

Assessment and recommendations

The Assessment and Recommendations present the main findings of the OECD Environmental Performance Review of France and identifies 33 recommendations to support the country's further progress towards its environmental policy objectives and international commitments. The OECD Working Party on Environmental Performance reviewed and approved the Assessment and recommendations at its meeting on 8 March 2016. Actions taken to implement selected recommendations from the 2003 OECD Environmental Performance Review are summarised in the Annex.

The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.

1. Environmental performance: trends and recent developments

France is the country with the largest surface area in the European Union (EU) and has the fifth largest economy among OECD members. Its population is well educated and enjoys a high standard of living. Although it withstood the global economic crisis fairly well, growth since has been weak and unemployment is high. Through its geographical position in Europe and overseas, France has a wide variety of terrestrial and marine ecosystems. However it has few fossil fuel and mineral resources, and its freshwater resources are moderate. France has continued to make progress in decoupling environmental pressures from economic growth over the last ten years (Figure 1). However, intensive farming, urbanisation, land take and the expansion of transport infrastructure continue to have harmful effects on water and air pollution and on ecosystems.

Transition to a low-carbon and energy-efficient economy

France has one of the lowest-carbon economies of any OECD country due to the preponderance of nuclear power in the energy mix (Figure 1). In 2014, nuclear energy accounted for nearly half the total primary energy supply (TPES) and over three-quarters of electricity generation. Renewable sources of energy accounted for 9% of TPES and 16% of electricity generation, which is low compared with the respective OECD Europe averages of 13% and 31% (IEA, 2015). France's aim of reaching 23% of renewables in gross final energy consumption by 2020, to comply with the relevant EU directive (2009/28/EC), will be difficult to achieve.

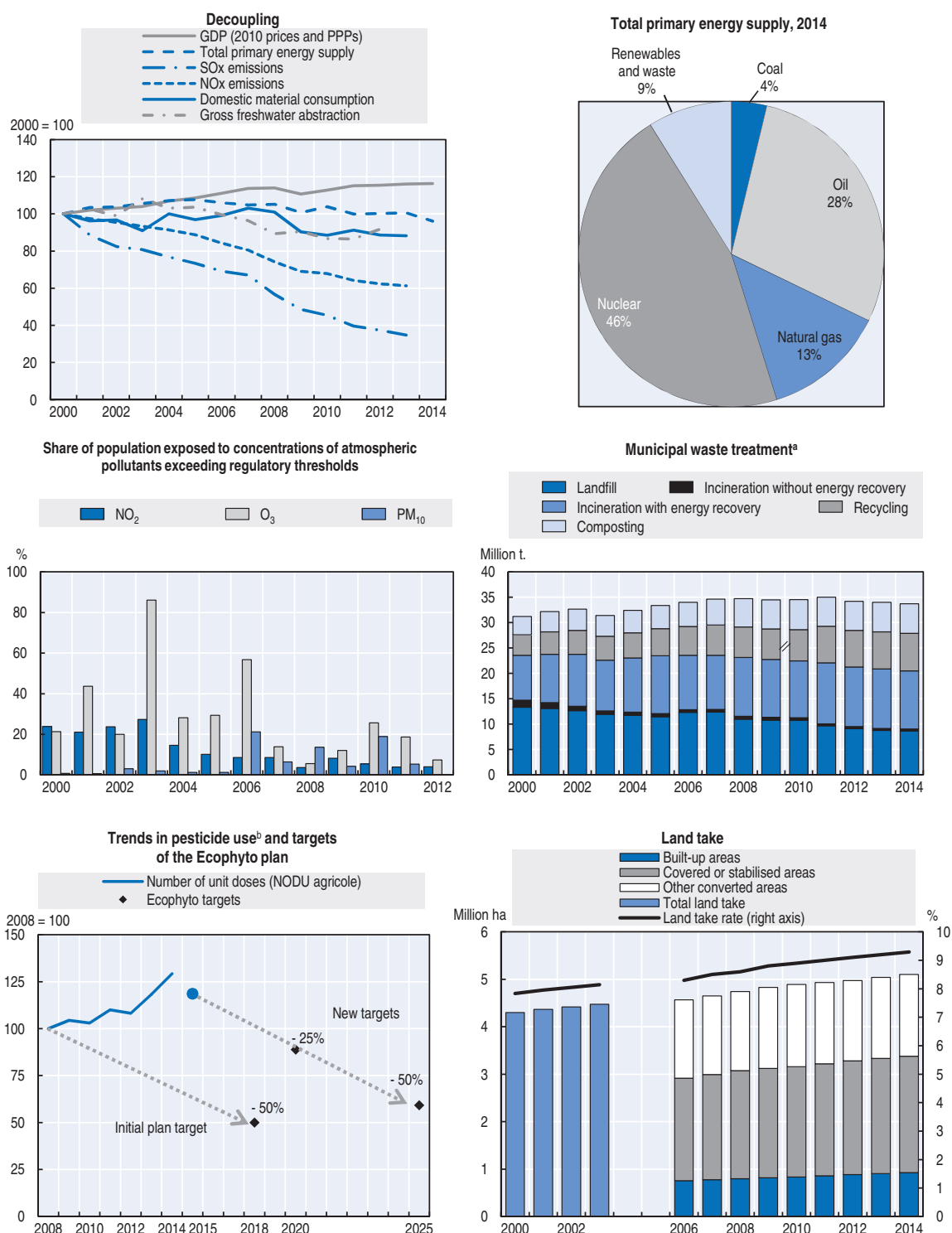
France outperformed the target it set itself under the Kyoto Protocol of limiting greenhouse gas (GHG) emissions over 2008-12 to 1990 levels (Figure 3). The decoupling of GHG and CO₂ emissions from economic growth has continued since 2000. The transport sector remains the largest GHG emitter, though emissions fell slightly between 2000 and 2013. A decline in road freight due to the economic crisis and the introduction of lower-carbon vehicles helped limit transport-related emissions (SOeS, 2014).

The French economy is more energy efficient than the OECD average, though its energy intensity has diminished less since 2000 than that of the OECD as a whole. Overall, final energy consumption has decreased and France has exceeded its intermediate energy saving target for 2010, set in the first National Energy Efficiency Action Plan in 2008 (MEDDE, 2014). Energy consumption has fallen sharply in manufacturing but has risen in the residential and service sectors.

Emissions of the main air pollutants fell between 2000 and 2013 due to stricter regulations, lower fossil fuel consumption, energy savings and de-industrialisation of the economy (Figure 1). Emissions remained below the national emission ceilings for 2010 set in EU Directive 2001/81/EC except in the case of NO_x emissions, due in particular to growth in the vehicle fleet and in the use of diesel cars since 2000.

The proportion of the population exposed to concentrations of air pollutants higher than the regulatory threshold has fallen (Figure 1). Despite numerous plans to combat air

Figure 1. Selected environmental performance indicators



a) Change of methodology in 2010.

b) Measured as number of unit doses for agricultural use (NODU agricole), linking the quantity of an active substance to a specific unit dose. 2015 is estimated as a three-year average (2012-14).

Source: OECD (2015), *OECD National Accounts Statistics* (database); IEA (2015), *IEA World Energy Statistics and Balances*, (database); EEA (2015), *AirBase* (database); OECD (2015), *OECD Environment Statistics* (database); MAAF (2016), *Tendances du recours aux produits phytopharmaceutiques de 2009 à 2014*; MAAF (2015), *Teruti-Lucas land use survey* (database).

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pollution, however, human health protection thresholds are regularly exceeded in some locations for ozone, NO₂ and fine particles (PM₁₀, PM_{2.5}) (CGDD, 2015a). This is because the plans are not restrictive enough, their governance is ambiguous and some of the statutory instruments available to limit urban traffic (congestion pricing and restricted access for the most polluting vehicles) were barely used until recently. Along with climate change, air pollution is the environmental problem that French people say they are most concerned about (CGDD, 2015b). The economic cost of its health effects is estimated at 2.5% of GDP (WHO/Europe and OECD, 2015).

Transition to efficient resource management

Material productivity (the amount of economic value generated per unit of material input) has improved, especially since the economic crisis, which caused a fall in domestic consumption of materials, particularly construction materials (Figure 1). Less primary waste has been generated as a result of the economic slowdown and the amount of municipal waste generated has levelled off. The French generate more waste per capita than the European average. The recovery rate for municipal waste (recycling and composting) has improved to reach 39% in 2014, but is still much lower than in Germany (65%) and Belgium (50%). This is partly because economic actors are insufficiently sensitised to the concepts of waste prevention and recycling, as well as the absence of price signals (Section 3). In addition, unlike some other European countries, France has not prohibited direct landfill disposal of municipal waste, which still accounted for more than a quarter of the waste treated in 2013 (Figure 1). The 2015 Energy Transition for Green Growth Act calls for halving the amount of waste landfilled between 2010 and 2025. It also institutes a five-year strategy for a circular economy, including a programming plan for the resources required by the economy in order to optimise their use.

France is the EU's leading agricultural producer, though output has fallen slightly since 2000. Nutrient surpluses (nitrogen and phosphorus) have also declined. In contrast, the use of pesticides has increased, making France one of the world's largest consumers of plant protection products. The use of these products is linked to the type of cultivation (vines and arboriculture), the increase in the surface of field crops at the expense of grasslands, and climate conditions. The target of halving their use between 2008 and 2018 will not be met and has been pushed back to 2025 (Figure 1). The presence of pesticides in watercourses and aquifers is a cause for concern and the situation has changed little since 2000. These products also contaminate the air and soil, for which current control measures are insufficient.

Management of natural assets

France has an abundance of natural assets. However, urbanisation and habitat fragmentation are putting increased pressure on biodiversity. The increase in land take has accelerated, especially on the outskirts of towns and cities and along the coast (Figure 1), mainly at the expense of farmland and woodland, generating many environmental impacts (Section 5).

France as a whole suffers from moderate water stress, but water resources are becoming scarcer in some areas and low-water periods are worsening in the south. Water abstraction has declined since 2000 (Figure 1). The pollution of watercourses by organic and phosphorous matter has decreased, mostly because of stricter regulation and better water treatment, though nitrate and pesticide pollution continues. Like many other European

countries, France has asked for a deadline extension (to 2021) in view of its inability to achieve the 2015 good water status objective set in the EU Water Framework Directive. Nevertheless, almost the entire population has access to drinking water of excellent quality (Onema, 2015).

The strength of France's water policy lies in its system of integrated management by catchment basin with decentralised and participatory governance. However, effective governance and water policy implementation are hindered by the number of players, the complexity of the links between them and the dispersal of responsibility (Levrant et al., 2013). Water policy is insufficiently incorporated into sectoral policies. At local level, the large number of public water and sanitation services prevents economies of scale.

Recommendations on air and waste management

Air management

- Adopt and implement the national plan to reduce emissions of atmospheric pollutants, coupled with a precise timetable in order to ensure compliance with standards for the protection of human health; clarify responsibilities between central and local government in order to implement plans to counter air pollution in large conglomerations and particularly polluted zones; promote the creation of restricted traffic zones and experiments with urban tolls; encourage the replacement of inefficient wood-burning domestic heating systems.
- Improve knowledge of the drivers of air pollution and its impacts on health.

Waste management

- Strengthen awareness of and information on preventing and recycling waste; develop indicators of material and waste flows and encourage businesses to use them in order to track progress in implementing the circular economy strategy and resource programming plan.

2. Environmental governance and management

Sustainable development action framework

France's environmental policy is proactive and ambitious, as exemplified in 2015 by the passage of the Energy Transition for Green Growth Act, adoption of the Paris Agreement at the 21st Conference of the Parties to the United Nations Framework Convention on Climate Change (COP21), recognition of the Lima-Paris Action Agenda at COP21 and parliamentary debate on a bill for restoring biodiversity. An earlier milestone was the Grenelle Forum in 2007. This multi-stakeholder consultation process and the two laws which arose from it put French environmental policy on a new footing by generating an extensive body of legislation, setting high goals and institutionalising participatory governance. Although the Grenelle laws have been called a "legal monster" (Petit, 2011), they have served to structure the environmental action of sectors and local authorities by deploying a battery of financial, regulatory and planning instruments. In the wake of the forum, the second National Sustainable Development Strategy for 2010-13 provided a general framework which brought all stakeholders together around a common vision, though it has been criticised for taking a sectoral approach which diluted priorities (MEDDE, 2013). The National Strategy for Ecological Transition to Sustainable Development for 2015-20 addresses this criticism by taking a cross-cutting approach and formalising stakeholders' actions by means of progress

reviews. The strategy serves as a base for France to elaborate a roadmap to implement the Sustainable Development Goals adopted by the international community in 2015 within the framework of the 2030 Agenda for Sustainable Development.

Most French environmental legislation and policy is determined by EU law. Since 2007, France has systematically exceeded the EU average number of infringements of EU environmental legislation (European Commission, 2014a). Breaches particularly concern nitrate water pollution, urban wastewater treatment and air quality.

Environmental institutions and governance

Environmental strategies and policies are overseen by the Ministry of Environment, Energy and the Sea (MEEM). MEEM supervises specialist public agencies in fields such as water, energy and forestry, and its action is carried out in the regions and departments by dedicated decentralised government bodies. To encourage sectoral integration of environmental issues, in 2007 the Ministry of Ecology and Sustainable Development was merged with the Ministry of Transport, Infrastructure, Tourism and the Sea, as well as the Industry Ministry's energy arm. The measure had mixed results. Although it gave MEEM greater clout within the government, it proved unable to break the hold of certain forms of corporate behaviour within the ministry's departments. The sensitive issue of balancing infrastructure projects and environmental impact now takes place within MEEM and not at prime-ministerial level, making decisions less transparent, sometimes to the detriment of environmental objectives (Bettina, 2010; Lepage, 2008).

Regions, departments and municipalities implement environmental policies at local level. However, the complexity of France's multi-level governance system hampers the attainment of environmental objectives and fuels demands for simplification; the system suffers from overlapping responsibilities between central and local government, and from an unclear relationship between central government and its decentralised bodies as well as between those bodies and the regional branches of national agencies. The recent reform of France's territorial organisation¹ is a step in the right direction, clarifying the division of powers, simplifying planning and encouraging co-operation between municipalities.

Environmental assessment

France has made clear progress in policy evaluation. New bodies such as the Inter-ministerial Committee on Modernisation of Public Action have helped bring policy evaluation closer to decision making. New sustainable development indicators and more frequent use of indicator dashboards to guide public action (e.g. indicators for inequality, quality of life and sustainable development in budget acts,² the dashboard for marine protected areas) make evaluation more rigorous. However, the multiple goals prescribed by law and the frequent use of means-based rather than results-based indicators make evaluation difficult (Crosemarie, 2012; HCSP, 2013).

The legal framework for strategic environmental assessment (SEA) of plans and programmes and environmental impact assessment (EIA) of projects has been strengthened since the 2005 *OECD Environmental Performance Review* by defining their scope and requirements more precisely. Nevertheless, differences between EU directives and French law continue to pose problems (AE, 2015), as with the French notion of "programme of works" which has no basis in the EU directive (Vernier, 2015), or the interpretation of what is needed for environmental authorities to be "independent" in their assessments (Vernier, 2015; European Commission, 2015). The relationship between SEA and EIA is less clearly defined

than in other EU countries, a point which the 2015 Growth, Activity and Equal Economic Opportunity Act (Macron Act) aims to clarify.

The French policy of one EIA per procedure means several EIAs are carried out for the same project. This duplication of efforts wastes time and resources and leads to fragmentation, so that the client, the environmental authority and the public lose the comprehensive overview of the project and its potential impact. A “one EIA per project” approach, favoured by several of the actors involved, would bring the situation more into line with the EU directive.

Licensing, compliance and enforcement

France streamlined its environmental permitting system in 2009, easing the administrative burden on the regulated community. It introduced a registration system for some sectors mostly dominated by small and medium-sized enterprises. However, the switch to registration of installations formerly subject to authorisation has been slower than expected because of the difficulty of drawing up new technical requirements specific to each sector.

The infringement detection rate has not improved since 2006. The scheduling of inspections does not take sufficient account of the behaviour of controlled installations. In addition, environmental inspection authorities do not use results-based indicators to measure the compliance of installations, taken individually or not, which undermines the effectiveness of their strategic planning. Recent regulations have rationalised compliance control procedures and stepped up the use of administrative and daily fines. However, the procedures and the instructions on their use by the inspection authorities are still pending. Criminal procedures continue to dominate enforcement measures, even though criminal penalties are rarely applied.

In 2008, France introduced the notion of strict environmental liability for damage to water, biological species, natural habitats and the soil. As the current legislation makes no provision for procedures or methods for remedying damage to the environment, strict environmental liability remains difficult to apply in practice. To make it operational, the government is working on the introduction of additional legislation that will give priority to direct rehabilitation of a damaged ecosystem by the party responsible.

Promoting environmental democracy

The Grenelle Forum was a high point for environmental democracy in France. Laying the foundations for “five-part governance” bringing together central government, elected officials, businesses, trade unions and non-government organisations (NGOs), it involved citizens directly in the process through local debates and online consultations. This participatory approach has been adopted in France’s annual environmental conferences and institutionalised through the National Ecological Transition Council (CNTE). At the Grenelle Forum and even now, however, the extent to which participation is representative is open to question. Trade unions and NGOs do not always have the capacity to be present, and even when they can participate, they do not guarantee representation of civil society (Gossement, 2013).

Strengthening dialogue on environmental and social issues remains a priority following protest movements which shook up government policy. The public is consulted about plans, programmes and projects too late, at a point where the project can no longer

be called into question and only marginal changes can be made (AE, 2015; Duport, 2015). The CNTE has proposed two systems to improve civil society involvement (CNTE, 2015). The Macron Act streamlines and modernises the procedure for public participation in the preparation of projects, plans and programmes. At the same time, however, it gives the government the power to reform environmental law by order, thus freezing parliament out of discussions.

Access to environmental information is of good quality: it is supported both by the role played by MEEM's Observation and Statistics Department in circulating information and by the many online data portals set up in recent years. However, French people consider themselves less well informed on environmental matters than their counterparts elsewhere in Europe (European Commission, 2014b). Substantial progress has been made in environmental education concerning sustainable development, as a result of an ambitious initiative spanning 2004 to 2015 that concerned primary to tertiary education and culminated in the certification of many schools. However, the tradition of separate disciplines in French education remains a stumbling block, making it more difficult for an intrinsically interdisciplinary approach to take root (ADEME, 2014). Another initiative is the "Learn to produce differently" plan, which has allowed the "agroecology" approach to be integrated into agricultural education (Section 5).

In compliance with the Aarhus Convention, France has several channels allowing citizens to access environmental justice, including the Commission for Access to Administrative Documents, the Ombudsman, assistance with access to the courts or legal advice, and the ability of environmental protection groups to take legal action on behalf of collective interests. However, referrals to the courts can get tied up in red tape and legal action can be expensive for those who lack access to legal aid (UN Economic Commission for Europe, 2014).

Recommendations on environmental governance and management

- Simplify planning documents relating to the environment and adopt a more global and integrated approach to environmental issues.
- Strengthen and simplify environmental evaluation by:
 - ❖ introducing more results-based indicators in public policy evaluation;
 - ❖ promoting a single EIA per project;
 - ❖ continuing to clarify the relationship between EIA and SEA.
- Continue to reform the environmental permitting system by extending the range of sectors eligible for registration and further rationalise the relevant procedural and substantive rules.
- Improve the targeting of inspections on the basis of the compliance history of regulated installations; introduce performance indicators to measure non-compliance for both individual installations and the regulated community as a whole; strengthen administrative enforcement measures by introducing administrative fines proportionate to the economic advantages of non-compliance; consider making minor infringements punishable by administrative measures.
- Strengthen the legal framework for environmental liability by defining procedures and standards obliging responsible parties to remedy the environmental damage they cause.

Recommendations on environmental governance and management (cont.)

- Simplify public participation in the preparation of plans, programmes and projects by making it easier to involve the public at an earlier stage, by creating a procedure for participation on a project-by-project basis and by modernising the opportunities for participation (e.g. via the Internet); bolster public information and communication on environmental costs (externalities and environmental protection expenditure).
- Strengthen teacher training on sustainable development issues.

3. Towards green growth

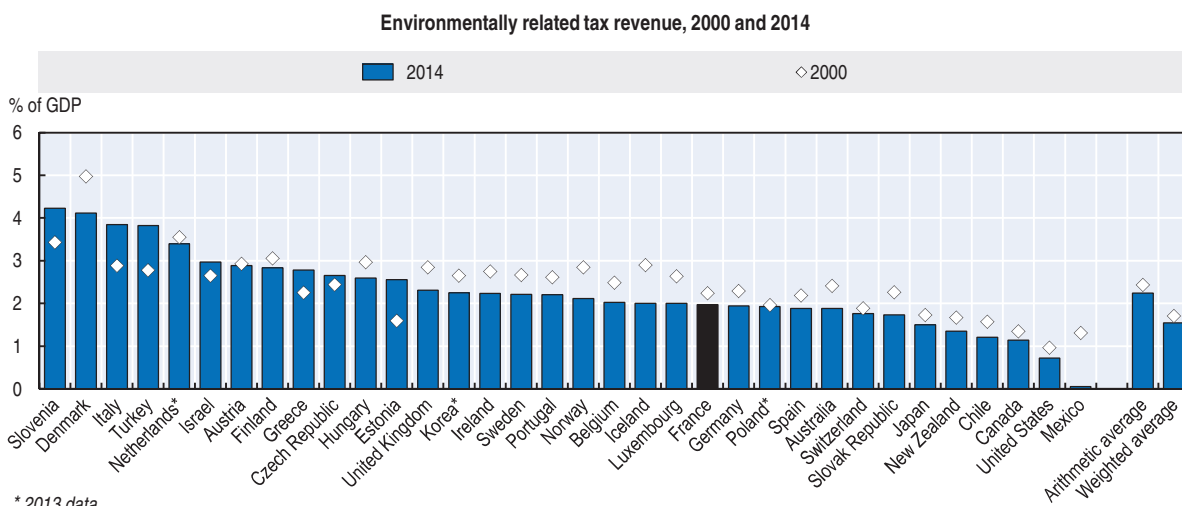
A coherent action framework for sustainable development and green growth

Green growth has been given increasingly high priority since the economic crisis. The Grenelle Forum favoured the promotion of investment in sustainable transport, the thermal renovation of buildings and clean technology as drivers of growth in the 2009 budget stimulus plan. It also revived interest in the greater use of economic instruments in environmental policy. Much work has been done to advance the valuation of environmental externalities, for example by the Stiglitz-Sen-Fitoussi Commission (2009) on the measurement of economic performance and social progress, the Quinet Commission (2009) on the shadow price of carbon and Bernard Chevassus-au-Louis on the monetisation of ecosystem services and the value of biodiversity (CAS, 2009). The 2015 Energy Transition for Green Growth Act gave a definition of green growth comparable to that of the OECD (OECD, 2011). The act fits within the National Strategy for Ecological Transition to Sustainable Development for 2015-20, which aims to ensure coherence in public action to meet the challenges of climate change, accelerated biodiversity loss, growing resource scarcity and proliferating health risks.


Towards greener taxation

The Environmental Taxation Committee, established in 2012 and renamed the Green Economy Committee in 2015, has increased the acceptance of the importance of including the cost of environmental harm in prices. In 2015, during COP21, the French president along with several other heads of state, the World Bank, the IMF, the OECD, business leaders and civil society representatives from around the world launched the Carbon Pricing Leadership Coalition. In addition, the government committed to harmonising diesel and petrol taxes within five years. In 2014, a carbon component (the climate-energy contribution) was incorporated into the taxation of fossil fuels and the 2015 Budget Act³ confirmed its gradual increase from EUR 7.00 to EUR 30.50/t CO₂ in 2017. The scope of the general tax on polluting activities has been extended and certain rates have been increased. The annual tax on company vehicles has been modified to take account of CO₂ and other pollutants emitted by such vehicles.

However, environmental taxation remains relatively light at a time when heavy fiscal pressure on jobs and businesses is holding back investment and innovation. Over 2000-14, environment-related tax revenue fell as a proportion of both GDP and total tax revenue (Figure 2). It represented 2.0% of GDP and 4.4% of tax revenue in 2014, one of the lowest levels among European OECD countries. Revenue from taxes on oil products has fallen significantly since 2000 due to lower consumption, lower real tax rates and a switch from

Figure 2. **The share of environmental taxation in the economy is low and decreasing**

Source: OECD (2015), *OECD Database on Instruments Used for Environmental Policy and Natural Resources Management*.

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petrol vehicles to more lightly taxed diesel ones. Nevertheless, the growth of the climate-energy contribution and another instrument, the contribution to public service charges for electricity (Section 4), should change this situation in coming years.

The implicit energy tax rate⁴ varies considerably depending on fuels and users and only partially reflects environmental externalities. The introduction of a climate-energy contribution in taxes on energy product consumption is an important step towards carbon price harmonisation, but their many exemptions limit its scope, and the average effective rate of carbon taxation remains fairly low by OECD Europe standards (OECD, 2015a). As in a majority of OECD countries, taxation of road fuel significantly favours diesel, which is unjustified from an environmental standpoint since diesel has a higher carbon content and emits more local pollutants (fine particles, NO₂) than petrol (Harding, 2014). The reduction under recent budget acts of the tax differential between diesel and petrol, from EUR 0.18/litre in 2014 to EUR 0.12 in 2017, is noteworthy and could be accelerated given the current drop in oil prices.

Progress has been made in eliminating environmentally harmful subsidies, such as exemptions from the tax on biofuels and on consumption of coal and natural gas for individuals, and the reduced rate of VAT on fertiliser and pesticides. However, many other subsidies continue to harm the environment and biodiversity, in particular by encouraging the use of diesel (especially for road freight and farming), to the detriment of air quality, or by encouraging urban sprawl without taking account of the harm caused by land take (Section 5). Tax expenditure related to fossil fuel consumption represented 20% of energy tax revenue⁵ and 0.3% of GDP in 2015.

Vehicle taxation is relatively low compared to other OECD countries. By focusing on CO₂ emissions, the bonus/malus programme for vehicle purchases which combines a subsidy and a purchase tax, and the scrapping premium introduced to sustain demand during the financial crisis have helped reduce average emissions per kilometre for new vehicles registered in France to a level well below the EU average. However, they have generated an overall subsidy worth more than EUR 2 billion which encourages consumers

to buy diesel vehicles, with harmful health effects (WHO/Europe and OECD, 2015). The proportion of diesel vehicles in the car fleet rose from 35% in 2000 to 62% in 2014, one of the highest levels in Europe.

The tightening of the bonus/malus programme and the annual tax on company vehicles, combined with the entry into force of stricter emission standards, have resulted in a recent downturn in diesel registrations in favour of petrol. However, the company car fleet still mostly comprises diesel vehicles, which are more advantageous in the long run: excise duty on diesel is lower than on petrol, and companies can deduct most of the VAT charged on diesel consumption but not on petrol. Furthermore, the tax breaks granted to employees for the use of a company vehicle do not take account of distance travelled, which encourages them to drive more.

Investing in the environment to promote green growth

Expenditure⁶ on environmental protection⁷ went from 1.9% to 2.2% of GDP between 2000 and 2013, a relatively high figure in comparison with other EU countries. The rise was mainly due to higher current expenditure on waste management, while capital expenditure fell in the second half of the 2000s, especially for wastewater treatment (CGDD, 2015c). Waste management and wastewater treatment remain the largest items of expenditure.

The amount of waste generated per capita has been relatively stable; the rise in expenditure is due partly to improved management methods (especially the widespread use of separate collection) but also to inadequate cost control in collection and processing. The polluter-pays principle is not well applied in municipal waste management and the way the service is funded provides little incentive to keep costs down (Cour des Comptes, 2014a). The majority of the population pays a household waste collection tax which is not directly linked to the service provided. In practice, businesses which use the public waste collection service contribute little to its funding. The reform of the general tax on polluting activities, applied to household and similar waste processing plants in 2009, has not produced the expected results in terms of switching waste flows from elimination to prevention and recycling.

Water supply and wastewater infrastructure is of good quality but ageing, and falling consumption could pose a problem with regard to paying for network replacement. After strong growth until 2007, driven by the need to bring sewerage networks and treatment plants into line with EU standards, capital expenditure diminished until 2012. The system of water charges is effective in terms of covering service provision costs but applies the polluter-pays principle imperfectly, with the result being that externalities related to agricultural and economic activities are borne by consumers (CGDD, 2012; Levraut et al., 2013). For example, the level of the abstraction charge does little to encourage water conservation, and the diffuse pollution tax provides few incentives and does not cover the use of mineral fertiliser. An experimental system involving savings certificates for plant protection products will be introduced in 2016 to encourage more sparing use of agricultural inputs.

The 2011 National Transport Infrastructure Plan, which emerged from the Grenelle Forum, provided for EUR 245 billion in investment over 25 years, with the rail sector accounting for 71%. Capital spending on the high-speed rail network more than quadrupled between 2010 and 2013, while spending on urban public transport increased by 50%. However, modal shift targets are not being met and low investment in the conventional rail network could compromise its long-term viability (Commission sur l'Avenir des Trains d'Équilibre du Territoire, 2015). The Mobility 21 Commission reviewed the socio-economic

evaluations and the impact assessments of large transport infrastructure projects and recommended modernising the conventional network before building new high-speed lines. However, recent commitments to new lines raise questions about the consideration given to socio-economic assessment in decision making (Cour des Comptes, 2014b). The shelving of an eco-tax on heavy goods vehicles clearly contradicts the polluter-pays principle by maintaining only partial coverage of external costs, including environmental costs, of using road infrastructure.

Promoting green markets and jobs

Added value and employment in eco-activities⁸ have grown faster than the economy as a whole since 2004. They represented 1.5% of GDP in 2013 and over 440 000 jobs (1.7% of total employment), about half of them in waste management, wastewater treatment and renewables (CGDD, 2015d). Growth was strongest in soil and water rehabilitation, renewables and waste. A national plan to promote employment and jobs in the green economy has been drawn up and a national observatory created. Going beyond eco-activities, its remit spans “greening” activities,⁹ an area in which recent momentum has been driven by rising employment in the maintenance and repair of cars and light utility vehicles and in railway infrastructure maintenance. Overall, eco-activities and greening activities accounted for around 1 million jobs in 2013. Recruitment problems persist in skilled building trades, underlining the importance of training and certification programmes focusing on energy efficiency and the installation of renewable energy systems.

Promoting eco-innovation as a new source of economic growth

Eco-innovation has been given increasing priority in environmental and economic policies. Climate change, the energy sources and economic engines of the future, recycling, and efficient resource management are some of the priorities of research and innovation strategies and of key industries promoted as new sources of economic growth. In 2013, the EU eco-innovation scoreboard ranked France among the leaders in Europe, behind Germany, the UK and Spain but ahead of Italy and the Netherlands (EIO, 2014). Expenditure on environmental research and development (R&D) has risen faster than total R&D spending since 2000, and public R&D and demonstration (RD&D) budgets dedicated to renewables and energy efficiency have increased substantially. However, the share of public RD&D budgets devoted to energy in 2013 (31%) was still lower than in a majority of OECD countries, with nuclear power accounting for nearly half. The share of environment-related technology in patent applications (12%) has doubled since 2000 but was barely above the OECD average (11%) in 2010-12.

France is particularly strong in water management, wastewater treatment, waste management and environmental engineering, boasting large firms and highly reputed public research institutes. Likewise, in technology to combat climate change it has taken advantage of industrial champions in sectors that are already mature, such as heating, hydraulics, insulation and cement, and of industries that have not really taken off yet, such as electric vehicles, which have both reaped the rewards of publicly funded research (Ménière et al., 2013). In contrast, weak positions in emerging sectors such as renewables reveal a lack of stable support mechanisms as well as a greater need for public-private co-operation in research, and more frequent monitoring of market trends and potential comparative advantages in French industry (Section 4).

Many regulatory, pricing and tax instruments used in environmental policy have stimulated eco-innovation, such as the bonus/malus programme and EU regulations on vehicle emissions or feed-in tariffs for renewables. On the demand side, the importance of public procurement in the French economy provides an opportunity to encourage green sourcing: less than 7% of public procurement contracts in 2013 contained an environmental clause. Within the framework of innovation policy, tax breaks and subsidies for R&D, such as the Investments for the Future Programme, have enabled some green industries to preserve and enhance their competitive advantage. However, large firms are still the main beneficiaries of such support, and the environmental, economic and social impacts of funded projects need to be assessed. The innovation support system is highly complex and induces growing tax expenditure. France has the OECD's highest rate of R&D tax incentives as a proportion of GDP.

Environment, trade and development

France's net official development assistance (ODA) has fallen significantly since 2010. It was predicted to reach 0.4% of gross national income in 2015 and remain at that level over 2016-17. France did not achieve its EU objective of devoting 0.5% of gross national income to ODA in 2010 and will not meet the 2015 goal of 0.7%.

Preserving the environment, combating climate change and protecting biodiversity have assumed growing importance in French development co-operation policy, with increasing amounts of ODA devoted to them. On average over 2013-14, France was the fourth largest provider of bilateral environment-related ODA. This placed France above the OECD Development Assistance Committee (DAC) average for environment-related ODA as a proportion of total screened ODA (40% versus 26%), though the share allocated in the form of soft loans was almost twice the OECD DAC average. Environment-related ODA increasingly targets projects containing environmental objectives outside the environment sector (transport, energy). Four times as many funds are allocated to climate change mitigation than to adaptation, a significant imbalance compared to other DAC members.

France is a leader in innovative financing for the environment. It has set up the French Global Environment Fund, which contributes to the development of innovative finance mechanisms through the projects it supports. The fund also earmarks some of the revenue from the financial transaction tax for environmental protection and action against climate change in developing countries. The French development agency AFD issues climate bonds on financial markets to raise funds for mitigation and adaptation projects. AFD also has many ways to integrate environmental considerations into development co-operation and to avoid financing environmentally harmful activities.

France promotes the OECD Guidelines for Multinational Enterprises and backs the 2012 OECD Recommendation on Common Approaches for Officially Supported Export Credits and Environmental and Social Due Diligence. It was the first country to require institutional investors to measure and disclose GHG emissions from their activities and their contribution to financing the energy transition, which should favour socially responsible investment and could serve as an example to other countries. In 2015, France announced that it was suspending export credits for the construction of coal-fired power stations unless they are equipped with operational carbon capture and storage. As part of the EU, France is participating in negotiations on a plurilateral agreement to liberalise trade in environmental goods.

Recommendations on green growth

- Speed up the reform of energy and vehicle taxation to better internalise costs associated with climate change and air pollution by:
 - ❖ confirming in upcoming budget acts that the carbon component (climate-energy contribution) of energy consumption taxes will gradually rise in line with commitments to reduce GHG emissions (EUR 100/t CO₂ by 2030);
 - ❖ confirming the time scale and schedule for aligning diesel and petrol taxation in the medium term;
 - ❖ reconsidering experimenting with a voluntary regional tax on heavy goods vehicles.
- Develop environmental assessment of direct and indirect public support, in particular via prior evaluation of Budget Act measures, with a view to eliminating measures that may harm the environment; gradually eliminate exemptions to the transport fuel consumption tax; ensure fair treatment of diesel and petrol with regard to recovery of VAT on companies' fuel consumption; eliminate the bonus part of the bonus/malus programme; revise the tax breaks granted to employees for use of a company vehicle in order to take account of distance travelled.
- Ensure the sustainability of financing for water and sanitation services in a context of declining consumption and rising financing needs:
 - ❖ speed up inter-municipal co-operation to promote economies of scale;
 - ❖ explore sources of funding compatible with resource management policy, including water savings in water stressed areas;
 - ❖ introduce a progressive component into the abstraction charge and local or seasonal variations linked to the scarcity of the resource;
 - ❖ continue to increase the diffuse pollution charge and extend it to cover mineral nitrogen fertiliser;
 - ❖ oversee and regularly evaluate the results of plant protection product savings certificates.
- Accelerate the introduction of incentive pricing for municipal waste management, including for companies and professional producers served by municipal waste collection services; reform the general tax on polluting activities in order to promote waste prevention and recycling; expand the use of cost accounting system for waste and cost tracking indicators in annual municipal waste management reports in line with the ADEME reference framework.
- Systematically conduct a cost-benefit analysis of public investment, giving consideration to environmental externalities, and ensure it is taken into account in decision making; continue research into the valuation of environmental costs.
- Continue efforts to foster R&D and the spread of environment-related technology by:
 - ❖ promoting co-operation between public research and the private sector;
 - ❖ making access to funding easier for businesses, especially small and medium-sized enterprises;
 - ❖ including mandatory environmental criteria in public procurement procedures;
 - ❖ regularly monitoring industries that might acquire a competitive advantage;
 - ❖ anticipating and developing the necessary skills for such industries;
 - ❖ expanding the analysis of the social, economic and environmental impact of aid to eco-innovation within an overall evaluation of measures to support innovation.
- Ensure a better balance between climate change adaptation and mitigation in environment-related ODA; earmark more of such aid for low-income countries, especially in the form of grants.
- Accompany investors in implementing the new environmental reporting requirements, and study the possibility of eventually including their carbon footprint; evaluate the results of the requirements and ensure their consistency with related international initiatives.

4. Energy transition: Towards a low-carbon economy

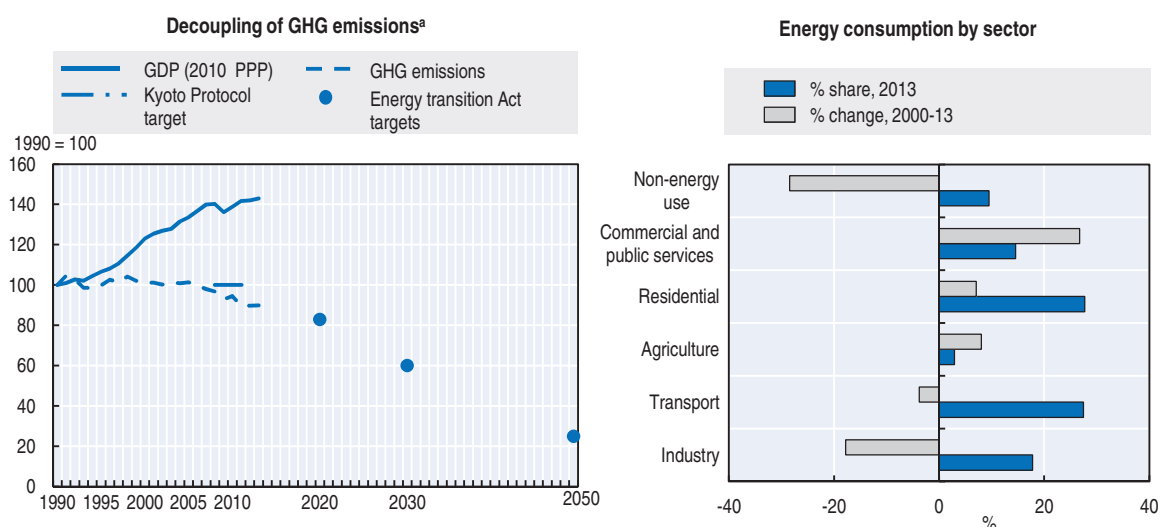
Strategic and institutional framework

The environment has loomed larger in France's energy policy over the last ten years, a development consistent with its EU and wider international commitments on energy and climate. The fight against climate change was declared a national priority in 2001 and, alongside the preservation of human health and the environment, was included in the objectives of the Energy Policy Guidelines Act in 2005. Ambitious targets have been adopted for deploying renewables, improving energy efficiency and reducing GHG emissions, including the Factor 4 approach, which aims to divide emissions by four between 1990 and 2050. A national debate preceded the drafting and adoption of the Energy Transition Act in August 2015, which aims to pave the way for an economy less dependent on fossil fuels and to implement a new, more sustainable energy model in response to the challenges of energy supply, price trends, resource depletion and the requirements of environmental protection, especially climate change. The act confirms the objectives set in the EU and international framework, adding a target for electricity generation diversification based on a 50% reduction in the share of nuclear by 2025.

The expansion of MEEM to encompass energy policy has made sectoral integration easier. Multiple strategies have been introduced at national level (Climate Plan, National Energy Efficiency Action Plan, National Renewable Energy Action Plan, etc.) and local level (Regional Climate-Air-Energy Plans, Territorial Climate-Air-Energy Plans), setting numerous objectives for all economic sectors. These framework documents are backed up by a battery of economic, financial and regulatory instruments that have enabled France to make progress in terms of GHG emissions, energy consumption and air pollution (Figures 1 and 3).

However, results have not matched the objectives. A proliferation of energy and climate legislation plus a multitude of often overambitious targets with differing and overlapping time horizons have complicated governance and hampered the evaluation and tracking of

Figure 3. **A lower-energy and lower-carbon economy**



a) Excluding emissions/removals from land use, land-use change and forestry (LULUCF).

Source: IEA (2015), *IEA World Energy Statistics and Balances* (database); UNFCCC (2015), *2015 submission of France to the UNFCCC*; UNFCCC (2014), *First biennial report of France under the UNFCCC*; OECD (2015), *OECD National Accounts statistics* (database).

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progress. Administrative complexity, legal instability, multiplication of instruments and overlap of powers at various levels of sub-national government have also held back implementation and undermined the effectiveness of policies, slowing the pace of renewables installation, for example. The Energy Transition Act aims to improve energy policy steering by creating an integrated framework for multiyear investment programming covering all energy sources and defining a national low-carbon strategy, setting indicative sectoral ceilings for GHG emissions over five-year periods in order to achieve Factor 4.

Developing renewables

The development of renewable energy sources is a determining factor for the economy's capacity to achieve low-carbon objectives while reducing the share of nuclear energy in the electricity generation mix. However, the rollout rate of renewables to date has not been sufficient to achieve the objective of lifting their share to 23% of gross final energy consumption by 2020 (MEDDE, 2009). To achieve this, efforts since 2005 to increase renewables-based electricity generation would have to be roughly tripled and those for heat production nearly quadrupled between 2014 and 2020. Although the intermediate targets in the national renewables action plan for the use of solar photovoltaic (PV) energy have been greatly exceeded, the development of onshore wind power and of solid biomass (for the production of heat and electricity) have fallen short of expectations. Offshore wind power has not even started (SOeS, 2014).

As in other OECD countries, unstable support measures combined with the red tape surrounding licence applications have held back renewables development. In particular, feed-in tariffs to support the solar PV industry were badly calibrated at the outset, generating windfall effects, and have been changed several times, sometimes retroactively, resulting in investment slumping and several firms going out of business. Under the Energy Transition for Green Growth Act, the feed-in tariff will be gradually replaced by feed-in premiums for installations in mature segments above a certain size. This should encourage integration of renewables into the electricity market while limiting windfall effects, provided that the system is easy enough for investors to understand. The complexity of regulations has also slowed the deployment of projects: in 2013, the time lapse in France between submitting an application for an onshore wind turbine and actual construction was triple that in Germany (Cour des Comptes, 2013a). Recent streamlining measures, such as the single licence procedure in regions with significant wind power potential, are welcome and should be continued. Since 2009, the Heat Fund has accelerated renewable heat production. However, the budget allocated to the fund (EUR 1.2 billion between 2009 and 2014) is below initial intentions. The government intends to double allocations by 2017.

Support measures for renewables are mainly financed by a tax called the contribution to public service charges for electricity (CSPE), paid by electricity consumers. It has soared, mainly due to the expansion of renewables industries, the growing burden of additional costs resulting from overgenerous feed-in tariffs in the first solar PV contracts, and falling electricity prices (the benchmark for calculating additional cost offsets). The CSPE has been repeatedly criticised (Cour des Comptes, 2013a), especially because it puts the full burden of developing renewables on consumption of electricity which in France has a low carbon content. It was reformed in November 2015 to give parliament greater control and restore balance in the taxation of different energy sources: feed-in tariffs will also be financed by a part of revenue from the growing carbon component in taxes on fossil fuel consumption.

The growing integration of renewables raises many issues. The first is a more flexible electricity system, which can be encouraged by the development of national grids and interconnection to the European grid, and by better demand management through smart grids and territorial planning (IDDRI, 2015). In France, flexibility stems from hydropower, which can provide storage capacity, and from nuclear power, which provides baseload power. Because France is committed to reducing the share of nuclear energy in the electricity generation mix to 50% by 2025 and limiting nuclear generation capacity, it must clarify its policy choices on closure and extension of the operating life of reactors in order to smooth the investment that would be required when many plants reach their 40-year limit (MEDDE, 2015). Multiannual energy programming, which will define the direction of public policy on demand management, infrastructure optimisation and interaction between energy vectors, should improve visibility for investors. The power generation base should also be optimised economically, which means improving control of production costs in different energy industries and adapting support mechanisms for renewables, against a backdrop of falling wholesale electricity prices, which is hardly conducive to investment.

Improving energy efficiency

Reducing energy consumption has long been a mainstay of French energy policy. However, the fall in final consumption has not matched ambitions (MEDDE, 2015). Although progress has been made in all sectors, further effort will be needed to meet the ambitious objective set in the Energy Transition Act of halving final consumption between 2012 and 2050 (EEA, 2015).

The residential and commercial sector, which accounts for over 40% of final consumption, represents a major policy challenge. Energy savings certificates, thermal regulations and financial incentives, such as sustainable development tax credits and soft loans, are the main instruments introduced to improve energy performance in the sector. The certificate programme, which obliges energy suppliers to make energy savings, has been tightened over time. In response to recommendations by the Cour des comptes (2013b), which audits the use of public funds in France, and to new EU rules, the programme was simplified and made more transparent for the third implementation period (2015-17). It now serves as a model for other sectors. France's thermal regulations for new buildings are an example of good practice because they are based on outcomes rather than inputs, unlike those for existing buildings, which need to be improved.

Although progress has been made, achieving the objective of 500 000 renovations a year by 2017 is a big task: only 265 000 energy improvement projects were carried out in 2013 (OPEN, 2015). There are many barriers to lift. The terms, scope and conditions of eligibility for financial incentives have been revised many times in recent years and the links between them, not always clear, have made access to them difficult for individuals. They have also generated considerable windfall effects and encouraged piecemeal renovations which are less efficient than complete renovations. The problem has been compounded by a lack of professionalism in the industry, resulting in considerable disparity in the quality of diagnoses and services provided. The environmental cross-compliance requirement, introduced in 2014, should help remedy the situation. Financing issues have also been raised: the tax credit weighs heavily on public expenditure (Cour des Comptes, 2011; MINEFI, 2015); local banks lack the technical skills to process eco-loan applications (Hilke and Ryan, 2012) which led technical responsibility for eligibility to be entrusted to building contractors; and the energy performance contract, a third-party

financing mechanism, has been less successful than expected because local authorities are put off by its complexity, individuals face high transaction costs and it cannot be combined with other support measures (MINEFI-MEDDE, 2013).

Improving the thermal performance of residential properties is also a way of combating fuel poverty, which was estimated to affect nearly 20% of the population in 2015 (ONPE, 2015). Between 2010 and 2015, the Habiter Mieux programme financed energy efficiency improvements for 140 700 households in fuel poverty, compared with a target of 300 000 by 2017 (ANAH, 2015). Difficulties persist in identifying and informing isolated individuals entitled to help and in financing the residual amount they have to pay (Chancel et al., 2015). The introduction of a “Habiter mieux” eco-loan in 2016 is aimed at facilitating such financing.

France has tried various ways to provide help with paying energy bills to combat fuel poverty, though their effectiveness has not yet been proved. The concessionary tariffs currently in place have been criticised as providing insufficient support and for being unequal depending on the type of heating used, incapable of targeting the poorest households and prohibitively expensive to administer (ADEME, 2013). The replacement of concessionary tariffs with a means-tested energy voucher from 2016 should improve targeting and be simpler to run. However, insofar as it is restricted to payment of heating bills (or purchases to make the home more energy-efficient), it could reduce the incentive to consume less energy. A new obligation aimed at fighting fuel poverty was introduced into the energy savings certificate programme in 2016.

Recommendations on energy transition

- Complete and implement the strategic framework for energy policy:
 - ❖ draw up the multiyear energy programme in consultation with the regions, defining road maps for developing generation capacity compatible with the national low-carbon strategy;
 - ❖ continue efforts to monitor production costs of energy industries;
 - ❖ put in place arrangements for revising implementation measurements when annual tracking indicators for the multiyear energy programme and the national low-carbon strategy stray too far from the road map.
- Ensure long-term clarity and transparency of measures to support renewables and energy efficiency; tighten monitoring to reflect changing technology costs and ensure that they do not lead to windfall profits; step up efforts to simplify and stabilise the legal framework regulating the installation and operation of renewables-based supply; strengthen efforts to develop biomass use and biogas production.
- Promote EU co-operation on the electricity market; develop interconnection capacities with EU grids to integrate renewables.
- Add overall building energy performance obligations to thermal regulations for existing buildings; make financial incentives for energy efficiency renovation conditional on an improvement in overall building performance.
- Encourage third-party investment.
- Structure the building renovation sector and increase training.
- Improve information on fuel poverty in order to better identify the issue and target assistance; evaluate the cost-effectiveness of such assistance.

5. Biodiversity: protection of natural and outstanding areas

Situation, trends and pressures on biodiversity

France's geographical position in Europe and overseas gives it a wealth of natural resources which make it one of the world's 18 megadiverse countries (Mittermeier et al., 2008).¹⁰ It is also one of the ten countries with the most endangered species, giving it great responsibility where biodiversity is concerned.

Despite many initiatives over the last ten years, France, like other countries, did not achieve the objective set by the Convention on Biological Diversity (CBD) to significantly reduce the rate of biodiversity loss by 2010. Three-quarters of habitats of community interest (as per Annex 1 of the EU Habitats Directive 92/43/EEC) in metropolitan France are in an unfavourable state and there has been no noticeable improvement since 2007. Grasslands, wetlands and coastal areas are most affected, together with their associated species. The share of endangered species, although generally lower than in most OECD countries, is still high: one species in five in metropolitan France is endangered. The situation is even more worrying in the overseas areas of France: over 30% of birds in Reunion and Guadeloupe are endangered or have disappeared. A third of the indigenous vascular plants in Reunion are under threat. The homogenisation of environments associated with agricultural intensification and specialisation, habitat fragmentation and land take are the main threats to biodiversity. Additional pressures include exotic invasive species, overfishing and climate change, all of which are especially critical overseas.

Strategic and institutional framework

In line with its commitments under the CBD, France adopted a first National Biodiversity Strategy in 2004 for the period until 2010. A strategy review highlighted the lack of involvement of the players concerned and a lack of a cross-cutting approach. The momentum generated by the Grenelle Forum helped remedy these shortcomings and many actors took part in the framing of the second National Biodiversity Strategy for 2011-20. Greater openness encouraged wider ownership of the issues at stake and biodiversity policy now concerns many economic sectors across France. However, local authority involvement needs to be stepped up, especially overseas (Juffé et al., 2012), and the 2011-20 strategy emphasises the mobilisation of associations and businesses rather than individuals. In response, the General Council for the Environment and Sustainable Development recommended the mobilisation of regions and of the heads of professional and association networks (CGEDD, 2015). Finally, no figures or deadlines are attached to the objectives of the 2011-20 strategy, and it does not include a resource mobilisation strategy. It is therefore difficult to measure its ambition or evaluate its implementation and effectiveness.

Although EU law is the main driver of legislation on biodiversity in EU member countries, the Grenelle Forum spurred a number of advances. The Grenelle 2 Act, in particular, led to the reform of environmental impact assessment, the definition of the green- and blue-belt network and regional ecological coherence initiatives, as well as the definition of a national strategy for integrated management of sea and coastal areas. France is overhauling its legal framework, unchanged since 1976, with a bill on restoring biodiversity. France has also strengthened its leadership on the international scene: biodiversity-related ODA has almost tripled since 2007-08, France played a leading role in setting up the Intergovernmental Platform on Biodiversity and Ecosystem Services and it is one of the ten framework partners of the International Union for Conservation of Nature (IUCN).

French biodiversity policy, especially the 2011-20 National Biodiversity Strategy, is based on voluntary stakeholder commitment and the use of pilot projects. While the approach has garnered support, strategic documents often overlook capacity for regulatory action and fail to give a clear overall picture of public action, especially the role of ministries other than MEEM. The approach also represents a curtailment of central government's ability to impose requirements on economic players and local elected representatives, whose role in environmental issues has been strengthened by decentralisation. This results in uneven implementation of guidelines set at national level, which is dependent on the will of local politicians, sometimes to the detriment of biodiversity.

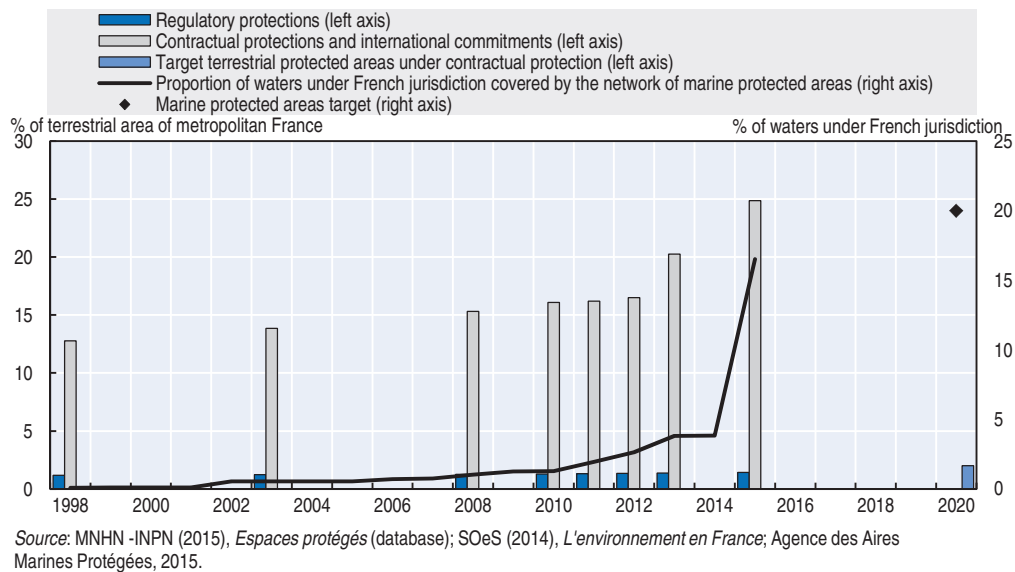
Biodiversity governance in France is partially decentralised, with local authorities taking the initiative and generally involving several levels of administration co-ordinated in ad hoc structures overseen by the central government. The government also acts through specialist bodies such as the Marine Protected Areas Agency and the National Hunting and Wildlife Commission. Regions are playing a growing role and in particular will oversee agro-environmental funding and the implementation of sustainable development programmes. The effect of decentralisation is to dilute responsibilities and reduce the visibility of public action in favour of biodiversity, due to the increase in the number of bodies with considerable overlap but no organised interaction. In addition, central government is ultimately responsible for mediation and co-ordination even though it has divested some of the legal and financial resources that would enable it to meet these commitments. Under such circumstances, the creation of a French Biodiversity Agency, a flagship measure of the bill on restoring biodiversity, should rationalise governance if it effectively brings together the various bodies responsible for biodiversity and does not add yet another level of complexity.


Information systems

France has multiple biodiversity information systems consolidated and showcased in a National Biodiversity Observatory, which compiles indicators on biodiversity and its links with society, monitors implementation of the National Biodiversity Strategy and participates in France's reporting to the CBD. The Nature and Landscape Information System, which includes observations by amateur naturalists, has helped improve knowledge of the status and distribution of species and habitats. The draft law on biodiversity conservation envisions an acceleration of open data in the biodiversity domain. However some environments, especially overseas (where new species are regularly discovered) are still little known, and knowledge of marine biodiversity and the pressures on it is insufficient. The French Assessment of Ecosystems and Ecosystem Services, along with studies on the value of protected areas at subnational level, has shown that the benefits of protecting natural areas (e.g. Natura 2000, the Port Cros and Guadeloupe national parks) outweigh the cost of managing them (PNF, 2015). However, there is not yet sufficient consensus on methods for valuing ecosystem services for them to be included in socio-economic calculations and they are little used in designing innovative financing mechanisms.

Protected areas

France has already achieved the CBD objectives of protecting at least 17% of its land area and at least 10% of the waters under its jurisdiction by 2020. Following the creation of the Natural Park of the Coral Sea, covering the entire maritime area of New Caledonia, 16.5% of French waters are now classed as marine protected areas, representing a major step towards the national objective of 20% of waters under protection by 2020 (Figure 4). The partnership-

Figure 4. **The surface of protected areas is increasing**

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based, decentralised approach promoted by the National Biodiversity Strategy has helped overcome the conflicts of interest that initially hampered creation of the Natura 2000 network: thanks to consultation among stakeholders and the requirement to draw up a management plan for each site, the network is now stable. However, with 1.4% of the land area of metropolitan France under regulatory protection in 2015, the country is still short of its target of 2% by 2020. In 2015, barely 0.7% of metropolitan France was covered by protected zones in IUCN Categories I and II (the highest levels of protection), compared with an OECD average of 3%. The network of protected areas in metropolitan France is satisfactory for only a quarter of the species targeted by the strategy for creating protected areas on land (Coste et al., 2010). It should be extended as a priority to species in open environments such as heathlands and grasslands. The national policy for the development of green- and blue- belts (trames vertes et bleues) provides an important framework to ensure ecological continuity between biodiversity reservoirs, (i.e. ecological corridors).

France has stepped up the protection of certain species of fauna and flora, in particular through national action plans for the conservation and restoration of endangered species. Thanks to the plans' clear objectives, targeted actions, deadlines and outcome-based indicators they have resulted in real progress as can be seen, for example, from the increase in the vulture population. Other instruments could be made more effective by adopting this framework. However, there is no national action plan for the majority of endangered species. In a context of limited resources, species which share habitats and have similar ecological requirements could be brought together under cross-cutting national action plans (Challéat and Lavarde, 2014). In 2007, the procedure for exemption from protection of species of Community interest was brought into line with EU requirements, strengthening habitat protection. France is already seeing the results of these efforts, for example for vultures, otters and wolves (the latter whose presence in areas of agro-silvo-pastoral activity still necessitates the development of a cohabitation solution). However, efforts must be pursued for other protected species such as the bear, some migratory birds and fauna associated with agricultural areas.

Financing biodiversity

Spending on protection of biodiversity and landscapes has increased by nearly 50% since 2000, mainly due to a rise in the amounts spent by water agencies and local authorities on preserving and restoring aquatic environments under the Water Framework Directive (CGDD, 2015c). Public authorities now fund three-quarters of spending on biodiversity protection, compared with half in 2000. In addition to ministerial grants to agencies and public establishments, biodiversity protection is financed by earmarked resources such as water charges collected by water agencies, part of the development tax for the establishment and management of protected areas by departments, and the annual vessel registration fee which enables the Coastline Conservation Agency to acquire and manage land. Despite higher spending, the additional resources that public operators will have to provide until 2020 on protection of land and marine areas were estimated at EUR 400 million per year, representing an increase of about 30% in public spending on biodiversity (Michel and Chevassus-au-Louis, 2013).

Rather than increasing public spending, France has considerable scope for reducing support measures that are harmful to biodiversity (i.e. that encourage natural habitat destruction, overexploitation of natural resources, and pollution) and redirecting them towards conservation and sustainable use (CAS, 2012). Several studies have identified opportunities for tax reform, especially adjusting the planning tax rate to favour activities which use little space and eliminating exemptions for public infrastructure which encourage land take (CFE, 2013). Not enough use is made of existing measures beneficial to biodiversity. In 2013, for example, only 34 municipalities had introduced the low-density tax, which would be effective against urban sprawl. Likewise, charges for using the maritime public domain do not sufficiently reflect the environmental costs associated with the impact on marine biodiversity (Miquel, 2014).

Integrating biodiversity into agriculture and land use planning

The Common Agricultural Policy (CAP) has become greener over the last ten years through environmental cross-compliance under Pillar One and agri-environment measures (AEM) under Pillar Two. Several initiatives have been put in place, including the Ecophyto Plan to reduce pesticide use, the Ambition Bio 2017 plan to promote organic farming, and the “Energy, methalisation, nitrogen autonomy” plan to recover organic effluents. However, these measures have not had the expected effects: AEMs have been criticised as economically inefficient, pesticide use is rising and organic farming is still marginal (4% of agricultural land in use in 2014) (Agence Bio, 2015). Barriers continue to hamper access to support and information, the link between initiatives is not always clear and actors in the sector are still reluctant to accept a model which differs significantly from the conventional one (Quelin, 2010; Potier, 2014). France’s agroecology project, in place since 2014, aims to reconcile the economic and environmental performance of agriculture based on the plans described above. Coupled with the recent reform of the CAP, it should allow for environmental issues to be better taken into account in agricultural policy.

Integrating biodiversity into land use planning is a challenge, as can be seen from the fact that urban planners were not involved in framing the first National Biodiversity Strategy. The combining of biodiversity and land use planning within a single ministry in 2007 represented progress, as did the creation of the green- and blue-belt network, which has made local politicians more aware of the interaction between development and biodiversity. Nonetheless, actors involved in land use planning need to take better account

of biodiversity. This could take the form of gradually introducing regional green and blue belts at appropriate scales for guiding planning decisions, incorporating the mitigation hierarchy¹¹ into land use and urban development plans, and effectively deploying local biodiversity atlases. Significantly greater vigilance on the part of central government departments with regard to environmental assessment of land use plans, programmes and projects would be a prerequisite for the virtuous application of the mitigation hierarchy.

Strengthening the offset component of the sequence is one of France's main advances in relation to biodiversity. However, a performance tracking and evaluation mechanism is still lacking (it should be based on a public register of residual impacts and offsets), as is a mechanism to provide feedback on the effectiveness of developer-financed conservation and restoration initiatives. France has also begun to experiment with biobanking. As such mechanisms have proved their worth in other countries, their use in France could be extended, in particular to better offset recurrent impacts on wetlands and grasslands.

Recommendations on biodiversity

- Review and update the National Biodiversity Strategy, insuring that it incorporates:
 - ❖ quantitative targets and indicators for the government and its partners;
 - ❖ prospects in terms of regulation, funding and governance.
- Rationalise biodiversity governance and management by bringing together all relevant bodies, including the National Hunting and Wildlife Commission, and setting up a single national consultative body; reform the National Nature Protection Council to concentrate scientific expertise there; roll out the model at regional level.
- Improve the effectiveness of instruments integrating biodiversity into land use planning policies (e.g. the green- and blue-belt network, agri-environment measures, the mitigation hierarchy) through results-based indicators and strengthened governance inspired, for example, by the national action plans for endangered species.
- Gradually eliminate support measures which are harmful to biodiversity and redirect tax instruments towards behaviour which favours the conservation and sustainable use of biodiversity; in particular:
 - ❖ eliminate exemptions from the development tax for public infrastructure, which encourage land take, and adapt the rate according to location;
 - ❖ encourage municipalities to use the low-density tax;
 - ❖ reform the system of charges for using the maritime public domain to better internalise the cost of impacts on marine biodiversity.
- Promote agroecology as a solution to environmental challenges (circular economy, reduction of inputs, renewable energy production, biomaterials, carbon storage); pursue the implementation of support measures (information, training, research and funding) to facilitate the transition to sustainable methods of production; ensure linkage between the various agroecology initiatives and promote synergies between them.
- Improve the effectiveness of the mitigation hierarchy by promoting the use of ecological outcome indicators in the design and evaluation of solutions proposed by developers and by centralising and circulating feedback on the rollout of offsetting measures; strengthen the role of the mitigation hierarchy in the development of planning tools; create a framework for extending the application of biobanking, clarifying the requirements of ecological equivalence (in its qualitative and quantitative dimensions),

Recommendations on biodiversity (cont.)

commitment periods and expected guarantees concerning the financing and ecological vocation of land set aside for offsetting. In socio-economic assessments, effectively integrate the costs of the mitigation hierarchy into project expenditure.

- Promote a culture of economic efficiency for biodiversity policies, for example by developing *ex post* economic evaluation indicators shared between actors; continue the French Assessment of Ecosystems and Ecosystem Services and foster the use of valuation methods.
- Ratify the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization to the CBD.

Notes

1. Act No. 2015-991 of 7 August 2015 on the new territorial organisation of the Republic (loi Notre).
2. Act No. 2015-411 of 13 April 2015 targeting the use of new wealth indicators in the development of public policies (loi Eva Sas).
3. Act No. 2015-1786 of 29 December 2015 on finance, amendment for 2015.
4. The ratio between total revenue from energy taxation and final energy consumption.
5. Includes tax exemptions on fuel used in international air transport, not counted in the OECD Inventory of Support Measures for Fossil Fuels (OECD, 2015b).
6. Expenditure comprises investment and current expenditure of households, businesses specialising in environment protection services or not, public bodies (including local authorities, public inter-municipal co-operation establishments, water agencies) and EU funds (mainly the European Regional Development Fund and the European Agricultural Fund for Rural Development).
7. Environmental protection spans all activities which seek directly to prevent, reduce and eliminate pollution and any other deterioration of the environment resulting from production or consumption processes.
8. Activities which produce goods and services whose purpose is to protect the environment or sustainably manage natural resources.
9. Activities which produce goods and services favourable to better environmental quality.
10. To be megadiverse, a country must be home to at least 1% (3 000) of the world's endemic vascular plants. New Caledonia is the main reason for France's classification as a megadiverse country.
11. "avoid, reduce, offset".

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ANNEX

Actions taken to implement the recommendations of the 2005 Environmental Performance Review of France

Information provided by the country

RECOMMENDATION	MEASURES TAKEN
Chapter 1. Environmental performance: Trends and recent developments	
In water management, maintain the basin-wide approach and setting of charges by the river basin authorities in a context of overall control by the Parliament.	The 2006 Water and Aquatic Environment Act maintained the basin-wide approach. Planning and financial incentives are organised by catchment area committees and water agencies at the level of the catchment area. The new law sets a cap for charges, below which each catchment area committee is free to set its rate according to local priorities and quality targets. The integrated management system by catchment area with devolved, participatory governance is recognised as a "fundamental achievement that must be preserved" (Chapters 1 and 3).
Step up measures to reduce NO _x emissions from transport, agriculture, industry and energy.	Many plans have been adopted to combat air pollution, at the different levels of government. Road transport remains the principal source of NO _x emissions. The widespread adoption of catalytic converters, more stringent vehicle emissions standards and the turnover of cars on the road have all helped bring transport emissions down since 2000. But these measures have not been enough to offset increased traffic and the dieselisation of the car fleet, preventing France meeting the 2010 target for maximum NO _x emissions set by the European Union's Directive 2001/81/EC.
Strengthen measures to limit particulate emissions (e.g. from wood, biomass and diesel combustion) and consider introducing ambient quality standards for fine and ultrafine particulates (PM _{2.5} and PM _{1.0}).	There are plans for particulates, health and the environment, and protection of the atmosphere that all aim to limit particulate pollution. Emissions of fine particulates have been falling since 2000 and the target for PM _{2.5} emissions reduction set for 2020 by the Gothenburg Protocol has almost been reached. Levels of fine particulates regularly rise above safe limits for human health in certain areas, however.
Chapter 2. Environmental governance and management	
Ensure that national and EU policies relating to environmental impact assessment (EIA) and strategic environmental assessment (SEA) procedures are fully implemented, including at subnational level.	France has strengthened both procedures, mainly by appointing three environmental authorities responsible for rulings, introducing a case-by-case evaluation and boosting the preliminary examination. It reformed EIAs in 2011 and issued two decrees to improve the transposition into law of the EU's Directive concerning the evaluation of the environmental impacts of certain plans and programmes (2001/42/EC) in 2012. The 2015 law for growth, activity and equality of economic opportunities aims to improve the co-ordination of EIAs and SEAs and increase public participation.
Strengthen the role of indicators in measuring environmental and sustainable development progress and in policy formulation.	Since 2005, the observation and statistics department (SOeS) of the General Commissariat for Sustainable Development (CGDD) has published an annual selection of key environmental figures. A dashboard of 54 follow-up indicators is included in the annual report to parliament on the implementation of the 2010-13 National Sustainable Development Strategy (SNDD). Since 2015, the principal reforms undertaken, especially in the framework of the French budget Act, have to be evaluated according to indicators of inequality, quality of life and sustainable development (Law No. 2015-411 of 13 April 2015).

Information provided by the country

RECOMMENDATION	MEASURES TAKEN
More explicitly integrate an economic dimension when implementing the national sustainable development strategy, and promote integration of environmental concerns into sectoral policies (e.g. for agriculture, transport and energy).	The national strategy of ecological transition towards sustainable development (SNTEDD) for 2015-20 replaced the SNDD 2010-13. It is based on nine strategic points, three of which specifically include an economic dimension: the commitment to a circular, low-carbon economy, the invention of new economic and financial models, and the support for the ecological shift in economic activity.
Pursue efforts to ensure that legislation on access to environmental information complies with recent EU directives, and take the necessary steps to implement the directives and the Aarhus Convention; better inform the public about its right of access to environmental information.	France enacted the European Directive concerning public access to environmental information (2003/4/EC) in 2005. The national public information portal dedicated to the environment, <i>Tout sur l'environnement</i> , was launched in 2009 in response to the first pillar of the Aarhus Convention. The Environment Code has, since 2005, required public authorities to adopt measures to inform people of their right to access the environmental information in their possession.
Continue to improve the co-ordination of information systems and the coverage and quality of environmental data, and increase the accessibility and use of such data in the development and monitoring of public policies.	In application of the INSPIRE Directive (2007/2/EC), the National Council of Geographic Information (<i>Conseil national de l'information géographique</i>) co-ordinates environmental geographic data. The various tools for disseminating environmental information – Eider, Geoidd, and the portals of the different environmental observatories – have been expanded. The public information portal for water and GéoKit3 (internal to MEEM) also supply tools for the implementation of central and local government policy.
Increase environmental education in primary and secondary schools.	As early as 2004, the Ministry of Education launched a process to roll out sustainable development education, backed by a 2007 circular and the Grenelle II Law in 2010 providing for the integration of sustainable development into all school subjects. Education about the environment and sustainable development was also included in the Education Code in 2013.

Chapter 3. Towards green growth

Establish a green tax commission.	The Green Taxation Committee (<i>Comité pour la fiscalité écologique</i>) was set up in 2012 under the joint authority of the Minister for the Economy and Finance and the Minister for Ecology, Sustainable Development and Energy. This body is composed of the different stakeholders (five-party governance) and promotes the greening of the French tax system. In 2015, it became the Committee for the Green Economy (<i>Comité pour l'économie verte</i>), with a remit expanded to include all economic instruments for green growth.
Increase rates of environmental taxes and charges, thereby increasing their incentive effect and reducing the budgetary cost of government environmental policies. Reform energy taxation to better integrate environmental concerns (e.g. continue moving towards balanced taxation on diesel and petrol, abolish the tax on hydroelectricity); set up a green tax commission.	In 2014, carbon was included in the taxation of fossil fuels, and the gradual increase of this tax until 2017 was restated in the Amending Finance Act for 2015. Fuel oil duty was also increased in 2015 and 2016 to offset the abolition of the environmental tax on lorries. The gap between duty on diesel and fuel oil narrowed by almost six centimes per litre between 2014 and 2017. The general tax on polluting activities (TGAP) was extended and some rates raised. The annual tax on company vehicles has been adapted to take account of emissions of CO ₂ and other pollutants emitted by vehicles.
Continue to reform existing environmental taxes to take better account of environmental externalities and eliminate the environmentally harmful aspects of energy and transport taxation.	Several environmentally harmful subsidies have been abolished, such as the exemption from the TIC domestic tax on coal and natural gas for consumers and on biofuels, as well as the reduced VAT rate for fertilisers and plant protection products.
Continue efforts to reduce environmentally harmful subsidies, and systematically examine all types of support programme from the standpoint of their net impact on environmental effectiveness and economic efficiency.	Since 2010, every provision of the Budget Act must be subject to a prior evaluation of its economic, financial, social and environmental impact. The Centre for Strategic Analysis (CAS) issued a report in 2012 on public assistance (subsidies, tax expenditure, the non-internalisation of costs) harmful to biodiversity.
Increase efforts to make an economic valuation of environmental damage caused by the energy sector so as to better internalise external costs in energy prices.	In 2009, the Quinet commission set a value for carbon at EUR 100 per tonne for 2030. The Energy Transition Act aims to reach this level.
Continue to carry out economic studies necessary for efficient action on the environment.	The department for the economics, evaluation and integration of sustainable development and SOeS, the CGDD's observation and statistics department publish many economic papers. Other bodies, such as Insee and France Stratégie, also produce economic research that is useful for environmental action. The Stiglitz-Sen-Fitoussi and Quinet commissions and work by Bernard Chevassus-au-Louis have also brought progress in measuring the integration of environmental externalities into the economy.
Ensure that economic instruments are introduced to address externalities associated with agriculture.	Since the 2006 Water and Aquatic Environment Act, farming has been subject to three fees: the fee for diffuse pollution, charged to distributors of plant protection products and graded according to product toxicity; the fee for non-domestic water pollution linked to livestock breeding, calculated per livestock unit; the fee for abstraction, modulated according to the purpose of the abstracted water and according to the resulting pressure on water resources in the zone in which the water is abstracted.

Information provided by the country

RECOMMENDATION	MEASURES TAKEN
Implement urban mobility plans, increase the use of economic instruments in urban transport (notably as regards private vehicle parking and use) and introduce measures to improve emissions from heavy vehicles (e.g. bus traffic, transport of goods and waste).	Urban mobility plans (PDUs) are mandatory for cities of over 100 000 inhabitants, but their take-up has also grown in medium-sized cities, encouraging the development of public transport. Parking pricing has been almost universally adopted in central urban areas. The Grenelle II Law authorises the testing of congestion charges and traffic restrictions for the most polluting vehicles. The Energy Transition Act includes various measures to step up the renewal of vehicle fleets with low-emission vehicles, including in public transport networks (especially buses). It also allows local authorities to give road access and parking privileges to the least polluting vehicles.
Increase the use of rail for passenger and goods transport and the use of combined goods transport, in the context of a modal shift framework policy based on improved internalisation of road transport externalities.	The national commitment to rail freight presented to the Council of Ministers in 2009 included an objective to push the non-road and non-air modal share up from 14% in 2012 to 25% in 2022. The share of these modes of transport has been stable since 2009. The 2011 proposal for a national plan for transport infrastructure, which emerged from the Grenelle, included investments of EUR 174 billion over 25 years for the rail sector. The Mobilité 21 commission recommended modernising the network before developing new lines. The share of road continues to dominate the transport of both goods and people, despite the constant increase in public transport. For rail passenger transport, under the 2015 roadmap for the future of <i>Trains d'Equilibre du Territoire</i> the government has undertaken to renew the rolling stock of these long-distance trains between now and 2025 for a total investment of around EUR 1.5 billion. A regular Ministerial conference has been held since 2013 on the subject of reviving rail freight.
Continue to promote environmental protection through proactive employment policies involving measures such as job creation and assuring a better match between training and employment.	2010 saw the creation of a National Plan for the mobilisation for jobs and professions in the green economy in order to predict, support and accelerate the transition to a green economy by adapting skills to changes in technology, the economy and society. A national observatory for jobs and professions in the green economy was set up to identify the skills and training required to meet the needs of employers.
Implement measures (e.g. taxation, emission permit trading, other flexibility mechanisms) to enable fulfilment of Kyoto Protocol commitments, paying particular attention to the transport sector.	France has surpassed its target under the Kyoto Protocol. The emissions quota trading system has been extended to aviation for flights within Europe. Since 2008, the "bonus-malus" scheme for cars has combined the subsidised purchase of new, low-CO ₂ emissions cars by consumers with a tax on the purchase of more energy-hungry vehicles. Other measures include the factoring of CO ₂ emissions into the taxation of company vehicles since 2006, and the inclusion of carbon in the taxation of fossil fuels since 2014.
Ensure that environmental assessment of projects supported by export credits and credit guarantees is consistent with recommended practices (international standards or equivalent standards set by the host country).	Since 2005, France's credit insurer Coface has been applying the safeguard policies and social and environmental performance standards of the World Bank to the projects it underwrites.
Continue to increase the level of official development assistance and the emphasis placed on environmental projects.	Bilateral official development assistance (ODA) commitments linked to the environment grew by volume and as a proportion of total bilateral ODA between 2006-07 and 2012-13. In 2014, the French Development Agency (AFD) reached 53% of climate awards, passing its annual target of 50% for the first time.

Chapter 4. Energy transition: Towards a low-carbon economy

Step up efforts to save energy, with due attention to the cost-effectiveness of the measures taken.	Energy savings in the housing sector have been pushed up by incentive measures such as energy saving certificates (ESCs), the sustainable development tax credit ("energy transition tax credit" since 2015), the interest-free eco-loan, the social housing eco-loan and a lower VAT rate for retrofitting. New thermal regulations for new builds came into force in 2012. In industry, energy savings have been incentivised by ESCs, green loans and eco-energy loans. In agriculture, energy savings are promoted by the 2009 Energy Performance Plan for Farms (<i>Plan de performance énergétique des exploitations agricoles</i>) and the 2010 Vegetation Plan for the Environment (<i>Plan végétal pour l'environnement</i>).
Undertake economic analysis of government policies to promote renewable energy sources so as to minimise the cost to society.	The Cour des Comptes, FranceAgriMer, the General Council for the Economy, Industry, Energy and Technology and the General Council for Food, Agriculture and Rural Land have evaluated the policy, taxation and costs of renewable energies. In 2013, the Cour des comptes said that meeting the 2020 targets for biofuels would carry a high cost for the public purse, that choices needed to be made in terms of the types of energy to promote and the most efficient support mechanisms, and that a realistic evaluation of the cost of CO ₂ needed to be carried out. Exemptions from the TIC domestic tax on biofuels will be phased out between 2014 and 2016.
Continue to make the nuclear sector more transparent, including through greater access to information.	The 2006 law on transparency and safety in the nuclear sector led to the creation of the High Committee for transparency and information on nuclear safety (HCTISN) and the Nuclear Safety Authority (ASN). The ASN issues an annual report and several bulletins. Since 2012, the Cour des comptes has published two reports on the costs of the electronuclear sector.

Information provided by the country

RECOMMENDATION	MEASURES TAKEN
Continue to improve solidarity funds for access to essential goods (water, energy, housing) by encouraging effective, long-term personal support; ensure that the planned water law favours access to water.	In 2012, the allocation of social energy tariffs was automated using data from the family allowances fund (CAF) and from energy suppliers, increasing the number of beneficiaries, while the 2013 Briottes Act broadened the eligibility criteria for recipients. In 2016, social energy tariffs will be replaced by a means-tested "energy cheque" to help consumers pay their energy bills, regardless of their heating modes, or to finance energy retrofits. The right to water is mainly protected by housing solidarity funds (FSL) that maintain the water supply. The Briottes Act allows local councils to offer progressive rates with a first tranche that is free of charge; to modulate this rate according to income; to cover all or part of the help supplied by the department for the payment of vulnerable households' water bills with their own budget.

Chapter 5. Biodiversity: The protection of natural and extraordinary areas

Reduce pollution of agricultural origin (from both crop and livestock farming) by continuing to reform farm subsidies (to decrease incentives for pollution-prone intensive farming), by implementing cross-compliance in agricultural support and by introducing efficient, targeted measures to reduce excessive nitrogen use at individual farm level.	The main measures implemented are the first pillar of the common agricultural policy (CAP), especially the greening and cross-compliance of direct payments; transferring payments to support organic farming from the first to the second pillar of the CAP; environmental payments of the second pillar of the CAP (agro-environmental and climatic payments, and contributions to environmental investments); the nitrates action programme; the Ecophyto plan; water agency action and subsidies; the use of the fee for diffuse pollution and the livestock breeding fee. Since 2014, the French agro-ecological project has aimed to reconcile the economic and environmental performance of the agricultural sector. An experimental certification system for plant protection product savings will be implemented in 2016 in order to encourage a reduction in the use of farm inputs (Chapters 1, 3 and 5).
Integrate biodiversity concerns into sectoral policies (dealing with farming, forestry, tourism and land use planning) in accordance with the national biodiversity strategy, and periodically evaluate progress on action plans.	The 2004-10 SNB was rolled out as ten sectoral action plans: agriculture, international co-operation, transport infrastructure, the sea, natural heritage, city planning, forests, research, tourism and overseas. The 2011-20 SNB promotes the inclusion of biodiversity issues in sectoral policies by means of calls for projects open to local authorities. An activity report on the 2004-10 SNB has been presented every year since 2006 and a progress report was published in 2011. The national biodiversity observatory, which compiles various indicators on biodiversity and its links to French society, tracks implementation of the SNB.
Increase the integration of biodiversity concerns into local decisions relating to economic development, land use planning, infrastructure and tourism activities.	The "avoid, reduce, compensate" mantra is the primary tool for embedding biodiversity concerns in local decisions about economic development and land use. Since the Grenelle II Law, the measures proposed by contractors for the application of "avoid, reduce, compensate" must appear in the project's impact study. In 2012, this tool was boosted with the publication of a doctrine and national guidelines.
Continue to expand protected areas, especially through extension of: <ul style="list-style-type: none"> i) the network of protected areas under Natura 2000 to 15% of Metropolitan France; ii) marine areas, and iii) protected areas in overseas départements. 	The land-based part of the Natura 2000 sites covered 12.6% of metropolitan France in May 2014. Since 2005, three new national parks have been created (the national park of Reunion, the Amazonian park of French Guiana and the national park of the Calanques), as well as five new regional natural parks. Since the law of 14 April 2006, France has had a 15th category of protected marine areas: natural marine parks (PNM). These parks currently cover 128 000 km ² of coastal and deep-sea marine areas, through seven PNMs.
Seek out and improve partnerships to build consensus regarding the issues at stake in connection with the EU directives on habitats and birds and the Bern Convention.	The Natura 2000 network supports implementation of the EU Directives on habitats, fauna and flora and on birds. Local parties interested in a Natura 2000 site may help to manage it through a steering committee that draws up the site's objectives in a document called the Docob, which acts as a management plan. Local authorities were responsible for 62% of Docobs in 2013, compared to 40% in 2009. The process has proved its worth: the network was said to have been stabilised in 2013.
Organise and increase the resources for studies on biodiversity (e.g. at the Natural History Museum, at the French Institute for the Environment, and in the overseas départements); increase funding for nature conservation, including by adjusting local taxation and finance.	Biodiversity knowledge has been organised and strengthened with: the creation of an information system about nature and landscapes and a national biodiversity observatory; the enrichment of the national natural heritage inventory. France has also begun its own evaluations of ecosystems and ecosystem services, designed to paint a picture of ecosystems and their trends and to estimate the value of the services they provide. Spending on the protection of biodiversity and landscapes has grown by almost 50% since 2000, because of a rise in spending by water agencies and local authorities on maintaining and rehabilitating aquatic environments as part of the implementation of the framework Directive on water. The reform of land use taxation started in 2010 covered some of the issues linked to land take. There exists a certain number of tax provisions to support biodiversity, but they are rarely used.
Continue to strengthen enforcement of environmental regulations; improve their integration in land use planning documents, including at local level; strictly apply the laws on risk, mountains and coastal areas, including at local level.	The provisions of the laws on risk, mountains and coastal areas have been included in the territorial coherence plans (SCOTs), local zoning plans (PLUs) and municipal maps.

Information provided by the country

RECOMMENDATION	MEASURES TAKEN
<p>Enforce the coastal law more strictly and speed up the Coastal Conservatory's land acquisitions by significantly increasing its budget to achieve the targets for the metropolitan coastline (200 000 hectares in 30 years); give the Conservatory an objective and resources that match the scale of the coastline challenges in overseas départements; continue to draw up and implement marine enhancement plans for the main coastal regions, in particular by introducing monitoring mechanisms.</p>	<p>A 2015 circular is designed to help local authorities with the integration of the provisions of the law on coastal areas into city planning documents.</p> <p>Since 2005, the area under the protection of the Coastal Conservatory has almost doubled; in 2016 it was greater than 166 000 hectares, representing 13% of the coastline and 700 natural sites. In 2006, the allocation of ships' yearly registration fees (DAFN) to the Coastal Conservatory significantly boosted the budget allocated thereto between 2005 and 2015.</p> <p>In 2013, however, the Cour des comptes highlighted the paucity of the Conservatory's resources with regard to its objectives. Law No. 2005-157 of 23 February 2005 introduced two main changes to maritime enhancement plans (SMVMs): the SMVM procedure has been devolved, and regional authorities are now able to introduce an individualised Chapter in their coastal SCOT that is equivalent to an SMVM.</p>



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