



PREMIER MINISTRE

NATIONAL BIODIVERSITY STRATEGY 2011-2020



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Introduction

In 2010, the International Year of Biodiversity, France embarked on the process of revising the first National Biodiversity Strategy, NBS (Stratégie nationale de la biodiversité, SNB)¹ adopted in February 2004.

A response to international, European and French commitments

The National Biodiversity Strategy is the outcome of French commitments under the Convention on Biological Diversity (CBD), ratified by France in 1994. The Minister for the Environment at that time was tasked with presenting a strategy which could be implemented across all government departments with the precise aim of: “halting the loss of biodiversity by 2010”, in line with the commitment made by all the other European Union members. This aim was applied in the NBS to each of the key components of the living world: genes, species, habitats, ecosystems and their translation into an ecological framework. The 2004-2010 NBS was:

- structured around four cross-cutting goals: “mobilising all stakeholders, recognising the value of the living world, improving its mainstreaming into public policy, and developing scientific knowledge and observation”.
- set out in ten sectoral action plans². These were predominantly drafted in 2005 and 2006, and updated in 2009 to incorporate the Grenelle Environment Forum commitments.

The target set was ambitious. It must be acknowledged that it was not met either in France or on a European level. The scale of the actions taken was not sufficiently far-reaching to confront the pressures being exerted on biodiversity.

A major instrument for national mobilisation

The 2004-2010 NBS, which is reinforced by the Grenelle Acts³, nevertheless remains a key instrument for national mobilisation to protect and enhance biodiversity in mainland France and in overseas territories, as well as marine areas under national sovereignty. It forms the biodiversity component of the National Sustainable Development Strategy (SNDD)⁴.

The challenges which the NBS attempted to address in the period 2004-2010 remain topical:

- building our capacity to act together to protect biodiversity on different territorial levels;

¹ "Stratégie française pour la biodiversité, enjeux, finalités, orientations" ["French strategy for biodiversity: issues, aims and approaches"], February 2004.

² The 2004-2010 National Biodiversity Strategy is divided into ten action plans organised and implemented by the government departments concerned: Natural Heritage, Agriculture, International, Spatial Planning, Land Transport Infrastructures, the Sea, Forestry, Overseas Territories, Research, Tourism. The Overseas Territories action plan comprises a cross-cutting action plan and 10 local action plans, i.e. one per *département* and overseas collectivity.

³ The implementation of Grenelle Environment Forum legislation was based on the framework law for Grenelle commitments (known as Grenelle 1, August 2009, cf. notably articles 1 and 23) and on the law referring to the national commitment to the environment (known as Grenelle 2, July 2010).

⁴ Challenge No 6 of the National Sustainable Development Strategy 2010-2013, entitled "conservation and sustainable management of biodiversity and natural resources".

- mobilising and using data and information relating to biodiversity to make it accessible to as many people as possible;
- addressing the emergence of new issues, especially those relating to climate change and the services delivered by ecosystems.

The Aichi Targets of the CBD strategic plan adopted in Japan in October 2010 (set out in Annexe 3), the objective set in 2010 by the European Union⁵, as well as the proposed framework of action for 2011-2020 by the European Commission in its Communication dated May 2011, provide strong impetus to the National Biodiversity Strategy 2011-2020. The Aichi Targets fed into and provided a structure for the work of the NBS Review Committee.

Text box 1: EU biodiversity strategy targets

The Communication from the European Commission (COM (2011) 244 – 3 May) concerning EU biodiversity strategy to 2020, recalls the important contribution of biodiversity and ecosystem services to the EU 2020 strategy for growth and jobs (*A more resource efficient economy; A more climate-resilient, low-carbon economy; A leader in research and innovation; New skills, jobs and business opportunities*).

The EU biodiversity strategy is structured around 6 main targets (including measurable goals) which are then set out in actions: 1/conserving and restoring nature; 2/ maintaining and enhancing ecosystems and their services; 3/ ensuring the sustainability of agriculture, forestry and fisheries; 4/ combating invasive alien species; 5/ addressing the global biodiversity crisis; 6/ contributions from other environmental policies and initiatives).

A coherent framework for a strategy designed for stakeholders by stakeholders

France is fully aware of its responsibilities and must demonstrate increased willingness to act against a background of continuing degradation of biodiversity, despite commitments made by the European Union and the international community.

In particular, most citizens and economic and social stakeholders are not aware of the objectives of the first strategy and its action plans but also, and above all, what actually constitutes biodiversity⁶. The aim of the 2011-2020 strategy is therefore implementation not just at government level, but also by local authorities and various stakeholders in civil society.

The NBS is consistent with the actions undertaken by the state through a variety of strategies and existing action plans. They will be pursued and supplemented by new commitments, designed to improve the connections between them and give them greater efficiency.

⁵ The main EU objective adopted by the European Council in March 2010: "to halt the loss of biodiversity and the degradation of ecosystem services in the EU by 2020, and restore them in so far as feasible, while stepping up the EU contribution to averting global biodiversity loss".

⁶ "La stratégie nationale pour la biodiversité: bilan et perspectives, juin 2010", ["The National Biodiversity Strategy: assessment and perspectives, June 2010"] a joint report by the Council for Food, Agriculture and Rural Areas and the Council for the Environment and Sustainable Development.

A vision for action

Diversity as a key feature of a changing living world

Together, living entities, including humans, form the biosphere, the living fabric of the Earth. Individuals are relatively ephemeral and are born, reproduce and die. They succeed each other in this way in a dynamic process which ensures the creation of bonds between species and also between species and their environment.

The living world is diverse: diversity of individuals and of their genes within each species, whether it be microbial, plant or animal, diversity of ecosystems and landscapes, human biological and cultural diversity. One word expresses this essential feature of life: “biodiversity”^{*} or biological diversity.

A great deal of work remains to be done to achieve a better understanding of biodiversity in all its many aspects. However, life sciences have already taught us three fundamental things:

- Life on Earth has endured because the living world has always been able to diversify, since its very origins, to produce individuals, species and communities of species with different abilities to adapt to changing conditions.

- During the course of the long evolutionary process of the living world, all around the earth, different species have succeeded each other, ensuring the renewal of ecological processes. In fact, bonds are established on a timely basis between living entities, between ecosystems, between the biosphere and the non-living components of the planet. Energy circulates, various types of organic matter are produced, decompose and are recycled, oxygen, carbon, nitrogen and many other chemical elements are exchanged and the water cycle is regulated. This ecological process, based on the interdependence of species, guarantees the finite production of resources which are indispensable to the existence of everything.

- Humankind has recently⁷ become part of this dynamic, becoming involved in the ecological workings of the planet while still depending on it like all other species. By diversifying its crops, it has forged a multitude of links, both tangible and intangible with its environments, which it has shaped with ever-increasing speed.

Humankind as an agent for change in the biosphere

Humanity today has reached a turning point in its short history: it has become a major stakeholder in planetary change^{*}. Our ever-increasing population takes up more and more space, we are consuming more resources on land and at sea and we are constantly creating new local and global interactions within the biosphere.

Local activities whose cumulative effects their agents do not always necessarily foresee, and local and global political and economic decisions whose consequences are sometimes misjudged, mean that we are reducing biodiversity, increasing the vulnerability of the living world and diminishing its ability to adapt and evolve. The speed and global reach of this

⁷ According to the latest dating estimates, our species, Homo Sapiens, first appeared approximately 200,000 years ago, which is very recent compared to the earliest known life forms (bacteria), which appeared 3.5 billion years ago and the first multicellular organisms, some 800 million years ago.

phenomenon are perhaps unique in the history of the Earth. This is more particularly the case because the agent is a living species who, in its ignorance, conceit or indifference, thought it could plunder natural resources without restraint, believing them to be limitless. However, over several decades we have become more aware of the issues involved in biodiversity and we must now take individual and collective responsibility.

A new international mission: to tackle the continuing loss of biodiversity and ensure greater human well-being

On the threshold of the third millennium, the United Nations set ambitious goals for humanity to make rapid progress towards greater well-being for all people, today and in the future. The link between the decline in biodiversity and the increase in poverty and a deterioration in health and well-being, sharply accentuated by a multitude of conflicts and shortcomings in the regulation of production and consumption, was advanced.

For all humans to have the best possible opportunity to live well, we must ensure that every society has as much natural diversity* as possible, ranging from city centres to the most untouched areas. The desire to perpetuate humankind and improve its well-being implies passing on to future generations in a clear-sighted and responsible way the greatest possible variety of means to enable us to continue to evolve alongside the other elements which make up the biosphere. Although these are largely unknown today, they may be a future source of innovations which will contribute to human well-being.

Concern for human well-being and a desire for a flourishing natural world stem from the same aspiration. This leads us to attribute a fundamental value to every genetic and cultural memory transmitted by individuals, species, communities, ecosystems and human societies as they are the source on which our existence and evolution depend. This value provides justification for a sustainable use* of other species with whom we share a common fate. It also calls for the exercise of responsible behaviour in the sustainable use of certain species or by limiting the risks which others impose on us. This value also calls for the emergence of new economic and social strategies aimed at ensuring the continuing adaptation of the biosphere in an atmosphere of respect for our cultural diversity.

Climate change, desertification, large-scale pollution, deforestation, artificialisation and degradation of soil, extinction of species, a decline in genetic diversity, the homogenisation of flora and fauna, overexploitation of natural resources etc. In Nagoya (Japan), the 10th meeting of the Conference of the Parties to the Convention on Biological Diversity (CBD) which brought together 193 countries, observed that despite certain signs of progress, we had collectively failed to stem biodiversity loss in 2010. The conference therefore fixed a new deadline: by 2050 humans must ensure that biodiversity is “valued, conserved, restored and wisely used” so that, in particular, ecosystem “services” are maintained. The deadline set may seem very far away, but ecological dynamics can suffer from an inertia effect. Therefore we must ensure a living web in every area starting now, not simply in terms of adequate ecological functioning, but also increased potential for diversification and adaptation by preserving, valuing and even reinforcing biodiversity. Initiatives promoting biodiversity show a sense of ecological solidarity*, at local and global scales, and fairness and a spirit of solidarity towards present and future generations.

A new national biodiversity strategy

The French National Biodiversity Strategy, which is in line with the international approach, is based on three firm principles:

- Biodiversity is a key social issue and the National Biodiversity Strategy therefore promotes the mobilisation and commitment of all stakeholders. This entails making a major long-term commitment to providing information and educational resources so that everybody can understand why it is important to have as much natural diversity around us as possible.

- Development projects incorporating biodiversity into every activity should be designed and implemented on the scale of territories, especially as local projects promoting biodiversity can have positive and fast effects on this scale. This is particularly valid in overseas territories where biodiversity is exceptionally rich and of major importance to the local people and socio-economic and cultural development.

- Frameworks must be put in place at every level of governance, from the global to the local, and at all these levels public policy, including fiscal policy and management and the planning legislation which they drive, must be genuinely biodiversity-friendly. The National Biodiversity Strategy has been designed in a spirit of international cooperation and solidarity.

Our knowledge* of biodiversity is patchy: observation, research and innovation must be considerably increased. However there is a degree of uncertainty inherent in science. Decisions must advance solutions which contain an element of reversibility, or at least a high degree of scalability. In order to frame decisions, therefore, academic scientific knowledge, local knowledge, data collected through collaborative sciences and the experiences of the many institutions and associations working to improve our understanding of nature, its conservation and enhancement should be taken into account. These many different sources of knowledge should feed into democratic debate between citizens in a spirit of partnership. The state and local authorities, within their own sphere of jurisdiction should assume responsibility and stimulate the emergence of these discussions. It is a case of trusting citizens and their political, socio-economic and third sector representatives in the field. Regional or land strategic development projects cannot be viable unless they take as their starting point the natural environment, namely by incorporating biodiversity from the outset. Lastly, when degradation of the biosphere entails increasingly heavy costs, promoting the diversity of living organisms should not be considered an additional expense, but an investment. In other words we must undertake what could be termed an “ecological recapitalisation”, a policy aimed at gradually developing our ecological heritage across the country.

Jointly developing life skills between humans and with nature as a whole
through a democratic process
is to envisage a new way of living on the Earth
and making progress towards greater humanity.

A shared mission

The 2011-2020 NBS ambition:

To preserve, restore, strengthen and value biodiversity
and ensure its fair and sustainable use
To involve everyone and every sector of activity, in order to succeed

The National Biodiversity Strategy (NBS) aims to preserve, restore and increase living diversity in every area for which France is responsible on the mainland and overseas. This also extends to the European and international framework, where France can contribute to this mission in a spirit of global solidarity. The objective is to keep ecosystems functioning adapting and evolving for the long term. To this end, the NBS is promoting the reduction of direct and indirect impacts on biodiversity, sustainable use of living resources and equitable distribution of the benefits which they deliver.

The NBS contributes to the integrated development of territories and to sustainable development in mainland France and in the overseas territories. As a result, it is incorporated as a priority into all public policy, at every territorial scale, such as policy relating to water, soil, the sea, climate and energy agriculture and forestry as well as spatial planning, infrastructures, industry, trade, education, research, health, etc. As such, it plays a full role in a project for society which targets the well-being of current and future generations by modifying our relationship with nature.

The NBS brings together all the stakeholders – the state, regional authorities, economic stakeholders, non profit associations, research stakeholders – in planning, implementing and evaluating its effects. It aims to provide information, raise awareness, mobilise elected representatives and citizens and promote their involvement and initiatives so that they contribute to its success through responsible measures.

Working together

There is a consensus of opinion that one of the keys to tackling the erosion of biodiversity successfully lies in the mobilisation of society as a whole. The National Biodiversity Strategy 2011-2020 was designed to reflect this.

The choice of a collaborative process was made as soon as the review was launched, during a national conference held in May 2010 in Chamonix (“*Choosing a method of governance for working together successfully*”). A Review Committee comprising more than 100 national networks and bodies then worked to produce the NBS 2011-2020 document with its shared vision and mission.

Text box 2: NBS 2011-2020:

- ⇒ *A shared vision, a joint mission;*
- ⇒ *Six supplementary strategic goals;*
- ⇒ *Twenty inter-related targets;*
- ⇒ *Incorporation of the Aichi Targets adopted by the Convention on Biological Diversity COP10.*

One of the basic principles and one of the original features of this 2011-2020 strategy is the fact that it establishes a coherent framework so that all stakeholders can contribute on a voluntary basis. Each stakeholder has their own level of responsibility and resources and can contribute, within the framework of their respective abilities, to the achievement of the mission, strategic goals and twenty targets⁸. It is within this cohesive framework that these local authorities can play a part in working to promote biodiversity. Biodiversity, its development and interaction with human activities are not uniform across French territories. The National Biodiversity Strategy was designed to provide a shared framework for all stakeholders which can be adapted to the various issues in each territory and to the variety of options for action available to each stakeholder. For any given stakeholder, in a given territory, certain strategic goals or targets will assume a particular significance.

By mobilising as many people as possible, the National Biodiversity Strategy helps build collective capacity for action at different territorial levels and in every sphere of activity. A subscription and commitment mechanism has been established to formalise this desire to contribute (cf. text box 3). All stakeholders (legal entities) are therefore invited to become subscribers to promote and publicise the NBS. Each subscriber is also invited to make a commitment to action on the basis of the principles for action and government officially recorded together when the Strategy was drafted. The voluntary commitment is designed to develop meaningful action to promote biodiversity with a gradual and proportionate improvement in the practices of the stakeholders concerned. This coherent framework for subscription and commitment forms an integral part of the National Biodiversity Strategy – **working and succeeding together.**

⁸For instance, in Saint Barts in the Caribbean, in French Polynesia, Wallis-et-Futuna and in New Caledonia, the environment falls within the territorial jurisdiction of the local authorities.

Text Box 3: The NBS, a coherent and incentivising framework:

The implementation of the NBS is a dynamic process which is based on subscribing to the NBS and a declaration of voluntary commitment.

– ***Subscribing to the NBS:***

Stakeholder mobilisation is reflected first and foremost in the signature of a voluntary subscription to the National Biodiversity Strategy, to its vision, mission, strategic goals, targets and governance principles (cf. Annex 1). Subscribing organisations declare themselves ready to: “a) disseminate and promote this strategy and its procedural rules through information and education within their networks and among their partners; b) share the lessons learned from their experiences in promoting biodiversity; c) familiarise themselves and others with the tools proposed by the strategy in order to initiate activities; d) explore, within 18 months, the possibility of and the circumstances for implementing a voluntary declaration of commitment within the framework of their activities for the objectives relevant to them and to notify the Ministry of Sustainable Development, acting as the NBS Secretariat, of their decision.” This subscription is the first phase, open to all, designed to inform, share and explore how to commit to biodiversity in a manner which goes beyond legal requirements. The state will update monitoring of stakeholders who subscribe to the strategy and make a commitment by signing the voluntary declaration of commitment.

– ***The voluntary declaration of commitment to the NBS:***

Within 18 months, subscribing organisations declare their willingness to make a firm commitment to the implementation of the NBS, by presenting the action plan they choose to implement. They may subscribe and commit throughout the duration of the NBS 2011-2020. Their proposed actions must go beyond mere compliance with existing regulations and must of necessity lead to a positive and significant impact in favour of biodiversity. They can be very diverse and must be commensurate with the size and activity of the organisation. They can fit into the scheme of existing measures (Agenda 21, corporate social responsibility, certifications specific to the relevant sector, etc.) and should promote and facilitate their adoption and actually reinforce their biodiversity component if they have one. The declaration must involve commitment and be significant, supplementary, measurable and scalable. The declaration defines the general framework of the commitment and includes a description of the project, its partners, its scope for action and objectives, accompanied by performance indicators. It is registered with ad hoc committees, namely the NBS Monitoring Committee or regional monitoring committees⁹, bringing together all stakeholders (based on the Grenelle model), and supported on a methodological level by the national committee. The recognised “NBS commitment” constitutes a guarantee of quality and consistency. It entitles subscribers to mention the NBS in all their communications relating to actions undertaken as part of their commitment and to use the NBS logo.

Methodological tools have been designed to assist in drafting, registering and monitoring commitments within the general framework defined by the NBS. This is the purpose of the “Action guide” which contains general methodological recommendations by type of stakeholder, as well as practical examples of possible activities.

⁹ Regional green and blue infrastructure committees (Comités régionaux Trame verte et bleue) can play this role.

Biodiversity in France

Spanning the globe

By virtue of its geographic position in Europe and overseas, France possesses a very rich natural and cultural heritage; it is a “megadiverse” country. French overseas territories encompass a variety of latitudes: the Mascarene islands, the Guyana plateau, the Caribbean, the South Pacific, Austral and Antarctic islands and the North American boreal environment. In mainland Europe, France lies at the crossroads of influences and includes 4 of the 11 biogeographic regions (Atlantic, Alpine, continental and Mediterranean). France is therefore situated in 5 of the 37 world biodiversity hotspots recognised by the WWF and IUCN and 4 of these hotspots are located overseas. The French exclusive economic zone covers over 11 million km² and is the second largest in the world. All of these factors mean that France has significant responsibilities in the area of biodiversity.

A diversity of natural habitats

This variety of territories and biogeoclimatic influences is reflected in a variety of ecosystems and landscapes. It is not possible to list all the types of ecosystem present in France. Some are particularly emblematic, scarce or endangered and require special attention, such as the mangrove swamps, coral reefs, aquatic plant habitats, wetlands, certain agro-pastoral environments or cave environments, etc. For example, French overseas territories have 10% of the world’s coral reefs (ranked 4th in the world), and therefore make a significant contribution to national and global biodiversity. The surface of an ecosystem does not constitute a sufficient criterion for analysing its ecological state; it is also necessary to factor in the way in which it is divided up, its functionality and its past and potential future dynamic. For example, an assessment of the state of conservation of mainland French forest habitats of community interest showed in 2007 that approximately 65% were in a poor state of conservation, whereas rocky habitats (cliffs, caves, etc.) and sclerophyllus habitats (dry coastal heathland, Mediterranean forests, etc.) were in a fairly good state of conservation.

A high number of species

Within these ecosystems, France has a very rich and diverse flora and fauna, both in mainland France and overseas territories. The national register of natural heritage currently lists nearly 11,934 plant species, 43,727 animal species and 14,183 types of fungi in mainland France. In overseas territories, despite often very patchy knowledge, registers show a far wider specific diversity than in mainland France. For example, there are more than 50 times as many endemic plant species. Biodiversity in overseas territories is particularly vulnerable as it is partly insular: populations of species are often small and isolated and there are many endemic species, i.e. species which only exist on those islands. For example, the recent publication of the red list of flowering plants and ferns for La Réunion showed that of the 905 species analysed, 49 have already disappeared and 275 are threatened with extinction.

Limited knowledge about genetic heritage

Little is known about the genetic heritage of species found in France, with the exception of livestock breeds and varieties which are cultivated or planted. Yet this is what guarantees the ability of plants to adapt to a changing environment and constitutes a key component of biodiversity.

All the various elements which constitute biodiversity interact with each other. Thus if one element disappears, then the system as a whole may be compromised. For example, the decline in the population of pollinating insects can lead to the decline of the plant species which they pollinate.

Biodiversity is useful to humankind

Biodiversity, whether it be genetic, specific, ecosystemic or landscape-based, is one of the fundamental elements of the diversity of crops France. The traditional knowledge of French people is partly linked to their understanding of biodiversity, both in mainland France and overseas, ranging from food to medicine, not forgetting clothing, construction, or the development of skills and practices in agriculture or livestock rearing. Biodiversity actually forms the basis, directly or indirectly, for a very wide variety of human activities and benefits which we enjoy. Agricultural activity, for example, requires soil which is the product of activity by micro-organisms. It is also based on the diversity of animal and plant genetic resources which must not only be preserved but also managed in a dynamic way to provide appropriate varieties for the farmers of the future.

An exploratory study for an assessment of ecosystem services in France identified 43 services in three categories: provisioning services (cultivated fruit and vegetables, wood for construction or energy, fishing-based resources, etc.); regulating services (avalanche prevention by certain forests, regulation of flooding, mitigation of climate variations, etc.); cultural and aesthetic services (landscapes for leisure, the cultural or spiritual significance of certain natural environments, etc.). A single ecosystem can provide different services depending on the way in which it is managed: not all of the ecosystem services can be produced simultaneously or in the same place and compromises have to be found.

Pressures threatening biodiversity

Despite international, European, national and local commitments, biodiversity is in sharp decline. The objectives set by the Convention on Biological Diversity (CBD) in Rio de Janeiro in 1992 and the European Union 2010 objective (“to halt the loss of biodiversity by 2010”) have not been achieved. The ecological crisis threatening the whole of the nation can be attributed to a number of pressures, which sometimes interact:

- the destruction, fragmentation and degradation of habitats reduce the number of environments available for species and their ability to move around;
- air, ground, water and marine pollution disrupt a number of ecosystems and put human health at risk;
- using species at levels above their replacement rate leads to their decline;
- the arrival of invasive alien species in ecosystems that have often already been made vulnerable by other pressures is a recurring problem;

- climate change has a direct and indirect impact on biodiversity (disruption of lifecycles, seasonal shifts, etc.):
- the reduction of human activities – among them agriculture- may often lead to poorer landscape and biodiversity.

The increase in these pressures is very closely linked to demographic and lifestyle changes. Moreover, their relative significance varies according to the geographical, human and ecological context. For instance, Polynesian atolls are particularly sensitive to the rise in sea levels caused by climate change. The impact of invasive alien species is very significant in island environments, especially in overseas territories. Overfishing and the degradation of marine habitats have already led to the collapse of certain fish stocks.

Despite growing awareness, especially within the framework of the National Biodiversity Strategy (NBS), most anthropic threats and pressures relating to biodiversity are increasing. Many initiatives have been implemented to reverse this trend: creation of protected areas, action plans for species, strategies to combat invasive alien species and the promotion of practices in favour of biodiversity, raising awareness, etc.

The Twenty National Biodiversity Strategy Targets

Strategic goal A: Generate the willingness to act in favour of biodiversity	
Target 1	Foster, enrich and share a common nature-oriented culture
Target 2	Reinforce mobilisation and citizen initiatives
Target 3	Turn biodiversity into a positive issue for decision-makers
Strategic goal B: Preserve life and its ability to evolve	
Target 4	Preserve species and their diversity
Target 5	Build a green infrastructure including a coherent network of protected areas
Target 6	Preserve and restore ecosystems and their functioning
Strategic goal C: Invest in a common good: our ecological capital	
Target 7	Include preservation of biodiversity in economic decisions
Target 8	Develop innovations for and through biodiversity
Target 9	Develop and perpetuate financial and human resources for biodiversity
Target 10	Turn biodiversity into a driver for development and for regional cooperation in the overseas entities
Strategic goal D: Ensure sustainable and equitable use of biodiversity	
Target 11	Control pressures on biodiversity
Target 12	Safeguard sustainability of biological resource use
Target 13	Share equitably the benefits arising out of the use of biodiversity on all scales
Strategic goal E: Ensure consistency across policies and the effectiveness of actions	
Target 14	Ensure consistency across public policies on all scales
Target 15	Ensure ecological efficiency of public and private policies and projects
Target 16	Develop national and international solidarity amongst territories
Target 17	Reinforce green diplomacy and international governance for biodiversity
Strategic goal F: Develop, share and promote knowledge	
Target 18	Develop research, organise and perpetuate the production, analysis, sharing and dissemination of knowledge
Target 19	Improve expertise in order to build capacity to anticipate and to act, mobilising all sources of knowledge
Target 20	Develop and organise mainstreaming of biodiversity issues in all education and training courses

Strategic goal A: Generate the willingness to act in favour of biodiversity

The current loss of biodiversity can only be halted if biodiversity is given a higher profile in society so that change takes place. Citizens and decision-makers will only mainstream biodiversity if they are familiar with it. Urban populations, which are often cut off from nature, and rural populations, which use its services more directly, must rally to this objective of conserving a common asset. We must reconnect culturally and emotionally with the living fabric of the Earth and bring about a cultural shift in society geared towards respect for biodiversity.

This means ensuring that every individual has a body of knowledge and values which can allow them to become aware of their daily reliance on services delivered by biodiversity and inform their decisions and actions. Furthermore, in a professional context, all managers must integrate the need to preserve biodiversity into their culture and decision-making criteria.

Several levers are available to drive this change. They involve children as well as adults in the school environment, in extra-curricular activities, non-profit or professional organisations as well as the arts and culture. They involve:

- developing a love of nature: developing feelings, stimulating curiosity, touching emotions, awakening receptiveness, empathy, wonder and respect, taking the time to observe and understand**
- demonstrating that biodiversity provides indispensable services by connecting it to issues such as health, diet, employment, the economy, the environment in which we live, leisure, sport and cultural activities**
- explaining that biodiversity has a strong functional connection with other environmental issues**
- raising awareness of the need for knowledge about nature, notably by developing communications and events**
- promoting involvement, both by individuals and collectively, in preserving biodiversity**
- persuading and mobilising political and administrative decision-makers, as well as socio-economic stakeholders**

A major challenge in this strategic approach consists of establishing a link between individual activity and the general good. Biodiversity is a common good which concerns us all and whose benefits affect life on Earth and the well-being of current and future generations.

Within the framework of the strategy, all stakeholders are committed to fostering a nature-oriented culture, and to facilitating and mobilising citizen initiatives in order to make biodiversity a positive issue for decision-makers.

Target 1: Foster, enrich and share a nature-oriented culture

The objective is to ensure that biodiversity is recognised by individuals and society. This involves fostering, enriching and sharing a nature-oriented culture. This is based on global and local biodiversity and on the diversity of perceptions and uses and can take a number of different forms: local practice, knowledge about nature, real-life experiences, education received, diet, personal appeal, etc. It ensures awareness of the major role played by the living world as a source of tangible and intangible benefits for humanity and therefore a full appreciation of its value. It is not just rational, but also emotional, sensory and therefore multifaceted.

This is why this message must be disseminated on a voluntary basis by all who are involved in the transmission of culture: education in school and in the home, trips and events for young people, the media, the recreational and the arts world, etc. It should bring hope and positive and incentivising values so that it becomes a reality across the whole of society.

Target 2: Reinforce mobilisation and citizen initiatives

Citizens are fully-fledged stakeholders in the future of biodiversity through their activities and everyday choices (consumption, housing, travel, lifestyle). It is important to capitalise on and promote positive citizenship initiatives in favour of biodiversity and to build transferrable models for action on these bases. The media and social networks have a major role to play in drawing attention to and adopting these citizen initiatives.

These activities affect all citizens, but also institutions, biodiversity professionals, non profit associations, businesses, elected representatives etc.

In order to achieve a successful mobilisation it is important to promote and enhance citizen commitment. It is also important to involve citizens in collective thinking and decision-making within the framework of consultations and citizen involvement, both at national and local level, to build a capacity for expertise within society. A process enabling citizens to get involved is to be defined.

Target 3: Turn biodiversity into a positive issue for decision-makers

Biodiversity must be perceived and managed by public and private decision-makers as a powerful political asset, on a par with public health or economic development.

It is important for them to incorporate it into their decision-making for the common good, whether they act as guarantors or whether they contribute to it, in order to mainstream biodiversity in all of their actions as far upstream as possible. This can be done notably by prioritising prevention over compensation and restoration, drawing in particular on the results of the TEEB study into the economics of biodiversity and ecosystem services and the MEA on the evaluation of ecosystems.

In this way, it is also necessary to ensure that actions led by local authorities to preserve and restore biodiversity are properly valued and receive full recognition. Helping decision-makers to understand the health, economic, social and even political benefits of management which mainstreams biodiversity as a response to everyday concerns will enable them to resolve potential conflicts over use and to recognise the cost of doing nothing.

Strategic goal B: Preserve life and its ability to evolve

Ever since life began, living organisms have been evolving and adapting to changing environmental conditions on account of their diversity. However, human activities tend to curtail this capability for evolution because they cause the loss of biodiversity. Protecting biodiversity is crucial to preserving the ability of life to evolve.

All diversity, whether it be genetic, specific, ecosystemic or landscape-based, enables life to adapt. In a dynamic world, it is necessary to protect certain elements of biodiversity, but also to view it as a whole. Preserving life therefore involves focusing on the most endangered species as well as widely distributed species, on protected areas as well as other areas, on genetic diversity used by man or not currently in use. It also involves taking into account the fact that we know nothing about a large proportion of this biodiversity. It also entails reconciling the coexistence of human activities with biodiversity more effectively.

French island territories, mostly located overseas, have a very high level of endemism and a limited ability to adapt. Land species' movements are constrained by the surfaces of their natural habitats. Global changes* are likely to have a very profound impact on them and their requirements in terms of preservation of biodiversity are significant.

Within the framework of the NBS, stakeholders undertake to work to preserve genetic resources, species, ecosystems and landscapes and their ability to evolve, against the backdrop of the dynamic of global change.

Target 4: Preserve species and their diversity

The simultaneous presence of a number of living species in natural environments is one of the keys to the expression or expansion of life on Earth. One of the objectives of this strategy is therefore to monitor and maintain species diversity by focusing more particularly on species whose survival is threatened in the short or medium term. An improvement in the conservation status of these species is to be sought by implementing action plans. It is also necessary to preserve species which, while not actually in danger of extinction, play an important role in the functioning of ecosystems. Some of these, whose numbers are significantly depleted, could be the focus of population reinforcement and measures to arrest their decline. When all the necessary preconditions are met, specimens of a species which had become extinct in a given region could also be reintroduced.

For the preservation of species to be sustainable*, it must be accompanied by diversity among the individuals which comprise it and by a minimum population size. Within this diversity, the conservation of genetic diversity (animal, plant, microbial), both domestic and wild, is a key objective. In addition to its general contribution to the functioning of the biosphere, genetic diversity constitutes a resource for adaptation to climate change, forms the basis for many economic developments, and provides a living resource for research, notably in the medical field. It is necessary to reinforce its conservation both *in situ* and *ex situ*.

Target 5: Build a green infrastructure including a coherent network of protected areas

The resilience and functionality of ecosystems must be maintained or even reinforced in order to preserve the evolutionary processes required for them to adapt as well as to preserve biodiversity. Moreover, in the context of global change, species must be able to move to find better environmental conditions in which to live.

Defining, preserving and restoring the green and blue infrastructure* to good condition is a priority, although we must be alert to its impact on the movements of invasive alien species and its role as a pathway for the transmission of disease. The green and blue infrastructure (trame verte et bleue, TVB), which includes both reservoirs of biodiversity and elements ensuring connectivity across the whole infrastructure, must be designed in a coherent manner on all territorial levels. Moreover, it is necessary to incorporate this ecological infrastructure* into the regional environment, in overseas territories in particular, but also in Europe. Ecological continuities are notably based on what is termed “ordinary biodiversity”. They can also be found in urban environments, where green and blue infrastructures could be created or reinforced.

Protected areas, the key elements of this infrastructure, are one of the main tools for conserving biodiversity on a national, European and international level. Protected areas must exist in sufficient numbers, be representative of different environments and be effectively managed. The network of protected areas is required to play a key role in responding to global environmental challenges, notably the effects of climate change. It contributes to the resilience of ecosystems by mitigating impacts and maintaining the quality of services delivered by ecosystems. Therefore the construction of a network of protected areas on land and at sea, in mainland France and overseas, in an approach based on ecological coherence and solidarity, is essential to implementing a national green infrastructure.

Target 6: Preserve and restore ecosystems and their functioning

Human activities have caused the degradation of certain elements of biodiversity, which now require restoration. The preservation of terrestrial and marine ecosystems and the restoration of those which are polluted, fragmented, or disturbed must be a priority.

This degradation of ecosystems and of natural and semi-natural habitats which constitute them is a major factor in the erosion of biodiversity. By contrast, a policy to improve habitats is an effective option to ensure that ecosystems function. This functioning is essential, as it determines the production of many services which are of benefit to man: climate regulation, waste water treatment, pollinisation, etc.

Preserving and restoring ecosystems entails quantitative and qualitative commitments. This involves a mission to preserve ecosystems quantitatively, i.e. in surface area, and qualitatively, by monitoring their functionality, especially by reducing fragmentation which significantly diminishes their ability to adapt and deliver services. Ecological engineering which respects ecosystem functions must also be developed and promoted.

Strategic goal C: Invest in a common good : our ecological capital

Biodiversity is our common heritage and one of the pillars of the functioning of the biosphere. The resources which the living world provides for us enrich us and contribute to the well-being of humanity. Safeguarding this heritage and viewing it as a common asset involves a commitment to new approaches so that this richness fosters our sustainable* and equitable* development for the future.

Biodiversity is a legacy from the past which requires us to devise very long-term economic strategies. Advances in science and technology mean that we can begin to understand biodiversity and its role and to benefit from this. However our economic rationale should not end with the immediate benefits conferred by exploiting it. It must also set out to protect and enhance biodiversity, which is our common heritage.

Investing in the physical and human resources required to protect and enhance this heritage simply constitutes good management of our relationships with life on Earth. It entails demonstrating a conviction that our natural heritage is a of key importance, our “ecological capital” and a source of benefit to humanity today and for the future.

Within the framework of the NBS, stakeholders make a commitment to use over the long term the ability to adapt and evolve which forms the basis of the biological story of our planet and the resources and services which nature provides for us, without jeopardising them.

Target 7: Include preservation of biodiversity in economic decisions

Biodiversity and natural resources are affected by the current economic growth mode for which they also partially form the basis. In fact, business and economic activities more broadly, play a major role in biodiversity, either by the impacts (negative or sometimes positive) of their activities on species and natural environments, or by the benefits which they derive from the goods and services delivered by biodiversity. These costs and benefits are scarcely addressed in economic decision-making.

It is necessary to integrate biodiversity more fully into the economic sphere in order to reconcile public and private interests, ensure mainstreaming in the long term, raise awareness among businesses of their dependence on biodiversity and encourage economic stakeholders to invest in ecological capital and thus to play a role in developing this common asset.

In order to achieve this integration successfully, it is necessary first of all to reduce then withdraw incentives which harm biodiversity, to reform the tax system, develop new positive incentives, integrate the impacts on biodiversity into eco labelling, or even extend the “polluter pays” principle and enforce it more rigorously. In particular, public subsidies must be redirected in several areas to avoid contributing to the loss of biodiversity and must be subject to bio-conditionality measures.

Target 8: Develop innovations for and through biodiversity

Innovation in the field of valuing biodiversity as a source of natural technologies and as a basis for sustainable development activities must be increased. Furthermore, it is important to increase mainstreaming of biodiversity in areas in which innovation occurs, either in terms of direct or indirect impacts or through equitable sharing of the biosphere's resources. A whole new area of research and practice (for instance ecological engineering) should be promoted and structured around this concept.

Transfer of knowledge to organisations supporting innovation (companies, local authorities, non-profit associations, and various excellence clusters, etc.) must be ensured by drawing on international best practice. This will facilitate the development of new projects capable of reconciling economic and social development with respect for the environment and biodiversity.

The NBS offers a permanent framework for priority development of new concepts and projects of all types, with particular emphasis on their value-added component for overseas territories and new promotion methods.

Target 9: Develop and perpetuate resources for biodiversity

Preserving, restoring and developing ecological capital constitute a major national policy which must develop in a coherent manner for the long term. In this respect, it must have access to increased financial, human and technical resources enabling it, on the one hand, to support initiatives throughout French territories and, on the other hand, to support France's international commitments, in particularly those made in Nagoya (an increase in state funding for development focusing on biodiversity).

In order to respond to these challenges, financial contributions will need to be substantially increased, firstly on the part of public stakeholders (the state, local authorities) but also from the private sector (company biodiversity budgets, environmental sponsorship, etc.) in order to invest in the preservation of biodiversity.

Moreover, examples of major environmental policies such as water, waste and energy saving demonstrate the benefits and effectiveness of the implementation of targeted resources managed within the framework of a multi-year plan drawn up jointly by the stakeholders. In addition to ensuring consistency between activities, such resources will create synergy with initiatives implemented by various private and public operators to preserve and develop our ecological capital. It is therefore appropriate to establish a mechanism of this type for biodiversity.

A growing number of professionals are working to protect biodiversity in all spheres of activity and in a variety of organisations: businesses, researchers, teachers, non-profit associations, managers of protected areas, local authorities, organisations for social and professional integration, etc. Recent studies carried out within the framework of the green economy plan for jobs and employment identify some forty different professions and over 30,000 jobs. Significant resources must be made available to reinforce the skills of active professionals (training, tools, methods, etc..) and develop these vocational areas.

Target 10: Turn biodiversity into a driver for development and for regional cooperation in the overseas entities

Insularity, or in the case of Guyana, its geographical location, mean that overseas territories are structurally extremely dependent on imports (energy, foodstuffs, equipment, etc.) which push up the cost of living as well as creating a large carbon footprint. Overseas territories are committed to a development goal which is focused more clearly on their own potential. This is the “endogenous development” goal defined by the Interministerial Council for Overseas Territories (CIOM) on 6 November 2009.

The promotion of natural resources, in particular, is a crucial asset for endogenous economic development in overseas territories. On the one hand, biodiversity is a source of innovation and research, hence the growth of specialist research companies developing and marketing products linked to biodiversity. On the other hand, the protection and promotion of the ecological assets of overseas territories is a growth factor for tourism, especially eco-tourism, although the impacts of tourism must be kept to a minimum.

Lastly, the protection and promotion of biodiversity provides a focus for regional cooperation* between overseas territories and neighbouring countries. This involves reinforcing cooperation and coordinating action between overseas collectivities, between overseas collectivities and neighbouring countries, or with the rest of Europe. There is therefore scope to increase sharing of information and know-how for the conservation and enhancement of biodiversity within the framework of regional cooperation by broad geographic zone (Caribbean, Indian Ocean, Pacific, South America). In addition, islands are developing original strategies and models which could be shared with or even transferred to mainland situations to positive effect: adaptation to climate change, and reduction in anthropic pressures, conservation and integrated sustainable management of biodiversity in the ecosystems exploited, etc.

Strategic goal D: Ensure sustainable and equitable use of biodiversity

Many human activities have an impact on biodiversity either directly or indirectly. The artificialisation of soils reduces the surface available for nature and fragmentation of areas exacerbates this situation, notably by preventing species from moving around, physical, chemical or biological pollution modify the structure of populations and impair their potential to evolve, alien invasive species disrupt living communities, especially on islands, and harvesting of living resources does not always take their renewal into consideration. Climate change is already modifying the environment at speeds which are quite unprecedented in the history of the earth and this is likely to increase the effects of other pressures.

Some of these pressures can also exert an influence which extends beyond their immediate environment. Thus the production of goods and services and their consumption have an impact on biodiversity far beyond our frontiers, for which we must accept responsibility.

Within the framework of the NBS, stakeholders as a whole undertake to act to control these pressures, use natural resources more sparingly, take into account all the consequences for biodiversity of our lifestyle and to share equitably* the benefits which can be obtained from the use of these resources. There will be particular focus on overseas territories, which are mostly islands: competition between activities for the use of the soil and the marine environment is very fierce; many inhabitants rely on the daily use of natural resources and biodiversity there is both particularly rich and vulnerable.

Target 11: Control pressures on biodiversity

The objective is to become more familiar with these pressures, to understand their causes and effects and to initiate concrete actions to reduce them. These actions will aim to avoid new pressures, reduce existing pressures or compensate inevitable pressures. It will involve adopting a new mode of governance based on consultation* between stakeholders and ensuring that the decisions taken are observed. There are a number of possibilities: promoting and using materials with a low impact on biodiversity, limiting the artificialisation of areas, ecological transparency in transport infrastructures, good practices for preventing and combating alien invasive species, combating toxic substances and all forms of pollution. The cumulative effects of these pressures must also be monitored and taken into account. There needs to be a special focus on more fragile and endangered ecosystems such as mangrove swamps, coral reefs, primary forests, estuaries, feeding grounds, etc. and on zones particularly affected by human activity, notably overseas territories.

Target 12: Safeguard sustainability of biological resource use

This entails promoting sustainable use and management* of resources covering the use and users of natural living resources, with particular reference to fisheries, agriculture and

logging. Action should focus on all aspects of this use: better knowledge about renewal rates for these resources and the effects of their exploitation, developing production and harvesting methods which respect the environment (the concept of ecological management and an ecosystemic approach), raising awareness among consumers of the positive or negative impacts of their behaviour on biodiversity, combating wastage and making better use of waste. Activities must be carried out at all levels: local initiatives, national (through agro-environmental measures for instance, and European policy (in particular the CAP and the CFP), international cooperation, notably to promote sustainable channels and reinforce the imports of certified products.

Target 13: Share equitably the benefits arising out of the utilisation of biodiversity on all scales

The objective is to promote, reinforce and share, in a manner which is fair* for all, the benefits derived from biological diversity and ecosystem services. Some ecosystem services are actually used at a local level but many ecosystems benefit a wider collective group or even humanity as a whole (e.g. carbon dioxide fixation). Others, such as bio-prospecting, involve stakeholders distinct from those living in these ecosystems. It is a case of ensuring a fair exchange between the beneficiaries of these services and those who have contributed or are contributing to maintaining them, (for instance by implementing a legal framework in France for access to genetic resources).

This “ecological solidarity” should be implemented on different scales: between towns and rural areas, between municipalities involved in preserving local natural heritage and neighbouring municipalities who benefit from this, between regions within a country (notably in the case of France between the mainland and overseas territories), and lastly between states, with France being involved by virtue of its dual role as a supplier and user of these services.

Strategic goal E: Ensure consistency across policies and the effectiveness of action

Over the centuries public policy has evolved to create a complex structure of laws, regulations and public expenditure. Each change in this mechanism is analysed only in its specific context and contradictions between public policies inevitably arise. Political decision-makers need to choose between contradictory policy elements whilst taking into account the improvement in our knowledge about the role of living organisms in the major balances of the biosphere and about the perpetuation of an environment which is favourable to humankind.

A framework must be built which encourages ideas, allows the most effective and efficient actions to be carried out and makes it possible to ensure that other public policies do not cause irreparable damage and in particular do not harm the ability of the relevant natural resources to renew themselves. Assessments must incorporate these aspects of effectiveness and efficiency.

Achieving this effectiveness also implies acting in a way which takes into account the concerns of those who are located at a distance and with whom we sometimes interact without even being aware of it: the neighbouring region, the neighbouring country or a country on the other side of the world. The aim of the strategy is also to develop ecological solidarity and to guarantee solidarity between states based on strengthening international action.

Target 14: Ensure consistency across public policies on all scales

Certain public policies such as fragmentation of habitats, overexploitation, the propagation of alien invasive species or pollution play a role in increasing political pressures on biodiversity. Often, one aspect of this damage could be reduced without amending public policy, but new decisions are also required in the light of our awareness of the issues.

Steps must be taken to achieve greater consistency on all scales of territory (including for coastal and marine areas). This is particularly the case for instance where planning and spatial planning documents (strategies, programmes, plans) are concerned at a territorial level. Moreover, there must be good coordination between the different scales of organisation, ranging from the local to the international, particularly in the context of the territorialisation of the NBS and the current development or review of regional and local biodiversity strategies.

This consistency is reflected notably in sharing best practice, a genuine environmental evaluation which mainstreams biodiversity, and effective economic instruments. We must all commit to these principles in a clear and ambitious way at an appropriate level of responsibility and subsidiarity.

Target 15: Ensure ecological efficiency of public and private policies and projects

The aim is to ensure the widespread use of methods and tools which enable the best choices to be made in all sectors for mainstreaming biodiversity. How can we ensure that natural biological resources are used effectively? How can we guarantee that the technical choices made by the authorities, business and individuals are economically efficient and also ensure the renewal of resources used and the long-term functioning of the ecosystems which provide them?

New methods and experiments are required, such as mainstreaming biodiversity into the life cycle monitoring systems, at every level, to ensure that the development of French society is based on rigorous environmental assessments and consistent decisions on the part of economic stakeholders, ranging from the producer to the consumer. The quantity of wood, agricultural produce or sustainably sourced fibres necessary to ensure production in a business can be optimised according to the impact of the production of these resources on biodiversity. Increased population density, avoidance of the most critical biodiversity zones and respect for ecological functions and continuities facilitate improvements in the ecologically efficient use* of spaces in territories.

Target 16: Develop national and international solidarity among territories

The mechanisms regulating functioning and exchange in ecosystems transcend administrative boundaries and state boundaries. The ecological interdependence of territories is a fact and ecological solidarity is a voluntary way of acknowledging this. Thus pollutants released into a river will have an impact on the coastal environment and the activities which originated the damage should remedy it and reduce its impact, despite being located a significant distance away. Similarly, if an urban area benefits from flood prevention provided by the presence upstream of a major rural area and wants to prevent this zone from being built up, then it is only fair to expect something in exchange.

On a national level, tools for organising these forms of solidarity have already been developed in the field of water, but have still to be developed in the area of biodiversity.

In order to meet the challenges of preserving global biodiversity, international solidarity must be strengthened, ensuring greater mainstreaming of biodiversity into French development assistance by facilitating and supporting actions in favour of global biodiversity by local authorities, research bodies, NGOs and companies, and by supplementing the array of tools, methods, approaches and means available, especially in the field of innovation, to step up the French contribution in a movement for international solidarity.

Target 17: Reinforce green diplomacy and international governance for biodiversity

International action features in most of the targets of the National Biodiversity Strategy. Reinforcing green diplomacy and governance relating to biodiversity is a target in itself since it concerns stakeholders as a whole on an international scale. It responds to the need to strengthen the environmental coherence of French action abroad and to find ways of

improving the effectiveness of action in favour of biodiversity, notably by addressing sectoral policies pursued by France abroad such as trade, agriculture, forestry, education and culture, etc. This involves mobilising all public and private stakeholders.

It therefore entails involving all relevant partners – official missions, local authorities, businesses, NGOs, non-profit organisations and research bodies – each according to their own negotiating and/or implementation level, with the aim, on the one hand, of reinforcing the coherence and effectiveness of the activities of the different biodiversity agreements, their connections and complementarity and, on the other hand, of mainstreaming and better integrating biodiversity into arenas which will apply them or tackle them indirectly. On a broader scale, diplomacy must contribute to improved international governance of the environment (IPBES, WEO, notably the preservation of open sea biodiversity).

Lastly, it is necessary to reinforce the ability of the various non-governmental stakeholders (local authorities, NGOs, business, non-profit associations) to act internationally, to further consult stakeholders on international conferences and to foster more regular dialogue between development, environment and international action stakeholders.

Strategic goal F: Develop, share and promote knowledge

The connection between knowledge and decision-making must be reinforced in order to achieve greater integration of biodiversity into human activities.

Improving our knowledge of biodiversity, its origins, dynamic and its link with ecosystem services and social dynamics are key topics for the well-being of humanity and its future. Major development of multidisciplinary research is required in this field.

The development of new interfaces between stakeholders in biodiversity and the establishment of a science-society dialogue are vectors for a better definition of the issues involved by all stakeholders.

The rapid increase in questions relating to biodiversity and related issues must be accompanied by innovations to initiate new areas of research and new thinking about the knowledge available and how to promote and share it.

The NBS provides a framework for this development which will be based on the mobilisation of all knowledge whether it be from research studies, public involvement in science, local knowledge, lessons learned, managers, non-profit associations or business.

Mobilisation of expertise* which is multidisciplinary and multi-stakeholder, needs to be based on strengthening and improving the coordination of biodiversity observation networks and observatories, as well as data management and analysis bodies. Innovative approaches will facilitate the development of scenarios for changes in biodiversity in the face of local as well as global change, improved identification of sources of uncertainty and an assessment of their scope in order to provide better input into decision-making and action.

Expertise underpinned by a synthesis of validated knowledge of every type and by research results will be organised within the framework of the IPBES by mobilising the research community in interaction with stakeholders.

Furthermore, reinforcing the links between research and decision-making on different scales of governance ranging from the local to the international will make it easier to explain, inform and support public and private decision-making more clearly.

In addition, mainstreaming biodiversity into all types of training and the reciprocal introduction of key social issues into the training of naturalists will foster mutual awareness.

Target 18: Develop research, organise and perpetuate the production, analysis, sharing and dissemination of knowledge

In order to understand the ability of biodiversity to respond to global* and local change, it is necessary to improve our knowledge which is currently very patchy. This knowledge must relate to the state of biodiversity and the mechanisms involved in its dynamic and resilience, including adaptation, as well as to human activities which interact with it. The knowledge available is still inadequate, often dispersed and inaccessible to many stakeholders (research bodies, non-profit associations, business, local authorities, etc.). A research initiative designed to fill these gaps in our knowledge is essential.

New questions relating to major issues in our societies require us to rethink the way in which knowledge is produced in the field of biodiversity. It is necessary to promote multidisciplinary and multi-stakeholder synergies in order to facilitate mutual questioning and the co-construction* of science-society responses, (for instance by developing realistic projections based on socio-economic scenarios to build research strategies). Knowledge monitoring and management will be based on enhanced coordination of access to the data produced and the development of appropriate means of experimentation (“permanent study sites”), analysis and meta-analysis within a multidisciplinary framework (ranging from the natural sciences through to the social sciences and including chemistry and maths, amongst other subjects). Coordinated steps must be taken to inventory biodiversity, overcoming the hurdle of taxonomy.

Target 19: Improve expertise in order to build capacity to anticipate and act, mobilising all sources of knowledge

The mobilisation and implementation of collective expertise*, which is diverse and independent by virtue of better informed decision-making, should be strongly supported by the NBS. This collective expertise is appropriate for all levels whether it be to respond to major social questions about biodiversity on a national and international scale or to find innovative solutions to practical problems in the field. It complements the mobilisation of expertise implemented by professional organisations (and usually codified in standards), or individual experts.

This a major strategic challenge for all those involved in knowledge production, notably researchers (whose research evaluation should explicitly integrate expert appraisals that they have carried out), who must organise themselves to make biodiversity a priority with a view to a European and international structure within the framework of the IPBES. This involves creating optimal, innovative conditions for improved science-society dialogue, a closer relationship between research and expertise, and action to inform decision-making and support measures to manage biodiversity as fully as possible.

Target 20: Develop and organise mainstreaming of biodiversity issues in all education and training courses

The term biodiversity should not just be a scientific or political term, but should be embodied in a living vision which forms the basis of our national culture. This culture stems largely

from education and training which should incorporate biodiversity at appropriate levels of detail into all programmes ranging from initial education (general, higher or vocational education, where this process is incorporated into primary, junior and senior school curriculum, as well as into general, technical and vocational education), and right through to continuing education.

Training all stakeholders - from policy-makers to social and economic stakeholders to citizens - and enhancing a common base of knowledge on biodiversity, are the best way to ensure mainstreaming within the population of issues which concern the whole of humanity.

As a result, communications, law or political science experts will be better equipped to integrate into their strategic thinking the spatial and temporal scales where man and diversity interact and the importance of nature and its benefits for mankind. Engineers will be invited to take into account the biological consequences of certain technological options on a systematic basis and will learn to imitate the inventions of nature. Biodiversity research, biomedical research and public health activities will be integrated.

In more general terms, each individual, on their own scale of action, will be aware that their place in the universe forms part of the dynamic of life from which we derive benefit and for which we are responsible at our own level.

Governance, monitoring and evaluation

Since its initial phase in 2004, the NBS has been stressing the fact that concrete results in terms of preserving and enhancing biodiversity can only be achieved if “*everybody is involved. [...] Continuous striving for this active and vigilant involvement is equally crucial for the development, implementation and monitoring of the strategy*”. This is why the new NBS 2011-2020 aims to generate greater commitment from various stakeholders on all territorial scales in mainland France and in overseas territories in order to achieve the objectives set. The strategy directs, mobilises, stimulates and aggregates initiatives.

Governance principles

“Rather than viewing governance of biodiversity as a mere tool, we must now think of it as a social issue”,
French Conference on Biodiversity, Chamonix, May 2010.

The NBS is a major component of the **National Sustainable Development Strategy (SNDD)**: it observes and applies its principles for good governance. These stem from the reference framework of the territorial sustainable development projects and local Agenda 21 strategies, the Aarhus Convention, the environment charter and the framework law relating to the implementation of the Grenelle Environment Forum.

They translate as follows for the NBS:

- **shared governance** with stakeholders (state, local authorities, employers, trade unions and non-profit associations for the protection of nature) instituted by the Grenelle Environment Forum. This is based on decision-making and consultative bodies both at a national (see below) and local level¹⁰.
- **effective and increased involvement of stakeholders**, at every stage and as far upstream as possible;
- **organising** the expression of the various interests of stakeholders and coordination between different levels of decision-making (international, European, national, local);
- **continuous improvement** of the implementation of the NBS;
- **public consultations** to develop involvement in decision-making and public access to information;
- **cross-cutting approaches** designed to make policy and actions more coherent, legible and effective;
- **monitoring and evaluation** to encourage action, inform decision-making and guide change.

An NBS implemented by stakeholder commitments

Every stakeholder can contribute to the implementation of the NBS. Each stakeholder, according to their level of responsibility and scope of their skills, can develop operational

¹⁰ **At a local level**, shared governance is established through committees such as the Grenelle committees or regional green and blue infrastructure committees (to avoid creating further bodies). The local level provides good scope for adoption of issues relating to biodiversity by all those who live in the same area.

objectives which give rise, as the case may be to various projects, plans, programmes, and are accompanied in so far as possible by performance indicators.

The **State** makes a commitment to be exemplary in the exercise of its prerogatives: in line with the initial strategy, it will develop throughout the period and in a cross-cutting manner, its own commitments to the policies for which it is responsible. It will ensure that public bodies contribute to the development of operational objectives on their territorial scale. Furthermore, the state undertakes to organise the collective dynamic for the implementation of the NBS, notably through the subscription and commitment mechanism whose transparency and effectiveness it will ensure. Lastly, it will ensure the consistency of actions undertaken, their integration into other public policies on a territorial level and compliance with international agreements.

Local authorities are already implementing or will implement actions including regional strategies, action plans, projects, etc., whose scope will vary according to the size of the local authority. Existing initiatives will be integrated, notably regional biodiversity strategies (SRB) and green and blue infrastructure strategies (TVB). Like the state, they can play a dual role in setting an example and providing organisation. Commitments by overseas collectivities take into account the scope of their environmental capabilities.

Economic stakeholders and notably **businesses** can also establish action plans, for example within the framework of corporate social responsibility (CSR). They act on their own behalf or as part of groups assisted by Chambers of Commerce. Their actions take place at various territorial levels (global, national, local).

NGOs (non-profit associations, foundations), trade unions, land managers, and other stakeholders involved in the NBS: their commitments will be linked to their own approaches and responsibilities relating to training, raising awareness, supporting projects, managing territories and other activities in the field.

In addition to the targets and actions which each stakeholder defines individually, **action in partnership** by several stakeholders will contribute to achieving the NBS targets more effectively. These actions can even include initiating contributions from citizens, who by their individual behaviour (consumption, activities, commitment, etc.) could also contribute to the success of the strategy.

A platform for exchanging information between various NBS stakeholders, including both the many partners and civil society, will be implemented via a dedicated page on the Ministry for Sustainable Development website. Public debates and citizen conferences can supplement these mechanisms as required.

Monitoring and evaluation of the NBS: principles, relevant bodies and indicators

The NBS 2011-2020 is equipped with a full monitoring and evaluation system. The principles for monitoring and evaluation and the relevant authorities are as follows:

– **Monitoring and evaluating the results of the implementation of the NBS:**

An annual scorecard of monitoring indicators for the implementation of the strategy is presented to the NBS Monitoring Committee to ensure the smooth running of the mechanism for steering and organising the overall strategy implementation process.

The NBS Monitoring Committee, a consultative, steering and decision-making body, is an extension of the Review Committee. It is tasked with monitoring the National Strategy as well as the implementation of the three Nagoya Agreements¹¹ and the European strategy in France. In this respect, Committee members confer to develop “targets” which are quantitative, in so far as possible, converging with the effective implementation of the NBS. It examines the annual report produced by the NBS before its submission to parliament (cf. article 1 of the Grenelle I Act) and the NBS mid-point evaluation report. It also draws on the performance indicators for the impact of the NBS on biodiversity (see below) to provide focus for the implementation of the NBS. It evaluates and recognizes voluntary declarations of commitment by stakeholders (cf. Text box 2 in “Working together”).

– **Monitoring the impact of the NBS on biodiversity:**

The **National Biodiversity Observatory (ONB)**, created in compliance with the Grenelle I Act (article 25), is, inter alia, responsible for monitoring the effects of the NBS on biodiversity and at the interfaces between biodiversity and society. In order to do this, the ONB: a) translates the NBS strategic goals and targets into questions for which indicators can be devised; b) develops a set of indicators to monitor the overall impact of the NBS, and also additional sets of indicators with finer monitoring granularity where national issues require them; c) provides information about these indicators and makes them available to public and private decision-makers and citizens. The ONB offers indicators adapted to various types of interested party, on the various relevant scales and covering all the strategic goals and objectives of the NBS. By making this information available to all, it thus provides reliable reference points facilitating effective policy management (by decision-makers and managers) and broad, constructive democratic debate (involving citizens).

The set of indicators for the NBS are set out in a document accompanying the strategy and may develop over time. The proposed indicators stem from an initial analysis of the strategic goals and targets adopted after the NBS review process. The initial list of indicators, as well as proposals relating to overseas territories, will be put forward for discussion before the final selection is made in 2011. The indicators will subsequently be updated at an appropriate frequency for each indicator. The complete set of indicators will be published annually by the ONB.

When they are published, the ONB will explain the values obtained using the various indicators, but does not offer any comment. The interpretation of the results is restricted to the NBS Monitoring Committee.

Lastly, there are other decision-making and consultative bodies **at a national level:**

- **Grenelle Environment Forum National Sustainable Development Committee (CNDDGE):** this consultative body is associated with the development, monitoring and evaluation of the NBS. Annual NBS monitoring and evaluation reports are

¹¹ Convention on Biological Diversity Strategic Plan (including the 20 Aichi Targets); ABS protocol for access and benefit sharing of genetic resources; Strategy Resource Mobilisation.

submitted to it for transmission to parliament. Members' recommendations are attached to the reports on transmission.

- **Economic, Social and Environmental Council (CESE):** the third constitutional assembly of the French Republic. As a forum for dialogue and debate, the CESE promotes collaboration between representatives drawn from across society and ensures that they are involved in French economic, social and environmental policy. It is regularly consulted on the implementation of the NBS.

Annexe 1: Subscription to the NBS

National Biodiversity Strategy:

*constitutes the French response to the **Convention on Biological Diversity** and its strategic plan;
is linked to the **European Biodiversity Strategy** ;
constitutes one of the challenges of the **National Sustainable Development Strategy (SNDD)** ;
is a response to the **Grenelle Environment Forum** commitments*

We subscribe:

to the vision, mission and governance principles of the National Biodiversity Strategy (2011-2020):

Mission

**To preserve, restore, reinforce and value biodiversity
ensuring sustainable and equitable use.**

To involve everyone and every sector of activity, in order to succeed.

And its strategic goals and targets :

Strategic goals

**A) Generate the willingness to act
in favour of biodiversity**

**B) Preserve life and its ability to
evolve**

**C) Invest in a common good: our
ecological capital**

**D) Ensure sustainable and equitable use of
biodiversity**

**E) Ensure consistency across policies and the
effectiveness of actions**

F) Develop, share and promote knowledge

And we decide to:

- **disseminate and promote this strategy and its procedural rules through information and education within our networks and among our partners**
- **share the lessons learned from our experiences in promoting biodiversity**
- **familiarise ourselves and others with the tools proposed by the strategy in order to initiate actions;**
- **explore, within 18 months, the possibility of and the circumstances for implementing a voluntary declaration of commitment within the framework of our activities and to notify the Ministry of Sustainable Development acting as the NBS Secretariat of our decision.**

Name of subscribing organisation:

Authorised signatory within the organisation: (Name and role)

Address:.....

Designated **biodiversity correspondent** (Name and role)

Address:

Tel/Fax: Email:.....

Date, signature and organisation stamp:

Annexe 2: Results of the public consultation on the NBS

In line with the Grenelle Environment Form, the Ministry for Sustainable Development, in agreement with the Review Committee, organised a public consultation* in order to involve citizens in the development of the NBS 2011-2020. A questionnaire was made available online from 22 March to 15 April 2011 on the Ministry website. Online respondents were able to give their opinions on potential future priorities and to suggest practical steps to promote biodiversity. These opinions and suggestions were taken into consideration by the NBS Review Committee during the drafting of the Strategy.

During the three-week consultation period, 6,312 citizens took the opportunity to express their views about biodiversity and the NBS review. In the wake of the International Year of Biodiversity, this strong public response confirms that the preservation of life is now a concern shared by French society as a whole.

A strong commitment to the NBS document

Of the 22 questions addressed to those respondents, several provided an opportunity to assess the degree of commitment on the part of the public to some components of the NBS document. The results were decisive: the NBS document won the large-scale approval of internet respondents.

The NBS targets were particularly popular. The majority of respondents considered them to be "crucial" or "important"¹². The following preferences were expressed as part of the general support for the targets. Targets relating to more traditional approaches based on preserving living organisms and sustainable development were more popular. Therefore Target 6 "Preserve and restore ecosystems and their functioning" and Target 11 "Control pressures on biodiversity" emerged as the highest priorities. By contrast, targets relating to more contemporary approaches based on the valuing of biodiversity in economic terms, were met with scepticism by most respondents. For example, 19% of respondents considered Target 13 "Share equitably the benefits arising out of the use of biodiversity" to be "not important". This rejection, although relative, should be considered in relation to the hostile response of respondents to the notion of patenting living organisms, to which Target 13 could appear to be connected.

¹²Question 16 in the survey: "Please state your opinion on the following priorities which may be included in the forthcoming National Biodiversity Strategy: how do you rate the following in order of importance:" offered respondents 16 out of 20 targets from the NBS. Respondents were asked to indicate whether they found each target "crucial", "important" or "not important".

Numerous proposals and clear expectations

Although the survey process allowed citizens to provide their opinions on targeted elements of the NBS document, the survey process established by the Ministry also provided a forum for freer forms of expression.

Survey respondents were notably invited to suggest one to three courses of action: 13,824 suggestions were received in this way. This figure demonstrates the level of engagement on the part of civil society with biodiversity issues. The actions suggested were varied, both thematically and in their level of detail. Most involved raising awareness. Governance issues also attracted a great deal of attention.

A selection of these practical proposals will be used within the framework of the work on the Action Guide, a methodological resource for the implementation of the NBS. Furthermore, the NBS Review Committee, noted a number of general expectations from the subtext of responses to the consultation. They focus on:

The need for significant involvement on the part of the public authorities

A new political willingness must emerge in the sphere of biodiversity. This involves the implementation of a clear approach whose progress in the field must be concrete and verifiable. This approach involves major political decisions on key issues: agriculture, spatial development, energy, industry, etc. The role of the state and the involvement of political decision-makers is crucial. In parallel, local and regional authorities must also strive to mainstream biodiversity issues in the regions or territories.

The need to create synergies

Based on a large number of responses, several categories of stakeholder have expressed a need for recognition of their day to day commitment to biodiversity. The hunting community, farmers and members of non-profit associations in particular have voiced their opinions on this matter. There is no shortage of willingness to act. However, these groups may come into conflict, resulting in the stigmatisation of some stakeholders. In order to foster the growth of effective collective action, there must be a focus on creating synergies between stakeholders or providing the necessary arbitration mechanisms.

The need to continue to raise awareness

If society is to progress towards greater mainstreaming of biodiversity, there must be increased focus on raising awareness. Particular attention must be paid to raising awareness among young people and in this respect, schools are more crucial than ever. Less institutionalised forms of education and awareness raising should also be developed, especially with a view to creating or restoring a clear link between the general public and nature. Although steps to raise awareness must initially target children and young people, other adult groups should not be overlooked so that awareness is ultimately raised across the whole of society.

Annexe 3: Mapping between the Aichi Targets (CBD strategic plan) and the NBS targets

NBS targets	CBD Strategic Plan Goals (Aichi Targets)
<i>NBS 2011-2020</i>	CBD Target 17: By 2015, each party has developed, adopted as a policy instrument, and has commenced implementing, an effective, participatory and updated national biodiversity strategy and action plan.
<i>Target 1 Foster, enhance and share a common nature-oriented culture</i>	CBD Target 1: By 2020, at the latest, people are aware of the values of biodiversity and the steps they can take to conserve it and use it sustainably.
<i>Target 3 Turn biodiversity into a positive issue for decision-makers</i>	CBD Target 2: By 2020, at the latest, biodiversity values have been integrated into national and local development and poverty reduction strategies and are being incorporated into national accounting, as appropriate, and reporting systems
<i>Target 4 Preserve species and their diversity</i>	CBD Target 12: By 2020, the extinction of threatened species has been prevented and the conservation status, particularly of those most in decline, has been improved and sustained.
	CBD Target 13: By 2020, the genetic diversity of cultivated plants, and farmed and domesticated animals and of wild relatives, including other socio-economically valuable species, is maintained and strategies have been developed and implemented for minimising genetic erosion and safeguarding their genetic diversity.
<i>Target 5 Build a green infrastructure including a coherent network of protected areas</i>	CBD Target 11: By 2020, at least 17% of terrestrial and inland water areas and 10% of marine and coastal areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved through effectively managed, ecologically representative and well connected systems of protected areas and other effective area-based conservation measures, and integrated into wider landscapes and seascapes.
<i>Target 6 Preserve and restore ecosystems and their functioning</i>	CBD Target 11: By 2020, at least 17% of terrestrial and inland water areas and 10% of marine and coastal areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved through effectively managed, ecologically representative and well connected systems of protected areas and other effective area-based conservation measures, and integrated into wider landscapes and seascapes.
	CBD Target 14: By 2020, ecosystems that provide essential services, including services related to water, and contribute to health, livelihoods and well-being, are restored and safeguarded, taking into account the needs of women, indigenous populations and the poor and vulnerable.
	CBD Target 15: By 2020, ecosystem resilience and the contribution of biodiversity to carbon stocks has been enhanced through conservation and restoration, including restoration of at least 15% of degraded ecosystems, thereby contributing to climate change mitigation and adaptation and to combating desertification.
<i>Target 7 Include preservation of biodiversity in economic decisions</i>	CBD Target 2 CBD: By 2020, at the latest, the values of biodiversity are integrated into national and local development and poverty reduction strategies and integrated into national accounts, where required and reporting systems
	CBD Target 3: By 2020 at the latest, incentives, including subsidies harmful to biodiversity, are eliminated, phased out or reformed in order to minimize or avoid negative impacts, and positive incentives for the conservation and sustainable use of biodiversity are developed and applied consistent and in harmony with the terms of the Convention and other relevant international obligations, taking into account national socio-economic conditions.
<i>Target 8 Develop innovations for and through biodiversity</i>	CBD Target 4: By 2020, at the latest, governments, business and stakeholders at all levels have taken steps to achieve or have implemented plans for sustainable production and consumption and have kept the impacts of use of natural resources well within safe ecological limits.
	CBD Target 18: By 2020, traditional knowledge, innovations and practices of indigenous and local communities relevant for the conservation and sustainable use of biodiversity and their customary use of biological resources are respected subject to national legislation and relevant international obligations and fully integrated and reflected in the implementation of the Convention, with the full and effective participation of indigenous and local communities at all relevant levels.
	CBD Target 19: By 2020, knowledge, the science base and technologies relating to biodiversity, its values, functioning, status and trends, and the consequences of its loss, are improved, widely shared and transferred, and applied.
<i>Target 9 Develop and perpetuate resources for biodiversity</i>	CBD Target 20: By 2020, at the latest, the mobilisation of financial resources for effectively implementing the Strategic Plan for Biodiversity 2011-2020 from all sources and in accordance with the consolidated and agreed process in the Strategy for Resource Mobilisation should increase substantially from the current levels. This target will be subject to changes contingent to resource needs assessments to be developed and reported by Parties.
<i>Target 11 Control</i>	CBD Target 5: By 2020, the rate of loss of all natural habitats, including forests, is at least halved, and where feasible brought close

<i>pressures on biodiversity</i>	to zero, and degradation and fragmentation is significantly reduced.
	CBD Target 8: By 2020, pollution, including from excess nutrients has been brought to levels that are not detrimental to ecosystem function and biodiversity.
	CBD Target 9: By 2020, alien invasive species and pathways are identified and prioritized, priority species are controlled or eradicated and measures are in place to manage pathways to prevent their introduction and establishment.
	CBD Target 10: By 2015, the multiple anthropogenic pressures on coral reefs and other vulnerable marine and coastal ecosystems impacted by climate change or ocean acidification are minimised, so as to maintain their integrity and functioning
<i>Target 12 Safeguard sustainability of biological resource use</i>	CBD Target 4: By 2020, at the latest, governments, business and stakeholders at all levels have taken steps to achieve or have implemented plans for sustainable production and consumption and have kept the impacts of use of natural resources well within safe ecological limits.
	CBD Target 6: By 2020, all fish and invertebrate stocks and aquatic plants are managed and harvested sustainably and legally, and by applying ecosystem-based approaches, so that overfishing is avoided, recovery plans and measures are in place for all depleted species, fisheries no longer have significant adverse impacts on threatened species and vulnerable ecosystems and the impacts of fisheries on stocks, species and ecosystems are within safe ecological limits.
	CBD Target 7: By 2020, zones under agriculture, aquaculture and forestry are managed sustainably, ensuring conservation of biodiversity.
<i>Target 13 Share equitably the benefits arising out of the utilisation of biodiversity on all scales</i>	CBD Target 16: By 2015, the Nagoya Protocol on Access to Genetic Resources and Fair and Equitable Sharing of Benefits Arising from their Utilization is in force and operational, consistent with national legislation.
<i>Target 14 Ensure consistency across public policies on all scales</i>	CBD Target 3: By 2020 at the latest, incentives, including subsidies harmful to biodiversity, are eliminated, phased out or reformed in order to minimize or avoid negative impacts and positive incentives for the conservation and sustainable use of biodiversity are developed and applied consistent and in harmony with the terms of the Convention and other relevant international obligations, taking into account national socio-economic conditions.
	CBD Target 17: By 2015, each party has developed, adopted as a policy instrument, and has commenced implementing, an effective, participatory and updated national biodiversity strategy and action plan.
<i>Target 18 Develop, research, organise and perpetuate the production, analysis, sharing and dissemination of knowledge</i>	CBD Target 18: By 2020, traditional knowledge, innovations and practices of indigenous and local communities relevant for the conservation and sustainable use of biodiversity and their customary use of biological resources are respected subject to national legislation and relevant international obligations and fully integrated and reflected in the implementation of the Convention, with the full and effective participation of indigenous and local communities at all relevant levels.
	CBD Target 19: By 2020, knowledge, the science base and technologies relating to biodiversity, its values, functioning, status and trends, and the consequences of its loss, are improved, widely shared and transferred, and applied.

The 20 Aichi Targets are reflected in one or more of the NBS goals which are formulated in more general terms.

This is not the case for the following NBS goals: *Target 2: Reinforce mobilisation and citizen initiatives, Target 10: Turn biodiversity into a driver for development and for regional cooperation in the overseas entities, Target 15: Ensure ecological efficiency of public and private projects, Target 16: Develop national and international solidarity amongst territories, Target 17: Reinforce green diplomacy and international governance for biodiversity, Target 19: Improve expertise in order to build capacity to anticipate and act, mobilising all sources of knowledge, Target 20: Develop and organise mainstreaming of biodiversity issues in all education and training courses.*

Abbreviations and acronyms

ABS: Access and benefit sharing of genetic resources.

CAP: Common Agricultural Policy.

CBD: Convention on Biological Diversity.

CESE: *Comité économique et social et environnemental*, Economic, Social and Environmental Committee.

CFP: Common Fisheries Policy.

CIOM: *Conseil interministériel de l'outre-mer*, Interministerial Council for Overseas Territories.

CNDDGE: *Comité national du développement durable et du Grenelle de l'environnement*, Grenelle Environment Forum National Sustainable Development Committee.

CSR: Corporate Social Responsibility.

IPBES: Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services.

MEA: Millennium Ecosystem Assessment.

MEDDTL: *Ministère de l'écologie, du développement durable, des transports et du logement*, Ministry for Ecology, Sustainable Development, Transport and Housing.

ONB: *Observatoire national de la biodiversité*, National Biodiversity Observatory.

SNB: *Stratégie nationale pour la biodiversité*, National Biodiversity Strategy.

SNDD: *Stratégie nationale de développement durable*, National Sustainable Development Strategy.

SRB: *Stratégie régionale pour la biodiversité*, Regional Biodiversity Strategy.

TEEB: The economics of ecosystems and biodiversity.

TVB: *Trame verte et bleue*, Green and blue infrastructure.

IUCN: International Union for Conservation of Nature.

WEO: World Environment Organisation.

WWF: World Wildlife Fund.

Glossary

Biodiversity: designates the diversity of living organisms. This diversity is reflected in and contributes to all levels of organisation of life: diversity of species, diversity within a species or between the individuals comprising a species at a given point and ecological diversity involving the association of species (biocenosis) in a particular environment (biotope).

Co-construction: A process of reaching a decision on a joint basis involving all stakeholders based on discussions and consultations deemed useful by the stakeholders; the authority remains responsible for arbitration on points where there is no consensus.

Discussions: A broad approach involving asking for advice on a plan by consulting parties interested in the decision, before it is taken. The authority wishing to make a decision presents it to the people concerned and initiates a dialogue with them. The authority is free to make their own decision. Discussions can take place very early in the decision-making process.

Consultation: The process by which decision-makers ask the advice of the population in order to establish their opinions, expectations and needs at any stage of a project. Those consulted do not however have any guarantee that their contributions will be taken into account in the final decision.

Ecological capital: resources such as minerals, plants, animals and air in the terrestrial biosphere viewed as means of production of ecosystem goods and services: oxygen production, natural water treatment, prevention of erosion, crop pollination and even the provision of leisure services. It is one of the 5 types of capital producing wealth, together with human, financial, social and physical capital.

Ecological effectiveness: the ability of a project to minimise its negative impact on biodiversity and maximise positive impacts (in the same way as economic effectiveness involves achieving the maximum return from economic capital).

Ecological infrastructure: This concept reflects the will to integrate, preserve and restore natural spaces in town and country planning and management decisions and to recognize the important contribution they make to human societies as regards the services they deliver, on a par with man-made infrastructures.

Ecological solidarity: a close interdependence between human beings, between humans and the natural or built environment of two geographic areas be they adjacent or not (R. Mathevet, CNRS report). It designates both a “common destiny” which exists between man and his environment and the willingness to influence the various components of this community in a positive way.

Ecosystem services: the utilisation by mankind of the ecological functions of certain ecosystems through uses and regulations which frame this use. In the interests of simplicity, we say that ecosystems “deliver” or “produce” services. However, an ecological function only takes the form of a service to man if social practices recognise the usefulness of the ecological function for human well-being. For example the production of oxygen in the air, natural water treatment, resources which feed domestic or hunted animals, the activity of crop pollinators, micro-organisms which produce and maintain soil, natural carbon sequestration in wood, soil, the oceans and subsoils, or continuous recycling of nutrients and of the necromass by animals, fungi and bacteria.

Equitable: whose benefits are shared fairly.

Expertise: assistance with decision-making based on technical or scientific facts, in circumstances where a decision-maker finds themselves faced with issues which are beyond the scope of their knowledge.

Global change: a concept covering changes in the biosphere (such as climate change and change of soil use) and changes in societies caused by globalisation.

Green and blue infrastructure: a structural approach which consists of including the preservation and restoration of ecological continuities in spatial planning decisions. It includes a green component, which refers to natural and semi-natural terrestrial environments, and a blue component, which refers to the aquatic and wetland network (rivers and streams, wetlands, etc.).

Knowledge: the sum of known things. Scientific knowledge is one of the main forms of knowledge. There are many types of knowledge which, without being scientific, are nevertheless appropriate for their purpose: know-how (arts and crafts, being able to swim etc.), speaking foreign languages, familiarity with traditions, legends, customs or ideas relating to a particular culture (traditional knowledge) or even knowledge relating to a given society or humanity in general (knowing what a hammer is for and that water extinguishes fire).

Nature: the physical and biological environment in which human societies evolve. This is often contrasted with the notion of culture, which is peculiar to humankind; nature is generally considered to lie outside culture.

Regional cooperation: cooperation between several territories in the same part of the world, for example between countries and overseas collectivities in the Caribbean or Pacific, etc.

Sustainable: which can last over the long term. “Sustainable development is development which meets the needs of the present without compromising the ability of future generations to meet their own needs” .



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