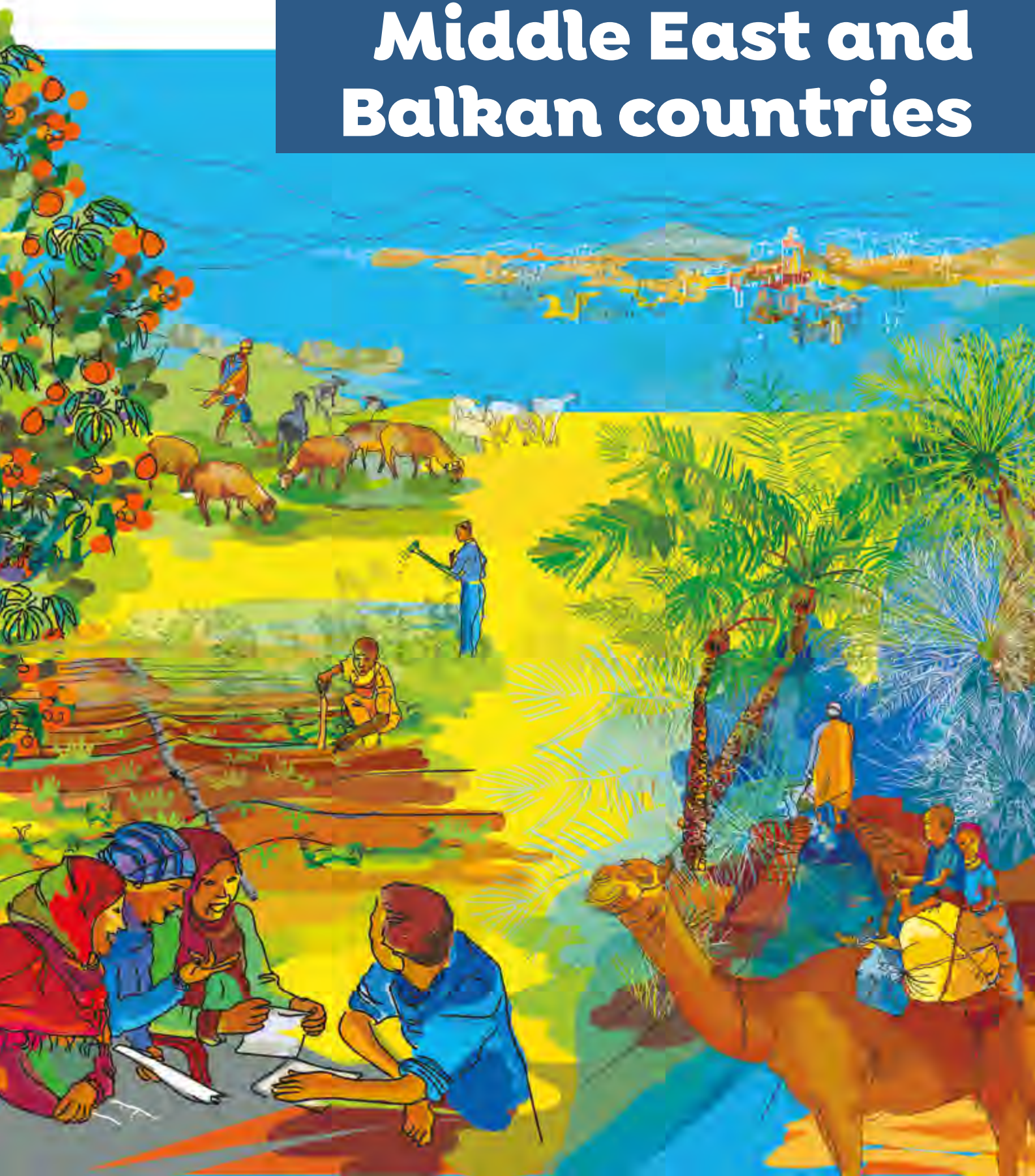


Mediterranean, Middle East and Balkan countries



The CIRAD regional office

15
paid staff
members



including 14 scientists

20



**PhD,
engineering
and Masters
students**

supervised
each year

5 priority
research
topics



Agroecological transitions
Biodiversity
Climate change
Food systems
Territories and collective action

2

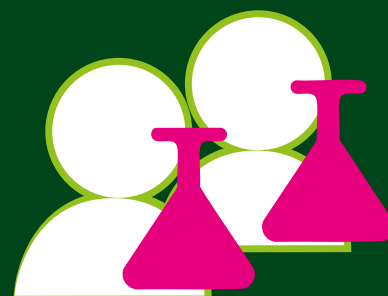
**fields of
intervention**

- Sustainable water management
- Sustainability of rangelands and pastoralism

1 platform in
partnership
for research
and training



5 research
units



25 ongoing
projects



200
annual
missions
to the region

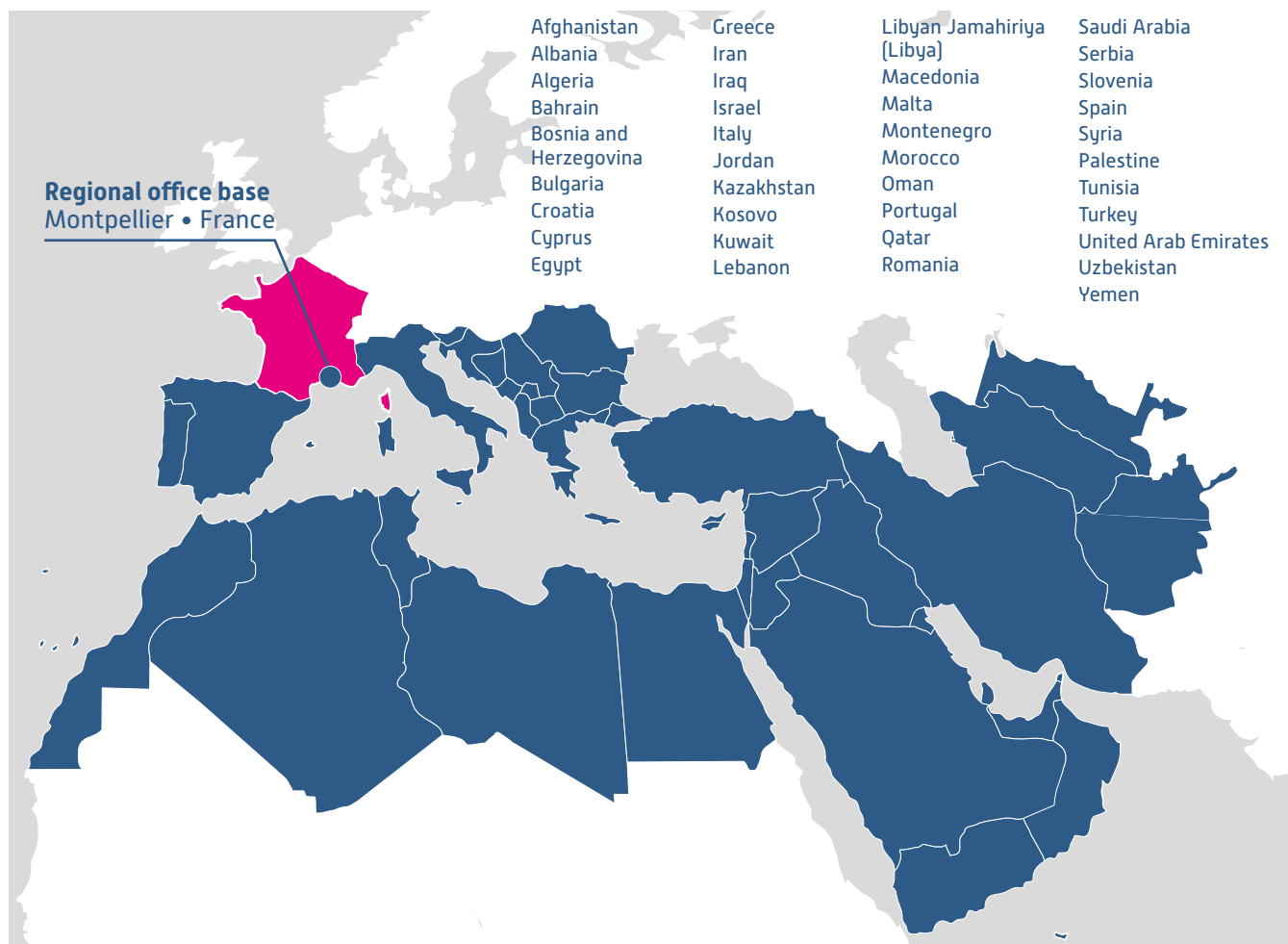


40
partner
institutions

30 on a national level

10 on an international
level

Mediterranean, Middle East and Balkan countries



One platform in partnership for research and training (dP)

Water and territories in North Africa

SIRMA

This platform in partnership for research and training (dP), founded in 2002, now associates some 20 institutions. It is led by research and higher education establishments in five countries: Algeria, France, Morocco, Portugal and Tunisia.

The platform studies and supports irrigated systems and water territories against a backdrop of major environmental and societal change, in North Africa and more broadly across the western Mediterranean. Its action centres on students and junior researchers. It fosters interdisciplinary exchanges around integrated water management, dialogue between research and development players, and regional cooperation between North Africa, France and other countries in the global South, particularly Brazil and Senegal.

From irrigation schemes and systems, dP SIRMA has gradually broadened its scope to span from agricultural water use to domestic use, and waste water recycling. The topics covered now extend to agroecology in irrigated systems and water governance issues. The network has built innovative, systemic multi-stakeholder approaches, often in support of participatory, multi-scale territory-based platforms. For instance, it works on the water-energy-agriculture-food systems nexus.



Water management is one of CIRAD's two priorities in the western Mediterranean. Wadi Toudra valley in Morocco.

© G. Lacombe, CIRAD

Find out more
(in French):



CIRAD in the Mediterranean, Middle East and Balkan countries



The CIRAD regional office for the Mediterranean, Middle East and Balkan countries covers 38 countries. It is based at CIRAD in Montpellier. Its primary relations are with countries in North Africa and the western Mediterranean.

CIRAD's commitment to national and regional research and agricultural development bodies, universities and other higher education establishments, and also associations and the private sector, focuses on addressing two main issues: adapting to the effects of climate disruption, and the transition to more sustainable farming systems. Within this context, water management and pastoralism are central to the region's identity.

Shepherd and his flock of sheep and goats
in the Taza region, Morocco
P. Dugué © CIRAD

Countries in the Mediterranean, Middle East, Balkans and Central Asia are all torn between building an agro-industrial model, preserving natural resources (water, soils, biodiversity) and respecting balances across territories. The growing scarcity of water resources and degradation of soils is causing major disparities between farmers, depending on whether or not they can access innovations and support for modernisation. Given the speed of climate change, agricultural growth and the increase in overall demand for water (both drinking water and water for agriculture), innovations are currently being developed in a headlong dash that is proving increasingly costly and risky: boreholes; new, more stress-tolerant varieties; drip irrigation; seawater desalination, etc. CIRAD is working with several regional institutions and universities in North Africa in the fields of research, training and public policy, to support development operations and actions to foster adaptation to the effects of climate change.

Training strengthens cooperation links

Seconding permanent CIRAD staff members to higher education and research establishments in North Africa is one of the spearheads of this partnership. This presence on the ground is backed by numerous missions to partner countries by scientists from Montpellier and the hosting of large numbers of teacher-researchers, engineering students and PhD students in Montpellier.

Framework agreements with various national training and research institutions serve to structure cooperation in the long term. Numerous universities are major partners, in the fields of environmental science and human and social science.

The fact that the regional office is based in Montpellier, which is also home to institutions such as INRAE and Institut Agro Montpellier, fosters scientific cooperation between North Africa and France, notably territorial development players (town councils, metropolitan councils, decentralised State services).

Fields of intervention and research topics

Pastoralism • A pillar of resilience for arid and semi-arid territories

Pastoralism is a major production system in North Africa, at the heart of social and ecological dynamics in arid and semi-arid zones. It is founded on stock mobility and collective resource management, and plays a vital role in maintaining biodiversity, in food security, and in rural economies. However, it now faces profound changes as a result of climate change, rangeland degradation, land pressure and its marginalisation in public policy.

CIRAD's research is aimed at understanding how these systems can be made more resilient to climate hazards and socioeconomic change. It investigates how pastoral resources can be managed sustainably, particularly as regards securing land tenure and restoring rangelands. It also explores the dynamics of herd mobility, how to adapt livestock production practices, and how to integrate innovations, both digital and organisational.

Another major issue is promoting pastoral products and boosting incomes, in association with value chains, markets and geographical labels. Governance, collective organisation and inclusion in public policy are also central questions. Lastly, generational renewal, female empowerment and the attractiveness of pastoral careers are key challenges for guaranteeing the sustainability of pastoral systems.



Pastoral goat rearing in northern Morocco © S. Taugourdeau, CIRAD



Conference

"What place for pastoralism in the food systems of tomorrow?"

Water • A vital resource under pressure

Agricultural policies in recent decades, primarily geared towards modernising agriculture, with support for investment and infrastructures, have had tangible positive results. Widespread access to groundwater thanks to boreholes has boosted agricultural production. However, these productivist trends, compounded by increasingly frequent, severe droughts, are now threatening food system sustainability.

Finding ways of managing water resources is therefore vital. The research CIRAD and its partners are doing to this end includes modelling water systems and generating knowledge of the links between different types of water resources (deep groundwater, rainwater, reservoirs, recycled water) and their many uses (crop and livestock farming, human consumption, industry). Research is also looking at water management methods, including involving different players (women, young people) in decision making, at changes in policy, practices and behaviours as regards the resource, and at the link between agroecological practices and water use. These analyses are combined with approaches looking at governance and territorial dynamics.



Fresh water, such a precious resource © G. Lacombe, CIRAD



Water Management, Actors, Territories
(UMR G-EAU)

Food systems

From farm to fork, territories are committed to sustainable food

The MAHDIA project aims to build sustainable food systems by means of a participatory approach involving local players and inhabitants, across four territories in Morocco, Senegal and Tunisia. It is addressing the challenges of access to water, sustainable agriculture, and quality food, in situations in which imported industrial products are taking over.

The aim is to boost water resilience, support agroecology, promote a healthy diet and consolidate food sovereignty. Dialogue and cooperation are being encouraged between players who are already engaged, be they local people interested in food issues, producers practising agroecology, or local development institutions, to build sustainable, inclusive territorial dynamics.

Duration > April 2024 to November 2026



Meeting with school pupils about “products of territorial interest” (PTIs) in the Kairouan region, Tunisia © Hamrouni, INAT

Climate change

Boosting the resilience of Mediterranean territories

CIRAD and the partners in SIRMA are participating in the MOR-FeuS project (Mediterranean operational resilience framework for nexus-based territorial solutions), led by INRAE, which is considering the interactions (nexuses) between water, energy, food and ecosystems.

MORFeuS is building a resilience analysis framework and establishing methods to co-design solutions at several pilot irrigated sites facing high pressure on freshwater resources, in the form of living labs (in Algeria, France, Morocco, Portugal and Tunisia). The solutions being tested combine various approaches: technical (agroecology, nature-based solutions, water recycling), organisational (integrated water management, local food processing, renewable energy for collective pumping) and institutional, thanks to the adaptation of political frameworks. Their potential for scaling up across the western Mediterranean is being assessed.

Duration > May 2025 to April 2028



Water and territory at the Semti dam in Tunisia © E. Hassenforder, CIRAD

Biodiversity

Crop diversity guarantees yields in semi-arid zones

The project on Access to crop diversity and resilience of agro-ecosystems in the semi-arid regions (ARISER) is working to understand the processes that determine farmers' level of information on and access to the full range of seed and crops. Making renewed use of traditional varieties in farming systems in arid parts of Africa (in Senegal, Morocco and Madagascar) would be a major lever for resilience to climate variability. Moreover, crop diversity serves to stabilise agricultural production.

Until now, agricultural development programmes have paid little attention to the question of farmers' access to crop diversity and have continued to support centralised seed distribution models, despite the fact that a growing number of farmers' organisations and researchers have cast doubt on their suitability. Those players stress the risks of jeopardising the resilience of family farms by limiting their access to crop diversity, and are calling for regulatory frameworks and development operations based on local crop diversity and seed management practices.

Duration > June 2022 to May 2027



Different bean varieties, northern Morocco
© Wissal Msellek, Polydisciplinary Faculty of Larache, Abdelmalek Essaâdi University, Tétouan, Morocco

Territories and collective action

Participatory governance for more resilient rural territories in Tunisia

The Programme of adaptation to climate change in vulnerable territories in Tunisia (PACTE) has introduced a concerted territory-based, participatory and multi-sector approach for drafting development plans, associating citizens, local authorities, associations, economic players and State services.

This fits into the drive in Tunisia to seek out new forms of public action following the 2011 revolution, marked by increased expectations in terms of participation, decentralisation and alleviation of inequalities. In long-marginalised rural territories, the programme has made territorial planning a lever for socio-spatial justice. It is an institutional trial of more inclusive types of local governance.

A project on the agroecological transition in Tunisia (PACT-AE) is extending this dynamic by assessing the results and impacts of PACTE and testing multi-scale planning of that transition, tailored to local realities and seen as a territorial, intersectoral and governance process, to prepare for a future programme to support the transition in Tunisia.

Duration > PACTE: 2017-2024
PACT-AE: 2025-2027

PACTE project



PACT-AE project



Citizen participation to co-construct territorial policies.
PACTE project © J. Bourgoin, CIRAD

Main partners in the higher education and research sectors

Algeria

- École nationale supérieure agronomique (ENSA)
- Centre de recherche en économie appliquée pour le développement (CREAD)
- Morsli Abdellah University of Tipaza
- University of Science and Technology Houari Boumediene (USTHB)

Morocco

- Institut agronomique et vétérinaire Hassan-II (IAV)
- École nationale d'agriculture de Meknès (Ena Meknès)
- Institut national de recherche agronomique (INRA Maroc)
- Caddy Ayad University, Marrakech
- Abdelmalek Essaâdi University, Tétouan
- Mohamed V University, Rabat
- Mohamed VI Polytechnic University (UM6P), Ben Guerir and Rabat

Tunisia

- Institution de la recherche et de l'enseignement supérieur agricoles (IRESA)
- Institut national agronomique de Tunisie (INAT)
- Institut national de la recherche en génie rural, eaux et forêts (INRGREF)
- École supérieure des ingénieurs de Medjez el Bab (ESIM)
- École supérieure des industries agroalimentaires de Tunisie (ESIAT)
- Ecole nationale de médecine vétérinaire, Sidi Thabet (ENMV)
- University of Carthage
- University of La Manouba

France

- L'Institut Agro Montpellier
- Institut national de recherche pour l'agriculture, l'alimentation et l'environnement (INRAE)
- University of Montpellier
- Institut de recherche pour le développement (IRD)

Portugal

- University of Algarve

International

- International Center on Agricultural Research in Dryland Areas (ICARDA)
- Institut agronomique méditerranéen de Montpellier (IAMM - CIHEAM)

Regional office
**Mediterranean, Middle East
and Balkan countries**

INRAE and Agreenium Representation

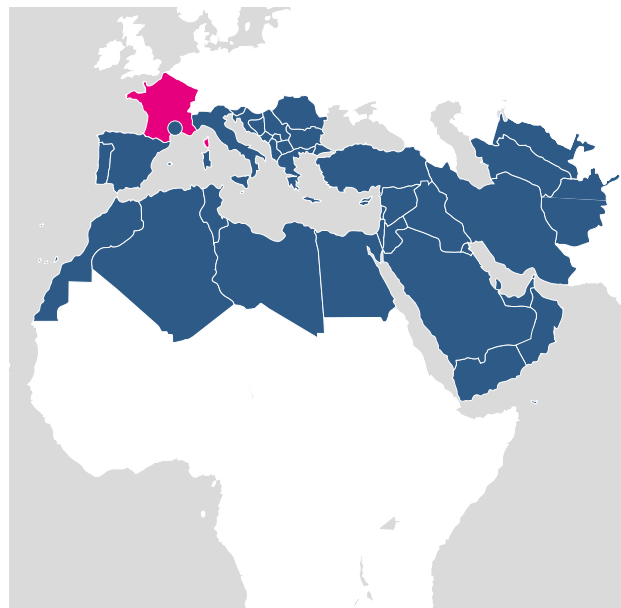
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To see our website,
scan the QR Code



CIRAD is the French agricultural research and international cooperation organisation working for the sustainable development of tropical and Mediterranean regions.

It has a remit to contribute to building resilient farming systems, food systems and forests, for a more sustainable, inclusive world.

It works with its partners to build knowledge and solutions for resilient farming systems in a more sustainable, inclusive world. It mobilises science, innovation and training in order to achieve the Sustainable Development Goals. Its expertise supports the entire range of stakeholders, from producers to public policymakers, to foster biodiversity protection, agroecological transitions, food system sustainability, health [of plants, animals and ecosystems], sustainable development of rural territories, and their resilience to climate change.

CIRAD is a public establishment (EPIC) under the joint authority of the Ministry of Higher Education, Research and Space and the Ministry of Europe and Foreign Affairs.

Working together for tomorrow's agriculture



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