

# **Green Economy: Jobs and Trades**

**Extract from France's 2021 Environmental Performance Review**



## Green Economy: Jobs and Trades

The perimeters of the green economy are difficult to define. Two complementary approaches are used to describe employment in the field. The first estimates the number of jobs related to the production of goods and services with an environmental purpose or contributing to improved environmental quality. The second focuses on occupations involved in environmental protection or that require "greening" skills regardless of employer company's activity.

### STRONG EMPLOYMENT DEVELOPMENTS IN THE GREEN ECONOMY

In 2019, green economy activities accounted for nearly 1.1 million full-time equivalent (FTE) jobs, or 3.9% of total national employment (*Figure 1*). "Eco-industries" whose primary purpose is the environmental protection or the sustainable management of natural resources, account for just over half of these jobs: 610,100 FTE jobs or 2.3% of the total workforce. So-called "peripheral activities" improve environmental quality, but it is not their primary purpose. They accounted for 442,000 FTEs in 2019 or 1.6% of total national employment.

**Figure 1: Employment in eco-industries in 2019**

	Employment in 2019 (FTEs)	Trend 2019/ 2018 (%)
<b>Eco-industries</b>	<b>610,100</b>	<b>3.5</b>
Environmental protection, including	306,300	5.9
Wastewater management	57,700	4.1
Waste management	89,100	0.7
Soil, groundwater and surface water protection	122,600	13.1
Biodiversity and landscape protection	18,800	1.1
Resource management, including	222,300	0.7
Recovery of materials for recycling	29,500	- 6.7
Energy control	101,200	- 3.8
Renewable energy production	79,900	11.1
Multidisciplinary, including	81,500	2.6
General environmental administration	38,300	0.0
Environmental R & D	26,000	5.7
Environmental engineering	17,100	3.8
<b>Peripheral activities, including</b>	<b>442,000</b>	<b>3.4</b>
More sustainable transport (public transport, bikes)	411,900	3.4
<b>Green economy activities</b>	<b>1,052,100</b>	<b>3.5</b>
<b>Total economy</b>	<b>26,859,100</b>	<b>1.3</b>

*Note: protection of soil and water including organic farming; waste collection and treatment: including radioactive waste. This table is based on the new scope of green economy activities defined in 2020 ().*

*Scope: France.*

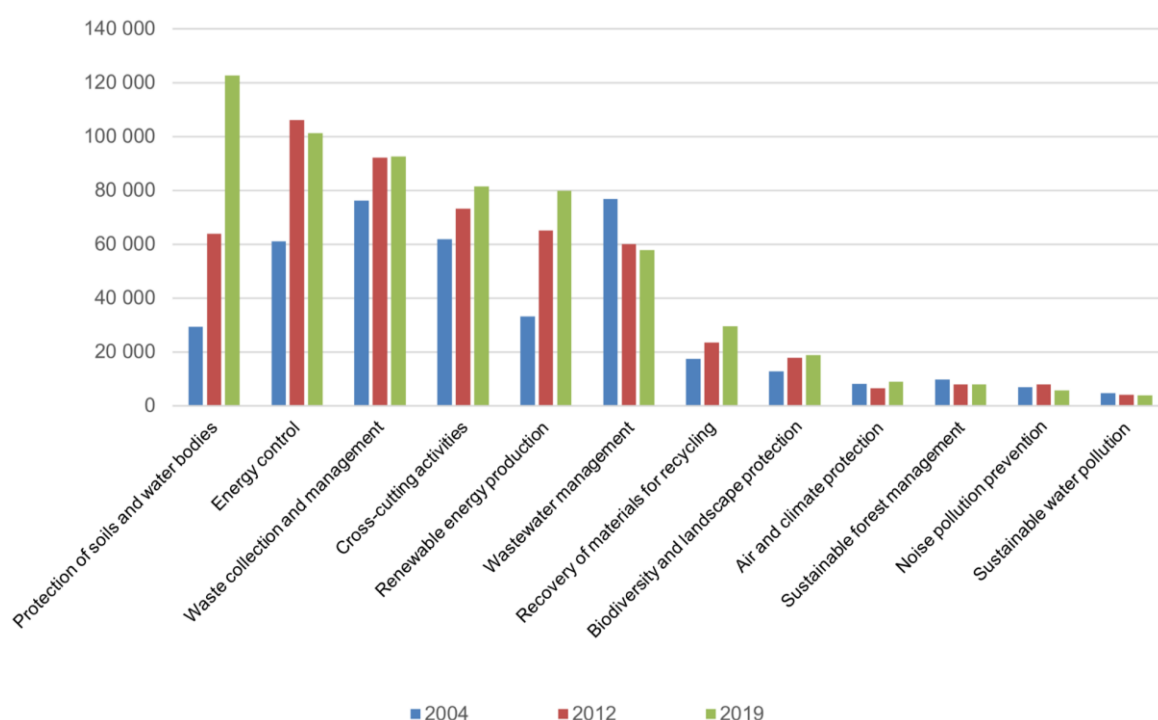
**Sources:** INSEE, EAP, É sane, National Accounts base 2014; Ademe; Agence Bio. Treatment: SDES, 2021

## Fact Sheet: Green Economy : Jobs and Trades

Almost half of jobs in eco-industries (306,000 FTEs) are associated with goods or services aimed at environmental protection (such as soil and water protection including organic farming and waste and wastewater management). Slightly over a third of jobs are in sustainable resource management (mainly energy efficiency and renewable energy production) while 13% are multidisciplinary (administration, R&D, engineering) – (Figure 1). Between 2004 and 2019, employment in eco-industries increased by 53%, compared to an increase of just 9% for employment overall nationally (Figure 2). Jobs in organic farming were multiplied by 4 over the period and activities in renewable energies and energy control were the highest contributors to the increase.

**Figure 1: Employment in green activities in 2004, 2012 and 2019**

Full-time equivalent



Notes: soil and water protection including organic farming; waste collection and treatment: including radioactive waste; multidisciplinary environmental activities: R&D, engineering, general administration.

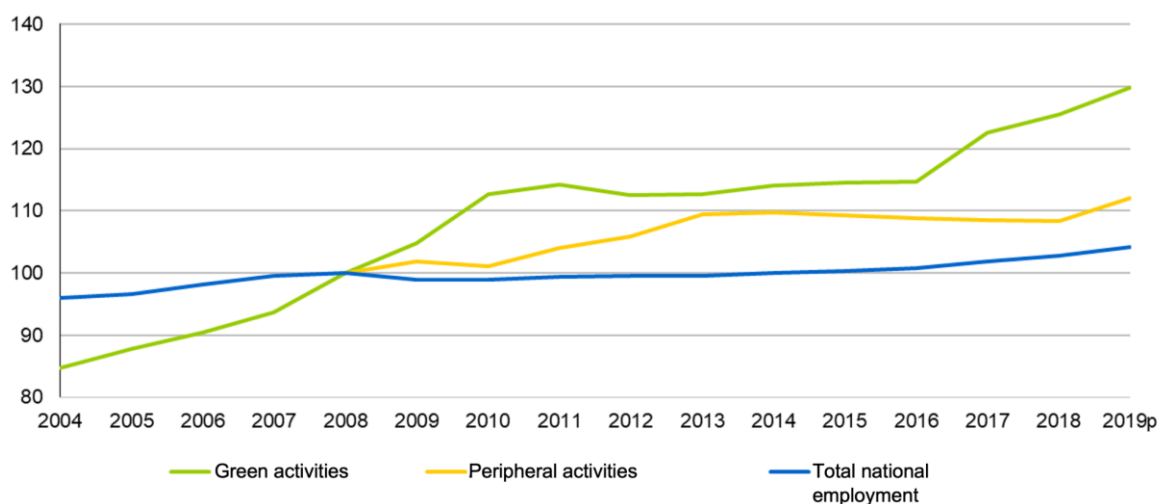
Scope: France

Sources: INSEE, EAP, É sane, National Accounts base 2014; Ademe; Agence Bio. Treatment: SDES, 2021

Most employment in peripheral activities was in public transport: transport service operation, construction of rolling stocks (locomotives, buses) and infrastructure (rail or tram lines). Employment in peripheral activities has increased by 12% since 2008, mainly due to investments in the rail network (high-speed lines and the greater Paris region network) – (Figure 2).

**Figure 2: Trends in employment in green economy activities between 2004 and 2019**

Base index value 100 in 2008



p = provisional data.

Notes: The observation period for peripheral activities begins in 2008. This figure is based on the new scope of green activities and peripheral activities (see Glossary: green activities).

Scope: France.

Sources: INSEE, EAP, É sane, National Accounts base 2014; Ademe; Agence Bio. Treatment: SDES, 2021

## MORE GREENING TRADES THAN TRADES WITH ENVIRONMENTAL PURPOSE

In 2018, nearly 4 million people were engaged in a profession related to the environment, representing 14.5% of all employment. Among them, 140,000 people were employed in a so-called "green" occupation with a direct environmental purpose, excluding organic farmers. 41% had jobs related to energy and water distribution, 36% wastewater sanitation and waste treatment, while the others were in jobs related to the protection of nature or the environment. Green occupations account for a relatively modest share of all occupations at 0.5% of employment. Employment in green trades decreased between 2013 and 2018: down 4.5% compared with an increase of 1.2% in all occupations. Apart from green professions, 3.8 million workers were in occupations potentially concerned with the integration of environmental issues, even if the functions performed had no direct environmental purpose. These so-called "greening" professions are in various sectors: construction, transport, industry, R&D, tourism, purchasing, agriculture, forestry, and green spaces maintenance. The extent to which the greening of the economy affects them is highly variable and difficult to quantify. Employment in these fields increased very slightly between 2013 and 2018 (+0.7%) – (Table 2).

81% of people working in the green economy are men. Women's numbers vary according to the sector and are higher in more skilled occupations.

## Fact Sheet: Green Economy : Jobs and Trades

**Table 2: Employment in the green economy**

In %

	Total number employed in 2018	Breakdown of employment by category	Employment trends 2013-2018	Women	Permanent contracts, holders of public service	Fixed-term and temporary contracts	Non-employees	Part-time
<b>All green professions</b>	<b>140,000</b>	<b>100</b>	<b>-4.5</b>	<b>18</b>	<b>88</b>	<b>6</b>	<b>0</b>	<b>7</b>
Wastewater sanitation and waste treatment	51,000	36	-2.3	8	82	10	0	9
Production and distribution of energy and water	58,000	41	-12	20	93	2	0	4
Nature and environmental protection	32,000	23	8.7	30	88	7	0	9
<b>All greening professions</b>	<b>3,793,000</b>	<b>100</b>	<b>0.7</b>	<b>19</b>	<b>73</b>	<b>8</b>	<b>13</b>	<b>10</b>
Agriculture and green spaces maintenance	230,000	6	1.3	12	63	11	15	16
Construction	1,394,000	37	-5.4	8	64	7	21	8
Transport	752,000	20	2.5	14	82	4	10	9
Industry	759,000	20	5.4	19	76	4	13	7
Research and development	355,000	9	3.9	31	84	13	0	7
Others (purchasing, tourism, entertainment and activities)	305,000	8	11.3	65	72	22	0	32
<b>All jobs</b>	<b>27,036,000</b>	<b>-</b>	<b>1.2</b>	<b>48</b>	<b>74</b>	<b>9</b>	<b>12</b>	<b>17</b>

Note: numbers are rounded to the nearest 1,000. Agricultural activities are not yet well integrated in the list of green and greening jobs: only jobs in technical and consulting technical assistance in agriculture and agriculture and natural environment engineering are currently included in the list of greening Rome codes. However, a large number of agricultural production professions are changing or are expected to change to include environmental issues.

Scope: employed people aged 15 or over living in France.

Source: INSEE, population census 2018 and 2013. Treatment: SDES, 2021

### FOR MORE INFORMATION

- [Les éco-activités et l'emploi environnemental en 2018](#), SDES, *Datalab Essentiel*, September 2020, 4 pp.
- [Les éco-activités et l'emploi environnemental en 2018 – Résultats détaillés](#), SDES, *web article*, June 2021.
- [Observatoire national des emplois et des métiers de l'économie verte - Nouveau périmètre des activités de l'économie verte](#), SDES, *working document*, no.48, July 2020, 22 pp.
- [Métiers verts et verdissants : près de 4 millions de professionnels en 2018](#), SDES, *web article*, December 2021.
- Website: [Observatoire national des emplois et métiers de l'économie verte](#), in the section for key figures on employment and the green economy.