**Projeto BRA/12/G31**

Planejamento Nacional da Biodiversidade para Apoio à Implementação do Plano Estratégico da CDB 2011-2020 no Brasil

**Consultora: Agnes L. Velloso**

**Produto 4 – Parte III do 5º RN para a CDB**

**09 julho 2014**

**BRAZIL**

**Fifth National Report to the CBD**

**DRAFT** – **NOT** TO BE DISCLOSED

09 July 2014

**Part III - Progress towards the 2015 and 2020 Aichi Biodiversity Targets and contributions to the relevant 2015 Targets of the Millennium Development Goals**

**3.1. Progress toward the National and Aichi 2020 Biodiversity Targets**

The assessments of the degree of biodiversity target achievement presented in this section and in the sections below represent a preliminary evaluation based on available data collected for this report. Brazil is currently in the process of developing specific indicators for the National Biodiversity Targets and a monitoring system to allow adequate and continuous measurement of status of target achievement.

Estimated status of Achievement of the National and Aichi 2020 Biodiversity Targets used a scale of five levels: 0 (insignificant or no progress), 25% (low progress), 50% (medium progress), 75% (advanced progress), and 100% (target met), shown graphically in the preliminary analysis provided below.

|  |  |
| --- | --- |
| **National Target 1:** By 2020, at the latest, Brazilian people are aware of the values of biodiversity and the steps they can take to conserve and use it sustainably. | circulo_na_metade.wmf |
| **Global Aichi Target 1:** By 2020, at the latest, people are aware of the values of biodiversity and the steps they can take to conserve and use it sustainably. | circulo_na_metade.wmf |

Various efforts are being led by the Ministry of the Environment, other governmental and non-governmental agencies and the private sector to generate and disseminate knowledge on biodiversity and biodiversity value, such as the Brazil TEEB Initiative (see section 1.2.1.2), to contribute to promote and enhance the integration of biodiversity into sectoral policies and programs, as well as a better understanding on the importance and value of biodiversity and ecosystem services and their conservation and sustainable use.

A series of public opinion polls (1992, 1997, 2001, 2006 and 2012) commissioned by the Ministry of the Environment indicated that public awareness of the natural environment and biodiversity, as well as their importance to human lives and activities has increased in Brazil along the last 20 years (see section 1.1). The most recent poll (2012) indicates that 50% of Brazilians are aware of biodiversity loss in comparison to 43% in 2006. Additionally, the 2012 poll indicated that the environment holds the 6th place in the list of main concerns of the Brazilian population, after health, violence, unemployment, education, and politicians, in comparison to the 12th place in 2006 and no mention in 1992. This series of polls also demonstrated that Brazilians consider deforestation as the main environmental problem, and demonstrate concern with a number of other important environmental impacts, such as water pollution; air pollution; increase of solid waste generation; wasteful consumption of water; ozone layer; and climate change; among other aspects. These results are supported by the most recent poll carried out in 2014 by UEBT Biodiversity Barometer[[1]](#footnote-1), which concluded that in Brazil, 90% of poll participants had already heard about biodiversity and, among the seven countries assessed by the poll (France, Germany, United Kingdom, USA, Brazil, Vietnam and Colombia), Brazil presented the higher number of correct definition on what is understood as biodiversity (50%). Additionally, UEBT’s poll indicated that 96% of Brazilian consumers buy cosmetic products containing natural ingredients, 89% expect companies to comply with their policies on respecting biodiversity, and 88% of interviewees believe they should personally contribute to nature conservation.

Numerous initiatives at the federal and state level also seek to promote knowledge, production and use of native biodiversity, disseminate information on endangered species and the importance of environmental conservation, reforestation incentives and programs, environmental education programs, among other similar initiatives. A few examples would be SiBBr; the Pact for the Restoration of the Atlantic Forest; the MDS Organic and Sustainable Brazil Campaign during the World Cup 2014; state, federal and private sector environmental education programs implemented through schools, TV and radio programs and other communications channels; among many others.

|  |  |
| --- | --- |
| **National Target 2:** By 2020, at the latest, biodiversity values, geo-diversity values, and socio-diversity values have been integrated into national and local development and poverty reduction and inequality reduction strategies, and are being incorporated into national accounting, as appropriate, and into planning procedures and reporting systems. | circulo_na_metade.wmf |
| **Global Aichi Target 2:** By 2020, at the latest, biodiversity values have been integrated into national and local development and poverty reduction strategies and planning processes and are being incorporated into national accounting, as appropriate, and reporting systems. | circulo_na_metade.wmf |

As mentioned for Target 1, various efforts are being carried out to generate and disseminate knowledge on biodiversity value to different target audiences, such as the Brazil TEEB Initiative, PESE and TeSE (see section 1.2.1.2), which are now generating initial results and should significantly contribute, within the next few years, to a better understanding among private and governmental economic sectors of the value of biodiversity.

Since 2002, Brazil is investing in the integration of an ecosystem approach into economic development, by coordinating and promoting the development of Ecological-Economic Zoning initiatives with the objective to reduce potential conflicts over resource use and prevent excessive impact on ecosystems and biodiversity. Resulting maps and guidelines are made available as territorial planning tools to guide the development of policies, infrastructure and economic development investments, and land use with a view to the sustainable use of natural resources (see section 1.4.5). The periodically updated Map of Priority Areas for the Conservation and Sustainable Use of Brazilian Biodiversity is another important tool to inform development policies.

Additionally, various federal policies have been established and implemented in the past several years to promote biodiversity-based and socio-biodiversity products, extractive activities, family rural production, governmental food acquisition programs, agrobiodiversity, traditional knowledge and products, and other sectors and themes targeting the sustainable use of biodiversity and poverty and inequality reduction (see sections 1.2.1.2, 1.2.4 and 1.4.7).

|  |  |
| --- | --- |
| **National Target 3:** By 2020, at the latest, incentives harmful to biodiversity, including the so-called perverse subsidies, are eliminated, phased out or reformed in order to minimize negative impacts. Positive incentives for the conservation and sustainable use of biodiversity are developed and applied, consistent and in harmony with the CBD, taking into account national and regional socio economic conditions. | redfourthgreen2 |
| **Global Aichi 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 Convention and other relevant international obligations, taking into account national socio economic conditions. | redfourthgreen2 |

As a contribution to SBSTTA-18, May and Weiss (2014)[[2]](#footnote-2) prepared an analysis of Brazil’s initiatives to address perverse subsidies and positive incentives for the conservation and sustainable use of biodiversity. The analysis concludes that Brazil is successfully implementing several important initiatives in efforts to mainstream values of biodiversity and ecosystem services in fiscal and credit policies. These have included: the creation of a national initiative for the conservation and sustainable use of the Natural Capital (the national, regional and corporate TEEB programs); a GEF project for mainstreaming of biodiversity conservation and sustainable use in key economic sectors; the Green Protocol (*Protocolo Verde*) to internalize environmental sustainability criteria within the public banking system; the creation of the Low Carbon Agriculture Plan (*Plano ABC*); a Resolution of the National Monetary Council – CMN (Resolution 3545/2008) to restrict credit to producers that do not comply with environmental regulations in the Amazon biome; the Federal Prosecutors pact with slaughterhouses and supermarkets to avoid buying meat from deforested areas (winner initiative of the public policy innovation prize in 2013); and the Amazon Fund for projects that contribute to protect Amazonian biodiversity; the Ecological VAT (*ICMS Ecológico*) that reallocates tax revenues to municipalities according to the proportion of protected area in municipal territory and other environmental criteria; among others.

However, these exemplify positive initiatives which compensate, to some degree, the prevailing negative incentives. Governmental guidelines for the upcoming investment period favor structural change in the underlying forces that continue to stimulate habitat modification. Publicly supported investments in hydroelectric power plants, roads and other infrastructure act as strong incentives to unchecked expansion in deforestation and other changes in land use arising from increased accessibility, thus contributing to forces that reduce biodiversity. Brazil plans to invest in nearly 500 new hydroelectric dams, of which 182 are already in operation, and agriculture continues to impact land use conversion, climate, water availability, natural predators and pollinators. A number of incentive measures to the agricultural sector have been implemented whose results have been contrary to policies to combat the loss of biodiversity and habitats. Despite marine and coastal protected areas, fish stocks are also declining due to incentives to overfish, and riverine, wetland and mangrove biodiversity are being modified by dams and other changes in water regimes, aquaculture in mangrove areas, and coastal development. The Rural Land Tax (ITR), although not very significant, serves as a disincentive for improper land use as ITR is higher for “unproductive” land than for land under agricultural production, even though the former may contribute significantly for the protection of natural capital. The tax exemption for legally required Permanent Protection Areas and Legal Reserves in rural properties and for Private Reserves of the Natural Heritage – RPPN, compensates in part for the opportunity cost associated with more intensive land uses, but it is so minuscule in value that its positive incentive is minimal.

Additional examples of Brazilian efforts to develop and implement tools to promote and enable the integration of environmental aspects in development projects and the production sector would be: the preparation of regional and state Environmental-Economic Zoning to guide development decision making; socio-environmental programs such as the Green Grant (*Bolsa Verde*), Water Producer Program (*Produtor de Água*) and Amazonas state’s Forest Grant (*Bolsa Floresta*); the Minimum Price Policy for Sociobiodiversity-based Products – PGPMBio; and the federal Food Acquisition Program – PAA and National Program for School Nutrition – PNEA (see sections 1.2.1.2, 1.4.1.1, 1.4.7).

|  |  |
| --- | --- |
| **National Target 4:** By 2020, at the latest, governments, private sector and stakeholders at all levels have taken steps to achieve or have implemented plans for sustainable production and consumption to mitigate or prevent negative impacts from the use of natural resources. | circulo_na_metade.wmf |
| **Global Aichi 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. | circulo_na_metade.wmf |

Various important initiatives and policies for the achievement of this Target have been developed and launched in the past several years at different governmental levels and by the private sector, although the degree and scope achieved to-date in implementation varies greatly.

The Action Plan for Sustainable Production and Consumption – PPCS (*Plano de Ação para Produção e Consumo Sustentáveis*) provides guidance for the governmental and production sectors, and general society actions to direct Brazil toward more sustainable production and consumption patterns. The Plan creates synergy between environmental and development policies, particularly the National Climate Policy, National Solid Waste Policy and *Brasil Maior* Plan, contributing to the achievement of their targets through sustainable production practices and consumer’s engagement to this initiative. The following priorities were selected for the first phase of PPCS (2011-2014): Education for sustainable consumption; Sustainable public acquisitions; Environmental Agenda in Public Administration – A3P (*Agenda Ambiental na Administração Pública*); Increase solid waste recycling; Sustainable retail trade; and Sustainable construction.[[3]](#footnote-3)

Sustainable public acquisitions, responsible for an estimated 10% of the Brazilian GDP, have been increasingly used as a strategy to promote socially and environmentally sustainable production. In 2010, the publication of Normative Ruling 1/2010 by the Ministry of Planning (MPOG) represented an important advance by defining the environmental sustainability criteria to be applied in public procurement of goods and services, and contracts for public infrastructure works. For example, this legal instrument rules on criteria for the contracting of engineering services, with a view to save on the maintenance and operation of buildings, reduction of energy and water consumption, and use of technologies and materials that reduce environmental impact.[[4]](#footnote-4)

The National Policy on Solid Waste (PNRS – *Política Nacional de Resíduos Sólidos*), established in 2010, has the objective of promoting the adoption of sustainable patterns of production and consumption as well as providing incentives to recycling industries. An Inter-ministerial Committee and an Advisory Committee for the Implementation of Reverse Logistics Systems assist in the implementation of this policy. The preceding Decree No. 5940 published in 2006 is aligned with this policy, establishing the differentiated collection of recyclable waste from the federal public administration and its destination to recycling cooperatives and associations.[[5]](#footnote-5)

An exponential growth of engagement with the Environmental Agenda in Public Administration (A3P) was observed in federal, state and municipal agencies: in 2007, 84 institutions had formally adopted A3P guidelines, increasing to 359 institutions in 2012. This dissemination of socio-environmental responsibility initiatives among public institutions demonstrate significant governmental advances in the commitment with principles preconized by the National Environment Policy, as well as with international recommendations, particularly those of the United Nations Conference on the Environment and Development (Eco 92)[[6]](#footnote-6).

Additionally, the Business Biodiversity Initiative – MEBB (*Movimento Empresarial pela Biodivesidade – Brasil*), launched in August 2010, is a pioneer inter-sectoral initiative led by the private sector, with the objective of engaging the business sector in the conservation and sustainable use of biodiversity. The initiative also seeks to establish a dialogue with the government, academia and other sectors of society to improve the legal framework on themes such as the valuation and access to biodiversity; sharing of benefits; payment for environmental services; technological innovation; research; and other themes that influence the manner in which companies may enhance their business under the directives of a sustainable economy. By the end of 2010, over 60 companies and institutions had joined MEBB. Its members were represented in the Dialogues on Biodiversity in 2011, and in the same year MEBB became a partner of the Biodiversity Barometer and the Union for Ethical Bio Trade – UEBT.[[7]](#footnote-7)

|  |  |
| --- | --- |
| **National Target 5:** By 2020, the rate of loss of native habitats is reduced by at least 50% (in comparison with the 2009 rate) and, as much as possible, brought close to zero, and degradation and fragmentation is significantly reduced in all biomes. | circulo_na_metade.wmf |
| **Global Aichi Target 5:** By 2020, the rate of loss of all natural habitats, including forests, is at least halved and where feasible brought close to zero, and degradation and fragmentation is significantly reduced. | circulo_na_metade.wmf |

Although deforestation rates are in general lower than in previous years (see 4th National Report to the CBD), deforestation data from 2009 to 2013 is currently being revised for all biomes by the Project on Satellite Monitoring of Deforestation in Brazilian Biomes – PMDBBS. The most recent year for which revised data is available for all biomes is 2009. According to this data, deforestation in 2009 varied among biomes between 0.02% and 0.37% of total biome size, with the Atlantic Forest, for which the strictest anti-deforestation legislation is in place, being the least deforested and the Cerrado, where agricultural pressures are currently most intense, being the most affected by deforestation (see section 1.3.3). The reducing trends in deforestation rates observed in recent years suggest advances towards Target achievement, even though the revised data is not yet available to allow an accurate analysis.

Nevertheless, the still high deforestation rates in the Amazon and Cerrado biomes underline the importance of the specific programs created under the National Policy on Climate Change (PNMC) to reduce greenhouse gas emissions through deforestation and land use change in these two biomes – respectively the PPCDAm and the PPCerrado (see section 1.4). In 2010, these two biomes combined were responsible for 89.4% of the greenhouse gas emissions of the forest sector. Deforestation in the Amazon has been showing a reducing trend since 2004, but efforts must continue to achieve deforestation reduction targets. Pará, Mato Grosso and Rondônia are the top contributors to Amazon deforestation rates.

On a different spatial and ecological perspective, an analysis of the Areas Susceptible to Deforestation (ASD – *Áreas Suscetíveis à Desertificação*) indicate that a total of 2.7% of ASD were deforested during the 2002-2008 period corresponding to an average annual rate of 0.45%, while a 0.33% deforestation rate was observed in the 2008-2009 period (Table 34).[[8]](#footnote-8)

**Table 34**: Deforested areas and remaining native vegetation cover in ASD of the Caatinga, Cerrado and Atlantic Forest biomes.

|  |  |  |
| --- | --- | --- |
|  | **Area (km2)** | **Area (%)** |
| **Deforested area** |  |  |
| Before 2002 | 555,532 | 41.10 |
| 2002 – 2008  | 36,576 | 2.71 |
| 2008 – 2009  | 4,510 | 0.33 |
| **Remaining native vegetation** |  |  |
| Before 2002 | 785,331 | 58.10 |
| 2002 – 2008  | 748,755 | 55.40 |
| 2008 – 2009  | 744,245 | 55.06 |

**Source:** IBAMA/PMDBBS data in: MMA-PNIA 2012, unpublished report. Theoretical reference, composition and synthesis of indicators for the pilot version (in Portuguese). PNIA – National Panel on Environmental Indicators.

|  |  |
| --- | --- |
| **National Target 6:** By 2020 all stocks of any aquatic organism are managed and harvested sustainably, legally and applying ecosystem based approaches, so that overharvesting is avoided, recovery plans and measures are in place for depleted species, fisheries have no significant adverse impacts on threatened species and vulnerable ecosystems, and the impacts of fisheries on stocks, species and ecosystems are within safe ecological limits, when scientifically established. | red2 |
| **Global Aichi Target 6:** By 2020 all fish and invertebrate stocks and aquatic plants are managed and harvested sustainably, legally and applying ecosystem based approaches, so that overfishing is avoided, recovery plans and measures are in place for all depleted species, fisheries have no significant adverse impacts on threatened species and vulnerable ecosystems and the impacts of fisheries on stocks, species and ecosystems are within safe ecological limits. | red2 |

The general understanding is that fish stocks, particularly in the coastal and marine zone, are at their limit, but the capacity of fishing vessels and tools has increased, as reflected in the increase in fisheries production (see section 1.2.1.4). Considering this limit, the substitution of part of extractive fisheries with the increasing aquaculture production seems to be an imperative strategy for conservation of fisheries resources. Nevertheless, this simple substitution by itself will not ensure sustainability: an effective network of coastal and marine protected areas that combine sustainable use favoring artisanal fisheries with the full protection regime is essential to allow the conservation of highly sensitive or nursery areas, thus enabling the recovery of fish stocks within and around protected areas.[[9]](#footnote-9)

A number of legal instruments (e.g., Normative Rulings) usually published by MMA also seek to establish more sustainable patterns in fisheries activities by defining the list of threatened aquatic species (marine and freshwater) and establishing no-fishing periods to protect reproduction of species targeted by fisheries activities. Joint efforts among federal and state agencies also seek to monitor and enforce compliance of fisheries activities with sustainability instruments.

Nevertheless, stronger support to actions planned under the REVIMAR Program (see section 1.2.1.4) would be strategic to obtain reliable (and currently lacking) up-to-date crucial data on the current status of living marine resources and the marine habitat which can support decision making, and significantly contribute to the adequate protection and sustainable use of the coastal and marine zone and its living resources. The continuation of complementary efforts for the conservation and monitoring of sensitive habitats and endangered species, such as the Species Conservation Action Plans under ICMBio and the ReefCheck Brazil Program (see section 1.2.1.4), is also crucial to ensure sustainability of these resources.

Continental aquaculture can be an important tool for the conservation of both marine and continental fisheries resources, but the widespread use of alien species, or Brazilian species outside of their original range, must be seen with caution. Increasing extractive production of alien species such as tilapia clearly indicates their strong presence in open natural habitats. The current success of aquaculture production of some native species should encourage investments in research and development targeting other native fish species of current or potential economic value, to diversify production and make local native species available as a viable economic option to aquaculture producers.

|  |  |
| --- | --- |
| **National Target 7:** By 2020 the incorporation of sustainable management practices is disseminated and promoted in agriculture, livestock production, aquaculture, silviculture, extractive activities, and forest and fauna management, ensuring conservation of biodiversity. | circulo_na_metade.wmf |
| **Global Aichi Target 7:** By 2020 areas under agriculture, aquaculture and forestry are managed sustainably, ensuring conservation of biodiversity. | redfourthgreen2 |

Brazil is seeking the ways and means for the sustainability of both the medium scale agricultural production (with initiatives such as the Low Carbon Agriculture Plan) and the family and community-based production of small scale agriculture, extractive activities, and organic/agroecological production through a number of policies and initiatives (see sections 1.2.1.2, 1.4.1.1, and 1.4.7).

Other notable initiatives also collaborate to Target 7 such as the Green Arc Operation (*Operação Arco Verde*) coordinated by MMA and the President’s Office, which promotes sustainable production models in the priority municipalities for deforestation reduction in the Legal Amazon (those in the area previously known as the Deforestation Arc); provides incentives for the transition from resource-depleting production models to sustainable production models; promotes capacity building of rural producers; and complements actions for deforestation control.

The National Plan on Agroecology and Organic Production, Minimum Price Policy for Sociobiodiversity-based Products – PGPMBio; and the federal Food Acquisition Program – PAA and National Program for School Nutrition – PNEA, in addition to several other federal policies to promote sustainable extractive and agricultural production, are examples of initiatives with a national scope that also contribute to this target (see sections 1.2.1.2, 1.2.4 and 1.4.7).

|  |  |
| --- | --- |
| **National Target 8:** By 2020, pollution, including from excess nutrients, has been brought to levels that are not detrimental to ecosystem function and biodiversity. | redfourthgreen2 |
| **Global Aichi Target 8:** By 2020, pollution, including from excess nutrients, has been brought to levels that are not detrimental to ecosystem function and biodiversity. | redfourthgreen2 |

Despite some recent progress to expand the provision of domestic wastewater collection and treatment services, treated and untreated domestic wastewater are still an important source of water pollution, particularly in urban areas. This source is also a relevant contribution to organic loads in Brazilian water bodies, together with agriculture runoff (see sections 1.2.1.3 and 1.3.1). In 2010, 15.2% of the main Brazilian rivers presented some type of critical status: 10.9% faced critical conditions regarding water quantity, 1.5% regarding water quality, and 2.8% faced critical conditions regarding both water quantity and quality.

The collection and treatment of solid waste is a responsibility of the municipality and historical data is very incomplete on this theme, with a varying number of municipalities providing data in different years. Nevertheless, available data for the period 2003-2011 indicate an increase in the number of municipalities that offer the service of domestic solid waste collection from 95 in 2003 to 1,288 municipalities in 2011 (out of a total of 5,565 municipalities). The average *per capita* generation of solid waste seems to vary between 0.72 and 1.30 kg/habitant/day. Where present, the service of solid waste collection addresses between 95.3 to 100% of the urban population, although the reported rates of recycling compared to total waste collected have not yet surpassed 5.79% (see section 1.3.7).

Brazil still lacks efficient air pollution monitoring systems capable of providing continuous, sufficient and reliable data to allow the construction of adequate and comparable local or regional diagnoses on air quality.[[10]](#footnote-10) Nevertheless, Brazil has already brought down to zero the consumption of CFCs in 2010, and of methyl bromide in 2006; and although still high, greenhouse gas emissions have reduced significantly (see section 1.3.7).[[11]](#footnote-11)

|  |  |
| --- | --- |
| **National Target 9:** By 2020, the National Strategy on Invasive Alien Species is fully implemented, with the participation and commitment of states and the elaboration of a National Policy, ensuring the continuous and updated diagnosis of species and the effectiveness of Action Plans for Prevention, Contention and Control. | redfourthgreen2 |
| **Global Aichi Target 9:** By 2020, invasive alien 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. | red2 |

Numerous alien species have been detected, are established or have become invasive in Brazilian terrestrial, freshwater and marine habitats (see Brazil’s 4th National Report to the CBD and section 1.3.2 of the present Report).

Although this target is still far from being reached, in 2013 a draft Ruling (*Portaria*) was prepared to institutionalize the priority alien invasive species to be targeted by management and control actions. If approved, this instrument will represent the first time that Brazil officially recognizes a list of alien invasive species and an important step towards the implementation of the National Strategy on Alien Invasive Species, which has been in place since October 2009. MMA is also currently preparing a federal Decree to officially adopt this Strategy and promote its implementation at the federal, state and municipal levels. Additionally, in 2012 a Presidential request (still under analysis) was presented to Congress for the ratification of the 2010 Nagoya Protocol. The MMA is also revising and publishing inventories of actual and potential alien invasive species present in Brazil (see section 1.3.2).

|  |  |
| --- | --- |
| **National Target 10:** By 2015, the multiple anthropogenic pressures on coral reefs, and other marine and coastal ecosystems impacted by climate change or ocean acidification are minimized, so as to maintain their integrity and functioning. | redfourthgreen2 |
| **Global Aichi Target 10:** By 2015, the multiple anthropogenic pressures on coral reefs, and other vulnerable ecosystems impacted by climate change or ocean acidification are minimized, so as to maintain their integrity and functioning. | redfourthgreen2 |

The best indicators for the control of pressures on coral reefs are the existence and effectiveness of protected areas to conserve these habitats. Prates (2003)[[12]](#footnote-12) assessed the representativeness of coral reef protection in Brazil and the effectiveness of selected protected areas, concluding that over 80% of the top portions of shallow corals are already being protected by some type of protected area, over 30% of which are full protection protected areas. However, as there is a trend to create protected areas over the shallower and more visible reefs, the undetected submerged portion may be less represented in these protected areas.[[13]](#footnote-13)

Mangroves and other coastal ecosystems are still being significantly impacted by coastal development and other habitat conversion, and pollution and sediment discharge, among other factors. It is estimated that approximately 25% of Brazilian original mangroves have already been lost. Although 75% of remaining mangroves are located within protected areas, most of this extension is within Environmental Protection Areas – APA, which usually present the lowest performance in the effectiveness of protection. Only 13.1% of remaining mangroves are located in full protection protected areas.[[14]](#footnote-14) The national monitoring of mangrove areas is being carried out by the Remote Sensing Center of IBAMA – CSR/IBAMA, where maps of all Brazilian mangrove areas (totaling 1,225,444 hectares in 2009, corresponding to 9% of global mangroves) are currently being produced based on revised 2010 and 2011 data. Updated maps from 2010 onward should be available by the end of 2014.

The continuous assessment of six protected areas containing coral reefs is being carried out by the National Program for Monitoring Coral Reefs (ReefCheck Brazil), which has been monitoring reef ecosystems inside and outside protected areas since 2002 with ReefCheck methodology. The 2002-2012 data series produced by this Program is currently being revised for publication by the end of 2014 and preliminary results suggest the trend that no-take areas tend to contain higher quantities of larger specimens and higher species diversity than areas where fishing activities are allowed (see section 1.2.1.4).

|  |  |
| --- | --- |
| **National Target 11:** By 2020, at least 30% of the Amazon, 17% of each of the other terrestrial biomes, and 10% of the marine and coastal areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved through protected areas foreseen under the SNUC Law and other categories of officially protected areas such as Permanent Protection Areas, legal reserves, and indigenous lands with native vegetation, ensuring and respecting the demarcation, regularization, and effective and equitable management, so as to ensure ecological interconnection, integration and representation in broader landscapes and seascapes. | circulo_na_metade.wmf |
| **Global Aichi Target 11:** By 2020, at least 17 per cent of terrestrial and inland water, and 10 per cent of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved through effectively and equitably managed, ecologically representative and well connected systems of protected areas and other effective area-based conservation measures, and integrated into the wider landscapes and seascapes. | circulo_na_metade.wmf |

In 2010, the terrestrial area covered by protected areas in Brazil corresponded to 16% of the total national territory, while the total marine protected area was limited to 1.5% of the coastal and marine biome under national jurisdiction, which has not changed much in the past four years. Although the number of protected areas recorded in the National Registry of Protected Areas – CNUC (*Cadastro Nacional de Unidades de Conservação*) increased from 1,724 in 2010 to 1,829 in February 2014, there was no substantial increase in the total geographical area under protection. The previous 2010 National Targets (protecting at least 30% of the Amazon and 10% of all other terrestrial biomes and coastal and marine zone) were only partially achieved, only the officially protected areas under SNUC were considered for measuring target achievement.

The new National Target for 2020 maintained the total area under protection to be reached for the Amazon and coastal and marine zone, and increased the target for other terrestrial biomes. The criteria for measuring target achievement was also modified to include, in addition to SNUC protected areas, other legally protected areas such as permanent preservation areas, legal reserves, and indigenous lands.

When only the protected areas under SNUC are considered, currently 26.1% of the Amazon, 7.5% of the Caatinga, 8.3% of the Cerrado, 9.3% of the Atlantic Forest, 2.7% of the Pampas, 4.6% of the Pantanal, and 1.5% of the marine area are protected. Considering data presented in the 4th National Report to the CBD on protected areas, permanent protection areas and legal reserves, it is possible to infer that the new geographical percent for protection targets were already exceeded in all biomes except for the Amazon and the coastal and marine areas. However, progress to-date is still insufficient to meet the targets for effective and equitable management, ensuring ecological interconnection, integration and representation in broader landscapes and seascapes.

In all biomes, except for the Pantanal and marine area, the sustainable use protected area category predominates, i.e., most of their protected areas have the objective of harmonizing nature protection with the sustainable use of part of their resources. For more details, please refer to section 1.4.2.

|  |  |
| --- | --- |
| **National Target 12:** By 2020, the risk of extinction of threatened species has been significantly reduced, tending to zero, and their conservation status, particularly of those most in decline, has been improved. | redfourthgreen2 |
| **Aichi Global Target 12:** By 2020 the extinction of known threatened species has been prevented and their conservation status, particularly of those most in decline, has been improved and sustained. | redfourthgreen2 |

One important step forward towards achieving this target for threatened fauna is represented by the strategy adopted by ICMBio in the past few years to institute a conservation planning process comprised of the periodic updating of the official lists of threatened species, assessing the conservation status of all vertebrate species and selected groups of invertebrate species (focusing in indicator groups such as mollusks, crustaceans, corals, bees and butterflies), followed by the preparation of Conservation Action Plans.

Current data indicate that the most affected biomes are the Atlantic Forest with close to 60% of its species classified as threatened, and the Cerrado, with 12% of threatened species. On the positive side, 58.8% of the 627 species listed as threatened for Brazil are present in federal protected areas. Conversely, the presence of threatened species was recorded in 242 (or 77.3%) of the 313 federal protected areas, indicating the need to integrate specific conservation actions in the protected areas’ management plans. As it is impossible to ensure that all populations and sub-populations that ensure the genetic viability of these species are safeguarded in protected areas, Conservation Action Plans address priority conservation activities for species populations both inside and outside federal, state and municipal protected areas, including private lands. By December 2013, a total of 48 Action Plans had been prepared addressing individual species or groups of species, and comprising 49% of all listed threatened species.

Regarding plant species, the Rio de Janeiro Botanical Garden published in 2013 the Red Book on Threatened Species of the Brazilian Flora. The conservation status of 4,617 plant species was assessed, of which 2,118 (45.9%) were classified as threatened under different risk categories. For more details referring to plant and animal threatened species, please refer to see section 1.4.6.

|  |  |
| --- | --- |
| **National Target 13:** By 2020, the genetic diversity of microorganisms, cultivated plants, farmed and domesticated animals and of wild relatives, including socio-economically as well as culturally valuable species, is maintained, and strategies have been developed and implemented for minimizing the loss of genetic diversity. | circulo_na_metade.wmf |
| **Global Aichi Target 13:** By 2020, the genetic diversity of cultivated plants and farmed and domesticated animals and of wild relatives, including other socio-economically as well as culturally valuable species, is maintained, and strategies have been developed and implemented for minimizing genetic erosion and safeguarding their genetic diversity. | circulo_na_metade.wmf |

EMBRAPA/CENARGEN continuously develops several research and *ex situ* conservation activities targeted at native Brazilian species of actual or potential use, and maintains a national collection of genetic samples. The Germplasm-Seed Bank was created in 1976 to safeguard the seeds of economically relevant species, protecting the genetic resources that support nutrition and agriculture. Current capacity of the seed bank is 250,000 accesses and to-date its cold chambers house over 107,000 accesses of 661 species, subspecies and races. To enhance its capacity for the conservation of genetic resources, CENARGEN inaugurated in 2014 the third largest gene bank of the world, with capacity to store some 750,000 seed samples, in addition to 10,000 *in vitro* plant samples, and over 200,000 other cryopreserved samples of plants, animals or microorganisms. Total capacity of the new gene bank, built within the EMBRAPA campus in Brasília, is over 1,000,000 samples under different preservation methods. Additionally, in 11 February 2014, Embrapa shipped 514 accesses of beans (*Phaseolus vulgaris*) to the Global Seed Vault - GSV in Svalbard, located in the town of Longyearbyen. Those seeds are part of Embrapa’s Nuclear Bean Collection, and will join other 264 corn accesses and 541 rice accesses that were shipped to GSV in September 2012.

Research projects carried out also include an initiative (on-going since 1997) to collect samples of animal and plant species traditionally maintained by indigenous groups of the Parque Indígena do Xingu, in the state of Mato Grosso, to compare them with the diversity of other samples of the same species or groups. The initiative also studies the traditional methods for species management used by those indigenous groups and in what ways these methods interfere in the dynamics of species evolution and genetic diversity. Additionally, the risks of diversity loss for species managed by those indigenous groups are also identified, as well as the causes leading to risk. *Ex situ* collections of the studied species are also maintained by CENARGEN as a prevention measure against diversity loss. Regarding rural producers, an assessment was carried to identify how existing legislation is impacting on the conservation of local products, given that the implementation of public policies has been leading to a decrease in the seed/species exchange networks among rural producers. CENARGEN implements efficient *ex-situ* and on-farm conservation of various native species of actual or potential value through cultivation, in vitro reproduction, or cryogenic preservation of viable seeds. For additional information, please refer to sections 1.2.3.1 and 1.2.3.4.

Two other important inter-related initiatives to promote biodiversity conservation and sustainable use are the Biodiversity for Food and Nutrition (BFN) and the Plants for the Future project, this latter carried out from 2005 – 2007 by MMA. The wealth of information generated by Plants for the Future on over 750 species from the five Brazilian regions (north, northeast, center-west, southeast, and south) has been undergoing revision for the past several years and serves as input to actions under the BFN project. The first volume of results from Plants for the Future for the South Region was published in 2011. A similar volume on the Central-West Region is being finalized for publication in 2014, and the preparation of the volume for the North region is well advanced. For more details, please refer to section 1.2.3.2.

|  |  |
| --- | --- |
| **National 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, traditional peoples and communities, indigenous peoples and local communities, and the poor and vulnerable. | circulo_na_metade.wmf |
| **Aichi Global 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 and local communities, and the poor and vulnerable. | circulo_na_metade.wmf |

Some of the most important ecosystems in terms of provision of essential services listed in this target are located in the Permanent Preservation Areas (APPs), which are mostly located along water bodies, sharp slopes and hilltops. A large deficit of compliance with legal conservation requirements had already been accumulated before changes introduced by the new Law 12.651/2012 that replaced the previous Forest Code (see section 1.4.1) significantly reduced the total area previously protected under Legal Reserves and APPs by adjusting their definition and forgiving a sizeable portion of the previous “environmental debt” of small rural properties (which comprise roughly 90% of all rural properties). The approved changes for the definition of hilltop permanent preservation areas alone, for example, reduced their total area by 87%, and the new definition for Legal Reserve together with the differentiation between conservation and restoration requirements reduced by 58% (from approximately 50 million hectares to 21 million hectares) the total area that would have required restoration at the landowner’s expenses under previous legislation. Furthermore, the legislation allows an additional 88 million hectares of legal deforestation of native vegetation on private properties, which exceed conservation requirements. This opens up the possibility of significant loss of natural habitats and biodiversity that may occur in compliance with legislation, although some instruments included in the revised Forest Code may contribute to maintain part of this area covered with natural vegetation, such as the Rural Environmental Cadaster – CAR and the Environmental Reserve Quota – CRA (see sections 1.3.1 and 1.4.1). Nevertheless, the Ministry of Agriculture Livestock and Supply estimates that the national production of grains alone should grow from the 184 million tons produced in 2012/2013 to 222 million tons in 2022/2023, which would be achieved through a combination of conversion of new areas for agriculture and productivity increase[[15]](#footnote-15).

Governmental programs and initiatives for the payment of ecosystem services also contribute to the conservation of forests and sensitive habitats, although their growing adoption at the sub-national levels is still limited. For example, the Water Producer Program (*Programa Produtor de Água*) coordinated by the National Water Agency – ANA is an important tool to promote the conservation of native vegetation in water recharge areas, while the Green Grant and Forest Grant programs (see section 1.2.1.2) provide direct incentives to communities for the conservation of forests.

Several recent policies and projects seek to promote the sustainable use of biodiversity by traditional peoples and communities, thus contributing to support the conservation of standing forests from which non-timber products are extracted. Such policies also often provide incentives for the adoption of more sustainable agricultural practices such as agroecology and organic production, which support the maintenance of APPs. Some examples are: the National Plan to Promote the Production Lines of Products from Socio-biodiversity – PNPSB; Food Acquisition Program – PAA; National School Nutrition Program – PNAE; National Policy on Food and Nutrition – PNAN; National Agroecology and Organic Production Plan – PLANAPO; Minimum Price Policy for Sociobiodiversity-based Products – PGPMBio; and the National Policy on Environmental and Territorial Management of Indigenous Lands – PNGATTI. The Plants for the Future and Biodiversity for Food and Nutrition projects, for example, also seek to conserve and promote the sustainable use of native foods and wild relatives of cultivated crops. For more details, please see sections 1.2.1.2, 1.2.3, and 1.2.4.2.

Other initiatives and programs for the restoration of native vegetation and to reduce deforestation also contribute to this target, such as the Pact for the Restoration of the Atlantic Forest, the federal initiative for vegetation restoration currently under preparation, PPCDAm and PPCerrado (1.4.3.1).

|  |  |
| --- | --- |
| **National Target 15:** By 2020, ecosystem resilience and the contribution of biodiversity to carbon stocks has been enhanced through conservation and restoration actions, including restoration of at least 15% of degraded ecosystems, prioritizing the most degraded biomes, hydrographic regions and ecoregions, thereby contributing to climate change mitigation and adaptation and to combatting desertification. | redfourthgreen2 |
| **Aichi Global 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 per cent of degraded ecosystems, thereby contributing to climate change mitigation and adaptation and to combating desertification. | redfourthgreen2 |

An important step forward for the achievement of this Target, and which is still under preparation, is the development of a proposed large scale native vegetation restoration strategy which seeks to strengthen and draw from the existing public policies, incentives, practices and other tools necessary to recover native vegetation. The initial target would be to recover deforested Permanent Preservation Areas (APPs) and Legal Reserves (RL), as well as degraded lands or areas of low agricultural productivity (see section 1.4.3.1). This strategy would complement the ongoing Action Plans to Combat Desertification which are being implemented in the Amazon (PPCDAm) and the Cerrado (PPCerrado) – the two biomes currently most affected by deforestation (see section 1.4.3.2).

The Watershed Revitalization Program currently implements activities in the watersheds of the São Francisco, Tocantins-Araguaia, Paraíba do Sul, and upper Paraguai (Pantanal) rivers.Actions supported in 2014 include: (i) support to the implementation of models for the restoration of degraded areas, seed conservation and seedling production, and capacity building and mobilization of communities for vegetation restoration and biodiversity conservation; (ii) integrated and preventive enforcement operations; and (iii) expansion of sanitation investments (water sanitation and distribution systems and sewage collection and treatment systems) at river side communities, as well as establishment of inter-municipal consortia for solid waste management (see section 1.4.3.1).

Additionally, the multi-sectoral Pact for the Restoration of the Atlantic Forest, launched in 2009, is a collective effort for the large scale restoration of the Atlantic Forest, involving the participation of non-governmental organizations, governmental agencies at the three administrative levels, rural land owners, traditional communities, cooperatives and associations. The target established for the Pact is to restore 15 million hectares of forest by 2050, increasing the vegetation cover of the Atlantic Forest to over 30% of the original biome (see section 1.4.3.1).

The Low Carbon Agriculture project (ABC) launched in 2010 as part of the Brazilian commitments to reduce carbon emissions in agriculture provides incentives for the adoption of more sustainable and low emission practices by agriculture and livestock producers, such as recovery of degraded pasture land and crop, livestock and forestry integrated systems, among others. Although the program is appealing as a tool to overcome barriers for the adoption of sustainable practices by producers, the project is still struggling to increase the low rate of adhesion to-date, due mainly to technical difficulties to access the ABC credit lines.[[16]](#footnote-16)

|  |  |
| --- | --- |
| **National Target 16:** By 2015, the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization is in force and operational, consistent with national legislation. | red2 |
| **Aichi Global Target 16:** By 2015, the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization is in force and operational, consistent with national legislation. | red2 |

In 05 June 2012, President Dilma Rousseff signed a request to Congress for the ratification of the 2010 Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization, together with a request to Congress to approve Brazil’s adhesion to the 1980 Bonn Convention on the Conservation of Migratory Species of Wild Animals. The request is still being analyzed.

|  |  |
| --- | --- |
| **National Target 17:** By 2014, the national biodiversity strategy is updated and adopted as policy instrument, with effective, participatory and updated action plans, which foresee periodic monitoring and evaluation. | circulo_na_metade.wmf |
| **Aichi Global 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. | circulo_na_metade.wmf |

Following the definition of 20 new Global Biodiversity Targets at COP-10 (Nagoya, 2010) and in an attempt to avoid the mistakes that prevented the achievement of most previous national and global targets, the need arose to design a different strategy to review and update the NBSAP and 2010 targets, this time effectively involving stakeholders of all sectors. This new approach could be considered as the first step in the construction of a new National Strategy for 2011-2020 in Brazil.

Implementation of the new approach began in 2013 with a broad consultation effort to achieve a collective construction of the revised NBSAP and new National Biodiversity Targets for 2020 in an initiative known as Dialogues on Biodiversity, which resulted in the definition of a more concise set of 20 National Targets (see section 2.1.2). Also as part of the new approach, various other initiatives are being carried out in parallel in 2014, one of which is the development of a Governmental Action Plan for the Conservation and Sustainable Use of Biodiversity (see section 2.1.3), complemented by the construction of the PainelBio (see section 2.1.4) to assist in the implementation and monitoring of the National Targets. Initial steps are also being carried out to design a national strategy for the mobilization of resources and capacity (see section 2.1.5).

|  |  |
| --- | --- |
| **National Target 18:** By 2020, the traditional knowledge, innovations and practices of indigenous peoples, family rural producers and traditional communities relevant for the conservation and sustainable use of biodiversity, and their customary use of biological resources, are respected, in accordance with their uses, customs and traditions, national legislation and relevant international commitments, and fully integrated and reflected in the implementation of the CBD, with the full and effective participation of indigenous peoples, family rural producers and traditional communities, at all relevant levels. | circulo_na_metade.wmf |
| **Aichi Global Target 18:** By 2020, the 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. | circulo_na_metade.wmf |

Despite the significant advances among indigenous peoples and traditional communities in their political organization and representation of their agendas by the government and general society, it is still a challenge to find representative voices for the high diversity of these groups to effectively include their demands in public policies. The creation of the National Commission for the Sustainable Development of Traditional Peoples and Communities in 2006 was an important step to deal with such complexity, although other equally complex challenges remain, such as to build reliable processes and enough capacity to meet the commitment of informed consultation, informed consent and fair and equitable benefit sharing.[[17]](#footnote-17) To deal with this challenge, the MMA is developing a methodology for the participatory preparation of community-specific Community Protocols defining the conditions and terms for access to traditional knowledge or genetic resources and benefit sharing.

Several public policies, initiatives and projects have been established and are being implemented to support the sustainable development of indigenous peoples and traditional communities, and enhance their participation in decision making: the National Policy for the Sustainable Development of Traditional Peoples and Communities (PNPCT), under which the 1st National Plan for the Sustainable Development of Traditional Peoples and Communities of African Origin was launched in January 2013, and a Plan for Strengthening Extractive Activities (PLANAFE) is under preparation. In November 2013 the federal government supported the event 2nd Forest Call (2o Chamado da Floresta), organized by the National Council of Extractive Workers (CNS), to take stock and evaluate the implementation of public policies addressing extractive populations. Additionally, in 2012 the National Fund for the Environment (FNMA) supported the development of five Plans for the Sustainable Development of Traditional Peoples and Communities, three of which addressing conservationist community initiatives led by women (fisherwomen, mussel collectors, babassu coconut-crackers, and family farmers).

The National Plan to Promote Production Chains of Products from Socio-Biodiversity (PNPSB), the national Policy on Minimum Prices for Products from Socio-biodiversity (PGPMBio) and the national Program for Food Acquisition (PAA) promote the sustainable use of biodiversity by traditional peoples and communities and contribute to the formalization of commercialization of socio-biodiversity products, also promoting the rupture of economic exploitation and monopoly relations practiced by local buyers and middle-men.

The National Policy on Territorial and Environmental Management of Indigenous Lands – PNGATI was enacted in 2012 and the PNGATI Management Committee became operational in October 2013. Since then, 16 projects were approved to develop, by the end of 2014, Territorial and Environmental Indigenous Land Management Plans – PGTA for indigenous lands in the Amazon **Public bids are currently in preparation for the elaboration of PGTAs for indigenous lands in the Cerrado and Caatinga biomes, and for the implementation of PGTAs in the Amazon biome. Six regional training courses to build management capacity for the implementation of the PNGATI policy are ongoing in the Legal Amazon (3), Cerrado and Caatinga (3), and the Atlantic Forest (1).**

The MMA is also supporting an ongoing initiative for the development and launching of a database on existing organizations of traditional peoples and communities – the YPADÊ portal ([www.caa.org.br/ypade](http://www.caa.org.br/ypade)). The portal contains information on traditional peoples and communities, as well as the initial mapping and database of their representative organizations.

The Ministry of Culture (MinC) has also been carrying out various initiatives to promote and disseminate traditional knowledge and practices. To insert traditional knowledge into formal education, MinC and the University of Brasília are promoting since 2010 the participation of instructors from traditional cultures in the workshops of the project Knowledge Sharing and Cultural Diversity (*Encontro de Saberes e Diversidade Cultural*) in Brazilian Universities. In July 2013, MinC also supported the 13th Meeting of Traditional Cultures of Chapada dos Veadeiros, in Goiás state, which was attended by 30,000 people. The annual event features debates and conferences to build capacity and promote, value and protect the ways of living of the Brazilian traditional peoples.

Additionally, the Secretariat on Policies for Women (SPM) coordinates and monitors the implementation of the National Plan on Policies for Women (PNPM – *Plano Nacional de Políticas para as Mulheres*), which establishes links with actions implemented by almost all governmental agencies that impact on the lives of Brazilian women. Among actions under this Plan, there are several actions targeting the empowerment of women, conservation of traditional knowledge by women, and women in biodiversity conservation among small scale rural producers, traditional communities and indigenous peoples.

For more details, please refer to section 1.2.4.

|  |  |
| --- | --- |
| **National Target 19:** By 2020, the science base and technologies necessary for enhancing knowledge on biodiversity, its values, functioning and trends, and the consequences of its loss, are improved and shared, and the sustainable use of biodiversity, as well as the generation of biodiversity-based technology and innovation are supported, duly transferred and applied. By 2017, the complete compilation of existing records on aquatic and terrestrial fauna, flora and microbiota is finalized and made available through permanent and open access databases, with specificities safeguarded, with a view to identify knowledge gaps related to biomes and taxonomic groups. | circulo_na_metade.wmf |
| **Aichi Global 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. | circulo_na_metade.wmf |

The Information System on Brazilian Biodiversity (SiBBr, see section 1.2.2.1) is an initiative of the Ministry of Science Technology and Innovation (MCTI) to integrate information on Brazilian biodiversity and ecosystems, with the objective of supporting scientific research and public policies. The SiBBr is already available online, and the first set of scientific data is currently being uploaded.

Additionally, various other programs implemented through the National Council for Scientific and Technological Development (CNPq) also contribute toward the achievement of this target: (i) the Long Term Ecological Research Program – PELD; (ii) National System of Research on Biodiversity – SISBIOTA Brasil; (iii) the Legal Amazon Network on Biotechnology and Biodiversity – BIONORTE; (iv) Taxonomy Capacity Building Program – PROTAX; (v) Brazilian Plants: Historical Recovery and Virtual Herbarium for Brazilian Flora Knowledge and Conservation; (vi) Biodiversity Research Program – PPBIO; (vii) Center-West Network of Post-Graduation, Research and Innovation – Rede Pró-Centro-Oeste; (viii) Archipelago and Oceanic Islands Program; and (ix) Brazilian Antarctic Program – PROANTAR.

On the 2014 International Day for Biological Diversity (22 May) the Ministry of the Environment announced agreements with the Ministry of Science Technology and Innovation for: (i) inserting the threatened species theme into the MCTI’s permanent biodiversity research programs such as the Biodiversity Research Program – PPBio; (ii) launching a call for proposals to support research on threatened species; and (iii) development of information technology tools to assess the risk of extinction, organize databases on threatened species, and to support action plans.

Other federal and state institutions also implement numerous important initiatives and programs relevant for this target. A few examples are: (i) the Oswaldo Cruz Foundation – FIOCRUZ maintains biological and germplasm collections (microbes, animal species, and histopathological samples); (ii) FIOCRUZ Minas Gerais is structuring a database on the genetic bar code of parasite of medical and veterinary interest (livestock and wildlife); (iii) the Emilio Goeldi Museum is developing the SINBIO System and the Biodiversity Census Database, to make available information on biological inventories and Amazon biodiversity; (iv) EMBRAPA CENARGEN maintains the Network of Animal, Plant and Microbial Genetic Resources; the Alelo System; and numerous research projects that contribute to the sustainable use of biodiversity and genetic resources; and (v) FAPESP implements since 1999 the Research Program for the Characterization, Conservation, Restoration and Sustainable Use of São Paulo Biodiversity – Biota-FAPESP, and maintains the Environmental Information System – SinBiota.

For more details, see section 1.2.2.1 and the 4th National Report to the CBD.

|  |  |
| --- | --- |
| **National Target 20:** Immediately following the approval of the Brazilian targets, resources needs assessments are carried out for the implementation of national targets, followed by the mobilization and allocation of financial resources to enable, from 2015 on, the implementation and monitoring of the Strategic Plan for Biodiversity 2011-2020, as well as the achievement of its targets. | redfourthgreen2 |
| **Aichi Global Target 20:** By 2020, at the latest, the mobilization 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 Mobilization, 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. | redfourthgreen2 |

A national strategy for the mobilization of resources and for meeting capacity needs is currently being designed. The Ministry of the Environment is in the process of hiring consultants to assist in the preparation of this strategy and provide an assessment of existing capacity at the state and federal levels to support strategy development. Results from these contracts should be available by mid-2015 and will be incorporated into the updated NBSAP. The Ministry of the Environment is also currently negotiating with the Institute of Applied Economic Research – IPEA the national mapping of resources invested in biodiversity (see section 2.1.5).

Financial resources continue to be obtained from the GEF and other international sources to support projects related to the implementation of the National and Aichi Targets, either directly or through environmental funds (e.g. Amazon Fund; National Biodiversity Fund – FUNBIO, Amazon Protected Areas Fund – FAP, among others). Nevertheless, additional resources will be required in order to achieve this target.

Additionally, Brazil hosted two international events in April 2014 on resource mobilization: a capacity building workshop and a meeting of the High-Level Panel on Global Assessment of Resources for Implementing the Strategic Plan for Biodiversity 2011-2020 (see section 2.2.3).

**3.2. Progress toward the Millennium Development Goals**

Based on the data gathered in this report, a preliminary assessment is presented below on how national actions taken to implement CBD in Brazil are contributing to progress towards the relevant 2015 Targets of the Millennium Development Goals.

**MDG 1 – Eradicate extreme poverty and hunger**

The poor and extreme poor are the primary beneficiaries of the numerous policies, programs and initiatives developed and implemented with the objective of promoting sustainable extractive and agricultural production, promoting economic value chains of products from socio-biodiversity, and supporting the sustainable development of indigenous peoples and traditional communities. These actions are therefore also contributing to all three 2015 targets under MDG 1, as they contribute to strengthening social organization, empowerment of traditional and indigenous communities, enhance food security and life quality, and contribute to the formalization of commercialization of socio-biodiversity products, also promoting the rupture of economic exploitation and monopoly relations practiced by local buyers and middle-men.

Please refer to sections 1.2.1.2, 1.2.3.3, 1.2.4, 1.4.1.1 and 1.4.7, as well as National Targets 2, 16 and 18 in section 3.1 for information on these actions.

**MDG 6 – Combat HIV/AIDS, Malaria and other diseases**

Brazilian mega-biodiversity has been for millennia the source of traditional medicines, the use of which has been largely preserved by the over 200 indigenous peoples in the country. Non traditional pharmaceutical companies and health research have long tapped these resources for the development of new drugs, vaccines and diagnosis kits, for example. Brazilian initiatives to increase knowledge on biodiversity and develop biodiversity-based technology, as well as to record traditional biodiversity-related knowledge and practices, all contribute to this MDG by identifying new opportunities for health research and treatments. Examples of such initiatives are listed in sections 1.2.2.1, 1.2.3.2, 1.2.3.4, 1.2.4, and 1.4.7, among others.

Additionally, the results of one of the research lines pursued by the Oswaldo Cruz Foundation – FIOCRUZ[[18]](#footnote-18) strengthen evidence that habitat disturbance by human activities trigger complex direct and indirect relations between human health and biodiversity: ecosystem degradation and fragmentation lead to a rupture of local ecological balance and natural wildlife movements and cycles, and increase human pressure, thus increasing the intensityand frequency of contacts between humans and wildlife, particularly wildlife that is seeking to re-establish of replace normal life cycles. As many vectors and pathogens of human diseases also interact or infect wildlife, these interactions can increase disease emergence and transmission both ways: from wildlife to humans and from humans to wildlife. National actions related to CBD implementation that seek to promote ecosystem restoration, reduce deforestation, and promote sustainable biodiversity use (see sections 1.2.1.2, 1.2.4.3, 1.4.3, and 1.4.4, among others) ultimately contribute to enhance ecosystem balance and seek to reconcile human activities and biodiversity conservation.

Nevertheless, practical action focusing on the relationships between health and biodiversity is still very limited. Future progress toward the adoption and implementation of the Nagoya Protocol, for example, may contribute to bring forward the importance of national sovereignty over biodiversity, including pathogens that are the basis for biotechnological development in health and consequent financial and non-financial benefits to the country.

**MDG 7 – Ensure environmental sustainability**

All actions, policies, programs and initiatives mentioned in this Report contribute significantly to targets A and B under MDG 7 (see all sections of the Report). Some contribute moderately to targets C and D under MDG 7 (see sections 1.3.7, 1.4.3.1), which is strongly supported by governmental investments in sanitation that have been ongoing for the past four years.

**3.3. Lessons learned with the implementation of the CBD**

During the ongoing process of developing the Governmental Action Plan for Biodiversity Conservation and Sustainable Use (see section 2.1.3), some important lessons were learnt in the broad and complex consultation level at the federal level:

* The consultation process evidenced the need to enhance the management and synergy among existing public policies.
* The process also resulted in the certainty that the governmental environmental sector cannot contain with its own efforts alone the ongoing loss of Brazilian biodiversity, and that consequently, there is significant potential for inter-ministerial integration regarding existing governmental programs, which would result in significant impacts on the reduction or halt of biodiversity loss.
* The process also brought the recognition that the inter-institutional integration and coordination for biodiversity conservation within the federal government and other sectors is a viable and rewarding venture.
* Additionally, the preparation of the previous national report to the CBD evidenced the difficulty of working with an excessive number of national biodiversity targets, particularly without adequate indicators and a monitoring system. The participatory construction of the new national targets, based on the Aichi Targets, sought to define a manageable set of targets and to obtain the engagement of all sectors that should contribute to target achievement and monitoring.
1. <http://ethicalbiotrade.org/biodiversity-barometer> [↑](#footnote-ref-1)
2. May, P.H. and Weiss, J. 2014. Brazil’s response to Aichi Goal 3 to reduce subsidies and perverse incentives harmful to biodiversity and ecosystem service provision. Contribution to SBSTTA-18. [↑](#footnote-ref-2)
3. <http://www.consumosustentavel.gov.br/> [↑](#footnote-ref-3)
4. Weigand Jr., R. et al, 2011. Metas de Aichi: situação atual. UICN, WWF-Brasil and IPE. [↑](#footnote-ref-4)
5. <http://www.consumosustentavel.gov.br/> [↑](#footnote-ref-5)
6. MMA-PNIA 2012, unpublished report. Theoretical reference, composition and synthesis of indicators for the pilot version (in Portuguese). PNIA – National Panel on Environmental Indicators. [↑](#footnote-ref-6)
7. <http://mebbrasil.org.br/> [↑](#footnote-ref-7)
8. MMA-PNIA 2012, unpublished report. Theoretical reference, composition and synthesis of indicators for the pilot version (in Portuguese). PNIA – National Panel on Environmental Indicators. [↑](#footnote-ref-8)
9. MMA-PNIA 2012, unpublished report. Theoretical reference, composition and synthesis of indicators for the pilot version (in Portuguese). PNIA – National Panel on Environmental Indicators. [↑](#footnote-ref-9)
10. Instituto de Energia e Meio Ambiente, 2014. 1º Diagóstico da Rede de Monitoramento da Qualidade do Ar no Brasil. 277 p. [↑](#footnote-ref-10)
11. MMA/SRHU data In: Weigand Jr., R. et al, 2011. Metas de Aichi: situação atual. UICN, WWF-Brasil and IPE. [↑](#footnote-ref-11)
12. Prates, A.P.L. 2003. Recifes de coral e unidades de conservação costeiras e marinhas no Brasil: uma análise da representatividade e eficiência na conservação da biodiversidade. Brasília (DF): Universidade de Brasília. [↑](#footnote-ref-12)
13. Weigand Jr., R. et al, 2011. Metas de Aichi: situação atual. UICN, WWF-Brasil and IPE. [↑](#footnote-ref-13)
14. MMA, 2010. Panorama da conservação dos ecossistemas costeiros e marinhos no Brasil. SBF/GBA, Brasília: 148p. [↑](#footnote-ref-14)
15. MAPA, 2013. Projeções do Agronegócio: Brasil 2012/2013 a 2022/2023. Brasília: 96 p. [↑](#footnote-ref-15)
16. IPEA, 2014. Políticas agroambientais e sustentabilidade: desafios, oportunidades e lições aprendidas. Brasília, 273p. [↑](#footnote-ref-16)
17. Ronaldo Weigand Jr et al., 2011. Metas de Aichi: situação atual. UICN; WWF-Brasil and Ipê. [↑](#footnote-ref-17)
18. Chame, M. (FIOCRUZ), 2014. Analysis of the working document. Contribution to SBSTTA-18. [↑](#footnote-ref-18)