

The National Strategy for Sustainable Development 2010-2013 was adopted by the Interministerial Committee for Sustainable Development on 27 July 2010.

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Preamble

NATIONAL SUSTAINABLE DEVELOPMENT STRATEGY 2010-2013

The 1987 Brundtland Report¹ proposed a definition of sustainable development which is still the main reference: "development that meets the needs of the present without compromising the ability of future generations to meet their own needs". Meeting the needs of humanity, now and in the future, without sacrificing the most deprived, is at the heart of this ambition. To achieve this, our techniques and organisations will have to change in order to use, protect and share our planet's limited natural resources better.

Since the 1992 Rio and 2002 Johannesburg Summits, the international community has gradually woken up to sustainable development issues and to the need to transform our cultural markers, our lifestyles and our research and development strategies.

All countries have been invited to put together sustainable development strategies to implement coherent global policies.

In France, for the first time, the National Sustainable Development Strategy 2003-2008 (NSDS), updated in 2006 for reasons of coherence with the European strategy (EU SDS), made sustainable development a component of public action.

Decision-makers and administrations showed only modest interest. Some enjoyed exploring the very concept of sustainable development for the first time, others wondered about its usefulness and how to turn it into reality. They all felt that it would be a long time before sustainable development would be effectively incorporated into public policies.

The context has changed radically in the ensuing seven years. The phenomenon of climate change at world scale, the "Grenelle of Environnement" Roundtable in France and the global economic and financial crisis have

accelerated the change in mentalities, making sustainable development a shared priority. The ambitious goals set by President Sarkozy in his concluding speech at the "Grenelle of Environnement" (Roundtable) on 25 October 2007 and the introduction of the legislative framework essential to turn them into reality have pushed our country into a new impetus that this second national strategy 2010-2013 is making concrete.

The economic crisis which has swept across the world since 2008 has plunged the planet into recession for the first time since World War II and compelled countries to wonder about the causes of imbalances which rocked the economic and financial systems.

In the report submitted to the G20 member countries during the London Summit on 2 April 2009, Ottmar Edenhoffer² and Lord Nicholas Stern³ underline that the world has to face up to a dual crisis.

→ **A structural economic crisis** which means imagining and experimenting with a new development model. The immediate cause of this crisis was the explosion of the property bubble and the contraction of credit, but its deep-seated roots are far wider - the imbalances between the American debt and the reserves of countries which finance it, intensified by the growing gaps in competitiveness and the increased public deficits of developed countries.

→ **An ecological crisis**, of which we're discovering not only the amplitude - according to the Intergovernmental Panel on Climate Change (IPCC), if we follow current trends, the average world temperatures should increase by 2 to 3°C over the next fifty years - but also its imminence. Thus, according to Ottmar Edenhoffer and Lord Nicholas Stern, given the rising greenhouse gas emissions and the planet's increasing inability to capture and sequester carbon, the risk assessment measured in the 2007 Stern Report should be reviewed upwards.

¹ Our Common Future, 1987.

² Postdam Institute for Climate Impact Research.

³ Graham Institute on Climate Change and the Environment.

The social dimension must be added to these two crises. The profound transformation of our organisations and our production and consumption patterns will involve all society stakeholders. Changes of this nature mean that the conditions of social acceptability and fair distribution of efforts that this assumes must be incorporated in the heart of projects and decisions. The industrial and economic transitions must be supported by giving social and intergenerational solidarities their rightful place, through reducing inequalities, combating unemployment and insecurity, training, risk prevention and governance.

This crisis undoubtedly marks the end of a cycle, as analysed by of the Economic, Social and Environmental Council (CESE) in 2009⁴: "Nothing could be worse than relaxing our efforts to control the consumption of energy and diversification of sources, thanks to the recent drop in oil prices, as we saw between 1985 and 2003 following the oil price fall, or repeating such transgressions in terms of cohesion when growth returns". In this context, the CESE calls for collective and political will through a high-level national strategy applied on the long term, to "implement firmly a new development model⁵".

The crisis urges us to build a new model which takes the requirements of sustainable development into account in the long term. It identifies new tacks, encourages us to commit to the path of greatly-renewed growth. In most developed countries, within OECD or at European level, recovery plans and more long-term work both open up routes to a decarbonised economy using far fewer resources.

The context governing this revision of our NSDS requires special consideration.

We must respond rapidly to social distress and unemployment by breathing new life into our activity, mainly through a greener economy without our choices jeopardizing the future.

Countries intervened strongly to limit the effects of the financial crisis. They must now make an unprecedented effort to re-balance the public finances sustainably to prevent the growing weight of the public debt and deficit weighing on future generations.

The French strategy must therefore clearly include the issue of sustainability of public finances. The logic of intergenerational solidarity is a foundation stone of sustainable development. The French strategy is based on this principle and therefore must avoid especially any new expenditure not relating to profitable investment for future generations. As stated in the budget bill for 2010, the public debt, which was 67.4% of the GDP in 2008, will reach 84% in 2010 and 90% in 2012 due to the emergency measures taken to tackle the economic crisis. The slide in public expenditure could be a major handicap for future generations who would have to take it on board to the detriment of their own development. This concern has naturally underpinned the entire elaboration of this strategy.

The French strategy therefore sets out to maintain the balance between the environmental, social and economic aspects of sustainable development, to reconcile the rights of present and future generations and to structure the national and local issues coherently. The cultural aspect is a deciding factor in this respect. It must be taken into account and incorporated through heritage, architecture, access to knowledge, information and cultural diversity if the National Sustainable Development Strategy 2010-2013 is to succeed.

⁴ Sustainable development and ecological footprint indicators - draft opinion submitted by Philippe Le Clézio, rapporteur to the CESE, May 2009..

⁵ CESE opinion of 27 January 2010 on the NSDS 2009-2013 - conclusion of the opinion.

The NSDS proposes a common architecture to all players in the Nation - public and private - to help them structure their own sustainable development projects around strategic choices and indicators decided by a wide consensus. Its main purpose is to ensure the coherence and complementarity of France's international and European commitments and national, cross-cutting and sectorial policies.

By developing a decarbonised economy using far fewer resources, the national strategy is to make France a major player in the green economy, which is, alone, compatible with the development of emerging countries, whilst pursuing a goal of social justice and equity. It hinges for this purpose on nine strategic challenges, in line with our European commitments, which we must take up to **move towards a green and equitable economy:**

→ **sustainable consumption and production**, thanks to responsible consumers and producers who take the entire life cycle of products and services into account;

→ **the knowledge society** by developing information, lifelong training, education and access to culture and by increased support for research and innovation, which conditions our competitiveness and therefore the durability of our economic and social model;

→ **governance**, which must make it easier for us to adapt to the change and help our society to evolve by involving all stakeholders;

→ **climate change and energy** which demand great rigour and moderation in our consumptions, the development of renewable energies and the adaptation of territories by watching over the situation of vulnerable people and activities;

→ **sustainable transport and mobility** by encouraging modal shift, complementarity and the least polluting means of transport, by setting out to reduce commuting and develop pioneering systems meeting the needs of economic and ecological efficiency and social cohesion;

→ **conservation and sustainable management of biodiversity and natural resources** by relying on improved knowledge - and recognition - of their contribution to our most fundamental needs, on a more moderate and eco-innovative economy, town planning and organisations;

→ **public health, risk prevention and management** by paying special attention to the quality of environments and to potential social inequalities;

→ **demography, immigration and social inclusion** which all have a decisive impact on the economy and equilibrium of our social protection systems, by setting out to combat all exclusions due to age, poverty, insufficient education and training and by focusing on the multi-cultural aspect of the French society;

→ **the international challenges of sustainable development and the fight against global poverty** by supporting the strengthening of international governance to better incorporate the requirements of a sustainable development, by contributing to food and energy safety in the most deprived countries.

Article 1 of the 3 August 2009 multi-year planning act on implementing the "Grenelle of Environnement", known as the First Grenelle Act, states that the NSDS put together by the State "must be coherent with the European Sustainable Development Strategy and developed in conjunction with national and local elected representatives, employers, employees and the civil society, especially associations and foundations⁶".

In accordance with the principles of sustainable development and in the spirit of the "Grenelle of Environnement", extensive discussions⁷ took place to work out the 2010-2013 strategy.

Founded on the architecture of the European Sustainable Development Strategy, the new NSDS is shorter, more instructive and more strategic than its predecessor. The major indicators from the European Sustainable Development Strategy have been inserted to make comparisons with European countries easier and have been supplemented to produce sustainable development indicators⁸ in line with the NSDS' strategic choices and applicable at sub-national scale, where possible.

To ensure its inclusion in national public policies, the State departments will report annually on NSDS implementation to the Interministerial Delegate for Sustainable Development, and in accordance with Article 1 of the First Grenelle Act⁶, an annual report will be presented to Parliament. The scoreboard for NSDS indicators will be updated annually and circulated widely.

Sustainable development is not a pre-determined ideal state to be achieved but a concerted improvement process, different according to each culture and its overall priorities which aims to better integrate the environmental dimension so that all citizens gain from its implementation. A close, efficient association of ecology and solidarity is at the heart of sustainable development issues and will be the focus of major work during the 2010-2013 period.

⁶ See appendices: extract from First Grenelle Act 2009-957 of 03/08/09, Art. 1.

⁷ See appendices.

⁸ See appendices.

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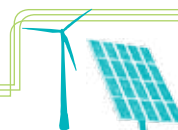
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CHALLENGE 1

Sustainable consumption and production



Context and challenges

Our production and consumption patterns result in **excessive and increasing exploitation of natural resources**. They affect the climate, the biological diversity, the natural balances and even the stability of human societies.

Our society thus features increasingly fierce consumption of goods and services, combined with shorter and shorter product lifetimes; the result is increased consumption of natural resources and production of waste and nuisances. At the same time, global environmental pressure is heightened due to the demographic progress of developing countries and the desire of an ever-increasing number of individuals to access the consumer market.

In this context, **the challenge is to orientate our production and consumption methods towards a more sustainable economy**, which limits environmental impacts whilst improving our competitiveness, our quality of life and the social conditions of production.

Despite their full inclusion, this challenge is not limited to simply developing green technologies or the green growth of some sectors,

mainly those linked to energy, the environment or information technologies. It covers all activities - more especially those involving consumer products like the agri-food sector - and is found at every stage in the products' life cycle, from design to recycling after use, via their production, distribution and use.

All players therefore have to be galvanised into action to take up this challenge - citizens, consumers, production companies, distributors and public authorities. Each individual's behaviour and involvement are decisive factors in the success of the deep-seated changes affecting how our lifestyles are organised.

Altering our production and consumption methods means **simultaneous action on supply and demand**, to enable harmonious growth of the most responsible products, making them more competitive than conventional offers, and to stimulate our economy.

The "Grenelle of Environnement" Roundtable mainly highlighted the need to make the best products (on environmental and social aspects, both more visible, more credible and more accessible.

It thus underlined the importance of **improving information** on the ecological and social quality of products and services and making it available to consumers and other buyers.

At the European level, in July 2008 the European Commission presented an action plan for sustainable consumption and production and a sustainable industrial policy.

On 4 December 2008, under the French Presidency, the European Union's Environment Council adopted conclusions which reinforce and widen the various European policy instruments and make them coherent - ecodesign⁹, ecolabel and energy label, "greening" of public procurement contracts, promoting environmental management of businesses.

These policies correspond fully to the requirements of the new approach which combines regulations and voluntary legislative baselines. The European conclusions also suggest developing economic incentives for good behaviour and eco-functionality, like the bonus/malus scheme and ecotaxation, and taking the rebound effect into account¹⁰. These policies form a new framework to encourage rolling out and boosting measures already initiated nationally.

⁹ Ecodesign sets out to minimise the environmental impact of a product throughout its life cycle, from extracting raw materials to its end-of-life recycling or destruction via its packaging, distribution and use.

¹⁰ The rebound effect refers to savings (of resources, energy, etc.) cancelled out by additional uses or products.



Our strategic choices

Simultaneous action on supply and demand and expanded information on the ecological and social qualities of products to change behaviours.

The aim is to encourage on-going improvement of the most efficient products and services in terms of sustainable development. To achieve this, it is important to develop and circulate ecodesign methods and tools upstream, mainly to reduce resource and energy consumption and the production of waste.

Simultaneously, downstream, it involves making the offer more attractive and more

credible in the eyes of consumers, extending environmental (especially the carbon content) and social information on the products and services and supporting virtuous consumption behaviours.

Altering behaviours is undertaken in all sectors. It must be supported and amplified to place the economy firmly on the path of a greener and more responsible growth.

Make more sustainable products and services available to as many people as possible.

Expanding markets must reduce the costs and selling prices of the most efficient products and services in terms of sustainable development, which will improve their accessibility (scale effect). Fiscal "kicks" can be envisaged (bonus/malus scheme, reduced VAT, etc.).

This expansion will be encouraged by public purchasing, regulations, economic incentives, partnership with major retailers and all forms of innovation - technical, commercial, organisational and financial.

Support the green economy and business innovation.

Innovation must be encouraged to boost the competitiveness of increasingly environmentally-friendly techniques and organisations. The same applies to the design of products and services which improve the environment and decarbonise the economy. In all circumstances, innovation in services and organisations is a driving force in deve-

loping new economic models, including the green growth model. An example of this is the emergence of an economy of functionality, replacing the marketing of goods by marketing their use, or industrial ecology, focusing on environmental optimisation at the scale of groups of businesses, sectors and regions.

Develop a more sustainable agri-food production.

The significance of food impacts on consumer health merits special attention, to introduce a more sustainable perspective into our agri-food production and consumption methods: more environmentally - and

employee - friendly production and distribution, reduced transport-related impact and better consumer information on the environmental and social quality of products.

The objectives in figures

- By 2012, **double** the sales volumes of ecolabelled products (environment NF (norme française = French standard) or European ecolabel).
- By 2013, reduce the production of household and assimilated waste by **7%** per inhabitant over the next five years, i.e. 25 kg per inhabitant¹¹.
- By 2012, recycle **35%** of household and assimilated waste and **45%** in 2015¹².
- By 2012, recycle **75%** of household packaging¹³ against 60% in 2006.
- By 2012, recycle **75%** of business waste, excluding construction and agriculture¹⁴, against 68% in 2004.
- Cultivate organically **6%** of the usable farmland in 2012 and 20% en 2020¹⁵.
- In 2012, achieve **20%** of organic products in public community catering¹⁶.
- Have **50%** of farms committed to an environmental certification initiative in 2012¹⁷ and **30%** of farms with low energy dependency by 2013¹⁸.
- By 2018, reduce the use of pesticides containing worrying substances and with no substitution option by **50%**¹⁹.
- Increase State purchases of wood from products from sustainably-managed forests (eco-certified) to **100%** with effect from 2010²⁰.

¹¹ First Grenelle Act 2009-967 of 03/08/09, Art. 46.

¹² Ditto.

¹³ Ditto.

¹⁴ Grenelle Environnement commitment, waste round tables, 20/12/07.

¹⁵ First Grenelle Act 2009-967 of 03/08/09, Art. 31.

¹⁶ Grenelle Environnement commitment 120.

¹⁷ First Grenelle Act 2009-967 of 03/08/09, Art. 31.

¹⁸ Ditto.

¹⁹ Ditto.

²⁰ First Grenelle Act 2009-967 of 03/08/09, Art. 48.

Our operative levers

Incentives to purchase and consume sustainably:

- expanding information displayed on the products and in the points of sale²¹: displaying the carbon content and other impacts of product, displaying health information, displaying social conditions of production and ecolabels;
- guiding corporate purchasing policies and individual choices towards more favourable products in terms of environmental impacts and social conditions of production;
- promoting certifications and best use practices;
- promoting fair trade products;
- supervising advertising in terms of environmental and health claims²².

Support for the green economy and green technologies:

- defining an industrial policy to support priority sectors like renewable energies, energy storage, green chemistry and biomaterials, recycling technologies and organisation and CO₂ storage and recycling;
- supporting the development of demonstration operations and industrial experimentation of innovations;
- supporting products sparing of natural resources to allow an harmonious and joint development of supply and demand.

Standardising ecodesign approaches²³:

- capitalising on good practices and broadcasting sectorial guides;
- incorporating the notion of product flows, "carbon" and environmental costs;
- reducing waste production at source, supporting abstemious products and using local products;
- supporting improved energy efficiency throughout the life cycle;
- promoting successes due to exemplary ecodesign initiatives.

Implementing tax and regulatory incentives:

- extending the principle of the balanced bonus/malus scheme²⁴;
- supporting, at European level, the application of a reduced VAT rate on eco-products;
- extending the tax on polluting activities to products generating a great deal of waste and strengthening its incentive nature by matching its rates to the costs of environmental damage caused;
- updating regularly criteria of eligibility to the tax credits, subsidised loans and other incentive economic instruments to promote the most efficient equipment, products and services and the gradual improvements

whilst making it easy for all to access sustainable and fair trade products;

- adapting constantly thermal regulations and the sustainable development tax credit to changes in technological changes.

Ensuring the traceability of information throughout the whole life cycle:

- harmonising assessment methods between firms, sectors and countries;
- supporting the creation and roll-out of sectorial databases and shared information systems;
- standardising reports and audits on greenhouse gas emissions and different environmental parameters.

Encouraging businesses to commit to an advanced social responsibility approach²⁵:

- promoting corporate social responsibility, socially-responsible investment approaches, adhering to the EMAS European regulations²⁶ and, more generally, the obligation laid down for major companies by the law on the new economic regulations to account for their policies and their environmental, social and societal performance;
- opening up staff representation bodies to preparing the firm's sustainable development strategies and the environmental and social report;
- involving different service providers (accountants, auditors, social audit firms, etc.) ;
- matching tools like the corporate social responsibility for small firms and developing simple baselines/labels suitable for eco-responsible SME²⁷;
- developing ecolabels (environment NF and European ecolabel).

Exemplary nature of public purchasing as accelerators for change:

- standardising the implementation of the exemplary State circular of 3 December 2008 to reduce the impacts from common administration consumption (paper and office products, vehicle fleets, etc.);
- producing eco-responsible administration plans: encouraging especially sustainable public procurement contracts and thermal renovation of buildings (energy audits and resulting work).

Pursuing regulatory and legislative harmonisation at European scale:

- regularly updating minimum ecodesign requirements by combining environmental protection and competitiveness whilst involving all stakeholders in these changes;
- harmonising consumer information.

²¹ Grenelle Environnement commitment 201.

²² Grenelle Environnement commitments 219 and 220: reformed Advertising Standards Office (became the Professional Advertising Regulation Authority in June 2008), modified Consumer Code.

²³ First Grenelle Act 2009-967 of 03/08/09, Art. 46.

²⁴ The discount mentioned above could be a reduced VAT rate.

²⁵ Grenelle Environnement commitments 196 to 199 and 202.

²⁶ Community Eco-Management and Audit Scheme.

²⁷ Grenelle Environnement commitment 202.



Access to safe and balanced food:

- supporting ecologically- and socially-responsible production and distribution patterns which help maintain public health, soil fertility and water quality, as local products and fair trade products;
- supporting sustainable production and fishing methods and their products;
- expanding consumer information on the characteristics of a balanced diet produced by sustainable methods.

Reducing waste production and improving recycling rates:

- encouraging savings in raw materials and recycling through incentive pricing and taxation and local prevention plans²⁸;
- extending the list of waste covered by the wider responsibility of producers by boosting prevention through adjusted contributions²⁹;
- inciting the development of ecodesign and the recycling of packaging and construction waste³⁰;
- reducing the amount of incinerated and stored waste³¹ using various producer and consumer incentives;
- developing recycling and recovery organisations and techniques, especially for rare resources.

Supporting waste recovery and waste-to-energy firms and activities:

- preparing and implementing a national and local policy to support the establishment and development of solidarity recovery and recycling;
- developing vocational training for employees in the recycling and repair-recovery sector;
- encouraging activities combining recycling, re-use and solidarity objectives.

Promoting the use of renewable or recycled raw materials:

- promoting wood from sustainably-managed forests (ecocertified) and the use of biomaterials produced under sustainable conditions;
- promoting the use of materials produced by recycling.

Promoting the potential of industrial ecology and the economy of functionality:

- developing short circuits at the scale of a region, sector or business park;
- experimenting with new development and growth patterns, like the functionality economy and the circular economy³², which replace the marketing of goods or services by the marketing of their use. This approach helps improve the service life of goods, reduce the consumption of raw materials and energy, lower the production of waste and also develop a more social lifestyle;
- Developing environmental finance and accounting and new wealth indicators.



28 Grenelle Environnement commitments 243 to 247.

29 Grenelle Environnement commitments 248 to 252.

30 First Grenelle Act 2009-967 of 03/08/09, Art. 46. Grenelle Environnement commitments 253 to 258.

31 First Grenelle Act 2009-967 of 03/08/09, Art. 46. Grenelle Environnement commitments 259 to 263.

32 The functionality economy replaces the marketing of goods or services by marketing their use. This approach helps especially to improve the service life of goods and thus reduce the consumption of raw materials and energy and lower the production of waste

CHALLENGE 2

Knowledge society



2.1 Education and training

Context and challenges

Equal access for all to education, training and culture is a major factor in social cohesion, at all training levels and in all stages of life. It offers human beings the means to fulfil their personal and professional potential, to integrate socially and take part in the knowledge society promoted by the European Sustainable Development Strategy and Europe 2020.

Education and training can instruct citizens and future citizens in the fundamental issues of sustainable development and help them acquire the know-how and knowledge they must have to be able to adapt to changes in the world and in society.

These are major changes. At the economic level, the crisis has shown the dangers and consequences of short-term logics and, at the technological level, standardising information and communication techniques, emerging nanotechnologies and biotechnologies and necessary changes in energy production and use indicate considerable changes to come.

These changes, which may be perceived as threats or opportunities, involve anticipating the benefit of potential new possibilities as well as managing the transition from

old to new activities. Education and training make a substantial contribution to this.

Extra training in key economic sectors, effective professional guidance and developing new learning methods seem essential to meet the corporate responsible competitiveness objectives and citizens' aspirations for different products and services.

Managing the transition from old to new activities in a context of globalisation of exchanges requires far greater adaptability of individual skills and more collective creativity to anticipate and deal with the changes.

Initial and continuing vocational training allows each individual to acquire, update and expand his knowledge and skills on a regular basis. On-going training more specifically helps the individual control his own career path and also makes it easier for each firm to adapt to the transformations in its environmental, economic and social environment.

The ethical and social aspects of education for sustainable development contribute to citizen training.

It is included inherently in all teaching disciplines and all curricular and extra-curricular educa-

tion activities. By educating young people, it helps rouse the general public to the challenges of sustainable development.

The requirements of sustainable development are also an integral part of the everyday operation of teaching and training establishments. These institutions have, in relation to society, a **mission of exemplarity**, impulsion and promotion of sustainable development pillars which protect and enhance the environment, economic development and social progress and the responsibility towards current and future generations.

The content of their teaching and training courses and the way they are managed must be such that secondary and higher education establishments can instruct their pupils and students, their staff, their suppliers, businesses they work with and authorities in their region of installation.

As a crosscutting challenge which impacts on all the other eight challenges of the NSDS, education and training require that considerable efforts continue to be made at country scale. Its success is one of the keys to an effective national sustainable development policy.



Our strategic choices

Adapt and reinforce training systems in the key areas of sustainable development.

Under the "Grenelle of Environnement", priority skills and qualifications have been identified in six key sustainable development sectors: building, energy, agriculture, marine sciences, economy and health. Training courses capable of implementing the changes sought in these sectors must be adapted and developed very quickly.

More generally, this implies extra efforts by those involved in vocational training to make the transitions smooth and support all sectors of activity, especially industrial, in adapting to the challenges of sustainable development. This goal requires a sustained training effort of teachers and instructors in all areas affected by these transformations.

Improve the lifelong training available and facilitate its access.

Lifelong training is a chance for individuals to progress more successfully in their professional life by adapting to the transformations in society and the changes in the economic context. Making training courses available

to the greatest number of people helps with these changes, as does enhancing professional career paths and experience. Efforts must focus on renewing training and reference framework contents.

Encourage social integration and employment through training and education.

Initial and continuing training of citizens and future citizens is an investment which facilitates integrating and remaining in professional life and more generally integrating individuals in society. It is an essential investment in a rapidly-transforming society,

where young people and senior citizens find it difficult to access the job market. The prolonged lifetime, and correlatively the working life, of senior citizens reinforces the need to update knowledge.

Expand general public training for sustainable development.

A global understanding and grasp, particularly by the general public, of the stakes, principles and values of sustainable development are fundamental levers in changing thoughts, attitudes and behaviours. Education for sustainable development must

prepare the future citizen to understand, assimilate the complexity of social, economic, cultural and environmental relations and take action. It means making everyone pay more attention to their surroundings and better able to participate.

Train public and private decision makers in the challenges of sustainable development.

Raising the awareness of and training decision makers - national and local elected representatives, State representatives,

business leaders and unions - is the ideal way of triggering real changes in behaviours and individual and collective choices.

Reduce early school-leaving.

The fight against early school leaving and academic failures must allow all young people to enter society rapidly and face up

to its transformations and changes in the economic context. It is one of the priorities in the action for youth plan.

The objectives in figures

In Europe by 2020³³, achieve :

- **15%** of adults on average taking part in lifelong training activities;
- less than **10%** of young people leaving school early.

Nationally, by 2013:

- increase the number of children and adolescents benefiting from education and cultural efforts by **20 to 25%**;
- reduce the percentage of the population which has never visited a cultural site by **25%**.

³³ Council of the European Union of 11-12 May 2009. European Education and Training Strategy 2020.

Our operative levers

Developing support systems to combat academic failure:

- priority education policy;
- introducing education support and personalised aid systems;
- improved integration of all disabled students;
- forming a localised guidance public service;
- renovating the vocational education;
- combating school drop-outs (setting up platforms in each region to monitor dropping out of school).

Standardising education for sustainable development from nursery school to higher education:

- including sustainable development in school curricula, teachers and managing staffs training. These training programmes help implement the overall sustainable development approach of schools and establishments;
- reinforcing the inter-disciplinary nature of teacher training;
- combining education for sustainable development with other cross-disciplinary education like education in health, nutrition and risks;
- learning the scientific approach to understand the issues and actions related to sustainable development.

Developing professionalisation and on-going training processes in higher education:

- using the options opened up by the law on the rights and responsibility of universities, the degree success plan and the European universities charter for lifelong learning.

Strengthening higher education and integrating sustainable development in the strategies of universities and higher education institutions:

- investing in campuses of excellence, modernising large campuses;
- preparing a green plan for the campuses and labelling universities and higher education establishments on the basis of sustainable development criteria³⁴.

Matching the professional training available in key sectors to the new requirements of sustainable development:

- incorporation of sustainable development in all vocational training courses and in the certification

reference frameworks by targeting in priority the key sectors³⁵ and those in need of major and rapid change;

- developing professions and sectors for the environment, recycling, ecodesign, life cycle analyses and an understanding of ecosystems³⁶;
- incorporating environmental and sustainable development issues in vocational training courses for leisure and sport supervision.

Applying information and communication technologies:

- reducing the digital gap and developing the use of information technologies to improve access to services, knowledge and employment, especially for isolated populations;
- supporting ICTs as a basis for a new economic development model, in Metropolitan France and Overseas³⁷;
- promoting information and communication technologies in secondary education;
- developing digital workspaces in schools and teaching establishments.

Access to training for those employees who benefit the least,

especially in very small, small and medium-sized businesses, as well for young people with few qualifications and for senior citizens through better coordination by those involved in national and local training by clarifying each individual's skills³⁸.

Developing methods for raising awareness and training public and private decision-makers:

- developing on-going, high-level training in sustainable development (Higher Education Institute, etc.);
- enriching and broadcasting forward-looking studies by combining public and private skills.

Making available environmental information to the general public held by the public authorities by creating a public environmental information portal: toutsurlenvironnement.fr.

Developing access to culture:

- boosting education and cultural actions, especially for young people;
- expanding accessibility to cultural establishments, especially for disabled people.



³⁴ First Grenelle Act 2009-967 of 03/08/09, Art. 55.

³⁵ First Grenelle Act 2009-967 of 03/08/09, Art. 6, 48 and 55.

³⁶ First Grenelle Act 2009-967 of 03/08/09, Art. 55.

³⁷ See overseas growth strategy.

³⁸ Bill on guidelines and lifelong vocational training.



2.2 Research and Development



Context and challenges

Research and innovation are major levers in taking up the challenges of today, anticipating those of tomorrow and allowing France to develop the competitiveness required for its economic and social equilibrium. Research plays an essential role to allow actors to commit to more sustainable methods.

Society's expectations must be taken into account when orientating research and the decision-making process. **Exchanges between elected representatives, researchers, technologists, experts and users are key to progress.** In a society worried about possible spin-offs from scientific progress, trust in research and its institutions implies the initiation of early dialogue. More widely, to prepare for the future, education must bring the scientific adventure to life and its role must be debated when building our societies.

French guidelines for research and innovation are part of **the 2020 vision for the European Research Area (ERA)** approved by the Council of the European Union in December 2008. This vision is intended to ensure coherent national and European policies and encourage the emergence of a European research

governance. It is also aiming to build a genuine scientific community at the scale of the Union through researcher mobility, exchanged knowledge and technology transfers.

In this context, **France, in common with major European countries, has put together a National Research and Innovation Strategy (NRIS) for 2009-2012.**

It determines the challenges to be taken up, establishes the priorities, ensures the coherence of everyone's actions involved and sets out to allocate public financing in the best possible way. The NRIS also makes sure that there is no opposition between fundamental research and applied research by underlining the continuum between fundamental research and innovation.

France allocates 2.2% of its GDP to public and private research activities, a percentage which has stagnated in recent years. The volume of research is adequate compared with other OECD countries in the public field but low in terms of private research, thereby restricting innovation potential. In the years to come, an active participation in discussions and

decisions at the European level will contribute to the dynamics of the European Research Area.

At the same time, the most of opportunities offered by this new research and innovation environment must be made to boost our competitiveness, **reinforce dominant scientific areas** and acquire new ones, **expand private research and innovation, especially in the fields of environment, natural resource management, sustainable development and health.**

International flows of students, PhD students, researchers and lecturers are a major prerequisite for buoyant research. It is essential to keep French research in European and international exchange and research programmes.

Our strategic choices

Support research and innovation in businesses.

Transferring knowledge from public research to the business must be strengthened to speed up business development of products and services in line with the issues of a green and sustainable economy. The interactions between public and private research, like the inter-disciplinary

approaches, must be consolidated. The policy of competitiveness clusters is a priority in this respect.

Training researchers in entrepreneurship, in managing innovation and in commercial issues will be boosted to take better account of user expectations.

Boost research on sustainable development and major societal challenges.

In line with the National Research and Innovation Strategy and the societal challenges identified at European level, certain themes call for an extra research effort: decarbonised economy, understanding and preservation of the biodiversity, saving and managing natural resources, understanding and managing risks, ageing of the popula-

tion, food crisis, climate change and new energies. Combating erosion of the biodiversity is a particularly strong challenge which requires research efforts in indicators, value of the biodiversity, understanding ecosystems, studying services rendered by the biodiversity and the links between global warming and biodiversity.

Support research and development to combat climate change.

Certain areas of research, like energy efficiency, reducing greenhouse gas emissions and adapting to climate change, are essential

for both France and Europe in meeting their international commitments. The means and European cooperation must be reinforced.

Include society better in research policies.

The transparency of political choices on research applications and their conditions of acceptability will be strengthened relying on independent quality expert assessments. Managing research through evolutive and

transparent rules will allow stronger citizen trust. At the same time, exchanges with the researchers should be encouraged to familiarise the public with the scientific reasoning and practices.

Improve the international opening up of research activities.

Improve France's appeal for French and foreign researchers and strengthen

our participation in European research programmes.

The objectives in figures

- From 2010 onwards, allocate **3%** of GDP to research and development³⁹.
- By 2010, finance **2/3** of research and development by businesses⁴⁰.
- By 2012, mobilise **one billion additional euros** for research on sustainable development; the expenses for research on clean technologies and preventing environmental attacks will be increased gradually to achieve the same expenditure level as for the civil nuclear sector⁴¹ by end 2012.

³⁹ Europe 2020

⁴⁰ Europe 2020

⁴¹ First Grenelle Act 2009-967 of 03/08/09, Art. 22.

Our operative levers

Incentive for businesses to invest in the research and development of public/private cooperation:

- encouraging the transfer of knowledge between public and private research (e.g. patent policy, researcher mobility, competitiveness clusters);
- developing competitiveness clusters combining businesses, laboratories, universities and local authorities around research centres and facilities, thereby encouraging regional vitality;
- continuing to support centres of rural excellence.

Opening research wider to the civil society:

- more developed information and association of representatives of the civil society (elected representatives, associations, NGOs, etc.) on the orientation, selection and assessment of research strategies and programmes, especially when they inspire major innovations: GMO, nanotechnologies, biotechnologies;
- researcher and citizen involvement in responsible, public dialogue, encouraged by efforts by main players in recognition, information and training;
- strengthening exchanges between elected representatives and the scientific world with the support of the Parliamentary Office for Scientific and Technological Choices (OPECST) and the National Commission for Public Debate (CNDP);
- preparing the political decision on such complex topics as the climate, nanotechnologies, biodiversity, energy and fishing, support by inventories incorporating scientific knowledge;
- easier access to available data from public research, under the same principles as those of the Aarhus Convention on access to environmental data.

Building a clear framework to exploit scientific expertise:

- developing scientific expertise: defining stakeholders and issues to be dealt with, independence of experts, understanding of conclusions by everyone involved so that they can contribute effectively to society's debates and political decisions;
- scientists encouraged to be involved in expert assessment, especially in collective procedures;
- encouraging fora of experts similar to the Intergovernmental Panel on Climate Change (IPCC) to develop a deliberative culture around major scientific issues.

Structuring the researcher community thus encouraged around sustainable development issues:

- decompartmentalising French research between environmental sciences and human and social sciences;

- helping develop European research networks and programmes (e.g. ERA-net, foundations, groupings, etc.);
- promoting European programmes in key areas of sustainable development (FP);
- increased researcher mobility and knowledge broadcasting within the European Union, mainly between public research and businesses;
- structuring tools for research, especially in the energy new technologies and greenhouse gas emissions: research platforms, demonstrators;
- creating an Alliance for marine sciences.

Research to improve the efficiency and low-resource consumption of our technologies:

- encouraging research into energy, waste-to-energy and waste processing technologies⁴², biotechnologies and their impacts, protecting resources and the biodiversity;
- improving energy efficiency of vehicles and transport systems, especially aircraft and flight procedures; encouraging the modernisation of fleets of all means of motorised transport⁴³.

Strengthening research on the biodiversity:

- supporting the foundation for research on the biodiversity;
- expanding research into indicators and assessment systems for the biodiversity, the impacts of climate change on ecosystems and the economic assessment of the biodiversity⁴⁴.

Developing and encouraging the influx of foreign students and researchers:

- developing intra-European exchanges, especially under the European Leonardo programme;
- Expanding the influx of foreign students and researchers.

Improved integration of sustainable development in the research guidelines:

- taking sustainable development issues into account in the strategic guidelines of research establishments;
- incorporating economic, environmental and social aspects in assessing applied research programmes and projects;
- incorporation of human and social sciences at the design phase of applied research projects and programmes, for innovations and socio-economic impacts.



⁴² Grenelle Environnement commitment 265.

⁴³ Grenelle Environnement commitments 28, 30, 33 and 36.

⁴⁴ Chevassus-au-Louis report from the Strategic Analysis Centre. Economic approach to the biodiversity and ecosystem-related services published on 29 April 2009. Pavan Sukdev report on the economic of ecosystems and the biodiversity submitted to the European Commission on 13 November 2009. The aim is to assess the global economic benefit of the biodiversity, the costs of losing the biodiversity and of comparing the costs of inaction with the costs of efficient conservation.

CHALLENGE 3

Governance



Context and challenges

Most of those within either the public or the private sector using the term **governance** understand it **first and foremost as a different way of making decisions**, with many more decision-making places and associated players.

Modernising public action, favouring cooperation and mediation, managing the many different and sometimes contradictory interests, encouraging mobilisation: **governance is based on the partnership, the interaction between the State (the central government) local authorities and civil society.**

Governance can be found at all scales of government. Global, local or themed, it is plural by nature. It is therefore important to make sure that its different scales are coherent and linked properly.

When executing the public action as in a project, good governance complies with and applies the following five principles⁴⁵:

- **player participation** is effective at all stages and as far upstream as possible so that everyone can build up and take on board the project or policy;
- **coordination** means organising the expression of the various stakeholder interests and how they are chosen;
- **the cross-cutting approach aims** to reconcile economic development, improve well-being, social cohesion, protection of environmental resources and the climate protection;
- **the shared evaluation** is

used to check that policies match and are relevant to global and local issues, sustainable development principles, population expectations and the efficiency of resources used. It helps projects and their strategic areas progress; → **on-going improvement** is in agreement with changes in the needs and expectations of society.

Good governance implies transparency in the changes in the file upstream and throughout the process.

At the international level, the Aarhus Convention, signed on 25 June 1998⁴⁶, pursues three goals: → **developing public access** to information held by the public authorities, especially through accessible broadcasting of fundamental information; → **encouraging the public** to participate in the decisions which have an impact on the environment, mainly at the start of a development procedure "when all options and solutions are still possible and the public can have a real influence"⁴⁷; → **extending the conditions** of access to justice in terms of environmental legislation and access to information.

At the national level, article 7 of the national Charter for the Environment⁴⁸ indicates that: "All people have the right, in the conditions and limits defined by law, to access information on the environment held by the public authorities and to help prepare public decisions with an environmental impact".

In addition, Article 43 of the **Act on scheduling the implementation of the "Grenelle of Environment"** states that "building a new economy reconciling environmental protection, social progress and economic growth requires new forms of governance, encouraging the mobilisation of society through mediation and consultation".

In this respect, the governance shared with the stakeholders used for the "Grenelle of Environment" and repeated for "Grenelle of Sea", sometimes referred to as "five-way governance" can be considered as exemplary. It has actually associated the five bodies - the State, local authorities, employers, unions and environmental protection associations. The setting up of the National Sustainable Development and "Grenelle of Environment" Committee (CNDDGE), included under Article 1 of the First Grenelle Act, and the modernising of the Economic, Social and Environmental Council ensure the continued existence of this type of governance by widening it to the fields of sustainable development.

⁴⁵ 13 July 2006 circular from the Minister for Ecology and Sustainable Development, reference framework for regional sustainable development projects and local Agenda 21s.

⁴⁶ International Convention signed by 39 States on 25 June 1998. It has resulted in Director 2003/4/EC which stipulates in particular that any authority must pass on any environmental information it holds to any person requesting it (without this person having to identify himself or his reason for the request).

⁴⁷ Ditto.

⁴⁸ The Charter for the Environment states the rights of man and society in its environment; since the constitutional law of 2005, it has been integrated fully into the preamble of 1958.



Our strategic choices

Encourage the appropriation of sustainable development objectives.

A precondition for implementing good governance is making quality information available to players. Sustainable development requires deep-seated change in individual and collective behaviours. Creating a culture shared by the miscellaneous stakeholders in sustainable development and its challenges tends to encourage these changes. The public will thus be able to help prepare public decisions, especially those with environmental impact,

in accordance with Article 7 of the Charter for the Environment.

More generally, shared governance (five-way governance: State, local authorities, employers, employees and environmental associations) must be developed taking support at the national level, on the implementation of the "Grenelle of Environnement" and at the local level on local Agenda 21s and on local sustainable development projects.

Develop local governance as close as possible to sustainable development and regional issues.

The local level means that everyone on the same territory can appropriate sustainable development issues correctly. Participation in local governance must therefore be generalized on the model of the "Grenelle of Environnement" and encourage the dialogue between all local stakeholders, local authorities, inhabitants, unions, businesses, associations and institutions on the issues and the strategy to be implemented.

This means developing their involvement in the consultation, preparation, implementation and evaluation processes of local projects.

To achieve this effectively, the principles of the consultation have to be defined and the decision-making modalities clarified and the entire process, along with the decision-making modalities, has to be transparent.

Experiment with new paths.

Practising local governance, stakeholder participation, sustainable development initiatives: in these fields, the metropolitan and overseas regions are areas for experimentation and innovation.

Improving their governance must lead to renewing their approach to development and make natural resources, their understanding, protection and recycling a development lever.

Apply the duty of exemplarity of public players in the governance and working methods.

Reorganising State departments and local authorities new responsibilities must be seen as a chance to improve governance and working methods in several fields: preparing decisions, incorporating sustainable development criteria in public policy evaluation and monitoring, developing eco-responsible and

socio-responsible public purchasing, combating all types of discrimination (including improving parity) and training staff in this matter, on-going improvement through identifying and pooling good practices, local experimentation and standardising shared evaluation systems.

Get businesses involved.

As major regional players, businesses and professional organisations must become active, committed partners in local sustainable development initiatives. The dialogue between the economic world (employers and unions) and the public sphere reinforces mutual understanding,

encourages the preparation of united, ecologically responsible and economically viable job creation projects. This implies specific approaches adapted to very small, small and medium-sized businesses, mainly through collective initiatives.

Preserve the interests of future generations in managing public action.

The necessary adaptation of our economic and social model, in a context where public players are under tremendous pressure due to the crisis, calls for reduced public

expenditure as a whole and the fair distribution of efforts and reinforced assessment of public policies covering the long term and involving Parliament in particular.

The objectives in figures

- Implement the Grenelle commitments on the initiation to an ecological democracy.
- Make the production of and access to information on sustainable development a priority.
- Apply cross-disciplinarity to working methods and involve the stakeholders in the decision-making process.
- Create **1000 local Agenda 21s** by 2013 and achieve **at least 250 local Agenda 21s** labelled under the national recognition system.
- By 2013 achieve the criteria of the stability pact (public deficit **less than 3% of GDP**)

Our operative levers

Organising consultation conditions:

- clearly identifying responsibilities at decision and implementation stage;
- standardising and facilitating the participation of public and private players in the consultation processes (shared governance, public debates, mobilising CESER, etc.); adapting the composition of consultation bodies for this purpose;
- operating rules and resulting resources devolved to the involvement of the civil society⁴⁹ in the consultation procedures established collectively, mainly in terms of transparency in the representativeness criteria;
- implementing systematically Article 7 of the Charter for the Environment, providing for public participation in preparing public decisions with an environmental impact;
- displaying the results of the consultation and reporting on decisions taken⁵⁰;
- developing consultations for complex projects covered by several regional scales.

Adapting national governance to take sustainable development into account better:

- performing impact studies regarding sustainable development prior to bill drafts;
- widening the composition and field of expertise of the National Sustainable Development Committee and the Grenelle Environnement to sustainable development players and themes;
- reinforcing the field of action of the Economic, Social and Environmental Council and adapting its composition as a result;
- facilitated seizure of the National Public Debate Commission;
- creating a council guaranteeing transparency, methodology and ethics of expert assessments⁵¹, a mediating authority for disputes over expert assessments and early environmental warning⁵²;
- reforming public enquiries and impact studies⁵³ to improve public participation.

Applying the NSDS at all levels:

- applying the NSDS in ministerial, themed and regional strategies; incorporating its priorities in developing action programmes;
- incorporating eco-responsibility in the operation of administrations and public departments by developing exemplary State initiatives⁵⁴ and capitalising on good practices;
- orienting the Public Commissions towards eco-responsible and socio-responsible projects, products and services.

Involving prefects and devolved administrations:

- raising awareness of administrations at different local levels to good governance and to sustainable development objectives;
- making information on the environment and the risks available to the general public;
- carrying out diagnostics of the territory and regional environmental profiles⁵⁵ under sustainable development principles;
- strengthening the sustainable development aspect in contracts between the State and local authorities and especially when revising State-region project contracts (CPEP);
- assessing public policies, promoting and sharing best sustainable development practices, developing regional indicators.

Coherence and good governance at regional scale:

- compliance with and application of good governance principles in terms of participation, coordination, cross-disciplinarity, assessment and on-going improvement. According to the principle of shared governance, encouraging the creation of regional committees⁵⁶ organised under the model of Agenda 21 regional committees or regional committees to monitor the "Grenelle of Environnement" follow up regional committees and the seizure of CESER to develop original governance methods and incorporate sustainable development in regional projects;
- promoting the national reference framework and the national baseline for assessing regional sustainable development projects and local Agenda 21s⁵⁷ to incorporate sustainable development in local projects (regional natural park charters, regional climate plans, charters for the environment, development and water management schemes, orientation and regional coherence schemes, etc);
- preparing regional climate plans and regional air-energy-climate schemes consistent with the local Agenda 21s where they exist⁵⁸;
- introducing sustainable development criteria gradually in the public aid subsidies criteria.

Promoting the opening up to European and international experiences:

- developing cross-border, European and international cooperation;
- using European networks and cooperations instigated by sub-national authorities to facilitate economic and cultural exchanges and pooling of experiences;
- integrating immigrants by developing links with their country of origin and their host authority (e.g. decentralised cooperation).

⁴⁹ See Comop 28 exemplary communities.

⁵⁰ See Comop 28 with the proposed white paper.

⁵¹ Grenelle Environnement commitment 95.

⁵² Grenelle Environnement commitment 194.

⁵³ Grenelle Environnement commitments 188 and 191.

⁵⁴ 3 Décembre 2008 circular from the Prime Minister on State exemplarity in relation to sustainable development in the operation of its departments and public establishments.

⁵⁵ 23 March 2009 circular from the Ministry of Ecology, Energy, Sustainable Development and Spatial Planning on regionalising the implementation of the Grenelle Environnement.

⁵⁶ Ditto.

⁵⁷ 13 July 2006 circular from the Minister for Ecology and Sustainable Development.

⁵⁸ First Grenelle Act 2009-967 of 03/08/09, Art. 51.



Information sharing:

- broadcasting information used to monitor and assess the sustainable development policy and the local sustainable development programmes⁵⁹;
- reinforcing awareness-raising and information actions on sustainable development targeting the general public;
- setting up an information portal on public environmental data⁶⁰;
- supporting coordinated environmental watch initiatives.

Promoting and enhancing long-term initiatives in territories:

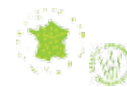
- developing citizen conferences, panels and other forms of participative democracy (folk high schools, association networks, local consultation bodies and entities in relation with the ministry of Education, local authorities, consultative bodies like the Regional Economic and Social Council or the Urban Area Development Council), to make known and open for debate the long-term initiatives designed to construct and share visions and action programmes at sub-national scale;
- preparing methodological tools to allow State departments to help the towns and territories move towards a more sustainable development mode.

Encouraging voluntary business initiatives:

- taking corporate social responsibility into account;
- environmental certifications (ISO 14000, EMAS), compensating for greenhouse gas emissions, international projects (for example corporate social responsibility guidelines under ISO 26000);
- collective approaches at the scale of business parks, regions, professions, interprofessions, associations and business clubs;
- incorporating sustainable development in dialogue and negotiating bodies within businesses or state-owned companies.

Improving sustainable development indicators and broadcasting them better

- preparing sustainable development indicators⁶¹ additional to the GDP (e.g. aggregated sustainable development indicators, green GDP, natural public capital, human and social capital)⁶²;
- creating a national scoreboard of sustainable development indicators correlated with the NSDS⁶³.



⁵⁹ Grenelle Environment commitment 193.

⁶⁰ Grenelle Environment commitment 141.

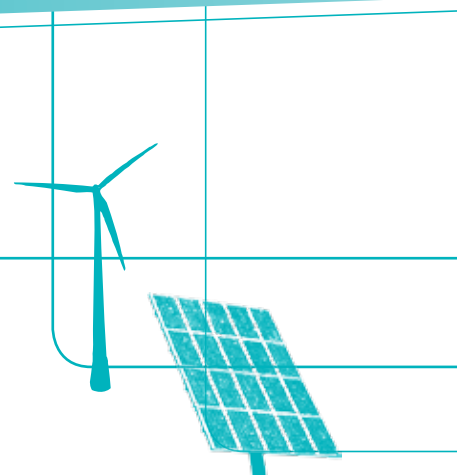
⁶¹ Grenelle Environment commitment 216.

⁶² Grenelle Environment commitment 214.

⁶³ Grenelle Environment commitment 215. Speech of President Sarkozy, international conference to present the conclusions of the report of the commission measuring economic performance and social progress. Large amphitheatre of the Sorbonne, Paris, Monday, 14 September 2009. National conference on sustainable development indicators on 20 January 2010.

CHALLENGE 4

Climate change and energies



Context and challenges

According to the 2007 assessment report by the Intergovernmental Panel on Climate Change (IPCC), eleven of the twelve years in the period 1995-2006 were among the hottest since 1850, the date when temperature records began. The sea level has risen due to this increase in temperature by 1.8 mm per year on average since 1961 and by 3.1 mm per year since 1993.

The greenhouse gas emissions⁶⁴ from human activity have caused this warming: they have doubled worldwide since the early 1970s and should double again by 2050 if nothing is done. According to the IPCC report mentioned above⁶⁵, continuing greenhouse emissions at the current rate should accentuate the warming and modify the climate system in the 21st century profoundly.

A rise in temperatures of more than 2°C would boost the extreme meteorological phenomena, with disastrous consequences, at far greater cost than the prevention measures likely to be taken. Urgent action is therefore required. **Restricting warming to 2°C requires stabilising world greenhouse gas emissions by 2020 at the latest, then halving them by 2050 compared with 1990.** These objectives form part of what is known as factor 4 because emissions in industrialised countries have to be divided by four, and by two for the entire planet. France has ratified the United Nations framework convention

on climate change, in force since 1994. It participates in the Kyoto Protocol (entered into force in 2005) which is targeting 5.2% reduction in world greenhouse gas emissions between 2008 and 2012 compared with 1990, mainly by acting on the production of energy which is responsible for 70% of global emissions. The goal for France is to stabilise emissions. France in fact produces less carbon than the average of developed countries due to its nuclear- and hydraulic-generated electricity. It accounts for 1.1% of world greenhouse gas emissions for 0.9% of the population and 5% of the global GDP⁶⁶.

The UN Climate Change Conference in Copenhagen in December 2009, despite a lack of global agreement made progress in some areas, like North-South solidarity and taking the role of forests into account.

The energy-climate legislative package, adopted in December 2008 under the French Presidency, should allow the European Union to achieve the objective of three times 20 by 2020: reducing greenhouse gas emissions by 20% compared with 1990, increasing energy efficiency by 20% and increasing the proportion of renewable energies in European energy consumption to 20%.

In addition, the 27 Heads of State and Government of the Union countries stated that Europe would reduce its greenhouse gas emissions to the higher 30% if

other signatory countries to the Convention on Climate change increased their own efforts, provided that other non-European Union countries committed to comparable objectives⁶⁷.

Nationally, the Act on planning the implementation of the "Grenelle of Environment" defines ambitious sectorial objectives, especially in building and transport. It thus confirms the guidelines of the law on energy policies (POPE) of 13 July 2005 which states that "combating climate change is a priority of the energy policy targeting an annual reduction of 3%, on average, of French greenhouse gas emissions". The national climate plan, updated in 2009, should help achieve these objectives.

These strategic choices will be implemented locally⁶⁸ by actions impacting both energy production and consumption, mainly the development of renewable energies and the search for energy savings in both new and existing buildings.

64 The main anthropic greenhouse gases are carbon dioxide (CO₂), dinitrogen oxide (N₂O), methane (CH₄) and the fluoride industrial greenhouse gases: hydridofluoridocarbons (like freon HCFC-22), chloro-fluorocarbons (CFC), tetrafluoromethane (CF₄) and sulphur hexafluoride (SF₆). Each greenhouse gas has a different effect: the impact of 1 kg of methane (CH₄) is 23 times higher than than of 1 kg of CO₂, and the impact of 1 kg of SF₆ is 22,800 more powerful. For ease of comparison, a common unit is used: the CO₂ equivalent or carbon equivalent.

65 Current scientific research suggests that the average temperature on Earth will continue to increase by 1.4 to 5.8°C by the year 2100, which would mean a rapid, deep-seated change compared with the trends, even if the minimum forecast prevailed.

66 United Nations data 2004.

67 First Grenelle Act 2009-967 of 03/08/09, Art. 2.

68 Article 68 of law 2010-788 of 12 July 2010 on national commitment for the environment (Second Grenelle Act) introduces the preparation of regional schemes for climate, air and energy, mainly to promote the regional potential of renewable energies and develop energy efficiency.



Our strategic choices

Promote and encourage more moderate behaviours and production methods

Producers, distributors, service providers, consumers and investors - all public and private players must be mobilised and urged to choose the most efficient and most low-consuming energy solutions, minimising greenhouse gas and pollutant emissions into the atmosphere. Industry, transport, construction, agriculture and town planning are the sectors particularly concerned.

The emphasis is on low consumption or positive energy buildings, on reducing consumption in existing buildings by 38%. These measures apply to housing and service sector buildings where obligations of rehabilitation are planned. In the transport sector, the aim is a 20% drop in greenhouse gas emissions by 2020 to bring them back to 1990 emission levels⁶⁹.

Provide information to enlighten individual and collective choices.

Changes in behaviour must be based on a better understanding of the climate, its mechanisms and its evolutions, energy consumptions and their effects. The results of international and national climate studies must be broadcast widely to help everyone to act at his own level and to reorientate the policies, if necessary.

Life cycle analyses of various energies must be performed and their overall cost assessed to achieve this. The cost/benefit balance sheets of energy policies must also be expanded nationally and locally, by incorporating ecological, economic and social concerns in order to select the most efficient and effective options.

Support innovation for growth moderate in energy and greenhouse gas emissions.

Growth in the economic activity must go hand-in-hand with energy savings. The very nature of production and consumption must change to take up this challenge. We must favour "green growth" and,

to achieve this, intensify our research, development and innovation efforts towards energy-saving processes and organisations. The development of renewable energies must be accelerated.

Adapt activities and territories to climate change.

According to the IPCC, both short- and long-term adaptation is necessary to face up to the inevitable consequences of climate warming, even under the stabilisation scenarios at the lowest levels. At local scale, climate change raises numerous challenges (changes in coastline, agriculture, forestry, tourism, etc.) which must be covered

by regional approaches combining all socio-economic players - farmers, SME, communities, etc. The aim is to reduce the ecological, social and economic vulnerability of each territory. For this purpose, long-term development and investment decisions should be adapted to the inevitable climate change.

Take into account the social consequences of our energy policies to avoid increasing inequalities.

Energy prices will undoubtedly rise in the years to come, mainly as a result of incorporating external costs in the use of fossil energies and through depleting resource. This increase must not result in categories of population or certain territories, mainly rural, being excluded from basic needs such as heating or electricity⁷⁴. This

implies setting up investment aid in favour of energy-saving solutions or those adapting to climate change for the most deprived populations. Lastly, adapting to climate change includes a society dimension linked to local changes in activities, mainly agricultural, forestry and tourism, which must be considered.

The objectives in figures

- European objective of **20%** reduction in greenhouse gas emissions in 2020 compared with 1990⁶⁹. In France, the sectors covered by the European Union's Emissions Trading Scheme (EU ETS, energy, metallurgy, cement works, paper industry, chemistry, etc.)⁷⁰ will take part in the European effort to reduce emissions by **21%** between 2005 and 2020 and emissions from non-EU ETS sectors (mainly agriculture, building and transport) will be reduced by **14%**.
- Increase the proportion of renewable energies in the final energy bill by **23%** in France in 2020⁷¹.
- In the overseas departments⁷², achieve **50%** renewable energies in 2020, with total energy autonomy following in 2030.

⁶⁹ Could increase to 30% in the event of international agreement.

⁷⁰ Objective adopted by the European Parliament on 17 December 2008 under the revision of Directive 2003/87/EC which improves and extends the European Union Emissions Trading Scheme for greenhouse gases.

⁷¹ European Parliament Directive on promoting the use of energy generated from renewable sources. Grenelle commitment 7.

⁷² First Grenelle Act 2009-967 of 03/08/09, Art. 56.

⁷³ First Grenelle Act 2009-967 of 03/08/09, Art. 9.

⁷⁴ Article 11 of the Second Grenelle Act provides for the notion of energy insecurity for implementing the law on the right to housing.

Our operative levers

Establishing a price signal on greenhouse gas emissions and boosting the carbon market⁷⁵:

- taking impacts of greenhouse gas emissions into account in the price of energy, for example by using taxation or bonus/malus scheme levers;
- preparing the third phase 2013-2020 of the European Union Emissions Trading System for greenhouse gas (EU ETS) and promoting the Paris financial market for the carbon market; examining the feasibility of a climate-energy contribution at European level;
- setting up a national accounting of greenhouse gas emissions and other atmospheric pollutants.

Developing local adaptation and attenuation initiatives

- raising awareness and informing all regional players (elected representatives, businesses, administrations, associations and citizens), developing the local energy council (e.g. ADEME energy info spaces);
- joint preparation between State and regions of regional schemes for climate, air and energy, standardising regional climate-energy plans for all municipalities and municipality groupings of more than 50,000 inhabitants; incentives to draw up local Agenda 21s incorporating an energy section;
- developing tools to help in decision making, coordination and monitoring: evaluation methodologies, operational indicators, energy audits and greenhouse gas emission assessments;
- support for local sustainable development strategies through local incentive taxes in terms of town planning, transport or housing choices;
- encouraging local authorities actions to control energy in all fields, be they acting as investor, operator or specifier towards economic players and citizens;
- taking climate change and its effects into account, especially in managing ecosystems to preserve the biodiversity through introducing an adaptation strategy;
- using the results of the interministerial group of assessing impacts and the cost of climate change and appropriate adaptation measures⁷⁶.

Diversifying energy sources and reducing recourse to fossil energies⁷⁷:

- preparing in Metropolitan France and overseas, regional air-energy-climate schemes which include the development of renewable energies⁷⁸ and their connection to the electricity transmission network or grid⁷⁹ or encourage energy autonomy of isolated sectors;
- extending the place of new and renewable energies in town planning policies and in constructions, creating eco-districts, eco-campus and eco-business parks; incorporating means to produce these energies in buildings, for example roof solar panels;

- reinforcing experiments in regional development which use renewable heat networks, wood-fired boilers or geothermal systems;
- incentives for renewable energies through taxes, purchasing prices, specific financing and investment funds⁸⁰.

Reducing energy insecurity situations:

- helping social categories and professions weakened by the tremendous volatility in the price of energy;
- special attention paid to improving existing housing and supporting actions undertaken by private individuals, mainly the more modest households, and public and private social housing bodies; in this context, supporting the acquisition of low consumption or positive energy housing by using interest-free or subsidised loans.

Promoting and improving energy efficiency in the building sector, industry, trade and transport:

- strengthening the information on energy performances and the costs of operating buildings, cars and products, especially lighting, domestic appliances and computers;
- developing energy efficiency baselines, ecolabels and balanced bonus/malus scheme;
- standardising energy diagnostics and greenhouse gas emission assessments in all fields of activity;
- incentives for energy savings and thermal quality through regulations, mainly in new construction and the renovation of existing buildings, developing the implementation and control of energy objectives, in new and old build⁸¹;
- promoting and developing the use of high-performing materials throughout their life cycle, produced and manufactured using little energy like the biomaterials which can both isolate and store carbon or even the recycling of materials, even waste like textile waste;
- standardising energy renovation of service sector buildings from 2012 onwards;
- installing smart meters and associated management systems, mainly to lower consumption peaks which call for electricity generation to be boosted using fossil energy;
- training construction professionals to take renewable energies into account and to use the technical solution most suited to the local context;
- developing interest-free loans to buy low consumption, even positive energy housing;
- promoting the adaptation of housing to the ageing of the population.

⁷⁵ First Grenelle Act 2009-967 of 03/08/09, Art. 2.

⁷⁶ Coordinated by ONERC and the Directorate General of Energy and Climate, this group has already produced a report proposing a methodology for assessing and listing the vulnerabilities for seven themes: health, energy, town planning, built environment and transport infrastructures, tourism, natural risks and insurances, agriculture, forest and water resource, regions.

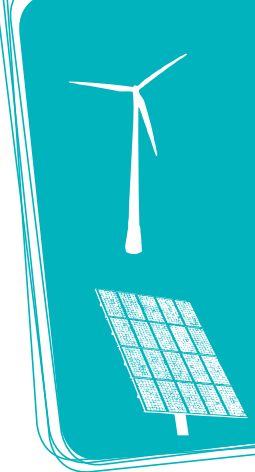
⁷⁷ The planning of investments over several years (PPI) into energy production adopted in 2009 states the objectives of each sector.

⁷⁸ Solar, wind, hydraulic, marine, geothermal, biomass, etc.

⁷⁹ First Grenelle Act 2009-967 of 03/08/09, Art. 56.

⁸⁰ First Grenelle Act 2009-967 of 03/08/09, Art. 12 and 22.

⁸¹ First Grenelle Act 2009-967 of 03/08/09, Art. 5 and 6.



Exemplarity of public players:

- standardising exemplary administration plans (PAE)⁸², energy audits and greenhouse gas emission assessments⁸³, voluntary compensation of greenhouse gas emissions;
- carrying out the energy audit of all State buildings by 2010⁸⁴;
- support from the Public Commissions for innovative sectors and products helping combat climate change;
- introducing teleworking and on-line services, especially in corporate centres, to reduce travelling⁸⁵.

Intensifying research efforts⁸⁶:

- modelling changes in the climate and extreme meteorological phenomena, particularly at local scale;
- natural carbon capture and storage by forests and, at the same time, waste-to-energy conversion of wood and biomaterials;
- CO₂ capture and geological storage⁸⁷ by ensuring its acceptability, especially by developing independent expertise on this topic;
- energy efficiency and production processes with low greenhouse gas emissions;
- renewable energies, solar, wind, geothermal, marine or from the biomass⁸⁸;
- improved output of second generation biofuels and taking associated issues into account in public policies, especially in terms of the competition with food uses and environmental issues;
- energy storage technologies;
- efficiency and safety of nuclear electricity generation and nuclear waste management processes;
- grid optimisation and management (smart grids);
- assessing the overall cost of buildings over several years.

Setting up shared monitoring indicators and instruments:

- tools at all levels of integrated evaluation of projects, programmes and policies. These tools must make it easier to implement national goals for reducing greenhouse gas emissions systematically at local levels;
- monitoring methodologies and monitoring of regional climate plans;
- indicators from the National Observatory on the Effects of Global Warming (ONERC), like flowering dates for fruit trees, glacier density assessments, etc.

Informing citizens about energy consumption:

- the various innovative measures, such as energy and carbon labelling or energy audits, are tools which inform or guide consumers in their choices;
- raising awareness to global warming, energy savings and information on action means are required more than ever, mainly through extensive information campaigns.



82 3 December 2008 circular from the Prime Minister on State exemplarity in relation to sustainable development in the operation of its departments and public establishments.

83 First Grenelle Act 2009-967 of 03/08/09, Art. 48.

84 03/12/2008 circular from the Prime Minister on State exemplarity in relation to sustainable development in the operation of its departments and public establishments, sheet no.17.

85 The daily commute is the leading factor for greenhouse gas emissions in the service sector (40%) See digital economy development plan (Besson plan).

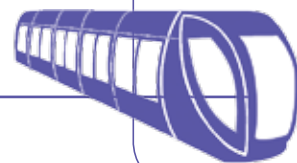
86 First Grenelle Act 2009-967 of 03/08/09, Art. 22.

87 First Grenelle Act 2009-967 of 03/08/09, Art. 19.

88 First Grenelle Act 2009-967 of 03/08/09, Art. 22.

CHALLENGE 5

Sustainable transport and mobility



Context and challenges

Freedom and ease of travel for people and goods are at the heart of our modern societies.

Source of wealth and job opportunities, they are inseparable from an open, efficient and competitive economy. Any transport system influences how the production of goods and services is organised. From raw materials choices to the journeys of goods and services consumer, it structures the flow of goods and professional and private journeys, even urbanisation.

Transport services contribute to the socio-economic activity, to relationships and social cohesion, to the integration of disabled, old or isolated people in decentralised districts or remote rural areas. Improving transport is thus a major component in urban renovation projects.

Transport also fashions our town planning and our lifestyles. The reduced transport costs and increased speeds in recent decades partly explain, therefore, the correlative dispersion of housing and activities, causing increases in traffic and covered distances⁸⁹. Developing individual housing, especially in the suburban sector, has been preferred to densification, which has contributed to transport network congestion and longer travelling times (e.g. commuting). The safety and the reliability in transport still remain demanded by our society. Road safety made tremendous strides as soon as society realised how important it was. It can still improve, for example by fairer sharing of the public space by soft modes⁹⁰ like walking and cycling.

Expectations for rapid and inexpensive transport will need to be adapted to a more restrictive framework, conditioned by increasing energy prices and gradually taking the external effects in transport pricing structures into account.

Road haulage accounts for the greatest proportion of land transport, representing about 80% of tonnes transported and kilometres covered by travellers. France enjoys a higher proportion of passengers travelling by rail due to its high-speed train network, but needs to breathe new life into rail freight as a matter of urgency.

For international journeys, passengers travelling by air have increased twice as fast as those using the roads; maritime freight has made the most progress in goods trade, hence the strategic importance of port infrastructures.

Transport systems have a significant direct environmental impact.

In France, energy consumption from transport is at 97% in hydrocarbons. Transport is responsible for 26% of greenhouse gas emissions. Air and road transport generate the most greenhouse gas emissions for each kilometre covered.

Transport systems, particularly road and air, also produce other pollutants - nitrogen oxides and fine particles - and noise. These nuisances have an impact on the health of resident populations. The need to reduce greenhouse gas emissions means several frontline actions: accelerating technological

advances in engines, modifying behaviours as well as encouraging the massive move towards rail, river and maritime transport methods.

Infrastructures divide up natural spaces and disturb ecosystems in addition to their direct and indirect impact in terms of space consumption. The priority for existing infrastructures is therefore, in addition to improving service quality (fluidity, regulation, etc.), the gradual restoration of the quality of our environment and compliance with ecological continuities (Green and Blue Network). New infrastructure projects will be assessed in particular for environmental impacts.

Environmental and even social impacts from transport will be reduced by acting on the travelling needs of people and goods and decoupling economic development and increased journeys.

⁸⁹ It has recently become clear that cars are being used less in town centres, but the kilometres annually covered per inhabitant are still higher in France than in Germany or the United Kingdom, given that journeys shorter than 100 km represent two thirds of travelled kilometers.

⁹⁰ The soft modes are thus qualified for their low environmental impact.



Our strategic choices

Promote more sustainable mobility practices for people and goods by encouraging neighbourhood development.

Regional planning can help reduce the need to travel whilst satisfying the needs of populations and economic activities. This is particularly true in urban areas. Controlling the urban sprawl and establishing commercial and trading areas, ensuring a diversity of activities in the districts, maintaining neighbourhood services and facilitating soft, active traffic modes are potential actions⁹⁶.

More generally, taking environmental, economic, social and health impacts into account in moving goods and people must become standard when we are organising our goods and services production system. The possibilities of decoupling economic development and increasing transport flows must be identified and implemented.

Strengthen intermodal transport and develop alternatives to road and air transport.

The priorities are to improve existing transport systems by strengthening the complementarity between rail, road, river and maritime transport, cycling, walking and to ease the passage from one mode to another. Transport prices must reflect their actual cost better by incorporating the cost of their environmental and social impacts and the cost of building and maintaining their essential infrastructures.

The economic appeal of alternatives to road haulage for goods, like rail or sea motorways or specific goods railway lines, combined transport and neighbourhood services, must be assessed, taking into account the benefits of fuel savings, environmental protection and safety and, more generally, a reduction in indirect costs supported by the community.

Improve the energy efficiency of vehicles, reduce their emissions and promote alternative energies.

Engine research and development must be encouraged with the aim of a genuine technological breakthrough regardless of the type of vehicle (private vehicles, heavy goods vehicles, public transport, railway equipment, boats and ships and aircraft). We must also achieve the European objective of emissions adopted for new cars -

120 g of CO₂/km by 2015. Regulatory or incentive measures likely to boost the competitive advantage of the most economic vehicles with the fewest emissions will contribute to this (bonus/malus scheme). Biofuels complying with sustainability criteria set by the European Directive on Renewable Energies should be expanded.

Ensure access to services and mobility for all throughout the territory.

The transport services available must meet very different localised needs (rural, near-urban and urban areas, town centres, disadvantaged or hemmed in districts) and the particular expectations of specific populations (old, young and disabled

people, people with modest incomes, professional constraints, etc.). This will be helped by organising adapted, safe, energy-saving and environmentally-friendly services and using new digital technologies.

The objectives in figures

- By 2012, increase the proportion of non-road haulage and non-air freight by **25%**⁹¹.
- By 2015, **double** the proportion of non-road haulage going to or coming from ports⁹².
- By 2020, use **10%** biofuels⁹³ in petrol and diesel consumption.
- By 2020, lower the average emissions of new vehicles to **95 g CO₂/km**⁹⁴.
- By 2020, achieve **10%** renewable energy in transport⁹⁵.

⁹¹ First Grenelle Act 2009-967 of 03/08/09, Art. 11 (on 2006 basis).

⁹² First Grenelle Act 2009-967 of 03/08/09, Art. 10.

⁹³ European Council, 8-9 March 2007.

⁹⁴ European regulations on reducing CO₂ emissions in new cars adopted on 17 December 2008 and the climate-energy package.

⁹⁵ European Council, 8-9 March 2007.

⁹⁶ New apartment complexes should be given secure bicycle parking facilities (Article 57 of the Second Grenelle Act).

Our operative levers

Actions on the demand, the choice of means and the use of transport:

- incentive to mix functions within urban areas;
- taking into account journeys induced by activities, depending on their localisation and organisation, to find how to optimise them. Associating in these discussions all stakeholders involved upstream and downstream in the transport chain: producers, suppliers, logistical engineers, hauliers and local authorities;
- supporting innovation, proposing new distribution methods intended to optimise the carriage of goods in towns;
- developing practices and digital technologies which meet certain needs by avoiding or limiting travelling⁹⁷: teleworking, video conferences, shared service centres, shared logistics, business travelling plans, carpooling, car-sharing;
- developing soft and active transport⁹⁸. Developing safe cycle itineraries, cycle parks, green routes, "roads for all" projects which allow for fairer and safer sharing of urban roads by making space for non-motorised traffic;
- developing systematic information on access (to a site, an event, etc.) by public transport to avoid using the car;
- implementing clean vehicle travelling programmes like the Gerri project in the Reunion Island⁹⁹; which model could inspire other island territories;
- innovation in services associated with mobility, such as information, ticketing, vehicle hiring, plurimodal changing, etc.

Improved assessment of mobility needs of people and goods:

- improving the understanding of neighbourhood journeys;
- supporting the transport observation system associating the stakeholders in the sector. Its main task will be to assess greenhouse gas emissions using a common methodology, so that greenhouse gas emissions can be displayed truthfully and honestly when ordering services¹⁰⁰;
- carrying out inter-regional and multimodal studies to forecast flows and reasons for travelling;
- developing relevant indicators to assess the environmental impact of alternative solutions to road and air transport.

Better integration of environmental, social and economic impacts in town planning choices¹⁰¹:

- better linking town planning and transport together in urban policies incorporating these two dimensions at local scale;
- expanding the evaluation of town planning documents in terms of sustainable development: territorial coherence scheme (SCOT), local plan for town planning (PLU), urban travelling plan (PDU) which must in particular include controlling urban sprawl, improve town-transport interfaces and limit the need for individual car journeys;
- promoting more dense urban areas, especially around public transport stations¹⁰².

Coordinating transport networks and organising authorities¹⁰³:

- improving the ease of successive use of various means of transport and developing intermodality. This is essential to speed up changes in behaviour;
- reinforcing the coordination of investments and operations between transport organising authorities (State, regional authorities) and transport companies (public transport in reserved lanes, rail transport); setting up the French Agency for multimodal and ticketing information¹⁰⁴;
- increased role of transport organising authorities in designing sustainable mobility policies at urban area scale in consultation with the State and the regional authorities.

Major investment in public transport and alternative transport to individual cars:

- improving and developing public transport in major cities;
- attention paid to the comfort of passengers;
- defining fair and lasting financing principles.

⁹⁷ Digital economy development plan (Besson plan).

⁹⁸ First Grenelle Act 2009-967 of 03/08/09, Art. 12.

⁹⁹ The Gerri programme deals with controlling energy (excluding journeys), the question of transport, of renewable energies, of energy security, of construction standards to be respected (HQE and BBC), sustainable town planning, tourism, with a section on evaluation, employment and training, culture, education, participation and communication.

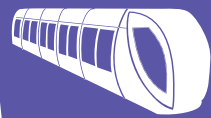
¹⁰⁰ First Grenelle Act 2009-967 of 03/08/09, Art. 11.

¹⁰¹ First Grenelle Act 2009-967 of 03/08/09, Art. 7.

¹⁰² Articles 19, 20 d) of the Second Grenelle Act of 12 July 2010.

¹⁰³ First Grenelle Act 2009-967 of 03/08/09, Art. 17.

¹⁰⁴ Finance Act 2009.



General coherence of transport networks:

- improving the transparency of assessments and decision-making processes relating to transport infrastructures;
- developing and consolidating methods for analysing and evaluating impacts of transport infrastructure projects throughout their entire life cycle;
- developing and publishing the national transport infrastructure scheme which determines State guidelines for networks for which it is responsible;
- strengthening the association of stakeholders involved in constructing transport infrastructures at different regional levels.

Reinforcing the economic appeal of the means of transporting goods with the fewest greenhouse gas emissions:

- developing rail and sea motorways and improving the multimodal service to maritime ports;
- modernising the existing rail network and how it is managed (journey time, timetables, frequency) to provide a reliable, quality goods transport system;
- creating a priority freight network, expanding high-speed rail freight by using high-speed lines outside peak hours;
- developing neighbourhood rail operators;
- changes in combined transport, which assumes developing goods geolocalisation and standardising multimodal exchange platforms;
- setting up the Regulating Board for rail activities;
- taking into account, in the cost calculation, nuisances generated by transport and using pricing and taxes to make the cleanest means the most economically competitive.

For passengers, modernising the existing rail network¹⁰⁵ and developing high-speed lines¹⁰⁶:

- modernising the existing network (excluding high-speed lines). This network could provide a relevant alternative to road transport provided it links effectively with other means of transport at regional and local scale and that urban restructuring takes place around stations;
- programming investments to launch the building of two thousand kilometres of high-speed lines by 2020 and defining a programme of 2,500 additional kilometres¹⁰⁷. The aim is to offer economically viable alternatives to planes and cars;
- improving network and equipment maintenance for both freight and passenger transport.

Supporting the adaptation of the car manufacturing sector to the new environmental challenges:

- incentives for innovation, diversification, training and development of "clean" vehicle skills from upstream to downstream: design, manufacture, services, maintenance and recycling;
- preparing and implementing a decarbonised vehicle plan to get ready for hybrid and electric vehicles by rolling out charging solutions throughout the country: battery terminals or exchange stations.

Exemplarity of public actors¹⁰⁸ as regards mobility:

- restricting professional travelling by public officials by road and air;
- faster replacement of the oldest vehicles with vehicles complying at least with the standard of 120 g of CO₂/km;
- developing the use of electric or hybrid vehicles.

Continuing with road safety efforts:

- defining a national education and training programme for eco-driving¹⁰⁹ which involves driving schools, businesses and drivers to change behaviours;
- continuing actions to prevent alcoholism and taking drugs or medicines incompatible with driving;
- continuing to install technical equipment which contributes to safety.



105 First Grenelle Act 2009-967 of 03/08/09, Art. 12.

106 Ditto.

107 Ditto.

108 Prime Minister's Circular of 3 December 2008. First Grenelle Act 2009-967 of 03/08/09, Art. 48.

109 First Grenelle Act 2009-967 of 03/08/09, Art. 13.

CHALLENGE 6

Conservation and sustainable management of the biodiversity and natural resources



Context and challenges

Natural resources include fossil and mineral natural resources, materials from the natural environment and arable lands. The biological diversity, or biodiversity, represents all living species found on Earth (plants, animals, micro-organisms, etc.), the communities formed by these species and the habitats in which they live.

The services rendered by the biodiversity for the last four billion years are essential.

The living systems provide food, fibres, main active substances for medicines and meets our most essential needs. Despite the survival of human societies depending entirely on services rendered by the ecosystems, they have not been assessed monetarily and are therefore rarely or insufficiently taken into account by our economic models.

Human activities, through their impacts on the water cycle and soil biology, their excessive drawing and modification of biotopes, impoverish the biodiversity at an unprecedented rate, which goes contrary to a sustainable development and compromises the well-being, even the survival, of humanity. Climate change exacerbates the problem. The poorest populations are also the most fragile, the most dependent and the most threatened.

Faced with this emergency situation, the Convention on Biological Diversity (CBD) adopted at the 1992 Rio Summit, tur-

ned a page in international law. It set three objectives: conservation of the biodiversity, sustainable use of species and natural environments, access and fair and equitable sharing of benefits arising from genetic resources.

At European scale, the themed strategy (2006-2010) on the sustainable use of natural resources, the July 2008 action plan for sustainable consumption, production and industrial policy, the raw materials initiative launched in November 2008 and the conclusions of the Council of the Union under French Presidency of December 2008 laid down several guidelines:

- widen and pool knowledge and research;
- develop indicators;
- improve the productivity of resources by 2% per year through more efficient use and more extensive recycling to reduce the Union's dependency on raw materials;
- decouple economic growth and environmental degradation.

As the guardian of an exceptional heritage, France has special responsibility towards biodiversity.

Metropolitan France is home to over half the habitats deemed of community interest and more than 35,200 animal and plant species.

Overseas, the tropical rainforest of Guyana conceals ecological riches still widely unknown; the French islands are home to numerous

endemic species in three oceans; 10% of coral reefs worldwide are in French waters.

Our country is found in five of 34 biodiversity hotspots¹¹⁰. It also houses 778 endangered species at world level.

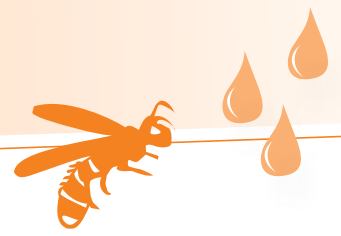
Artificialised spaces show a global increase of more than 820 km² (+3.0%) between 2000 and 2006, mainly at the expense of farmland but also natural spaces¹¹¹.

The fragmentation of the territory hampers the migration, feeding and reproduction of numerous species.

The National Strategy for Biodiversity (NSB), with action plans renewed in 2009, is the biodiversity section of the NSDS and incorporates the Grenelle Environnement commitments. It is designed to set up **local protection plans** for the biodiversity.

¹¹⁰ Areas including a large number of highly-endangered species and environments.

¹¹¹ [www.stat. environnement. developpement-durable.gouv.fr](http://www.stat.environnement.developpement-durable.gouv.fr)



Our strategic choices

Know and understand biodiversity better; share our knowledge better.

Understanding the biodiversity is an essential prerequisite to assessing and taking it into account in sectorial policies and development choices. To shed light on these decisions, particularly at local level, top-level specialists must be trained, capable of analysing very clearly from all aspects the impact of construction and economic

development projects on the ecosystems. At the same time, public information and awareness-raising shall be strengthened and people taught how to understand and protect biodiversity, to appreciate the true worth of services rendered by nature and to enjoy natural spaces without degrading them.

Assess the benefits and costs of preserving services rendered by nature.

Disappearing species and degraded ecosystems threaten the well-being and future of Humanity. This also applies to the durability of economic activities reliant on exploiting natural resources. It is therefore crucial that our development pattern really does take

into account the true value of ecosystems and preserves them. All human activities must make sure that they integrate seamlessly with the fabric of the living systems.

Reduce the pressures on the ecosystems and natural resources.

Urbanisation, intensive agriculture and fishing, industry and transport infrastructures exert major pressure on ecosystems, natural resources, whether or not renewable, and natural spaces. Any exploitation of resources must be in line with availability levels and renewal rates. The spaces and species essential to ecosystems must therefore be preserved to curb the loss of biodiversity. Special attention will be paid to the biodiversity of overseas France. The emergence of a less greedy economy, founded on technological pro-

gress, the protection of spaces and species and the recourse to quota systems, even the ban on drawing when species survival or resource availability are under threat, are essential. Besides, a more efficient use of materials is also important, as well as recovering them and reusing them more. Lastly, encouraging more diversified agriculture, using fewer pesticides, more protective of ecosystems and natural resources and especially water will help achieve this objective.

Control the artificialisation of spaces and the homogenisation of landscapes.

Excessive urbanisation taking over farmland and rural spaces is a threat to ecosystems, natural spaces and the potential production of food crops. The land use policy must deal with the conflicting uses of territories. It must make sure that the major equilibriums are maintained, ensure ecosystem continuities,

mainly through creating the Green and Blue Belts and encouraging harmonious interpenetration between urban, rural, agricultural and natural environments. It must also help protect the nature of spaces and landscapes, like an additional cultural, aesthetic and tourist value of the human activity.

The objectives in figures

- **Halting** the loss of wild and domestic biodiversity¹¹².
- By 2012, protecting the **five hundred** catchments the most threatened by diffuse pollution, mainly nitrates and pesticides¹¹³.
- By 2012, establishing a coherent network of protected marine areas¹¹⁴ for **10%** of French territorial waters, then **20%** by 2020, in accordance with the international objectives of the Convention on Biological Diversity¹¹⁵.
- By 2015, achieve a good ecological state for **66%** of bodies of water¹¹⁶.
- By 2015, **create** regional coherence schemes in coastal regions incorporating a coastal section¹¹⁷.
- Before 2020, ensure high protection of at least **2%** of the land territory of Metropolitan France¹¹⁸.
- Acquire and protect **20,000** hectares of wetlands¹¹⁹.
- By 2020-2030, protect **one third** of our shores (wild third)¹²⁰.

112 First Grenelle Act 2009-967 of 03/08/09, Art. 23.

113 First Grenelle Act 2009-967 of 03/08/09, Art. 27.

114 Definition of IUCN protected marine areas: "Any area of intertidal or subtidal terrain, together with its overlying water and associated flora, fauna, historical and cultural features, which has been reserved by law or other effective means to protect part or all of the enclosed environment."

115 Grenelle Sea commitment 14a.

116 First Grenelle Act 2009-967 of 03/08/09, Art. 27. Water Framework Directive of 23 October 2000.

117 Grenelle Sea commitment 72a.

118 First Grenelle Act 2009-967 of 03/08/09, Art. 23.

119 Ditto.

120 Grenelle Sea commitment 70c.

Our operative levers

Reinforcing expertise and training on biodiversity,

by acquiring essential tools to understand, manage and monitor the preservation of the biodiversity and for that:

- creating an international scientific expertise mechanism on the biodiversity (IPBES¹²¹) and a biodiversity observatory¹²²;
- reinforcing naturalist disciplines such as botany, zoology, ecology, taxonomy and marine sciences.

Reinforcing the implementation and monitoring of the National Biodiversity Strategy:

- preparing regional biodiversity strategies which take account of the effects of climate change by using feedback from pioneering or experimenting regions and departments including overseas;
- implementing sectorial action plans¹²³ for use by all ministries and their partners to incorporate biodiversity priorities;
- opening up NBS steering committees to all partners involved.

Strengthening the conservation of ultra-marine biodiversity:

- implementing in each overseas department and authority local biodiversity plans, plans for conserving and restoring by 2012 species in critical danger of extinction and establishing a plan to control invading land and marine species which threaten the equilibrium of ecosystems;
- identifying sustainable financing mechanisms to preserve and manage the overseas biodiversity;
- reinforcing policing of nature and means of protecting species and habitats;
- developing research and the acquisition of operational knowledge.

Preparing the National Protected Areas Strategy and a system for overseas¹²⁴:

- creating three national parks and ten natural marine parks by 2012;
- setting up eight new natural reserves per year;
- completing the Natura 2000 network at sea and accelerating the creation of protected marine areas in Metropolitan and overseas French waters¹²⁵.

Preserving ecological continuities:

- by 2012, developing the Green and Blue Belts¹²⁶ which ensure territorial continuity for species and allow them to circulate, feed, reproduce and survive at local, regional, national and European scale, to combat fragmentation;

- studying and setting up a marine blue belt on the coastline, in the estuaries and at sea¹²⁷;
- observing and supporting the movement of species linked to climate change as a factor in adapting ecosystems and the territory;
- studying and creating a specific ecological network for overseas departments and territories;
- completing the land inventory of natural areas of ecological, faunistic and floristic interest (ZNIEFF) and produce the marine ZNIEFF inventory¹²⁸.

Promoting sustainable agriculture and forestry:

- introducing a strict, transparent framework for GMO and biotechnologies¹²⁹;
- accelerating the development of productive, diversified agriculture¹³⁰ which consumes few pesticides;
- developing sufficient organic agricultural production to satisfy demand and facilitate access to these products for the greatest possible number of people;
- recognising and promoting environmental services rendered by the forest¹³¹ and the cultural aspect of access to the forest;
- adapting natural, agricultural and forest spaces to climate change;
- increasing the production of wood whilst preserving the biodiversity better under concerted regional initiatives.

Promoting hunting good practices, which help manage the wild fauna.

Developing integrated sea and coast management:

- stating the strategy framework directive for the marine environment¹³²;
- defining coherent perimeters for coastal areas and governance integrating the land-sea interfaces: protecting ecosystems, sustainable development of activities (tourism, fishing, etc.), sustainable development of the coastline and the maritime public domain;
- associating the development of sports and leisure activities in a natural environment with environmental protection;
- concerted management of each ecosystem;
- reducing and preventing pollution from port activities or coming from the continent;
- suppressing actions destroying the marine biodiversity like degassing and ballast water discharges;
- reinforcing controls in all sea-related activities and sanctioning polluters;
- managing fishery stocks¹³³ mainly by developing a network of protected marine areas; combating

121 Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services.

122 Grenelle Environnement commitment 79.

123 Natural heritage, agriculture, forest, sea, town planning, land transport infrastructures, tourism, overseas, international, research.

124 Grenelle Environnement commitment 74.

125 First Grenelle Act 2009-967 of 03/08/09, Art. 23 and Grenelle Sea.

126 First Grenelle Act 2009-967 of 03/08/09, Art. 24.

127 Grenelle Sea commitment 69.

128 Grenelle Environnement commitment 79.

129 Grenelle Environnement commitments 135 and 136.

130 Grenelle Environnement commitments 125 to 130.

131 First Grenelle Act 2009-967 of 03/08/09, Art. 34.

132 Directive 2008/56/EC of the European Parliament and the Council of 1 June 2008 establishing a community action framework for the marine environment policy (strategy framework directive for the marine environment). The member States should do whatever is necessary to create or maintain the marine environment in a good ecological state by 2020 at the latest. Article 166, sub-section 2 of the Second Grenelle Act 2010-788 of 12/07/2010.

133 Grenelle Environnement commitment 87.



illegal fishing; experimenting with administered and non-transferable fishing quotas; ecolabelling fishing products¹³⁴;

- reforming and simplifying sea extraction conditions¹³⁵ and consolidating impact studies;
- developing environmentally-friendly marine aquacultures.

Promoting an integrated regional development policy, focusing especially on the heritage aspect, town planning and architecture:

- taking into account environmental, energy and social impacts and interpenetrations between urban, natural and rural regions by ensuring good links between the national transport infrastructure scheme and the Green and Blue Belts framework document and national guidelines for the preservation and restoration of ecological continuities;
- expanding town planning documents (SCOT, PLU) to environmental concerns: controlling urban sprawl, limiting the consumption of agricultural and natural spaces, preserving ecological continuities, controlling energy¹³⁶;
- priority to urban structures combining density objectives with open spaces and taking into account the landscape aspect in the construction approach and the architecture;
- changing town planning rules for calculating the net floor area to counterbalance the housing densification by creating natural urban spaces;
- preferring urban renewal policies over extending new urbanisation areas;
- implementing the sustainable city plan and the plan to restore nature in cities and its multiple functions; creating at least one eco-district by 2012 in all municipalities which run significant housing development programmes to incorporate the biodiversity better in urban planning, construction and management¹³⁷;

- inventory of environmental inequalities to be reduced at the local level. Including the notion of environmental equity in development projects;
- developing logics of common assets, rivers, sea, public spaces, by involving inhabitants in their management;
- promoting tourist developments and activities which protect and promote the environment;
- maintaining and encouraging near-urban agriculture and supply short-circuits.

Reduced drawing from non-renewable resources:

- developing recycling and re-use to limit the extraction of materials;
- research and development of innovative processes and alternative materials, developing ecomaterials with sustainable and renewable production.

Adjusting taxation in favour of the preservation of biodiversity and natural resources:

- setting up tax systems in favour of preserving resources;
- economic use of resources, recycling, reducing waste, reusing materials.

Developing education for environment through associative movements:

- targeting young people (inside and outside school);
- targeting the general public.



¹³⁴ First Grenelle Act 2009-967 of 03/08/09, Art. 35 and Article 170 of the Second Grenelle Act 2010-788 of 23/07/10, law of 12 July 2010.

¹³⁵ First Grenelle Act 2009-967 of 03/08/09, Art. 35.

¹³⁶ First Grenelle Act 2009-967 of 03/08/09, Art. 7. Grenelle Environnement commitment 50.

¹³⁷ First Grenelle Act 2009-967 of 03/08/09, Art. 7. Grenelle Environnement commitments 49 and 76.

CHALLENGE 7

Public health, risk prevention and management



Context and challenges

France has one of the highest life expectancies without incapacity in the world¹³⁸. The country is also the European Union member which spends the most on the health of its inhabitants, close to 9% of its GDP. The guarantee of access to care for all by the universal medical cover constitutes a factor of social equity and lasting health. Article 1 of the Charter for the Environment, attached to the Constitution, stipulates that "Everyone has the right to live in a balanced and health-friendly environment". Environmental degradation, especially water and air pollution, can have serious health consequences. Certain natural or technological risks are proven. Others, uncertain, required sustained vigilance. Not everyone is exposed to these risks in identical fashion: living conditions generate health inequalities.

At European scale, the REACH regulations¹³⁹ have reinforced the Union's regulatory framework for chemicals since 1 June 2007. It aims to protect health and environment better, improve information to users on product safety and urge manufacturers to replace hazardous substances with safer alternatives. Under REACH, businesses must provide health and environmental safety data on all the substances where they produce or import more than one tonne per year. The substances which can cause cancer or mutagenic effects, interfere with reproduction or the hormonal system and those which cannot be broken down by nature and

accumulate in the organisms are qualified as "substances of very high concern" and require authorisation. The European Chemicals Agency (ECHA) is responsible for managing and supervising these obligations.

At the national scale, the first National Health and Environment Plan 2004-2008 (PNSE 1) provided for actions to prevent and control health risks linked to air quality and chemical substances. The National Health and Environment Plan 2009-2013 (PNSE 2) continues on from its predecessor and is governed by many of the Grenelle Environnement commitments. It focuses on two major areas:

- reducing exposures responsible for pathologies with tremendous impact on health (cancers, cardio-vascular illnesses, respiratory, neurological pathologies, etc.);
- reducing the inequalities in terms of access to a quality environment (living conditions, professional or geographical exposures).

It underlines the inequalities and the differences in vulnerability of people faced with situations of over-exposure, multi-exposure and early exposure. For risks which are poorly understood, the PNSE 2 is based on the precautionary principle formulated in Article 5 of the Charter of the Environment¹⁴⁰.

To monitor and adjust the implementation of PNSE actions better, a national steering committee will group the categories of actors associated with the Grenelle Environnement and qualified per-

sonalities, health system professionals, health insurance bodies and consumer, patient and victim representatives. The plan is then intended to be applied through regional health and environment plans.

In terms of health at work, the efforts cover the prevention of professional risks which include exposure to chemical substances. The aim is to encourage the diffusion of a genuine prevention culture in businesses and more generally in workplaces. The actions planned under PNSE 2 supplement the actions of the health at work plan (PST).

Lastly, the **natural and technological risks** are subject to major prevention efforts which must be pursued. This is one way of reducing the vulnerability of territories, humans and animal and plant species. Risk awareness is conveyed by informing the general public and all local actors better. The poorest populations are also the most exposed and are subject to accumulated exposure in terms of risks and nuisances.

¹³⁸ Source: Eurostat 2008 women/men

¹³⁹ Registration, Evaluation, Authorisation and Restriction of Chemicals.

¹⁴⁰ "As soon as realisation of damage could affect the environment in a serious and irreversible manner, even though [its recognition] might be uncertain in the current state of the scientific knowledge, public authorities should monitor, by the application of the precautionary principle in their relevant domains, the implementation of risk assessment procedures and the adoption of proportionate, provisional measures in order to prevent the realisation of the damage".



Our strategic choices

Keep the population in good health through prevention

The disparities in access to care can be linked to social and geographical isolation, financial insecurity or lack of information. These factors are likely to degrade public health and result in extra expense in the event of delayed care. Special attention must therefore be paid to deprived and vulnerable populations and to improving their living conditions.

The role of occupational medicine must also be reinforced. This is a valuable auxiliary service in detecting and preventing exposure to risks mainly from chemicals, pollution, pesticides or work stress. Occupational medicine also ensures the traceability of professional exposures.

It is essential to encourage businesses and especially SME to watch out for the profes-

sional environment of their employees: air and water quality, exposure to noise, dust, chemicals, etc.

Close links between health and behaviour, especially in terms of diet and addictions (alcohol, tobacco, drugs, medicines and psychotropic drugs) and use of toxic products (including household ones) require reinforced information and prevention.

Exposure to a poor quality environment (e.g. air or soil pollution, noise, etc.) accentuates the risks. It is therefore important to set out to resolve over-exposure and multi-exposure situations in priority, especially of children, and situations which cause exposure of vulnerable people given their state of health or their social situation.

Maintain access to quality care for all

It will be important to associate healthcare professionals with the governance of the social protection system, especially at the local level, and to control the progression of health expenditure.

Training in environmental issues and risk factors must also be extended for doctors, healthcare professionals and those in the medico-social sector: health at work, diet

and individual behaviours.

In addition, solutions must be found to the disparity of geographical installation of healthcare professionals which in some places results in major delays in access to care to specialists, in conjunction with the regional authorities.

Help in acquiring additional cover for young people with low incomes will be increased.

Increase the ability to anticipate and watch over health risks

The precautionary principle implies the introduction of watch operations:

→ on new risks like those induced by nanotechnologies or electromagnetic waves, for example;

→ on emerging diseases like that caused

by the chikungunya virus and pandemics like the flu;

→ on the geographical extensions, linked to climate change, of certain endemic diseases like malaria.

Reduce the vulnerability to natural and technological risks

Local risk prevention policies will be continued. Land use is a decisive factor in this, especially in overseas authorities and departments.

Businesses and local authorities must create operational crisis cells to deal with risks, problems and accidents.

This is essential, especially in the event of a major accident in trading areas housing installations classified for environmental protection (ICPE) and "Seveso" establishments. It is also essential during exceptional climate events like droughts, floods or gales.

The objectives in figures

- From 2010 onwards, aim for **15 micrograms the m³** (15 µg/m³) of fine particles in the air and achieve this without fail in 2015¹⁴¹.
- By 2012, **reduce** the noise black spots most dangerous for health¹⁴².
- By 2012, put together **2,500** new natural risk prevention plans.
- By 2013, reduce by **30%** the emissions of fine particles in the air and reduce the emissions in the air and water of six toxic substances: mercury, arsenic, polycyclic aromatic hydrocarbons (PAH), benzene, tetrachloroethylene and PCB/dioxins¹⁴³.

141 First Grenelle Act 2009-967 of 03/08/09, Art. 40. This is particulate matter less than 2.5 micrometres in diameter (PM 2.5). The European Air Directive imposes on the member States a target value of 25 µg/m³ to be achieved by 2010.

142 First Grenelle Act 2009-967 of 03/08/09, Art. 41. Grenelle Environment commitment 153.

143 PNSE 2.

Our operative levers

Understanding environmental impacts on health:

- establishing a national biomonitoring plan to bring together the population health¹⁴⁴ and the state of its environment and assess the efficiency of public policies for environmental health¹⁴⁵;
- experimentation with interestablishments care centres, clinical research and environmental health education by taking example of consulting centres for professional pathologies;
- creating or strengthening health, environment and work inter-regional research and treatment networks and centres; developing finalised research centres in toxicology and ecotoxicology;
- setting up data compilation on cancers throughout the territory;
- extending occupational medicine competence to dealing with cancer at work and urging the creation of innovative support systems;
- monitoring the application of the REACH European regulations on chemical substances.

Organising the implementation of the second national environment health plan 2009-2013¹⁴⁶ and its regional application, which implies:

- greater transparency in the information for the general public;
- boosting actions relating to the understanding, anticipation, prevention and reduction of health risks linked to the environment;
- supporting environmental health observation at the local and urban areas scale;
- the commitment of local authorities in health policies;
- strengthening the link between observation and operational implementation of policies at local scale.

Restoring water quality and preserving water renewal:

- reconquering the ecological quality of aquatic environments¹⁴⁷: preserving wetlands to combat soil artificialisation, standardising on grassy strips and planted buffer zones along water courses and masses included in town planning documents, restoring continuities for fresh water ecosystems, removing the most difficult obstacles to migrating fish after a study to identify them;
- promoting strict protections for water recharging areas of drinking water resources;
- optimising the quantitative management of water resources¹⁴⁸: water courses, lakes, water tables, sea;
- preventing pollution and bringing all purification stations up to standard by 2011¹⁴⁹.

Improving the quality of environments:

- applying the particle reduction plan and NO_x emissions and ozone concentration objectives in the territory¹⁵⁰;
- mandatory labelling, for indoors air, of construction products, paints, coatings, furnishings and decorative products on their emissions and volatile pollutant content; banning the use in these products of substances classified as carcinogenic, mutagenic or toxic for reproduction in categories 1 and 2 (CMR 1 and CMR 2) as stated in European regulations¹⁵¹;
- reinforcing actions to reduce insanitary housing and lead poisoning;
- setting up a rehabilitation plan for abandoned polluted sites and closed gas stations¹⁵²;
- implementing the strategic inspection programme for classified installations 2008-2012;
- combating noise sources and reducing blackspots¹⁵³;
- developing nature spaces in cities.

Preventing natural and industrial risks:

- reducing the vulnerability of territories by preparing different systems in close cooperation with the civil society;
- elaboration of 420 technological risk prevention plans (PPRT) for the entire territory;
- strengthening control and monitoring methods for environment-classified installations; expanding information and awareness-raising of local residents;
- elaboration and adoption of 2500 new natural risk prevention plans by 2012 and reinforcing preventive information;
- reducing the flood risk by protection and prevention civil engineering under an initiative for each catchment area and flood expansion area¹⁵⁴;
- preventing risks linked to climate change, coastal submersion and erosion in coastal and island regions by putting together and adopting dedicated plans;
- developing sustainable forestry management and urging the replanting of mountain forests to prevent risks of erosion and flooding;
- reducing the risks of fire by clearing undergrowth, especially in Mediterranean forests, awareness-raising campaigns and reinforcing monitoring devices and fire-fighting equipment;
- by 2015, putting together and implementing for all overseas territories a prevention policy for natural risks¹⁵⁵ (seismic, volcanic tornadoes, hurricanes), technological risks and pollution from pesticides (like kepone used to treat bananas); accelerating the implementation of the seismic plan in the Caribbean.

¹⁴⁴ PNSE 2.

¹⁴⁵ First Grenelle Act 2009-967 of 03/08/09, Art. 37. PNSE 2.

¹⁴⁶ First Grenelle Act 2009-967 of 03/08/09, Art. 37. Grenelle Environnement commitment 138.

¹⁴⁷ First Grenelle Act 2009-967 of 03/08/09, Art. 27.

¹⁴⁸ Grenelle Environnement commitments 117 to 119: match drawings to the resources, develop new systems of recovering and reusing rain or waste water (Article 164 of the Second Grenelle Act 2010-788 of 12/07/10), reinforce the bans and controls of their application in illegal products.

¹⁴⁹ First Grenelle Act 2009-967 of 03/08/09, Art. 12.

¹⁵⁰ Directive of the European Parliament and Council of 21 May 2008 on ambient air quality and pure air for Europe. The States will be required to reduce exposure to PM 2.5 particles in urban areas by 20% on average by 2020 compared with the 2010 figures. Grenelle Environnement commitment 149.

¹⁵¹ First Grenelle Act 2009-967 of 03/08/09, Art. 40.

¹⁵² First Grenelle Act 2009-967 of 03/08/09, Art. 43.

¹⁵³ First Grenelle Act 2009-967 of 03/08/09, Art. 41. Grenelle Environnement commitment 153.

¹⁵⁴ First Grenelle Act 2009-967 of 03/08/09, Art. 44. Grenelle Environnement commitments 115 and 116.

¹⁵⁵ First Grenelle Act 2009-967 of 03/08/09, Art. 39.



Reducing releases of substances of very high concern:

→ improving knowledge and reducing risks linked to medical residues in the environment, by preparing a national action plan¹⁵⁶.

Encouraging good individual behaviours for good health:

→ Inciting the development of active transport and soft mobilities to encourage regular sports practicing, walking and cycling;

→ boosting campaigns in favour of a healthy diet and setting up good nutritional practices in community catering;

→ setting up in each region, under the auspices of regional health boards, a regional prevention scheme listing the recommendations for health education and promotion of the national health nutrition plan and the national plan to combat cancer.

Improving the documentation of links between socio-economic and health inequalities, regional inequalities and exposure to risks, environmental and health inequalities.

Taking differences in cultural behaviours into account

in education and prevention, the intergenerational effects of inequalities and the perception of risks.



¹⁵⁶ First Grenelle Act 2009-967 of 03/08/09, Art. 37.

CHALLENGE 8

Demography, immigration and social inclusion



Context and challenges

Demographic changes represent a major challenge for Europe. Ageing populations, accentuated by the extended lifespan, are inevitable. The forecast for France is six million people over 75 in 2015. The growth in world population¹⁵⁷ plays a major role in immigration. The Europe of the Fifteen has an annual net migration of more than 1.5 million people, which raises the question of integration, especially linguistic and economic, of these populations.

The financial and economic crisis, of a magnitude never seen before, is going to make poverty worse, deepen inequalities and hit the most deprived extremely hard.

France stands out for its high fertility rate (in the order of two children per woman) and the youngest population in the Europe of Fifteen after Ireland, which in the current context, is an asset which should be promoted. Despite this, one third of its inhabitants will be more than 60 in 2030 and there will be one retired person for one active person in 2050. This will affect tax and social receipts whereas pensions and health expenditure will increase, threatening the durability of social systems.

All territories, mainly overseas, and all fields of activity are concerned (education, town planning, transport, consumption, etc.).

7.9 million people live below the national poverty threshold¹⁵⁸. Young people, isolated old people, single mothers and their children, unemployed no longer entitled to benefit are particularly vulnerable. Large categories of the population remain outside or on the outskirts of the working world. The number of **poor workers** is increasing constantly. The crisis increases the fragility of the most deprived.

Poverty is concentrated in urban environments, affecting nearly one third of inhabitants of sensitive urban areas (ZUS).

Combating exclusions must allow each citizen to access the fundamental rights in employment, housing, social protection, health, justice, education, training and culture, protection of family and childhood and the quality of his environment. Under the guidance law of 29 July 1998, the effectiveness of these rights is a condition for respecting the equal dignity of all.

The President of the Republic and the Government are committed to an objective of reducing poverty by one third over the five-year term. A fourth national action plan for inclusion (PNAI) was prepared for the period 2008-2010.

The systemic crisis facing us calls however for a real transformation combined with social and societal support matching changes in progress. Redefining social justice and dealing with inequalities in a more moderate society is a condition of lasting change in our lifestyles and our growth models.

In the current context of crisis, public expenditure on education, health and social security has a softening role; social protections are a safety net for the most fragile.

Because the Republic is also a project of society, the equality of chances is a priority and access to employment must be at the heart of strategies for social inclusion and combating poverty, where developing green growth must be an opportunity.

¹⁵⁷ United Nations Economic and Social Council, Population and Development Commission, January 2009: world population, estimated at 6.8 billion people, should reach nine to ten billion in 2045.

¹⁵⁸ Source: INSEE 2008 on standards of living in 2006.

Our strategic choices

Facilitate access, maintaining and return to employment of people who are and who risk being the most removed from it.

Social inclusion is vital for economic growth and social cohesion. Casualisation and unemployment too often lead to an accumulation of exclusion factors. It is therefore essential to make the integration of people on the margins of employability easier through targeted policies.

The minimum wage guarantee and incentives to work are preferred instruments of the return to work. The active solidarity revenue (RSA) will continue to gain in strength, by supplementing the incomes of poor workers, encouraging and helping people who are not working and without resources to find a job. The RSA will also be extended to young working people, on the condition of professional integration.

Particular encouragement should be given to accessibility to trades linked to green growth.

Apart from the social suffering it causes, poverty weighs our economy down and compromises social cohesion, both now and in the future: fighting poverty is henceforth a human imperative with a social as well as economic dimensions, and is part of a sustainable development strategy. Changes in poverty will still be monitored carefully, through the annual publication of a report to Parliament on monitoring the objective of reducing poverty by one third in five years. Readjusting basic welfare benefits (old age pension, disabled adult allowance) will be continued.

Reduce territorial inequalities whilst respecting diversity.

Reduce the inequalities of access to the fundamental rights of knowledge, culture, housing, transport, a healthy environment, care and social protection to make them levers for active inclusion.

Make sure the balance is maintained between regions in terms of public service and access to services.

The regionalisation of integration policies

will be continued at the most suitable levels: the region and the department for programming resources, employment pools for their implementation.

The social section of local Agenda 21s will be expanded.

Urban projects must encourage a social and generational mix.

Anticipate the effects of demographic changes and develop intergenerational solidarity.

The extended lifespan, demographic ageing, difficulties of access to jobs for young people call for global discussions on intergenerational solidarity. In the current context of economic crisis, young people must be helped to find their place in society: youth employment plan, assisted contracts, civic service, social innovation projects, extra support in unemployment combined with training paths matching employer demands.

Supporting offers of quality employment for women reduces the number of poor children. The durability of the pensions systems is a major problem which must be resolved. Social protection systems will be modernised. Businesses will be encouraged to increase jobs for senior citizens and to adapt their working conditions as a result. Home care services will be expanded to take better care of dependency.

Encourage the integration, including cultural, of migrant workers and their families.

Following the unanimous adoption of the European Pact on Immigration and Asylum in October 2008, the 27 member States set common objectives and timetable, based on three priorities:

→ mastery of the host country's language;

→ understanding and practising the country's values;

→ access to employment.

All these priorities must be taken up by opening up to innovation and solidarity.

The objectives in figures

→ Include **6%** disabled workers in businesses with more than twenty employees¹⁵⁹.

→ By 2012, reduce poverty in France by **one third**¹⁶⁰.

→ By 2020, renovate the **800,000** council houses consuming the most energy¹⁶¹.

¹⁵⁹ Disabled Act 2005-102 of 11/02/2005

¹⁶⁰ Grenelle Integration: national action plan for inclusion - PNAI 2008.

¹⁶¹ First Grenelle Act 2009-967 of 03/08/09, Art. 5.

Our operative levers

Combating illiteracy and integration through training:

- encouraging the fight against illiteracy, especially in professional circles;
- developing sandwich training courses, including apprenticeships, one method to bring schools and businesses closer together and an integration factor in the job market.

Supporting people the most remote from the job market towards lasting employment:

- rolling out, monitoring and assessing the active solidarity revenue (RSA); continuing to readjust basic welfare benefits¹⁶²;
- reforming assisted contracts through the entry into force, in 2010, of the integration unique contract;
- mobilising public and private employers: assisted contracts, access paths to civil service jobs - regional, hospital and State (PACTE) - employer groupings for integration and qualification (GEIQ);
- creating or carrying on reintegration sites, especially in construction (minor heritage renovation), green and natural space management and energy production from biomass.

Generalizing social clauses in public procurement contracts:

- monitoring and using local experiments for wide deployment of clauses promoting jobs for people encountering particular integration problems: long-time unemployed, disabled workers, young people without qualifications, people receiving basic welfare benefits;
- training government buyers in these areas;
- introducing supports for facilitators to implement, monitor and assess the social clauses in public procurement contracts.

Reinforcing the fight against discrimination and promoting diversity:

- monitoring anti-discrimination programmes: European Pact for Gender Equality, urban social cohesion contracts (CUCS), suburbs plan, commitments by the National Centre for Regional Civil Service (CNFPT), National Agency for Social Cohesion and Equality (ACSE) and the Equal Opportunities and Anti-Discrimination Commission (HALDE). Similarly, special attention will be paid to parity between men and women;
- developing exemplary initiatives of the State employer and voluntary initiatives of businesses and support by labelling.

Reducing the risk of social exclusion:

- priority to access to rights in health, social protection, preventing and taking charge of dependency, education and training, transport, social tourism, bank credit, culture and justice;
- carrying on with family support systems; adapting these systems to socio-economic changes; single-parent families, divorce, decohabitation, involuntary part time working;
- introducing the right to housing as an effective right providing access to decent housing for all.

Reducing intergenerational fractures between active workers, retired people and young people:

- supporting retired people both financially and in their social integration;
- supporting the employment of senior citizens which can help maintain the pension system;
- reflecting on suitable working methods for senior citizens: part time, voluntary, shorter working hours;
- improving young people's access to jobs, housing, culture and leisure activities to encourage their social integration;
- supporting social innovation projects intended for youth, mainly to find lasting solutions for the problems confronting youth.

Creating a civic service for young people

seeking to serve the community, especially in sustainable development areas (environment, fight against exclusion, etc.). From 2010, ten thousand young people will perform a civic service.

Improved integration of migrants and their families:

- implementation of the European Pact on Immigration and Asylum¹⁶³ which is targeting improved organisation of legal immigration, combating clandestine immigration, reinforcing the effectiveness of inspections at borders outside the Union and cooperation with countries which immigrants come from;
- helping migrants master French and improve their knowledge of our institutions and culture;
- helping with access to employment, mainly through reception and integration contracts, professional skill assessments for the new arrivals;
- encouraging local cooperation initiatives, factors of cultural rapprochement, integration and co-development;
- forecasting climatic and economic migrations.

¹⁶² Old age pension and disabled adult allowance.

¹⁶³ European Council of 16 October 2008.



Reducing insecurity and dependency in relation to energy consumption especially for heating and everyday travelling:

- negotiating conventions with council housing operators to upgrade all such housing, starting with the 800,000 most degraded units¹⁶⁴;
- supporting thermal renovation, with a 2015 energy performance objective¹⁶⁵ matching the type of building and the size of communities;
- supporting accessibility work for disabled people;
- applying future thermal standards early to the programmes of the National Agency for Urban Renovation (ANRU);
- developing micro-credit for energy renovation;
- introducing a fair distribution of gains from energy savings between owner-lessor and lessee;
- using the carbon tax in a concern for cohesion and social equity.

Improved reconciliation between family and professional life:

- urging businesses to develop family services (e.g. creches, child-minding units, etc.) ;
- promoting voluntary service, a factor in intergenerational and individual accountability social links.

Anticipating economic transformations and attenuating geographical and social disparities:

- supporting the transition of sectors and businesses towards green technologies and economy, mainly through training and integration support;
- analysing the consequences of demographic changes in land allocation, energy consumption, water resources and mobility;
- global discussions on the future of regions weakened by the economic crisis and by the transformation of certain sectors of the economy.

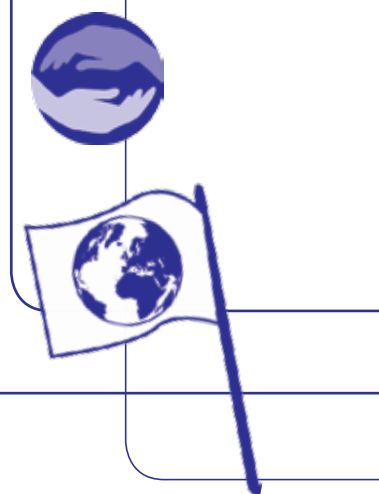


¹⁶⁴ First Grenelle Act 2009-967 of 03/08/09, Art. 5.

¹⁶⁵ Grenelle Environnement commitment 5.

CHALLENGE 9

International challenges of sustainable development and world poverty



Context and challenges

The challenges of a sustainable development transcend our borders: poverty, hunger and imbalances in an increasingly interdependent world threaten peace and stability.

During the 55th session of the United Nations General Assembly in 2000, the international community undertook to achieve the eight Millennium Development Goals by 2015: end extreme poverty and hunger, universal primary education, gender equality, combat HIV/AIDS, malaria and other diseases, reduce infant mortality and improve maternal health, protect the environment and set up a global development partnership.

In some respects the situation has improved over the last fifty years: whilst the world population has increased from three to seven billion inhabitants, the number of people suffering from hunger has halved (two to one billion) and the number of people living on less than 1.25 dollars a day has dropped from 1.8 to 1.4 billion¹⁶⁶.

In the developing world, primary school attendance has increased respectively from 83% in 2000 to 87% in 2007. In Sub-Saharan Africa and Southern Asia, school attendance has increased respectively by 15% and 11% over the same period. The mortality of children under five has dropped worldwide:

nine million in 2007 against 12.6 million deaths in 1990. Globally, although HIV has continued to advance, the number of new infections - 2.7 million in 2007 - has been dropping since 1996, mainly thanks to increased access to antiretrovirals in the poorest countries. AIDS-related mortality peaked in 2005 (2.2 million deaths) and then dropped to two million in 2007.

But progress is tenuous and could even be reversed; the food crisis which struck many developing countries in 2008 and the economic crisis which spread across the planet was a timely reminder of this. The drop in international food prices after they rocketed in the first half of 2008 did not lead to more affordable prices for most inhabitants on the planet. The UN estimate that in 2009, 55 to 90 million individuals living in extreme poverty should be added to the number forecast before the economic crisis.

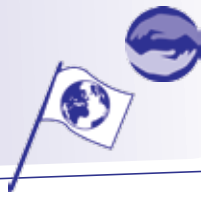
Climate change and its consequences, the degradation of soils and water tables, deforestation, erosion of the biodiversity, ultimately exhaustion of fossil energies and natural resources jeopardize the ability to achieve the millennium goals and, more than that, to meet the basic needs of a global population which could culminate in nine billion people in 2050, applying yet more pressure on natural resources.

International governance of sustainable development relies on a variety of bodies - the United Nations Environment Programme (UNEP), the UN Commission on Sustainable Development (CSD), the Food and Agriculture Organisation (FAO) and the World Environment Fund (WEF) - which only have limited powers.

Reforming these structures or creating new ones - like a World Environment Organisation - should include globalisation of exchanges and the emergence of new major players on the international scene (Brazil, Russia, India and China).

In this context, France is implementing pluri-annual strategies in seven priority areas: education, water and sanitation, health and fight against AIDS, environmental protection, transport, infrastructures and development of the private sector. Two strategies on governance and gender equality supplement its commitment.

¹⁶⁶ The data are taken from the UN 2009 report on the Millennium Development Goals.



Our strategic choices

Promote the strengthening of global governance of sustainable development in its three dimensions - social, economic and environmental.

Globalisation of exchanges calls for the strengthening of international governance, particularly in terms of the challenges of sustainable development: climate, preservation of natural and fossil resources, biodiversity and oceans. The United Nations

Environment Programme (UNEP) lacks forceful tools to make sure commitments made are respected and suffers from a lack of visibility. France and the EU are promoting a significant improvement in the international governance of the environment.

Contribute to food and energy safety.

Reducing the extreme poverty and food crises is the first Millennium Development Goal. France will continue its commitment to a world partnership for agriculture and food. The Economic Partnership Agreements to develop free trade between the European Union and the ACP countries (Africa,

Caribbean and Pacific Group of States) will be enhanced¹⁶⁷. France also supports energy supply policies compatible with the fight against climate change and the development needs of Southern countries, particularly the recourse to decentralised and renewable energies.

Reinforce solidarity efforts in a logic of sustainable development.

The French Development Agency (AFD) has become the hinge pin of French development aid. By adhering to the United Nations Global Compact in favour of sustainable development, AFD is committed to assessing and incorporating the environmental and social risks of operations it supports.

Overseas territories, spread through the Pacific, Atlantic and Indian Oceans, are the ideal setting for increasing and strengthening regional cooperation. Whereas the role of local authorities is frequently decisive, this effort towards solidarity must respect the sovereignty of States.

Combat climate change and its effects on populations.

Climate change accentuates the extreme phenomena (droughts, floods, etc.) likely to cause famine, deteriorating health and population migrations. To reduce the vulnerability of exposed populations, it is essential

to introduce financial solidarity mechanisms under the Climate Convention and encourage transfers of technologies in energy efficiency, renewable energies and decentralised energy production.

Promote the respect of human rights.

Human rights are the premier condition of sustainable development. Proclaimed by the Universal Declaration of Human Rights and by

the European Union's Charter of Fundamental Rights, they must guide the international solidarity actions taken by France.

The objectives in figures

- Increase public development aid to **0,7%** of gross domestic income by 2015 against 0.39% in 2008.
- **Reduce** greenhouse gas emissions (factor 4, see Challenge 4).
- Devote **one billion** euros to agriculture and food safety in Africa over five years.
- Set aside, over five ans, **2.5 billion** euros to finance the African private sector.
- Reinforce support for commercial aid (production and transport infrastructures, technical assistance) by setting aside **250 million** euros a year from 2010.

¹⁶⁷ These agreements provide mainly for abolishing customs' duties on products coming from signatory countries entering the European Union and financing development aid in infrastructures, food processing and industry.

Our operative levers

Reinforcing the global governance of sustainable development, mainly through the European Union:

- objective of setting up a World Environment Organisation;
- reinforcing the United Nations Environment Programme (UNEP), pursuing efforts to bring multilateral environment agreements closer together, clarifying the notion of climate refugee;
- strengthening civil society participation in negotiating multilateral environment agreements;
- supporting the implementation of international tools for managing chemical risks, REACH at the European level, Strategic Approach for International Chemicals Management¹⁶⁸ (SAICM) at international level, and promoting new tools;
- reinforcing the prevention of catastrophes by regulating the trade of hazardous substances and waste and instigating management policies under the guidelines of the Hyogo Protocol; creating an international binding tool on mercury.

Supporting the establishment of a global partnership for agriculture, food safety and nutrition:

- supporting the relaunch of subsistence farming in developing countries, food self-sufficiency and aid to the country for this purpose;
- opening up the development of this partnership to stakeholders, mainly farmer organisations;
- developing storage methods and transport networks to relieve the isolation of rural areas and make it easier to market agricultural productions;
- improving the standard of living for rural populations to avoid urban over-concentration; standardising the support for small producers (mainly through fair trade);
- developing agronomic research and cooperation;
- creating an international network of expertise in food safety; watching out for the coherence of international policies with an impact on global food safety;
- improving the support to the most vulnerable populations;
- modernising the governance to ensure policy coherence, especially under the reform of the FAO Food Safety Committee.

Incorporating sustainable development criteria in the financing methods of international financing institutions:

- search for innovative financing methods, incorporating sustainable development criteria in different development aids;
- adopting criteria of conditionality, covering social, environmental and anti-corruption aspects in the regulations of bodies on which depend development

policies or international exchanges (International Monetary Fund, World Bank, World Trade Organisation, International Labour Organisation);

- in close consultation with the European Union, implementing the G20 guidelines on financial regulation and the objective of ensuring a fair and sustainable recovery for all.

Placing the climate issue at the top of the agenda for our bilateral and European relations:

- contributing actively to climate negotiations to obtain global agreement on reducing greenhouse gas emissions in developed countries and, in developing countries, introducing low-carbon strategies reducing deforestation and financing adaptation measures;
- introducing energy policies compatible with the fight against climate change and the needs of Southern countries, mainly by developing renewable and decentralised energies for the most isolated populations;
- incorporating the adaptation to climate change of our aid strategy for the least advanced countries, mainly in Africa;
- developing an integrated approach to desertification, climate change and the loss of biodiversity.

Combating deforestation, impoverishment of the biodiversity and the overexploitation of natural resources:

- supporting international agreements like the convention on international trade in endangered species of wild fauna and flora (CITES);
- supporting the creation of an international scientific platform on biodiversity (IPBES¹⁶⁹);
- studying the remuneration for services provided by the forest and ecosystems;
- promoting a fair conservation and enhancement policy for genetic resources;
- complying with the ban on illegally-produced wood and forest product importations (Forest Law Enforcement, Governance and Trade (FLEGT) agreements), supporting the standardisation of wood certification, pursuing the Congo Basin Forest Partnership (PFBC¹⁷⁰).

Helping developing national policies on health, education, vocational training, research and risk prevention:

- developing French and European investments in public health actions in the South;
- supporting the development of national health policies meeting the needs of populations: access to medicines, sickness risk cover;
- combating discriminations and the exclusion of marginalised populations;

¹⁶⁸ Adopted in Dubai on 6 February 2006, under the auspices of the United Nations, during the International Conference on Chemicals Management.

¹⁶⁹ Intergovernmental platform on biodiversity and services rendered by the ecosystems.

¹⁷⁰ Grenelle Environnement commitment 222.



- supporting the Gender initiative¹⁷¹ which promotes equal rights between men and women and a fair sharing of resources and responsibilities;
- developing civil protection cooperation programmes.

Improving access to essential services for the most deprived populations:

- increasing our contribution to developing rural areas and widening the access to essential service, mainly water, sanitation and energy, by the poorest populations;
- developing public-private partnerships and seeking innovative financing;
- supporting integrated water resource management (GIRE) and sustainable urban development;
- promoting internationally our strategy for corporate social responsibility: respecting human rights, the fundamental rights of people at work and high levels of environmental quality, in compliance with ratified conventions and principles adopted by France and the European Union (ILO, multilateral environmental agreements, OECD, United Nations principles on socially-responsible investment).

Promoting all sustainable development strategies internationally, nationally and in the regions:

- supporting the Marrakesh process¹⁷² for sustainable consumption and production and, in particular, coordinating an international initiative on sustainable tourism;
- supporting the New Partnership for Africa's Development (NEPAD);
- promoting the link between development aid and the need for governance which respects human rights;
- supporting the preparation and implementation of national sustainable development strategies.

Fighting poverty through a development aid and decentralised cooperation policy:

- preparing a framework document for the cooperation policy in order to respect especially the Millennium Development Goals and to implement the Paris Declaration on aid efficiency¹⁷³;
- implementing the initiative supporting growth in Africa, targeting the development of local private businesses;
- improving the involvement of citizens in policies favouring developing countries;
- doubling the proportion of public development aid given through the NGOs;
- mobilising the civil society through increased volunteering service and through a more extensive consultation to put together these policies.

Make the Union for the Mediterranean an example of concerted and shared sustainable development:

- supporting the Mediterranean environmental programmes, especially in terms of depolluting the Mediterranean; commitment by France for no more untreated urban releases from its coasts by 2030¹⁷⁴;
- implementing the Mediterranean sustainable development strategy;
- reinforcing synergies between the Mediterranean Action Plan (Barcelona Convention) and the General Fisheries Commission for the Mediterranean (GFCM);
- development aid for solar electricity in the Southern countries.



¹⁷¹ See France Cooperation, Gender strategic guideline document, 17/12/07.

¹⁷² The Marrakesh process is run by the United Nations Department of Economic and Social Affairs (UNDESA) and the United Nations Environment Programme (UNEP). It is largely based on themed working groups, each one coordinated by a country. France coordinates the sustainable tourism working group.

¹⁷³ The Paris Declaration, ratified on 2 March 2005, defines an action plan to improve the quality of development aid. It is based on five major principles: ownership, alignment, harmonisation, managing for results and mutual accountability.

¹⁷⁴ Grenelle Sea commitment 66b.

Appendices

Scoreboard for NSDS 2010-2013 indicators

This NSDS scoreboard is the result of work in the Consultation Commission meetings on 6 October and 10 November 2009, chaired by Philippe Le Clézio, member of the Economic, Social and Environmental Council (CESE). It was presented during the first national conference on sustainable development indicators held at the Palais d'Iéna on 20 January 2010.

Set up at the joint request of Michèle Pappalardo, Interministerial Delegate for Sustainable Development, Jacques Dermagne, Chairman of the Economic, Social and Environmental Council and Jean-Pierre Duport,

Chairman of the National Statistical Information Board (INIS), this commission brought the five Grenelle bodies together (State, local authorities, NGOs, employer and employee representatives) supported by the organisations represented on the "Grenelle of Environment" Monitoring Committee, the CESE and the CNIS.

Some of these indicators are included in the headline sustainable development indicators adopted at European level. These indicators are identified by the abbreviation EU.

CONTEXT INDICATORS	
Economic and social context	0.1 Net domestic income and GDP per inhabitant (EU)
	0.2 Unemployment rate and under-employment rate
	0.3 Income distribution
	0.4 Demography: fertility rate

	HEADLINE INDICATORS (LEVEL 1)	ADDITIONAL INDICATORS (LEVEL 2)
Challenge 1 Sustainable consumption and production	1.1.1 Resource productivity and domestic consumption of materials per inhabitant	1.2.1 Changes in waste production per emitter, households, agriculture, industry, construction, service sector (available every two years) 1.2.2 Waste recycling rate 1.2.3 Proportion of usable farmland in organic agriculture (goal 20% in 2020) 1.2.4 Use in eco-activities (share in total use or evolution index)
Challenge 2 Knowledge society	2.1.1 Early school-leavers of 18-24 age group 2.1.2 Proportion of R&D expenses in the GDP, including those of businesses	2.2.1 Reading difficulties for young people: PISA survey available every three years (or indicator from the ministry based on tests during National Service days) 2.2.2 Proportion of higher diplomas among the 25-34 age group and comparison with the 25-64 age group 2.2.3 Continuing training per socio-professional category and/or age group 2.2.4 Barometer of knowledge by households of the notion of sustainable development
Challenge 3 Governance	3.1.1 Participation of women in governing bodies	3.2.1 Election turnout compared with previous elections of the same type 3.2.2 Participation in associative life (every two then three years from 2006) 3.2.3 Number of regional climate plans and local Agenda 21s including those recognised under the national recognition system

Challenge 4 Climate change and energies	4.1.1 Approved emissions of six greenhouse gases (EU) 4.1.2 Carbon footprint of the final national demand ¹ 4.1.3 Proportion of renewable energies in the primary energy consumption	4.2.1 Energy consumption per inhabitant and energy intensity (ratio of energy consumption to GDP) 4.2.2 Greenhouse gas emissions by sector (agriculture, industry, transport, public building, etc.) 4.2.3 Energy consumption in the residential-service sector
Challenge 5 Sustainable transport and mobility	5.1.1 Transport energy consumption and GDP in France	5.2.1 Modal split of passenger transport (private vehicles, buses, coaches, rail, air) 5.2.2 Use of public transport: proportion of public transport in total land passenger transport (in passengers-km) 5.2.3 Modal split of goods transports 5.2.4 Pollutant emissions from transport (NOx and particles) 5.2.5 Contributions by France to international sea and air transport emissions
Challenge 6 Conservation and sustainable management of the biodiversity and natural resources	6.1.1 Abundance index of common bird populations (EU) 6.1.2 Changes in soil artificialisation	6.2.1 Proportion of catches at EU level only ² based on the state of fishery stocks (EU) 6.2.2 Synthetic indicator of surface water quality 6.2.3 Consumption of pesticides
Challenge 7 Public health, risk prevention and management	7.1.1 Life expectancy and life expectancy in good health, at birth in France	7.2.1 Accidents at work 7.2.2 Occupational diseases (with the necessary precautions) 7.2.3 Unmet healthcare needs biennial indicator of renunciation of care for financial reasons depending on the type of additional cover 7.2.4 Suicide rate 7.2.5 Nuclear waste (every three years)
Challenge 8 Social inclusion, demography and immigration	8.1.1 Monetary poverty rate after social transfers (EU) 8.1.2 Senior citizens' employment rate 8.1.3 Proportion of young people between the ages of 16 and 25 unemployed and without training	8.2.1 Number of households heavily in debt 8.2.2 Poverty in living conditions (budgetary constraint, late payments, consumption restrictions, housing difficulties as a whole) 8.2.3 Housing difficulties ³ : overcrowding and privations of comfort 8.2.4 Gender pay gap: median wage incomes for employees aged 25 to 55 according to gender (see social inequality indicators) 8.2.5 Long-term unemployment rate 8.2.6 Public debt (as % of GDP) and indebtedness of businesses and households 8.2.7 Structure by large age groups in the population
Challenge 9 International challenges of sustainable development and world poverty	9.1.1 Official Development Assistance (EU)	9.2.1 Proportion of imports in domestic consumption of materials and indirect flows mobilised per tonne of imported materials

The sustainable development indicator scoreboard will be updated annually and accessible online.

Reference: NSDS 2010-2013 indicators, col. "Markers", July 2010 edition

¹ Also taking into account emissions from outside trade and therefore imports in particular.

² There is no national level available.

³ Excluding no housing or makeshift housing.

⁴ Available since 2002 only, it includes the different working hours. This indicator replaces the comparison of average full-time wages.

Preparing the National Sustainable Development Strategy 2010-2013

"The National Sustainable Development Strategy and the National Biodiversity Strategy are prepared by the State in coherence with the European Sustainable Development Strategy and in consultation with national and local elected representatives, employers, employees and the civil society, especially associations and foundations". Under these conditions, Article 1, sub-paragraph 3 of the Act on scheduling the implementation of the "Grenelle of Environment" Roundtable, known as the First Grenelle Act, determines the framework for preparing the NSDS.

The first step was to create the detailed plan for the future strategy. Three days of interministerial exchanges and discussions on 18, 21 and 26 November 2008 resulted in a successful conclusion thanks to the participation of the senior sustainable development officials and of all central administration directorates of the Ministry of Ecology, Energy, Sustainable Development and the Sea.

Michèle Pappalardo, Interministerial Delegate for Sustainable Development, submitted this first draft to the ministerial cabinets for their opinion on 16 January 2009. The draft version of the NSDS, together with a proposal on organising the consultation, were then presented to the "Grenelle of Environment" Monitoring Committee on 11 February.

The second step was to organise a consultation based on the principle of five-way governance, instigated during the "Grenelle of Environment". The consultation was broken down into four phases. Our initial intention was to produce a short, educational and strategic text based on the architecture of the European Sustainable Development Strategy to allow comparisons with the other European countries.

In anticipation of the First Grenelle Act, we wished from the start of the process to cohere with the principles of sustainable development and organise the widest possible consultation as we prepared the NSDS.

→ Written consultation with institutional partners

The draft version of the NSDS was sent to the main institutional partners: NGOs, unions, associations, members of the former National Sustainable Development Council (CNDD), members of the Monitoring Committee of the National Agenda 21 Committee, etc.

→ Public consultation via the Internet

This consultation, based on a questionnaire, was open for one month. The results of the consultation were presented to the Grenelle Environment Monitoring Committee on 14 May 2009.

→ Consultation of Ministry of Sustainable Development devolved services

To give this consultation a territorial dimension, the regional prefects and regional services of the Ministry of Sustainable Development (DIREN, DREAL and préfetures) were asked to submit their opinion.

Despite very short response times, seven of them - Alsace, Aquitaine, Auvergne, Centre, Guadeloupe, Languedoc and Midi-Pyrénées - provided comprehensive replies and some even mobilised regional partners like the regional economic and social councils and the regional Agenda 21 committees.

→ Three days of discussions and exchanges between stakeholders

These first three consultation steps meant that workshop-debates could be organised on 3, 5 and 10 June. Using a highly-participative method, these workshops, open to all contributors to the draft NSDS, were a chance for participants to familiarise themselves with the results of written and Internet consultations, debate the draft version of the NSDS by giving free rein to anyone wishing to contribute and potential improvements proposed by each individual.

→ The draft national strategy went through four major validation stages

- Validation by the "Grenelle of Environment" Monitoring Committee on 10 September 2009.
- Interministerial validation by the various cabinets during the interministerial meeting on 17 November 2009.
- Opinion of the Economic, Social and Environmental Council (CESE) on 27 January 2010.
- Adoption of the NSDS 2010-2013 and its indicators by the Interministerial Committee for Sustainable Development (CIDD) on 27 July 2010.

Article 1 of Act 2009-967 of 3 August 2009 on scheduling the implementation of the Grenelle Environnement

"This Act, with the desire and ambition to respond to the shared and concerning observation of an ecological emergency, sets the objectives and, as such, defines the action framework, organises the long-term governance and states the instruments of the policy implemented to combat and adapt to climate change, preserve biodiversity and its related services, contribute to a health-friendly environment and preserve and enhance the landscapes. It provides a new sustainable development model which protects the environment and goes hand in hand with reducing consumptions of energy, water and other natural resources. It provides sustainable growth without compromising the needs of future generations.

For public decisions likely to have a significant impact on the environment, the decision-making procedures will be revised in preference for environmentally-friendly solutions, by proving that an alternative more environmentally-friendly decision is impossible at reasonable cost.

Public policies must promote a sustainable development. For this purpose, they reconcile the protection and enhancement of the environment, economic development and social advances.

The National Sustainable Development Strategy and the National Biodiversity Strategy are prepared by

the State in coherence with the European Sustainable Development Strategy and in consultation with national and local elected representatives, employers, employees and the civil society, especially associations and foundations listed under sub-paragraph 2 of Article 49 of the current Act.

The State monitors their implementation within a committee perpetuating the conference of "Grenelle of Environnement" stakeholders and reports each year to Parliament, with proposals for specific measures to improve their effectiveness. The Government sends the Committee an annual report before the 10 October on implementing the commitments under the current law, its impact on the finances and local taxation and on the mandatory drawings in relation to the principle of stability of the tax pressure weighing on private individuals and businesses.

For the overseas regions, departments and local authorities, given their environmental characteristics and their rich biodiversity, the State will base its policy on clear strategic choices in the context of measures specific to these bodies.

These choices will include especially an experimental framework for sustainable development, under suitable local governance, based on the provisions of Article 73, sub-paragraph 3 of the Constitution."

List of abbreviations and acronyms

ACSE	National Agency for Social Cohesion and Equality
ACP	African Caribbean and Pacific Group of States
ACV	Life cycle analysis
AFD	French Development Agency
APD	Public development aid
AME	Multilateral Environment Agreements
ANRU	National Agency for Urban Renovation
APE	Economic Partnership Agreement
CBD	Convention on Biological Diversity
CSD	United Nations Commission on Sustainable Development
CESE	Economic, Social and Environmental Council
CESER	Regional Economic, Social and Environmental Council
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
CNDDGE	National Committee for Sustainable Development and the "Grenelle of Environnement"
CNDP	National Public Debate Commission;
CNFPT	National Centre for Regional Civil Service
CPER	State-region project contract
CUCS	Urban social cohesion contract
UNDESA	United Nations Department of Economic and Social Affairs
ECHA	European Chemicals Agency
ERA	European Research Area
ENT	Digital Workspace
FAO	Food and Agriculture Organisation
GEF	Global Environment Fund
FLEGT	Forest Law Enforcement, Governance and Trade - action plan to improve the governance and application of laws on exploitation of forests and trade in wood products
GHG	Greenhouse gas
IPCC	Intergovernmental Panel on Climate Change
GEIQ	Employer groupings for integration and qualification
GIRE	Integrated water resources management
HALDE	Equal Opportunities and Anti-Discrimination High authority
PAH	Polycyclic Aromatic Hydrocarbons
ICPE	Installation classified for environmental protection
IPBES	Intergovernmental Platform on Biodiversity and Ecosystem Services
POPE LAW	Law 2005-781 of 13 July 2005 of programme fixing energy policy guidelines

NEPAD	New Partnership for Africa's Development
OECD	Organisation of Economic Cooperation and Development
GMO	Genetically modified organism
MDG	Millennium Development Goals
ONERC	National Observatory on the Effects of Global Warming
NGO	Non-Governmental Organisation
OPECS	Parliamentary Office of Scientific and Technological Choices
PACTE	Access paths to regional, hospital and State civil service jobs
PAE	Exemplary administration plan
ICP	Inferior Calorific Power
PCRD	Research and Development Framework Programme
PFBC	Congo Basin Forest Partnership
GDP	Gross Domestic Product
PLU	Local town planning plan
SME	Small and medium-sized businesses
PNAI	National Action Plan for Inclusion
PNSE	National Environmental Health Plan
UNEP	United Nations Environment Programme
PPRT	Technological Risks Prevention Plan
PST	Health at Work Plan
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals (European Directive)
RSA	Active solidarity revenue
SAICM	Strategical approach for international chemicals management
EU ETS	European Union Emissions Trading Scheme
SCOT	Regional coherence scheme
SHON	Net floor area
SNB	National Biodiversity Strategy
SNDD	National Sustainable Development Strategy
SNRI	National Research and Innovation Strategy
TICE	Information and communication technologies for education
TPE	Very small businesses
ZUS	Sensitive urban area

Glossary

Action 21: global action programme or plan relating to sustainable development, adopted by governments at the United Nations Conference on the Environment and Development (UNCED) during the Second Earth Summit in Rio in June 1992.

Agenda 21: tool invented at the Rio Earth Summit in 1992 to locally implement sustainable development concretely. It is a programme of actions put together by inhabitants and stakeholders together. France has a reference framework for regional sustainable development projects and Agenda 21s.

Lifecycle analysis (ACV) or ecobalance: balance of material flows in a system. Its use aims to quantify the material flows in the ecosystems. By extension, any activity can undergo a lifecycle analysis. Several methods can be used to calculate these flows, mainly to understand the full repercussions of using a product, an activity or a technology on the environment.

Ecosystem approach: methodology to address the complexity of interrelations, interactions and interdependencies. The ecosystemic approach analyses a phenomenon studied as a fabric of interactions.

Positive energy building: buildings with potential energy self-sufficiency thanks to their design (insulation, ventilation, etc.) and the use in particular of solar, photovoltaic or geothermal sensors.

Biocapacity: ability of a territory to continuously generate renewable resources and to absorb the waste generated by their consumption. The planet's biocapacity is dropping due to deforestation, advancing deserts and unsustainable farming methods (soil contamination by pesticides and organic matter impoverishment).

Biofuels or agrofuels: first generation biofuels are obtained from crops, mainly from two sectors: oil (rape, palm and sunflower) and alcohol (fermentation of sugar beet, wheat, corn or sugar cane). Other sectors are under development.

Biomass: organic matter (straw, wood, green waste, etc.) which can provide energy when burnt to produce heat or power. It can also generate biogas (methane) or biofuels for vehicles.

Fair trade: this is an alternative to conventional trade which marginalises and excludes small producers, especially in the South. EFTA, the European Fair Trade Association, defines it officially as "a trade partnership which targets sustainable development for excluded or disadvantaged producers. It seeks to achieve this by proposing better trade conditions to producers, by educating consumers to raise awareness and through campaigns".

Sustainable consumption: the notion of sustainable consumption was developed under the United Nations programme adopted in Johannesburg in 2002. It starts from the observation that public policies can no longer simply be content to act on production. Softening ecologically and socially unsustainable consumption modes is also essential in achieving sustainable development. It targets both fair trade practices and "alternative" production methods (organic agriculture, use of ecolabels, etc.) and reducing packaging, sorting, re-using and recycling.

Primary energy consumption: final energy consumption, plus the losses and all intermediate consumptions, be they in the energy sector itself or other industries.

Final energy consumption: energy consumed in its converted form by the end user, contrary to primary energy which includes the energy required to produce energy (e.g. coal burned to generate electricity).

Global cost: global cost is a notion that appeared in the 1990s in the cost price of a building. It proves awareness of the significance of deferred costs in a construction. It encourages choosing investments in terms of savings they may generate subsequently during the life of the building (operation: heating, choice of efficient materials, etc.).

Total cost: by expanding the notion of global cost, the notion of total cost aims to incorporate all outsourced costs, especially environmental throughout the life cycle of a product when calculating a cost.

Decoupling: this involves reducing the externalities for a same unit of production of goods or services continuously, especially in terms of consumption of natural resources.

Ecological debt: where the ecological footprint of an area is higher than its biocapacity, this area is therefore not used in sustainable fashion and contracts an ecological debt.

Sustainable development: the conventional definition adopted for sustainable development was formulated in 1987 by the United Nations World Commission on Environment and Development: "A sustainable development is a development that meets the needs of the present without compromising the ability of future generations to meet their own needs". Two concepts are inherent to this notion:

- the concept of needs and more especially of essential needs of the most deprived; they must be granted the highest priority;
- the idea of limitations imposed by the state of our techniques and our social organisation on the ability of the environment to respond to current and future needs. It conveys the idea of limited ability of the environment to react to our production and consumption methods

and invites the renewal of the notion of need. It is normally associated with methods: cross-disciplinarity, governance, long-term approach and global cost.

Durability: see strong, weak or moderate sustainability.

Circular economy: it defines the re-use of matter from waste and used products through recycling and waste-to-energy conversion, to put the matter to good use.

Functionality economy: it is intended to limit the impact of production on the environment and involves replacing the purchase of goods (e.g. television, car, printer) by a service (hiring a car, self-service bicycle, networked printer, etc.) to optimise the use of the goods.

Ecosystem: fundamental notion of ecology, it describes the whole formed by a community of living beings amongst themselves and, by extension, between this community and its environment. The ecosystem is characterised by relations of interdependency which maintain and develop life at its heart (notion of food chains, cycles, ecological niches, etc.).

Greenhouse effect: this phenomenon, necessary for life on Earth (maintaining an average clement temperature on Earth) is triggered by the presence of greenhouse gases in the atmosphere which prevent infrared radiation being reflected totally from Earth towards Space. Deregulated, it causes a rise in the Earth's temperature.

Energy efficiency: this is the ability to produce or consume the same quantity of goods and services by using less energy than before.

Ecological footprint: it corresponds to the surface of the planet in hectares on which a population depends, given its lifestyle, to satisfy its needs for products from the land (agriculture and forestry), for fishing areas and for goods and equipment consumption (natural and mined resources, urbanised spaces, infrastructures and waste).

Environmental assessment: study of the state of the environment and issues present to assess the impacts and ways of avoiding, reducing or compensating for them.

Integrated assessment: study of all the consequences, mainly economic, environmental and social and their interrelations, covering human activities directly and the indirect consequences of these actions.

Externalities: by externality can be understood the variation in satisfaction of an agent generated by the actions of another agent (interdependency), without giving rise to compensation movements in the market (deficiency). Negative externalities represent the environmental costs which are not included in the price system (e.g. air, soil and water pollution, transport greenhouse gases, etc.).

Factor 4: designates the objective France set itself in 2005 (guideline energy law) which aims to reduce the country's greenhouse gas emissions by four by 2050 (compared with 1990 emission level).

Greenhouse gas: this involves chemical compounds contained in the atmosphere, which retain some solar heat under the so-called greenhouse effect mechanism. These gases include carbon dioxide, methane, ozone, dinitrogen oxide and the fluorocarbons, each one with very different global warming development ratings.

Governance: designates a method of regulating social and economic relationships, based on mutual recognition, dialogue and consultation at various regional scales and between different types of stakeholder, with a view to making a decision.

Five-way governance: this is the approach and work process initiated by the "Grenelle of Environnement" round-table, uniting five categories of actors around the table: State, regional authorities, economic actors, social actors and non-governmental organisations (NGO).

High Environmental Quality: promoted by the HQE association since 1996, this is a voluntary approach aiming to limit the impact of a building on the environment. Buildings can thus take fourteen targets laid down by Ademe and the HQE association into account in construction and rehabilitation work. The use of this notion is too often reduced to its energy aspects (insulation, energy savings, renewable energies).

Environmental impact: this covers all alterations to the environment, be they negative or positive, caused by an organism, a development or a product. The environmental impact study is used by the developer to limit the potential environmental damage by his project.

Energy intensity: this is the amount of energy required to produce a goods item and more widely for the economy to function (e.g. energy intensity of the GDP). It is frequently measured in ton oil equivalent (toe).

Irreversibility: impossibility for a system to return spontaneously to its exact state before being altered; applies mainly to the natural "critical" capital (exceptional) and to minor, but cumulative phenomena.

Polluter-payer principle: this is principle stemming from the ethics of responsibility, which consists of ensuring that each economic actor takes the negative externalities of his activity into account. Briefly, it is the principle whereby the costs resulting from prevention, pollution reduction and anti-pollution measures must be supported by their author. OECD adopted the polluter-payer principle in 1972 as an economic principle to impute costs relating to anti-pollution

measures. It is one of the basic principles underpinning environmental policies in developed countries.

Precautionary principle: now a major and new component in European and French legislation, established as a fundamental principle, this principle recommends preventive action faced with hypothetical, even unknown dangers. "As soon as realisation of damage could affect the environment in a serious and irreversible manner, even though [its recognition] might be uncertain in the current state of the scientific knowledge, public authorities should monitor, by the application of the precautionary principle in their relevant domains, the implementation of risk assessment procedures and the adoption of proportionate, provisional measures in order to prevent the realisation of the damage" (Charter of the Environment).

Weak sustainability: the natural capital can be replaced by new resources, goods or services to come, mainly thanks to the contribution by innovation or substitution banks.

Moderate sustainability: it establishes that monetary analysis is useful but insufficient to assess the value of the natural capital ensuring vital functions. Substitution between the vulnerable capital and the manufactured or human capital no longer exists.

Strong sustainability: today's natural capital and the ecosystemic services must be maintained entirely for future generations. This has been adopted by the Strategic Analysis Centre for the outstanding biodiversity.

Subsidiarity (principle of subsidiarity): this is a political and social principle, whereby the responsibility for a public action, when necessary, must be allocated to the smallest entity capable of resolving the problem itself. It is therefore the concern not to carry out at a high level something that can be dealt with more efficiently at a lower scale, i.e. seeking the relevant level for the public action. This does not mean it cannot be reversed if a defect is noted.

Substitutability: converting a natural capital into an artificial capital which can be passed on from one generation to the next.

Discount rate: the discount rate, similar to an inflation rate and which is added to it, represents the annual depreciation rate to be applied to the value of future goods to obtain its updated value, i.e. the value to be compared with that of goods available immediately, taking account of the fact that we attach more price to a present consumption than a future consumption. Example: taking a discount rate of 4%, the updated value of an income of 100 euros to be collected in ten years is $100/1.04^{10} = 67.5$ euros. In other words - assuming zero inflation - it is rational to invest 67.5 euros today to obtain 100 euros in ten years.

Waste-to-energy conversion: recovery of energy released by incinerating waste or biogas mainly produced in disposal sites.

Material recycling: the intention with this process is to give a second life to waste to provide materials once more after sorting and recycling.

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- Site of the Ministry of Sustainable Development: www.developpement-durable.gouv.fr/



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