOINT
RESEARCH UNITS
involved in Thailand

IRD'S STUDY AREAS



Institut de Recherche
pour le Développement
FRANCE

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