

Environment

Environmental science draws on a range of disciplines concerned with sustainable development and agriculture, the economy of resources and raw materials, climate and air, ecology and natural habitats, ecosystems, water and biodiversity, land planning, natural resource and waste management, as well as alternative energies and transportation.

Jobs in the field of environmental services require two or three years of higher education. Entry level courses cover the life sciences and health, earth and space sciences, marine sciences, and basic disciplines such as agronomy, biology, chemistry, and physics, as well as economics, the social sciences, and management. In other words, environmental science is characterized by its interdisciplinary nature.

Beneficial to the environment, renewable energies come from a variety of sources: the sun, wind, water, and geothermics, as well as firewood, crop residues, biogas, biofuels, urban or industrial waste, and heat pumps.

The environment by the numbers

- € 68 million spent on the environment in France (2012)
- € 47.5 million spent on environmental protection (2012)
- € 24 million spent on renewable energies in 2012
- 25,273 Ktep of primary energy produced by the renewable energy sector in 2013
- 83,148 km² of regional parks (2013)
- 74,873 km² of natural marine parks (2013)
- 5,431,434 km² of national parks (2013)
- 38,034 km² of biosphere reserves (2013)
- 12% reduction of GHG emissions (1990-2012)

Source: Institut National de la Statistique et des Études Économiques (www.insee.fr)

INTERNATIONAL

The "Climate, Environment, Raw Materials" challenge is one of seven social challenges embraced by the European Union's Horizon 2020 program of research and innovation. France plays an active role in this program by stimulating knowledge about the environment and climate, health, water use and management, and energy.

Within the European Union, France has taken an ambitious stance. It aims to reduce greenhouse gas emissions by 40% by 2030 and by 60% by 2040 (compared to 1990 levels). France is supporting priority areas of research in light of warnings from the Intergovernmental Panel on Climate Change (IPCC) and the role humankind plays in climate change.

Related fields

Agriculture – Agronomy – Architecture – Biology – Chemistry – Ecology – Economics and management – Energy – Law – Education – Geography – Geosciences – Engineering – Meteorology – Oceanography – Physics – Public health – Marine science – Earth and space sciences – Life and health sciences – Tourism – Transportation – Urban planning

Subfields

Agri-food - Agro-ecology - Food - Animals - Land planning and landscaping - Astronomy - Astrophysics - Atmosphere - Biodiversity - Bio-geosciences - Biotechnologies - Climate change - Climate - Climate challenges - Sustainable development - Water - Eco-technologies - Emissions - Ecological footprint - Carbon footprint - Alternative energies - Epidemiology - Forestry - Greenhouse gas - Genetics - Civil engineering - Sanitation engineering - Genomics - Geo-chemistry - Geology - Geomatics - Geophysics - Geotechnics - Water management - Glaciology - Horticulture - Hydrology - Environmental engineering - Sea - Natural habitats - Ocean - Paleoclimatology - Planetology - Plants - Pollution - Global warming - Halieutic sciences - Soil - Silviculture - Water technologies - Earth - Territories - Toxicology - Urban planning

Useful links

- Alliance Nationale de Recherche pour l'Environnement (AllEnvi): www.allenvi.fr
- European Center for Research and Training in Environmental Geosciences (CEREGE): <https://www.cerege.fr>
- Climat-Environnement-Société, a scientific interest group: www.gisclimat.fr
- Conseil Économique, Social et Environnemental (CESE): www.lecese.fr
- 2015 Paris Conference (COP21-CMP11): www.cop21.gouv.fr
- École Nationale de la Météorologie - ENM Météo-INP Toulouse France: www.enm.meteo.fr
- EU Environment: <http://ec.europa.eu/environment/>
- European Geosciences Climate: www.egu.eu
- History of the environment, a multi-disciplinary database on the environment: www.cnrs.fr/inshs/->La recherche en SHS>RTP Histoire de l'environnement
- Institut National des Sciences de l'Univers (INSU): www.insu.cnrs.fr
- Letter on research & climate by the scientific interest group Climat-Environnement-Société: www.gisclimat.fr->Nos activités>Diffusion scientifique
- French Ministry of Foreign Affairs and International Development (MAEDI): www.diplomatie.gouv.fr->Politique étrangère de la France >Environnement et développement durable
- French Ministry of Ecology, Sustainable Development, and Energy (MEDDE): www.developpement-durable.gouv.fr->Énergie, air et climat
- Office National de l'Eau et des Milieux Aquatiques (ONEMA): www.onema.fr
- Office National des Forêts (ONF): www.onf.fr
- Partnership for European Environmental Research (PEER): www.peer.eu
- Sagascience, collection of multimedia data on multiple topics (climate, earth climate, polar climate, etc.): www.cnrs.fr/cw/dossiers/saga.htm
- Université Virtuelle Environnement & Développement Durable (UVED): www.uved.fr

CHOOSE YOUR PROGRAM

- Campus France program catalogue: www.campusfrance.org->Trouvez votre formation
- Catalogue of programs taught in English: www.campusfrance.org->Programs Taught in English
- Catalogue of short academic programs and language courses: www.coursdete.campusfrance.org
- CampusBourses, financing your studies in France: www.campusfrance.org->Financez vos études

Licence level

Brevet de Technicien Supérieur (higher technical certificate) (Secondary diploma +2 years of higher education) – L2

20 schools (private and public high schools and CFAs, or apprentice training centers) offer the **BTS in environmental services**. This degree offers specialized technical training on coordinating and delivering services relating to cleanliness, the hygiene of premises and equipment, urban sanitation, waste and sanitation management, etc.

The **BTS in fisheries and marine environment management** is offered by Lycée de la Mer Paul Bousquet à Sète.

Brevet de Technicien Supérieur Agricole (agricultural technician certificate) (Secondary diploma +2 years of higher education) – L2

The **BTSA in environmental management and protection** is offered by many *Lycées Agricoles* (agricultural secondary schools). The following concentrations are available to students:

- water management
- nature management and protection
- forestry
- rural development

Diplôme d'Études Universitaires Scientifiques et Techniques (Secondary diploma +2 years of higher education) – L2

The DUT is offered by the technology institutes of certain universities in:

- **biological engineering** with a concentration in **environmental engineering**
- **environmental hygiene and safety**

Professional licences (bachelor's degrees) (Secondary diploma +3 years of higher education) - (L2 +1 year)

Three programs offer degrees related to the environment:

- **Law, economics, and management** with concentrations in urban project and environmental management or safety and the environment.
- **Humanities and social sciences** with concentrations in sustainable agriculture and environmental certification; management of landscape and environmental projects; environmental and sustainable development education; geomatics, etc.
- **Sciences, technologies and health** with concentrations in construction; environmental management; acoustics; energy management; hygiene, health, quality, and safety; analytic chemistry and the environment; motor industry and environment; environmental risks and impacts; agro-resources and the environment; water treatment; etc.

The **licence in earth science** covers the earth, space, and environmental sciences.

- www.campusfrance.org>Trouvez votre formation>Licence

Master level

Master (Secondary diploma +5 years of higher education) – M2

Numerous programs offer master's degrees in environmental studies with a wide range of specializations:

- **Sciences of the environment, territory, and economy** with specializations in: territorial development, energy, and ecology; risk management; sustainable construction; eco-construction; eco-innovation; ecosystems; marine environment; tourism; Arctic studies; health; functional ecology; ecological modeling; environmental toxicology; sciences of industrial and urban environments, etc.
- **Life and environmental sciences and technologies:** bio-contaminant control in food and feed; engineering of products and processes; toxicology and health; biodiversity; continental environments and hydro-science; tropical ecosystem management, etc.
- **Sciences, technologies, and health:** industrial environment; environmental engineering; ecology; sustainable development; risks; expertise; health/safety; naval environments, etc.
- **Engineering sciences** (degree in applied sciences with specialization in civil engineering and the environment).
- **Law, economics, and management** with specializations in: chemical pollutants; geological engineering; quality; safety; energy; construction; sustainable development, etc.
- **Humanities and social sciences:** environmental projects; geomatics; archeology and environment; Mediterranean and African paleo-environments, etc.

Programs taught in English:

- *Agrosociences, Environment, Territory, Landscape, Forests: Climate, Land-use and Ecosystem Services:*
www.universite-paris-saclay.fr/en/education/masters
- *Science in Project Management for Environmental and Energy Engineering:* www.mines-nantes.fr
- *Sustainable management of pollution:*
www.isa-lille.com/programs/masters/msc-sustainable-management-of-pollution/

Diplôme d'ingénieur (engineering degree) / Master (Secondary diploma +5 years of higher education) – M2

French engineering schools offer engineering degrees and master's degrees accredited by the CTI (*Commission des Titres d'Ingénieur*). Numerous specializations in environmental studies are available:

- water and environmental engineering,
- life and environmental sciences and industries,
- engineering for land development and the environment,
- environment, construction, and energy,
- agronomic and environmental science,
- energy, risks, and environment,
- georesources and engineering for sustainable development.

- www.cti-commission.fr/-Liste-officielle-des-programmes-d-

Beyond the master

Mastère Spécialisé (MS, specialized master's degree) (M2 +1 year of higher education) – post-M

Labeled by the *Conférence des Grandes Écoles* (CGE), the specialized master enables students to earn an institutional credential attesting to dual competence. Numerous specializations in the environment are available:

- life and environmental sciences and industries,
- sustainable development and agriculture,
- eco-design and environmental management,
- mining and mine environments,
- global management of environmental risks,
- waste management and processing,
- environmental engineering and management,
- engineering and management of environmental risks,
- environmental management and eco-energy efficiency,
- quality, safety, and environmental management,
- management of health, food, and environmental hazards
- public policy and strategies for the environment,
- environmental quality and safety,
- industrial safety and environment.

Programs taught in English:

- *International environmental management*
- *Water utility management*

- Information on MS degrees: www.campusfrance.org/fr/ressource/les-masteres-specialises-ms
- List of MS programs: www.cge.asso.fr/nos-labels/ms