Republic of TURKEY

Ministry of Agriculture and Forestry

UN Convention on Biological Diversity

Sixth National Report

This sixth national report of Turkey is prepared by General Directorate of Nature Conservation and National Parks under Ministry of Agriculture and Forestry of Republic of Turkey.

November 2019

Section I. Information on the targets being pursued at the national level

For indicators asked in sections, please see Annex I.

I. Information on the targets being pursued at the national level

☒ My country has adopted national biodiversity targets or equivalent commitments in line with the Strategic Plan for Biodiversity 2011-2020 and the Aichi Targets

Previous NBSAP (2007-2018) of Turkey had many elements in line with the Aichi Targets. However there were significant progress about mainstreaming with regards to the projects carried out and legislative arrangements prepared after 2007. The updated NBAP (Addendum Action Plan) reflects this situation.

☐ My country has not adopted national biodiversity targets and is reporting progress using the Aichi Biodiversity Targets for reference. (Move to section II. In section III, the Aichi Biodiversity Targets should be used for the purpose of this report as the national targets and progress should be assessed towards their achievement in the national context.)

National Target (Please use the official title, if available**)**

Similar to outline of Aichi targets, updated NBAP (Addendum Action Plan) is structured such that there are goals, for whose realization targets are set. See Table 1, below.

Level of application (Please specify the level to which the target applies):

☐ Regional/multilateral – please indicate area concerned <Text entry>

☒ National~~/federal~~

☐ Subnational – please indicate area concerned <Text entry>

Relevance of the national targets to the Aichi Biodiversity Targets (Links between national targets and Aichi Biodiversity Targets.)

Table 1 Relevance of the national targets to the Aichi Biodiversity Targets 1 (Links between national targets and Aichi Biodiversity Targets.)

2011-2020 Strategic Plan	NBSAP
Strategic Goal A: Address the underlying causes of biodiversity loss by mainstreaming biodiversity across government and society	***GOAL 2: To use biological diversity components by applying the methods and at a level fitting to their renewal capacity by taking the future generations' needs into account***
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	**Objective 2.3** To raise public awareness and sensitivity concerning the conservation and sustainable use of biological diversity. **2.3.1.** The inclusion of the subjects and texts on biological diversity conservation and the sustainable use of biological resources into the national education curricula **2.3.4.** The dissemination of the education materials urging those measures that can be taken to prevent or reduce the adverse impacts on ecosystem and biological resources
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.	**Objective 2.1** To establish harmony among legal, administrative, and institutional regulations and applications having relevance to the conservation of biological diversity and sustainable use of its components. **2.1.1.** The identification of any inharmoniousness between biological diversity related legislation and other regulatory measures to eradicate authority chaos and repetitions and to fill the gaps and taking actions to harmonize them. **2.1.6.** The search, development and use of alternative management tools to urge the integration of the Biological Diversity Strategy and Action Plan with

	development plans and for the integration of social, cultural, and economic targets with nature conservation targets and for the sustainable and rational use of water resources.

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.	**2.1.4.** The development and the implementation of appropriate socio-economic policies and incentives as a way of biological diversity conservation, the sustainable use of biological resources and the development of new sustainable use patterns for biological resources. **4.2.6.** The maintenance, adjustment, and improvement of economic incentives for the sustainable use of biological resources and the conservation of biological diversity. **7.2.2.** The development and implementation of appropriate socio-economic policies and incentives to support sustainable use of mountain ecosystems and of the biological resources of those ecosystems, in particular the high plateaus. **8.1.2.** The determination and implementation of incentives for the establishment and operation of sewer system and wastewater treatment plants in the settlement areas close to the sensitive inland water ecosystems and for the expansion of the irrigation methods which ensure the sustainable use of water resources. **9.1.3.** The determination and the implementation of incentive measures which promote the creation of new income-generating resources for those communities who might be affected from the conservation and sustainable use of coastal and marine biological diversity. **9.3.6.** The promotion of the use of appropriate fishing gears and techniques and the implementation of training programmes which will allow the elimination or lowering to an acceptable level of the adverse impacts of fishery on populations, species, habitats and ecosystems.

Target 4: By 2020, at the latest,	**Objective 1.3** To prevent or minimize as
Strategic Goal B: **Reduce the direct pressures on biodiversity and promote sustainable use**	**GOAL 2: To use biological diversity components in a sustainable manner by applying the methods and at a level fitting to their renewal capacity by taking the future generations' needs into account.**
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	**Objective 1.3** To prevent or minimize as far as possible any pressures on and threats to biological diversity **Objective 2.1** To establish harmony among legal, administrative and institutional regulations and applications having relevance to the conservation of biological diversity and sustainable use of its components **Objective 2.2** To develop and put into practice the ecosystem-based planning and management systems for the purposes of the biological diversity conservation and the sustainable use of biological resources **Objective 4.2** To develop management applications and technologies as well as policies which support the positive impacts of agriculture on biological diversity, on one hand, and minimize its adverse impacts, on the other hand, and to increase yield from agricultural ecosystems and its capability to sustain as a source of livelihood **Objective 5.2** To identify ecological, physical and social processes such as grazing, drought, desertification, aridity, salinity, flood, fi res, tourism, agricultural transformation or abandonment which have adverse impacts on the biological diversity of steppe ecosystems and mainly on the ecosystem structure and function, and to take measures regarding the above

	Objective 6.2 To establish appropriate mechanisms for more effective conservation and sustainable use of forest biological diversity**.** **Objective 7.2** To establish appropriate mechanisms for the conservation and sustainable use of sensitive mountain ecosystems **Objective 8.2** To take actions for the conservation and sustainability of inland waters biological diversity and reduce threats to it **Objective 9.3** To combat against the threats to coastal and marine biological diversity
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.**	**Objective 9.3** To combat against the threats to coastal and marine biological diversity 9.3.6. **The promotion of the use of appropriate fishing gears and techniques and the implementation of training programmes which will allow the elimination or lowering to an acceptable level of the adverse impacts of fishery on populations, species, habitats and ecosystems**

Target 7: **By 2020 areas under agriculture, aquaculture and forestry are managed sustainably, ensuring conservation of biodiversity.**	**Objective 2.2** To develop and put into practice the ecosystem-based planning and management systems for the purposes of the biological diversity conservation and the sustainable use of biological resources. **Objective 4.2** To develop management applications and technologies as well as policies which support the positive impacts of agriculture on biological diversity, on one hand, and minimize its adverse impacts, on the other hand, and to increase yield from agricultural ecosystems and its capability to sustain as a source of livelihood **Objective 5.2** To identify ecological, physical and social processes such as grazing, drought, desertification, aridity, salinity, flood, fires, tourism, agricultural transformation or abandonment which have adverse impacts on the biological diversity of steppe ecosystems and mainly on the ecosystem structure and function, and to take measures regarding the above **Objective 6.2** To establish appropriate mechanisms for more effective conservation and sustainable use of forest biological diversity **Objective 8.2** To take actions for the conservation and sustainability of inland waters biological diversity and reduce threats to it **Objective 9.3** To combat against the threats to coastal and marine biological diversity

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.**	**Objective 1.3** To prevent or minimize as far as possible any pressures on and threats to biological diversity. **1.3.4.** Taking appropriate legal and institutional measures, including the improvement of human resources, for the identification of the alien species that are introduces or most probably will be introduced into Turkey, the prevention of the introduction of invasive alien species, the determination of any possible adverse impacts of them on biological diversity and the elimination and control of those impacts.
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.**	**1.3.7.** The identification of the impacts of climate change on biological diversity, the monitoring of those impacts, and taking measures to protect the most affected ecosystems and species **7.2.1.** The identification of the adverse impacts of the key threats to mountain biological diversity like climate change and the determination of measures either to prevent or to mitigate such impacts. **9.3.3.** The identification and monitoring of the impacts of climate change in Turkey's seas using remote sensing methods.
Strategic Goal C: **To improve the status of biodiversity by safeguarding ecosystems, species and genetic diversity**	GOAL 1**: To identify, protect and monitor biological diversity components which have importance for Turkey.**
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**	**Objective 1.2** To include the less-represented ecosystems, species and genetic diversity centres into protected areas of both terrestrial and aquatic ecosystems, and to achieve an effective protected area management.

representative and well-connected systems of protected areas and other effective area-based conservation measures and integrated into the wider landscapes and seascapes.	**Objective 4.1** To identify, protect and monitor the biological diversity elements which have importance for agricultural biological diversity. **Objective 7.2** To establish appropriate mechanisms for the conservation and sustainable use of sensitive mountain ecosystems **Objective 9.2** To fill the information gaps concerning coastal and marine biological diversity, to identify and put under conservation the areas and species which have importance for biological diversity and are under threat, and to develop and implement monitoring programmes.
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.**	Objective 1.1 **In order to determine and monitor any changes in ecosystems, species and genetic diversity, to develop and implement biological diversity inventory and monitoring methods and programmes, by considering rapid assessment methods and biological diversity indicators, as well.** **Objective 1.3** The identification of reliable and economic biological diversity inventory methods and Technologies. **1.3.3.** The development of rehabilitation programmes, techniques and technologies for the species either endangered or under threat, or for the degraded ecosystems, using such objective criteria as the ecological and habitat needs of the species at risk, and the implementation of the above and evaluation of their success. Objective 4.1 **To identify, protect and monitor the biological diversity elements which have importance for agricultural biological diversity.**

	Objective 5.2 To identify ecological, physical and social processes such as grazing, drought, desertification, aridity, salinity, flood, fires, tourism, agricultural transformation or abandonment which have adverse impacts on the biological diversity of steppe ecosystems and mainly on the ecosystem structure and function, and to take measures regarding the above. **Objective 7.1** To effectively implement biological and ecological inventories, monitoring programmes and classification systems. **Objective 9.2** To fill the information gaps concerning coastal and marine biological diversity, to identify and put under conservation the areas and species which have importance for biological diversity and are under threat, and to develop and implement monitoring programmes.

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.**	**GOAL 3.** To identify, protect and benefit the components of genetic diversity, including the traditional knowledge, which have importance for Turkey. **Objective 3.1** To identify, record, protect and manage the components of genetic diversity which have importance in terms of biological diversity, agriculture, food and economic value. Objective 4.4 **To ensure conservation and sustainable use of genetic resources which have actual and potential values for food and agriculture; and to ensure the fair and equitable sharing of the benefits from the utilization of genetic resources.** **Objective 5.3** To establish mechanisms and frameworks in order to support the fair and equitable sharing of the benefits from the utilization of the genetic resources of steppe areas.
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.** ***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.**	**Objective 4.2** To develop management applications and technologies as well as policies which support the positive impacts of agriculture on biological diversity, on one hand, and minimize its adverse impacts, on the other hand, and to increase yield from agricultural ecosystems and its capability to sustain as a source of livelihood. **Objective 5.2** To identify ecological, physical and social processes such as grazing, drought, desertification, aridity, salinity, flood, fires, tourism, agricultural transformation or abandonment which have adverse impacts on the biological diversity of steppe ecosystems and mainly on the ecosystem structure and function, and to take measures regarding the above.

	Objective 6.2 To establish appropriate mechanisms for more effective conservation and sustainable use of forest biological diversity. **Objective 7.2** To establish appropriate mechanisms for the conservation and sustainable use of sensitive mountain ecosystems. **Objective 8.2** To take actions for the conservation and sustainability of inland waters biological diversity and reduce threats to it. **Objective 9.3** To combat against the threats to coastal and marine biological diversity.
***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.**	**Objective 3.2** To control access to genetic resources and guarantee the sharing of the benefits arising out of the utilization of these resources with Turkey.
Strategic Goal E: Enhance implementation through participatory planning, knowledge management and capacity building.	**GOAL 10.** To establish a mechanism for the implementation of the Biological Diversity Strategy and Action Plan and the follow-up of implementation and reporting.
***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.**	**Objective 10.2** To achieve the integrity and sustainability of financial structure for the identification, conservation and sustainable use of biological diversity.

Table 2 Relevance of the national targets to the Aichi Biodiversity Targets 2 (Aichi Targets and National Biodiversity Action Plan)

GLOBAL STRATEGIC GOALS (AICHI GOALS)	NBSAP (2007-2017)	NBAP (2018-2028)
Strategic Goal A: Address the underlying causes of biodiversity loss by mainstreaming biodiversity across government and society	***GOAL 2: To use biological diversity components by applying the methods and at a level fitting to their renewal capacity by taking the future generations' needs into account.***	***NATIONAL OBJECTIVE 4 NATIONAL OBJECTIVE 6 NATIONAL OBJECTIVE 7***
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	**Objective 2.3** To raise public awareness and sensitivity concerning the conservation and sustainable use of biological diversity. **2.3.1.** The inclusion of the subjects and texts on biological diversity conservation and the sustainable use of biological resources into the national education curricula. **2.3.4.** The dissemination of the education materials urging those measures that can be taken to prevent or reduce the adverse impacts on ecosystem and biological resources.	**Action 4.1.** Awareness on ecosystem services will be raised among public and private sectors, and training of specialists will be ensured. **Action 6.2.** The public will be informed on the goods and services developed by using biological resources. **Action 7.2.** Activities for increasing the awareness of the public and related stakeholders on combat against bio smuggling will continue.
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	**Objective 2.1** To establish harmony among legal, administrative and institutional regulations and applications having relevance to the conservation of biological diversity and sustainable use of its components.	**Action 6.1.** Development of institutional capacity, innovation, infrastructure facility, necessary technology transfer and incentives will be provided and road maps for emerging technologies will be determined and necessary

appropriate, and reporting systems.	**2.1.1.** The identification of any inharmoniousness between biological diversity related legislation and other regulatory measures to eradicate authority chaos and repetitions and to fill the gaps and taking actions to harmonize them. **2.1.6.** The search, development and use of alternative management tools to urge the integration of the Biological Diversity Strategy and Action Plan with development plans and for the integration of social, cultural and economic targets with nature conservation targets and for the sustainable and rational use of water resources.	legislation accordingly will be created.
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, considering national socio-economic conditions.	**2.1.4.** The development and the implementation of appropriate socio-economic policies and incentives as a way of biological diversity conservation, the sustainable use of biological resources and the development of new sustainable use patterns for biological resources. **Objective 4.2** To develop management applications and technologies as well as policies which support the positive impacts of agriculture on biological diversity, on one hand, and minimize its adverse impacts, on the other hand, and to increase yield from agricultural ecosystems and its capability to sustain as a source of livelihood. **4.2.6.** The maintenance, adjustment and improvement of economic	**Action 6.1.** Development of institutional capacity, innovation, infrastructure facility, necessary technology transfer and incentives will be provided and road maps for emerging technologies will be determined and necessary legislation accordingly will be created. **Action 6.4.** Promotion of producers from public and private sectors (university, institutes, companies etc.) will be ensured in the process of commercializing of the products developed with modern biotechnological methods from the biological resources, in particular those from microorganisms.

	incentives for the sustainable use of biological resources and the conservation of biological diversity in agricultural fields. **7.2.2.** The development and implementation of appropriate socio-economic policies and incentives to support sustainable use of mountain ecosystems and of the biological resources of those ecosystems, in particular the high plateaus.	
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, considering national socio-economic conditions.	**8.1.2.** The determination and implementation of incentives for the establishment and operation of sewer system and wastewater treatment plants in the settlement areas close to the sensitive inland water ecosystems and for the expansion of the irrigation methods which ensure the sustainable use of water resources. **9.1.3.** The determination and the implementation of incentive measures which promote the creation of new income-generating resources for those communities who might be affected from the conservation and sustainable use of coastal and marine biological diversity. **9.3.6.** The promotion of the use of appropriate fishing gears and techniques and the implementation of training programmes which will allow the elimination or lowering to an acceptable level of the	**Action 6.1.** Development of institutional capacity, innovation, infrastructure facility, necessary technology transfer and incentives will be provided and road maps for emerging technologies will be determined and necessary legislation accordingly will be created. **Action 6.4.** Promotion of producers from public and private sectors (university, institutes, companies etc.) will be ensured in the process of commercializing of the products developed with modern biotechnological methods from the biological resources, in particular those from microorganisms.

	adverse impacts of fishery on populations, species, habitats and ecosystems.	
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.	***Objective 2.2*** To develop and put into practice the ecosystem-based planning and management systems for the purposes of the biological diversity conservation and the sustainable use of biological resources. ***Objective 4.2*** To develop management applications and technologies as well as policies which support the positive impacts of agriculture on biological diversity, on one hand, and minimize its adverse impacts, on the other hand, and to increase yield from agricultural ecosystems and its capability to sustain as a source of livelihood.	**Action 2.4.** In order to conserve biological diversity, studies to develop and implement species specific or ecosystem based conservation approaches by using traditional or advanced biotechnological methods will be conducted. **Action 4.3.** In order to utilize ecosystem services effectively, studies for sustainable use of biological diversity will be conducted.
Strategic Goal B: Reduce the direct pressures on biodiversity and promote sustainable use	**GOAL 2: To use biological diversity components in a sustainable manner by applying the methods and at a level fitting to their renewal capacity by taking the future generations' needs into account.**	***NATIONAL OBJECTIVE 1*** ***NATIONAL OBJECTIVE 2*** ***NATIONAL OBJECTIVE 3*** ***NATIONAL OBJECTIVE 4*** ***NATIONAL OBJECTIVE 5***
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.	**Objective 1.3** To prevent or minimize as far as possible any pressures on and threats to biological diversity **Objective 2.2** To develop and put into practice the ecosystem-based planning and management systems for the purposes of the biological diversity conservation and the sustainable use of biological resources **Objective 5.2** To identify ecological, physical and social processes such as	**Action 2.4.** In order to conserve biological diversity, studies to develop and implement species specific or ecosystem-based conservation approaches by using traditional or advanced biotechnological methods will be conducted. **Action 3.2.** Studies on minimization of pressures and threats to agriculture, forest and fishing will be continued.

	grazing, drought, desertification, aridity, salinity, flood, fires, tourism, agricultural transformation or abandonment which have adverse impacts on the biological diversity of steppe ecosystems and mainly on the ecosystem structure and function, and to take measures regarding the above. **Objective 6.2** To establish appropriate mechanisms for more effective conservation and sustainable use of forest biological diversity**.** **Objective 7.2** To establish appropriate mechanisms for the conservation and sustainable use of sensitive mountain ecosystems. **Objective 8.2** To take actions for the conservation and sustainability of inland waters biological diversity and reduce threats to it **Objective 9.3** To combat against the threats to coastal and marine biological diversity	**Action 5.3.** Alarm systems (biosensors and pollution indicators etc.) will start to be used to warn against the degradation of ecosystem balance in order to provide monitoring in healthy ecosystems.
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	Objective 9.3 **To combat against the threats to coastal and marine biological diversity** 9.3.6. **The promotion of the use of appropriate fishing gears and techniques and the implementation of training programmes which will allow the elimination or lowering to an acceptable level of the adverse impacts of fishery**	**Action 3.1.** Conservation and sustainable management of biodiversity creating sources for industries of agriculture, forest, food and medicine will be ensured. **Action 3.2.** Studies on minimization of pressures and threats to agriculture, forest and fishing will be continued.

impacts of fisheries on stocks, species and ecosystems are within safe ecological limits.	**on populations, species, habitats and ecosystems.**	
Target 7: By 2020 areas under agriculture, aquaculture and forestry are managed sustainably, ensuring conservation of biodiversity.	**Objective 2.2** To develop and put into practice the ecosystem-based planning and management systems for the purposes of the biological diversity conservation and the sustainable use of biological resources. **Objective 4.2** To develop management applications and technologies as well as policies which support the positive impacts of agriculture on biological diversity, on one hand, and minimize its adverse impacts, on the other hand, and to increase yield from agricultural ecosystems and its capability to sustain as a source of livelihood	**Action 2.4.** In order to conserve biological diversity, studies to develop and implement species specific or ecosystem-based conservation approaches by using traditional or advanced biotechnological methods will be conducted. **Action 3.1.** Conservation and sustainable management of biodiversity creating sources for industries of agriculture, forest, food and medicine will be ensured.
Target 7: By 2020 areas under agriculture, aquaculture and forestry are managed sustainably, ensuring conservation of biodiversity.	**Objective 5.2** To identify ecological, physical and social processes such as grazing, drought, desertification, aridity, salinity, flood, fires, tourism, agricultural transformation or abandonment which have adverse impacts on the biological diversity of steppe ecosystems and mainly on the ecosystem structure and function, and to take measures regarding the above **Objective 6.2** To establish appropriate mechanisms for more effective conservation and sustainable use of forest biological diversity. **Objective 8.2** To take actions for the conservation and sustainability of inland waters biological diversity and reduce threats to it.	**Action 2.4.** In order to conserve biological diversity, studies to develop and implement species specific or ecosystem-based conservation approaches by using traditional or advanced biotechnological methods will be conducted. **Action 3.1.** Conservation and sustainable management of biodiversity creating sources for industries of agriculture, forest, food and medicine will be ensured.

	Objective 9.3 To combat against the threats to coastal and marine biological diversity.	
Target 8: By 2020, pollution, including from excess nutrients, has been brought to levels that are not detrimental to ecosystem function and biodiversity.	**2.2.5.** The development of methods for the prevention of the release into the nature of substances which are harmful to ecosystems, species and genetic resources or the release of those substances in amounts harmful to them, and the support of the attempts towards this **Objective 4.2** To develop management applications and technologies as well as policies which support the positive impacts of agriculture on biological diversity, on one hand, and minimize its adverse impacts, on the other hand, and to increase yield from agricultural ecosystems and its capability to sustain as a source of livelihood **4.2.1.** The development of methods and measures for the reduction of the impact of excessive and wrong agricultural inputs on the beneficial populations and for more effective agricultural input use, and the implementation of those methods and measures.	**Action 1.1.** Struggle strategies will be continued to be improved against direct or indirect pressures on biological diversity such as habitat loss and degradation, global warming, increase of population, over consumption of natural resources, genetic erosion and pollution. **Action 4.2.** In order to increase benefits from ecosystem services, studies to reduce the pressures such as pollution (air, water, soil), habitat loss and degradation, global warming, over consumption of natural resources to the lowest level will increasingly be continued.
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.	**Objective 1.3** To prevent or minimize as far as possible any pressures on and threats to biological diversity. **1.3.4.** Taking appropriate legal and institutional measures, including the improvement of human resources, for the identification of the alien species that are introduces or most probably will be introduced into Turkey, the prevention of the introduction of invasive	**Action 1.2.** Studies on improving the measures for identifying, monitoring, and controlling the entrance routes of invasive species and alien species and preventing entrance and habitation thereof will increasingly be continued. **Action 1.3.** Potential effects of organisms developed using synthetic biology techniques on conservation and sustainable use of biological diversity will be revealed and via necessary

	alien species, the determination of any possible adverse impacts of them on biological diversity and the elimination and control of those impacts. **Objective 4.3** To prevent or minimize as far as possible any pressures on and threats to agricultural biological diversity which come from the genetically modified organisms (GMO's) and the alien species. **Objective 8.2** To take actions for the conservation and sustainability of inland waters biological diversity and reduce threats to it. **8.2.4.** The identification of the reasons of unintentional introduction of alien species, and the submission of solution proposals.	risk assessments, risk evaluation, and monitoring procedures will be developed, and legislation regulations will be prepared. **Action 1.4.** Studies on creating and strengthening GMO monitoring procedures will increasingly be continued in order to prevent their out of purpose usage.
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.	**8.2.5.** Setting up a national database which will help the identification of the introduction of any potential harmful alien species and allow the foreseeing of them in advance and promoting the efforts to allow access to the international databases in order to be able to devise methods for control and prevention. **8.2.6.** The elimination or lowering to an acceptable level of the adverse impacts of alien species introduced by fisheries harvest projects, fish farms, development programmes and the transfer of waters and species between basins.	**Action 1.2.** Studies on improving the measures for identifying, monitoring, and controlling the entrance routes of invasive species and alien species and preventing entrance and habitation thereof will increasingly be continued. **Action 1.3.** Potential effects of organisms developed using synthetic biology techniques on conservation and sustainable use of biological diversity will be revealed and via necessary risk assessments, risk evaluation, and monitoring procedures will be developed, and legislation regulations will be prepared.

	8.2.7. The reviewing of laws and regulations concerning the introduction of alien species in ecosystems. **Objective 9.3** To combat against the threats to coastal and marine biological diversity. **9.3.5.** The examination of the impacts of alien species on marine biological diversity and taking measures to prevent any adverse impacts.	**Action 1.4.** Studies on creating and strengthening GMO monitoring procedures will increasingly be continued in order to prevent their out of purpose usage.
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.	**1.3.7.** The identification of the impacts of climate change on biological diversity, the monitoring of those impacts, and taking measures to protect the most affected ecosystems and species **7.2.1.** The identification of the adverse impacts of the key threats to mountain biological diversity like climate change and the determination of measures either to prevent or to mitigate such impacts. **9.3.3.** The identification and monitoring of the impacts of climate change in Turkey's seas using remote sensing methods.	**Action 1.1.** Struggle strategies will be continued to be improved against direct or indirect pressures on biological diversity such as habitat loss and degradation, global warming, increase of population, over consumption of natural resources, genetic erosion and pollution. **Action 5.3.** Alarm systems (biosensors and pollution indicators etc.) will start to be used to warn against the degradation of ecosystem balance in order to provide monitoring in healthy ecosystems.
Strategic Goal C: To improve the status of biodiversity by safeguarding ecosystems, species and genetic diversity	GOAL 1**: To identify, protect and monitor biological diversity components which have importance for Turkey.**	***NATIONAL OBJECTIVE 1*** ***NATIONAL OBJECTIVE 2*** ***NATIONAL OBJECTIVE 3*** ***NATIONAL OBJECTIVE 5*** ***NATIONAL OBJECTIVE 7***
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	**Objective 1.2** To include the less-represented ecosystems, species and genetic diversity centres into protected areas of both terrestrial and aquatic	**Action 2.4.** In order to conserve biological diversity, studies to develop and implement species specific or ecosystem-based conservation approaches by

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.	ecosystems, and to achieve an effective protected area management. ***Objective 2.2*** To develop and put into practice the ecosystem-based planning and management systems for the purposes of the biological diversity conservation and the sustainable use of biological resources. **Objective 7.2** To establish appropriate mechanisms for the conservation and sustainable use of sensitive mountain ecosystems. **Objective 9.2** To fill the information gaps concerning coastal and marine biological diversity, to identify and put under conservation the areas and species which have importance for biological diversity and are under threat, and to develop and implement monitoring programmes.	using traditional or advanced biotechnological methods will be conducted. **Action 5.3.** Alarm systems (biosensors and pollution indicators etc.) will start to be used to warn against the degradation of ecosystem balance in order to provide monitoring in healthy ecosystems.
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.	Objective 1.1 **In order to determine and monitor any changes in ecosystems, species and genetic diversity, to develop and implement biological diversity inventory and monitoring methods and programmes, by considering rapid assessment methods and biological diversity indicators, as well.** **Objective 1.3** The identification of reliable and economic biological diversity inventory methods and Technologies. **1.3.3.** The development of rehabilitation programmes,	**Action 2.1.** National biological diversity inventory will be determined and by doing so, current condition of biodiversity will be defined and species will be registered; DNA Barcoding method will be started to be used within this process. **Action 2.2.** Monitoring studies will be performed for the registered national biodiversity data and e-DNA (environmental DNA) monitoring technique will start to be used within the process. **Action 2.3.** Studies to determine and monitor endemic and endangered

	techniques and technologies for the species either endangered or under threat, or for the degraded ecosystems, using such objective criteria as the ecological and habitat needs of the species at risk, and the implementation of the above and evaluation of their success. ***Objective 2.2*** To develop and put into practice the ecosystem-based planning and management systems for the purposes of the biological diversity conservation and the sustainable use of biological resources. **Objective 4.1** To identify, protect and monitor the biological diversity elements which have importance for agricultural biological diversity.	species; develop and implement species specific conservation methods will increasingly be continued. Action 2.4. **In order to conserve biological diversity, studies to develop and implement species specific or ecosystem-based conservation approaches by using traditional or advanced biotechnological methods will be conducted.** Action 2.5. **Studies to detect terrestrial and aquatic microorganisms and to identify them at molecular level to determine their functions in ecosystems will be conducted.**
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.	**Objective 5.2** To identify ecological, physical and social processes such as grazing, drought, desertification, aridity, salinity, flood, fires, tourism, agricultural transformation or abandonment which have adverse impacts on the biological diversity of steppe ecosystems and mainly on the ecosystem structure and function, and to take measures regarding the above. **Objective 7.1** To effectively implement biological and ecological inventories, monitoring programmes and classification systems.	**Action 2.1.** National biological diversity inventory will be determined and by doing so, current condition of biodiversity will be defined and species will be registered; DNA Barcoding method will be started to be used within this process. **Action 2.2.** Monitoring studies will be performed for the registered national biodiversity data and e-DNA (environmental DNA) monitoring technique will start to be used within the process. **Action 2.3.** Studies to determine and monitor endemic and endangered species; develop and implement species specific

	Objective 9.2 To fill the information gaps concerning coastal and marine biological diversity, to identify and put under conservation the areas and species which have importance for biological diversity and are under threat, and to develop and implement monitoring programmes.	conservation methods will increasingly be continued. **Action 2.4. In order to conserve biological diversity, studies to develop and implement species specific or ecosystem-based conservation approaches by using traditional or advanced biotechnological methods will be conducted.** **Action 2.5.** Studies to detect terrestrial and aquatic microorganisms and to identify them at molecular level to determine their functions in ecosystems will be conducted.
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.	**GOAL 3.** To identify, protect and benefit the components of genetic diversity, including the traditional knowledge, which have importance for Turkey. **Objective 3.1** To identify, record, protect and manage the components of genetic diversity which have importance in terms of biological diversity, agriculture, food and economic value. Objective 4.4 **To ensure conservation and sustainable use of genetic resources which have actual and potential values for food and agriculture; and to ensure the fair and equitable sharing of the benefits from the utilization of genetic resources.** **Objective 5.3** To establish mechanisms and frameworks in order to support the fair and	**Action 1.1.** Struggle strategies will be continued to be improved against direct or indirect pressures on biological diversity such as habitat loss and degradation, global warming, increase of population, over consumption of natural resources, genetic erosion and pollution. **Action 2.1.** National biological diversity inventory will be determined and by doing so, current condition of biodiversity will be defined and species will be registered; DNA Barcoding method will be started to be used within this process. **Action 2.4.** In order to conserve biological diversity, studies to develop and implement species specific or ecosystem-based conservation approaches by using traditional or advanced biotechnological methods will be conducted. **Action 3.1.** Conservation and sustainable management of

	equitable sharing of the benefits from the utilization of the genetic resources of steppe areas.	biodiversity creating sources for industries of agriculture, forest, food and medicine will be ensured. **Action 7.1.** Studies on regulation of access to traditional knowledge associated with genetic resources and product development using thereof will increasingly be continued.
Strategic Goal D: Enhance the benefits to all from biodiversity and ecosystem services	**GOAL 2*:*** To use biological diversity components by applying the methods and at a level fitting to their renewal capacity by taking the future generations' needs into account. **GOAL 3.** To identify, protect and benefit the components of genetic diversity, including the traditional knowledge, which have importance for Turkey.	***NATIONAL OBJECTIVE 1*** ***NATIONAL OBJECTIVE 4*** ***NATIONAL OBJECTIVE 5*** ***NATIONAL OBJECTIVE 7***
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.	**Objective 4.2** To develop management applications and technologies as well as policies which support the positive impacts of agriculture on biological diversity, on one hand, and minimize its adverse impacts, on the other hand, and to increase yield from agricultural ecosystems and its capability to sustain as a source of livelihood. **Objective 5.2** To identify ecological, physical and social processes such as grazing, drought, desertification, aridity, salinity, flood, fires, tourism, agricultural transformation or abandonment which have adverse impacts on the biological diversity of steppe ecosystems and mainly on the ecosystem structure and function, and to take measures regarding the above. **Objective 6.2** To establish appropriate mechanisms for more effective conservation	**Action 1.1.** Struggle strategies will be continued to be improved against direct or indirect pressures on biological diversity such as habitat loss and degradation, global warming, increase of population, over consumption of natural resources, genetic erosion and pollution. **Action 4.3.** In order to utilize ecosystem services effectively, studies for sustainable use of biological diversity will be conducted. **Action 5.1.** Through improving ecosystem-based models, rehabilitation and restoration of degraded ecosystems (marine, forest, wetland etc.) will be provided, monitoring and inspection thereof will be performed.

	and sustainable use of forest biological diversity. **Objective 7.2** To establish appropriate mechanisms for the conservation and sustainable use of sensitive mountain ecosystems. **Objective 8.2** To take actions for the conservation and sustainability of inland waters biological diversity and reduce threats to it. **Objective 9.3** To combat against the threats to coastal and marine biological diversity.	
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.	**1.3.7.** The identification of the impacts of climate change on biological diversity, the monitoring of those impacts, and taking measures to protect the most affected ecosystems and species **Objective 5.2** To identify ecological, physical and social processes such as grazing, drought, desertification, aridity, salinity, flood, fires, tourism, agricultural transformation or abandonment which have adverse impacts on the biological diversity of steppe ecosystems and mainly on the ecosystem structure and function, and to take measures regarding the above.	**Action 1.1.** Struggle strategies will be continued to be improved against direct or indirect pressures on biological diversity such as habitat loss and degradation, global warming, increase of population, over consumption of natural resources, genetic erosion and pollution. **Action 4.2.** In order to increase benefits from ecosystem services, studies to reduce the pressures such as pollution (air, water, soil), habitat loss and degradation, global warming, over consumption of natural resources to the lowest level will increasingly be continued. **Action 5.1.** Through improving ecosystem-based models, rehabilitation and restoration of degraded ecosystems (marine, forest, wetland etc.) will be provided, monitoring and inspection thereof will be performed. **Action 5.2.** Efficient struggle methods (traditional and modern) for the improvement

		of degraded ecosystems/habitats will be defined, and necessary legislative studies will be conducted.
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.	**Objective 3.2** To control access to genetic resources and guarantee the sharing of the benefits arising out of the utilization of these resources with Turkey.	***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.
Strategic Goal E: Enhance implementation through participatory planning, knowledge management and capacity building	**GOAL 10.** To establish a mechanism for the implementation of the Biological Diversity Strategy and Action Plan and the follow-up of implementation and reporting.	***Strategic Goal E: Enhance implementation through participatory planning, knowledge management and capacity building***
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.	**GOAL 10.** To establish a mechanism for the implementation of the Biological Diversity Strategy and Action Plan and the follow-up of implementation and reporting.	***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.
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		**Action 7.1.** Studies on regulation of access to traditional knowledge associated with genetic resources and product development using thereof will increasingly be continued.

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.		
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.	**Objective 10.1** To establish coordination among the relevant institutions as regards the conservation and sustainable use of biological diversity.	**Action 4.1.** Awareness on ecosystem services will be raised among public and private sectors, and training of specialists will be ensured. **Action 6.1.** Development of institutional capacity, innovation, infrastructure facility, necessary technology transfer and incentives will be provided and road maps for emerging technologies will be determined and necessary legislation accordingly will be created. **Action 7.1.** Studies on regulation of access to traditional knowledge associated with genetic resources and product development using thereof will increasingly be continued.
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	**Objective 10.2** To achieve the integrity and sustainability of financial structure for the identification, conservation and sustainable use of biological diversity.	

contingent to resource needs assessments to be developed and reported by Parties.		

Table 3 Scheduled Targets and Relevant Authorities

Global Strategic Goals (Aichi Goals)	NBAP Objectives and Actions (2018-2028)	Schedule	Responsible Authorities	Related Authorities
Global Strategic Goals B, C, D 	**NATIONAL OBJECTIVE 1. Pressures and threats on biodiversity and ecosystems will be determined, reduced to the possible lowest level or removed totally.**		Ministry of Agriculture and Forestry	
	Action 1.1. Struggle strategies will be continued to be improved against direct or indirect pressures on biological diversity such as habitat loss and degradation, global warming, increase of population, over consumption of natural resources, genetic erosion and pollution. 	2018-2028	Ministry of Agriculture and Forestry	Ministry of Science and Technology Ministry of Environment and Urbanization Universities

				
	Action 1.2. Studies on improving the measures for identifying, monitoring, and controlling the entrance routes of invasive species and alien species and preventing entrance and habitation thereof will increasingly be continued. 	2018-2028	Ministry of Agriculture and Forestry	Ministry of Transport and Infrastructure Ministry of Science and Technology Ministry of Environment and Urbanization Universities

Global Strategic Goals (Aichi Goals)	**NBAP Objectives and Actions (2018-2028)**	**Schedule**	**Responsible Authorities**	**Related Authorities**
Global Strategic Goals B, C, D	**Action 1.3.** Potential effects of organisms developed using synthetic biology techniques on conservation and sustainable use of biological diversity	2018-2028	Ministry of Science, Industry and Technology	Ministry of Agriculture and Forestry

	will be revealed and via necessary risk assessments, risk evaluation, and monitoring procedures will be developed and legislation regulations will be prepared. 			
	Action 1.4. Studies on creating and strengthening GMO monitoring procedures will increasingly be continued in order to prevent their out of purpose usage. 		Ministry of Agriculture and Forestry	Ministry of Science and Technology

Global Strategic Goals (Aichi Goals)	**NBAP Objectives and Actions (2018-2028)**	**Schedule**	**Responsible Authorities**	**Related Authorities**
Global Strategic Goals A, B ve C	**NATIONAL OBJECTIVE 2. Biological diversity components (ecosystem,**		Ministry of Agriculture and Forestry	

     	**species and genetic variability) will be determined, monitored, and species specific and ecosystem-based conservation approaches (traditional and modern) will be developed by determining current condition of biodiversity.**			
	Action 2.1. National biological diversity inventory will be determined and by doing so, current condition of biodiversity will be defined, and species will be registered; DNA Barcoding method will be started to be used within this process.  	2018-2028	Ministry of Agriculture and Forestry	Ministry of Science and Technology Universities
	Action 2.2. Monitoring studies will be performed for the registered national biodiversity data and e-DNA (environmental DNA) monitoring technique will start to be used within the process.	2018-2028	Ministry of Agriculture and Forestry	Ministry of Science and Technology Universities

				

Global Strategic Goals (Aichi Goals)	NBAP Objectives and Actions (2018-2028)	Schedule	Responsible Authorities	Related Authorities
Global Strategic Goals A, B ve C      	**Action 2.3.** Studies to determine and monitor endemic and endangered species; develop and implement species specific conservation methods will increasingly be continued. 	2018-2028	Ministry of Agriculture and Forestry	Ministry of Science and Technology Universities
	Action 2.4. In order to conserve biological diversity, studies to develop and implement species specific or ecosystem-based conservation approaches by using traditional or advanced biotechnological methods will be conducted. 	2018-2028	Ministry of Agriculture and Forestry	Ministry of Science and Technology Universities

	Action 2.5. Studies to detect terrestrial and aquatic microorganisms and to identify them at molecular level to determine their functions in ecosystems will be conducted. 	2018-2028	Ministry of Agriculture and Forestry	Ministry of Science and Technology Universities

Global Strategic Goals (Aichi Goals)	**NBAP Objectives and Actions (2018-2028)**	**Schedule**	**Responsible Authorities**	**Related Authorities**
Global Strategic Goals B, C    	**NATIONAL OBJECTIVE 3. Conservation and sustainable management of biodiversity of areas exposed to agriculture, forestry and fishing activities in the country will be ensured.**		Ministry of Agriculture and Forestry	
	Action 3.1. Conservation and sustainable management of biodiversity creating sources for industries of agriculture, forest, food and medicine will be ensured.	2018-2028	Ministry of Agriculture and Forestry	Ministry of Health Ministry of Science and Technology

				
	Action 3.2. Studies on minimization of pressures and threats to agriculture, forest and fishing will be continued. 	2018-2028	Ministry of Agriculture and Forestry	Ministry of Health Ministry of Science and Technology Ministry of Environment and Urbanization

Global Strategic Goals (Aichi Goals)	**NBAP Objectives and Actions (2018-2028)**	**Schedule**	**Responsible Authorities**	**Related Authorities**
Global Strategic Goals A, B, D, E	**NATIONAL OBJECTIVE 4. Awareness of the public and administrators on ecosystem services**		Ministry of Agriculture and Forestry	

	**will be raised, benefits from ecosystem services will be increased and sustainable biodiversity management will be ensured.**			
	Objective 4.1. Awareness on ecosystem services will be raised among public and private sectors, and training of specialists will be ensured. 	2018-2028	Ministry of Agriculture and Forestry	Universities

Global Strategic Goals (Aichi Goals)	**NBAP Objectives and Actions (2018-2028)**	**Schedule**	**Responsible Authorities**	**Related Authorities**
Global Strategic Goals A, B, D, E 	**Action 4.2.** In order to increase benefits from ecosystem services, studies to reduce the pressures such as pollution (air, water, soil), habitat loss and degradation, global warming, over consumption of natural resources to	2018-2028	Ministry of Agriculture and Forestry	Ministry of Science and Technology

	the lowest level will increasingly be continued. 			
	Action 4.3. In order to utilize ecosystem services effectively, studies for sustainable use of biological diversity will be conducted. 	2018-2028	Ministry of Agriculture and Forestry	Ministry of Development Ministry of Environment and Urbanization

Global Strategic Goals (Aichi Goals)	**NBAP Objectives and Actions (2018-2028)**	**Schedule**	**Responsible Authorities**	**Related Authorities**
Global Strategic Goals B, C, D	**NATIONAL OBJECTIVE 5. Rehabilitation and restoration of ecosystems damaged due to different reasons will be ensured,**		Ministry of Agriculture and Forestry	

	**measures to prevent damage to healthy ecosystems will be developed and legislative gaps thereon will be fulfilled.**			
	Action 5.1. Through improving ecosystem-based models, rehabilitation and restoration of degraded ecosystems (marine, forest, wetland etc.) will be provided, monitoring and inspection thereof will be performed. 	2018-2028	Ministry of Agriculture and Forestry	Ministry of Environment and Urbanization Universities
	Action 5.2. Efficient struggle methods (traditional and modern) for the improvement of degraded ecosystems/habitats will be defined, and necessary legislative studies will be conducted. 	2018-2028	Ministry of Agriculture and Forestry	Ministry of Science and Technology Ministry of Environment and Urbanization

Global Strategic Goals (Aichi Goals)	NBAP Objectives and Actions (2018-2028)	Schedule	Responsible Authorities	Related Authorities
Global Strategic Goals B, C, D 	**Action 5.3.** Alarm systems (biosensors and pollution indicators etc.) will start to be used to warn against the degradation of ecosystem balance in order to provide monitoring in healthy ecosystems. 	2018-2028	Ministry of Agriculture and Forestry	Ministry of Science and Technology Universities
Global Strategic Goals A, E 	**NATIONAL OBJECTIVE 6. In order to develop high added value products based on knowledge and technology concerning conservation and sustainable use of biological resources, coordination mechanism among**		Ministry of Agriculture and Forestry	

	**universities, public and private sectors will be established, and long-term plans and programmes will be prepared.**			

Global Strategic Goals (Aichi Goals)	NBAP Objectives and Actions (2018-2028)	Schedule	Responsible Authorities	Related Authorities
Global Strategic Goals A, E 	**Action 6.1.** Development of institutional capacity, innovation, infrastructure facility, necessary technology transfer and incentives will be provided and road maps for emerging technologies will be determined and necessary legislation accordingly will be created. 	2018-2028	Ministry of Agriculture and Forestry	Ministry of Development Ministry of Science and Technology Universities

	 			
	Action 6.2. The public will be informed on the goods and services developed by using biological resources. 	2018-2028	Ministry of Agriculture and Forestry	Ministry of Science and Technology Universities
	Action 6.3. Training of more specialist on advanced technologies in higher education, working platforms for the researchers in different disciplines to work together will be provided. 	2018-2028	Ministry of Agriculture and Forestry	Universities

Global Strategic Goals (Aichi Goals)	**NBAP Objectives and Actions (2018-2028)**	**Schedule**	**Responsible Authorities**	**Related Authorities**
Global Strategic Goals A, E	**Action 6.4.** Promotion of producers from public and private sectors (university, institutes,	2018-2028	Ministry of Agriculture and Forestry	Universities

	companies etc.) will be ensured in the process of commercializing of the products developed with modern biotechnological methods from the biological resources, in particular those from microorganisms. 			
<u>Global Strategic Goals A, C, D, E</u> 	**NATIONAL OBJECTIVE 7. National legislation will be prepared considering the international conventions on access to genetic resources and fair and equitable sharing of the benefits arising from their utilization, and the necessary technical infrastructure will be established.**		Ministry of Agriculture and Forestry	

Global Strategic Goals (Aichi Goals)	NBAP Objectives and Actions (2018-2028)	Schedule	Responsible Authorities	Related Authorities
Global Strategic Goals A, C, D, E 	**Action 7.1.** Studies on regulation of access to traditional knowledge associated with genetic resources and product development using thereof will increasingly be continued. 	2018-2028	Ministry of Agriculture and Forestry	Ministry of Science and Technology Ministry of Culture and Tourism Universities
	Action 7.2. Activities for increasing the awareness of the public and related stakeholders on combat against bio smuggling will continue. 	2018-2028	Ministry of Agriculture and Forestry	Ministry of Foreign Affairs Ministry of Interior Affairs Ministry of Justice Ministry of Trade

	Action 7.3. Studies for preparation and implementation of a legislation on biopiracy will be conducted by creating an inter-institutional coordination.  	2018-2028	Ministry of Agriculture and Forestry	Ministry of Foreign Affairs Ministry of Interior Affairs Ministry of Justice Ministry of Trade

Relevant websites, web links, and files (Please use this field to indicate any relevant websites, web links or documents where additional information related to this national target can be found.)

http://www.milliparklar.gov.tr/dosyalar/nbap.pdf

http://www.milliparklar.gov.tr/dosyalar/NBSAP2007.pdf

http://www.nuhungemisi.gov.tr/

http://natura2000.ormansu.gov.tr/

http://www.milliparklar.gov.tr/resmiistatistikleryeni

https://www.tubitak.gov.tr/en

https://www.turkpatent.gov.tr/TURKPATENT/?lang=en

https://tvk.csb.gov.tr/

https://www.tarimorman.gov.tr/TAGEM/Sayfalar/EN/AnaSayfa.aspx

https://www.tarimorman.gov.tr/BUGEM/Sayfalar/EN/AnaSayfa.aspx

https://www.tarimorman.gov.tr/BSGM/Sayfalar/EN/AnaSayfa.aspx

https://www.tarimorman.gov.tr/HAYGEM/Sayfalar/EN/AnaSayfa.aspx

http://www.milliparklar.gov.tr/

https://www.ogm.gov.tr/lang/en/SitePages/OGM/OGMDefault.aspx

https://www.tarimorman.gov.tr/SYGM/Sayfalar/EN/AnaSayfa.aspx

https://www.tarimorman.gov.tr/CEM/Sayfalar/EN/AnaSayfa.aspx

Section II. Implementation measures taken, assessment of their effectiveness, associated obstacles and scientific and technical needs to achieve national targets

Using the template below, please report on the major measures your country has taken to implement its national biodiversity strategy and action plan. Please also provide an assessment of the effectiveness of these measures. The template should be replicated for each measure reported.

II. Implementation measures taken, assessment of their effectiveness, associated obstacles and scientific and technical needs to achieve national targets
Describe a measure taken to contribute to the implementation of your country's national biodiversity strategy and action plan The National Biodiversity Coordination Council is established for effective implementation of Convention. The newly developed National Biodiversity and Action Plan is directly aiming realization of Aichi Targets.

For the implementation measure, please indicate to which national or Aichi Biodiversity Target(s) it contributes

There are many policy documents and strategies (also referred in NBSAP and NBAP) contributing to realization of Aichi Targets.

NBSAP (2008-2017) GOAL 10: To establish a mechanism for the implementation of the Biological Diversity Strategy and Action Plan and the follow-up of implementation and reporting.

NBAP (2018-2028) NATIONAL OBJECTIVE 2. Biological diversity components (ecosystem, species and genetic variability) will be determined, monitored, and species specific and ecosystem-based conservation approaches (traditional and modern) will be developed by determining current condition of biodiversity.

NBAP (2018-2028) NATIONAL OBJECTIVE 4. Awareness of the public and administrators on ecosystem services will be raised, benefits from ecosystem services will be increased and sustainable biodiversity management will be ensured.

NBAP (2018-2028) NATIONAL OBJECTIVE 6. In order to develop high added value products based on knowledge and technology concerning conservation and sustainable use of biological resources, coordination mechanism among universities, public and private sectors will be established, and long-term plans and programmes will be prepared.

NBAP (2018-2028) NATIONAL OBJECTIVE 7. National legislation will be prepared considering the international conventions on access to genetic resources and fair and equitable sharing of the benefits arising from their utilization, and the necessary technical infrastructure will be established.

http://www.sbb.gov.tr/wp-content/uploads/2019/11/ON_BIRINCI_KALKINMA-PLANI_2019-2023.pdf (716.1, 716.2, 716.3, 717, 412.1)

http://www.sbb.gov.tr/wp-content/uploads/2018/11/The_Tenth_Development_Plan_2014-2018.pdf (1037)

Assessment of the effectiveness of the implementation measure taken in achieving desired outcomes:

☐ Measure taken has been effective

☒ Measure taken has been partially effective

☐ Measure taken has been ineffective

☐ Unknown

Please explain the selection and where possible indicate the tools or methodology used for the assessment of effectiveness above

Time schedule (2010-2020) is not reached as needed. This is why measures are partially effective.

The main problem was the partial lack of coordination. In order to resolve this we have established The National Biodiversity Coordination Council on August 1, 2019.

Relevant websites, web links and files (Please use this field to indicate any relevant websites, web links or documents where additional information related to this assessment can be found).

https://www.mevzuat.gov.tr/MevzuatMetin/CumhurbaskanligiGenelgeleri/20190802-15.pdf

Section III. Assessment of progress towards each national target

Using the template below, please assess the level of progress made towards each of your country's national targets or similar commitments. The template should be replicated for each national target. If your country has not set national targets please use the Aichi Biodiversity Targets.

III. Assessment of progress towards national targets

Category of progress towards the implementation of national targets:

☐ On track to exceed targets

☐ On track to achieve targets

☒ Progress towards targets but at an insufficient rate

☐ No significant change

☐ Moving away from targets

☐ Unknown

- **The National Biodiversity Inventory and Monitoring Project** was prepared and started to implement in 2013 by the Ministry of Forestry and Water Affairs, General Directorate of Nature Conservation and National Parks for the purpose of conserving our biological richness.

With this project, biological diversity will be followed up both database and land based monitoring. Thus, risks such as biopiracy, threaten of species, habitat destruction, pressure to nature will be prevented.

Project has been initiated in 81 provinces so far and has been completed in 74 provinces. By the end of 2019, Project works will be completed in 81 provinces and the Turkey Biological Diversity Map is planned to be prepared.

Within the scope of the project, biodiversity inventory and monitoring studies of Turkey has been continued in the following taxa:

- Vascular plants (Literature and fieldwork)
- Mammals (Literature and fieldwork)
- Birds (Literature and fieldwork)
- Reptiles (Literature and fieldwork)

- Amphibians (Literature and fieldwork)
- Cryptogamic plants (Literature)
- Invertebrate animals (Literature)

Biological diversity data come from all provinces have been stored at Noah's Ark National Biological Diversity Database. Therefore Turkey's biological diversity data will be searched by the database on the basis of table, graphic and map, in addition to this it will be able to be monitored for conservation and sustainability of biodiversity.

Inventory studies

With the start of the project, 941.358 data entries were provided within the 4 years period between 2014 and 2018 and the total number of data reached 1.460.000. Data were collected from a total of 470.185 location observations within the scope of the completed province of Turkey. As a result of the project, a total of 12.388 taxa were identified which 10.991 are flora taxa and 1.397 fauna taxa. 394 local endemic, 3.519 endemic taxa were also identified and the rates of endemism are 31%.

During the project implentation phase, the indicators for monitoring biodiversity regarding to species nad habitat level are decided and for each indicators is prepared a specific monitoring plan. Also, systematic and sustainable monitoring studies will be carried out having the completed inventory results. It will be ensured effective management of biological diversity through species/ population, habitat/ecosystem and regional level monitoring studies.

Monitoring studies

Monitoring indicators are identified for each taxa and habitats regarding field locations. Information about the population status of the species, habitat status and the state of the ecosystem that the species is located and represented can be obtained by monitoring the indicators.

Monitoring activities are being implemented currently throughout 74 province. Monitoring activities are conducted either by the regional directorates themselves or by the local universities via protocols.

Inventory studies will be finished in 2019. However, monitoring studies are ongoing studies at local and national level. By monitoring activities, it is planned to be maintained and expanded this studies at national level for taking care of common monitoring species amoung provinces.

- **Biopiracy Information Sharing System** which also includes a database and was established in order to facilitate the follow-up of biopiracy cases, has been used effectively with contribution of Research Permission Information System and Ministry of Interior.
- In scope of **The Project on Registration of Traditional Knowledge Associated with Biodiversity**, all publications on traditional knowledge based on biological diversity from the republican period were scanned and recorded in the data table. Field work was completed in 2018 in Aydın, Afyonkarahisar, Hatay, Ankara, Erzurum, Samsun and Çorum and the following year Bursa, Mersin, Kayseri, Gümüşhane and Şanlıurfa field work was completed. Within the scope of the 2019 program of the project, field works have been

started in Kırklareli, Mardin, İzmir, Isparta, Aksaray, Sinop, Bartın, Trabzon and Van. It is aimed to complete the field work in all provinces by 2023.

The aim of the Project of Recording Traditional Knowledge Based on Biodiversity is to compile, record and regulate traditional knowledge based on biodiversity in order to contribute to the acquisition of biological diversity into the economy and the utilization of industrial property rights based on our genetic resources in our country. The project aimed to compile information on traditional products such as medicines, yeasts and dyes developed by the public using natural biological resources and to create a national traditional knowledge bank.

Within the scope of the project, on the one hand, previously published scientific publications are compiled and on the other hand, traditional knowledge is recorded by making face-to-face interviews with the elderly population, especially in the villages determined by taking into consideration the geographical characteristics, historical background and cultural richness of each province. Species subject to this information are also identified by experts and samples are taken from traditional products. The literature and the information obtained from the fieldwork are recorded in the data tables.

As a result of the project, obtaining patents directly on the products developed using traditional knowledge based on biodiversity will be prevented in national and international levels. Furthermore, this information in the database will be provided to academicians and researchers for use in research and development activities.

For field studies, teams consisting of botany, ethnobotany, social sciences, zoology and microbiology were formed. All the elements that make up biodiversity in the field studies (plant, animal, microorganism)

Health (applications containing public medicine or healing BGB),

• Nutrition (food, spices, beverages, yeast, etc.),

• Industrial (paint, textile, building material, fuel, crafts, etc.),

• Agriculture-Livestock and

• Information on traditional uses for other purposes (birth-death, wedding customs, incense, etc.) is compiled.

Further, General Directorate of Nature Conservation and National Parks carries out the following projects;

- **Technical Assistance for Strengthening the National Nature Protection System for Implementation of Natura 2000 Requirements**

An IPA Project called “Strengthening the National Nature Protection System for Implementation of Natura 2000 Requirements Project” was carried out between September 2015 – September 2018. Total project budget was 6.429.789 Euro. Ministry of Agriculture and Forestry was the beneficiary.

Outputs of the Project are:

• lists of habitats and species under Habitats Directive and Birds Directive found in Turkey

• Habitat interpretation manual for Turkey,

• A new methodology called "Systematic Conservation Planning" for selection of Natura 2000 sites,

• A list of potential Natura 2000 sites in Central Anatolian ecoregion, (34 potential sites were described)

• Standard Data Forms for Potential Natura 2000 sites,

• A new Natura 2000 database compatible with EU system and Turkey's Noah's Ark Database.

• Institutional Need Analysis for Natura 2000 in Turkey,

• Capacity building workshops for NGO's institutions,

• Draft Secondary legislations for Turkey's Nature Conservation Law were prepared.

- **Addressing Invasive Alien Species Threats at Key Marine Biodiversity Areas GEF VI Project**

"Addressing Invasive Alien Species (IAS) Threats at Key Marine Biodiversity Areas" project was designed to ensure resilience of marine and coastal ecosystems through strengthened capacities and investment in prevention, detection, control and management of Invasive Alien Species. The project has successfully obtained the approval from Global Environment Facility (GEF) in October 2017 and the Local Appraisal Committee (LPAC) meeting was held on 16th of January 2018. The Project Document was approved and signed by the Ministry of Foreign Affairs (MoFA), Ministry of Agriculture and Forestry, General Directorate of Nature Conservation and National Parks (MoFWA) and by UNDP Turkey on 18th of August 2018. The project started in 3rd quarter of 2018 and expected finish in 3rd quarter of 2023.

The long-term project objective is to minimize negative impacts of IAS in support of conservation Turkey's globally significant native marine biodiversity. The project will be implemented on Turkish coastsal and marine ecosystems in four pilot areas. The project is organized into three components:

• Component 1. Effective national policy framework on IAS

• Component 2. Capacity building, knowledge and information sharing systems to address the IAS threats

• Component 3. Investment in sustainable management, prevention, eradication, and control of IAS and restoration of IAS-degraded habitat at key marine and coastal areas.

- **Conservation and Sustainable Management of Turkey's Steppe Ecosystem Project**

Within the framework of the FAO-GEF project GCP/TUR/061/GFF "Conservation and Sustainable Management of Turkey's Steppe Project", surveys and assessments on biodiversity, socio-economic and socio-cultural aspects, and a comprehensive analysis of on-going grazing activities and livestock situation will be carried out. This will contribute to the objectives of the project which is targeting improving of conservation of Turkey's steppe ecosystems through effective protected

area management and mainstreaming steppe biodiversity conservation into productive landscapes.

The project has three outcomes and nine outputs:

Component/Outcome 1: Effectiveness of protected area system to conserve steppe biodiversity increased

Output 1.1 New steppe protected area established and operational

Output 1.2 Effective management plans for three steppe protected areas created and implemented

Output 1.3 Rigorous monitoring program for three steppe protected areas established

Component/Outcome 2: Steppe biodiversity conservation mainstreamed into production landscapes

Output 2.1 Sustainable grazing management program operational across three steppe protected areas and associated buffer zones

Output 2.2 Sustainable grazing management program impacts monitored at three steppe protected areas

Output 2.3 Model steppe conservation training program for pastoralists in place

Component/Outcome 3: Enabling environment established for the effective conservation of steppe biodiversity across large landscapes

Output 3.1 Sanliurfa Province steppe conservation strategy and associated enabling environment improvements implemented

Output 3.2 National steppe conservation strategy and associated enabling environment improvements established

Output 3.3 National steppe conservation training and awareness program for decision-makers and resource managers

The surveys and assessments as tendered shall contribute to the overall goals of the project and will be carried out in three pilot sites, their associated buffer zones and to be decided ecological corridors for connecting the pilot sites in Sanliurfa Province. The pilot sites are Kızılkuyu Wildlife Development Area, Tek Tek Mountains National Park, and (Sanliurfa part of) Karacadağ.

Project Management Unit from FAO, National Project Implementation Unit (NPIU) and site-based implementation unit is part of survey studies. The staff from provincial levels of the General Directorate of Nature Conservation and National Parks (GDNCNP) and General Directorate of Plant Production of the Ministry of Agriculture and Forestry (MAF) have actively joined the survey and assessment process. The staff from the national levels of these General Directorates have participated in the survey and assessment process when needed. Other stakeholders and

representatives of academic institutions, civil society, and farmer's organizations may join the surveys and assessment process as well.

- **Addressing of Invasive Alien Species Threats in Terrestrial Areas and Inland Waters in Turkey**

The overall objective of the project titled "Addressing of Invasive Alien Species (IAS) Threats in Terrestrial Areas and Inland Waters in Turkey" is to ensure resilience of inland waters and terrestrial ecosystems with specific focus on invasive alien species. The project was submitted to European Union (EU) for the second period of Instrument for Preaccession Assistance (IPA II) and approved by EU in 2018. The project will be started in the last quarter of 2019 and last for 3 years.

The purpose of the project is to get invasive alien species (IAS) under control in terrestrial areas and inland waters in Turkey, in line with the EU Regulation 1143/2014. Six invasive alien species were selected within the scope of project. List of targeted IAS and their distribution is given below;

1-Bur cucumber (*Sicyos angulatus* L.) in Eastern Black Sea region in Artvin, Rize, Trabzon, Giresun provinces

2-The rose-ringed parakeet (*Psittacula krameri*) in Ankara, Istanbul and Izmir provinces

3-Red-eared slider (*Trachemys scripta elegans*) in Lakes in İzmir, Antalya and Mersin provinces

4-Nutria (*Myocastor coypus*) in Meric River (Trakya Region) and Aras River (Eastern Anatolia)

5-The Prussian carp (*Carassius gibelio*) Seyitler Dam Lake (Afyonkarahisar)

6-Eastern mosquito fish (*Gambusia affinis*) Lake Acıgöl and very small spring field and short spring feed streams (Denizli-Afyonkarahisar)

The expected results of the project are;

Result 1-Legal basis for the control of IAS in terrestrial areas and inland waters of Turkey was prepared.

Result 2-Each Invasive Alien Species of interest was controlled / eradicated

Result 3- Improved management capacity of institution staffs

Result 4- Increased Public awareness

This project will be linked with GEF VI Project (Addressing of Invasive Alien Species Threats on Key Marine Biodiversity Areas in Turkey) which was started in 2018. This EU IPA II Project will complete gaps in terrestrial ecosystems and inland waters on the roadmap towards the implementation of EU legislation. GEF VI and EU IPA II projects will be in close cooperation especially on preparing IAS Regulation and The National Strategy and Action Plan covered all ecosystems in Turkey and also setting up IAS data base and other involved cross-cutting issues within the scope EU IPA II Project. Two projects are complementary with each other.

- **Noah's Ark National Biodiversity Database's new version is completed on September 2019.**

- **Species Conservation Studies**

Species conservation studies started in 2013 with the determination of the strategic targets of our Ministry. With the strategic target, at least 10 Species Conservation Action Plans will be prepared each year until 2023 and 100 Species Conservation Action Plan is planned to be completed.

Species are identified that need to be intervened urgently. Between 2013-2017, action plans were prepared for 60 of species. In 2018, the preparation of action plans for 20 species are being proceeded. The objectives and activities in the completed action plans are monitored in 5 year-periods.

By monitoring studies, the pressures and threats affecting the persistance of species' generation will be minimized and maintanence of species will be supported.

With the completion of action plan, monitoring activities are started for the next year and these studies are carried out with the financial means of our Ministry.

Indicators used in this assessment

Indicator(s)used in this assessment

<Indicator(s) used> Please provide a list of indicators used for the assessment of this target

or:

☒ No indicator **used**

Please describe any other tools or means used for assessing progress

Related projects results have been evaluated.

Relevant websites, web links and files (Please use this field to indicate any relevant websites, web links or documents where additional information related to this assessment can be found).

http://www.nuhungemisi.gov.tr/

https://aribs.tarimorman.gov.tr/

https://dogadabirak.tarimorman.gov.tr/

http://www.sbb.gov.tr/wp-content/uploads/2019/11/ON_BIRINCI_KALKINMA-PLANI_2019-2023.pdf (716.1, 716.2, 716.3, 717, 412.1)

http://www.sbb.gov.tr/wp-content/uploads/2018/11/The_Tenth_Development_Plan_2014-2018.pdf (1037)

Level of confidence of the above assessment

☒ Based on comprehensive evidence

☐ Based on partial evidence

☐ Based on limited evidence

Please provide an explanation for the level of confidence indicated above

Anticipated progresses and outputs were achieved from the projects.

Adequacy of monitoring information to support assessment

☒ Monitoring related to this target is adequate

☐ Monitoring related to this target is partial (e.g. only covering part of the area or issue)

☐ No monitoring system in place

☐ Monitoring is not needed

Please describe how the targets are monitored and indicate whether there is a monitoring system in place

There was no monitoring system for targets until August 2019. Since then, The National Biodiversity Coordination Council has been established for effective monitoring national targets. For this purpose, coordination meetings will be performed inter related institutions.

Relevant websites, web links and files (Please use this field to indicate any relevant websites, web links or documents where additional information related to the monitoring system can be found)

https://www.mevzuat.gov.tr/MevzuatMetin/CumhurbaskanligiGenelgeleri/20190802-15.pdf

Section IV. Description of the national contribution to the achievement global Aichi Biodiversity Targets

Using the template below, please describe your country's contribution towards the achievement of global Aichi Biodiversity Targets.

For Parties whose national targets are identical to the Aichi Biodiversity Targets, some of this information may be captured in sections II and III above. Please provide additional descriptions of your country's national contribution to the achievement of global Aichi Biodiversity Targets.

IV. Description of national contribution to the achievement of global Aichi Biodiversity Targets
Related Aichi Targets with national targets
Please describe how and to what extent your country has contributed to the achievement of this Aichi Biodiversity Target and summarize the evidence used to support this description: NBSAP (2008-2017) has been updated. NBSAP (2008-2017) with new working schedule entried into force with Minister of Agriculture and Forestry approval together with NBAP (2018-2028) including recent action plans based on country's biodiversity politics. The National Biodiversity Coordination Council has been established for effective achievement of related Aichi Targets with national targets.
Please describe other activities contributing to the achievement of the Aichi Biodiversity Target at the global level (optional) Being host of COP 16 (UN CBD), Turkey's preparation works have been continued.
Based on the description of your country's contributions to the achievement of the Aichi Biodiversity Targets, please describe how and to what extent these contributions support the implementation of the 2030 Agenda for Sustainable Development and the Sustainable Development Goals: 2030 SDG Goal 2 - NBAP (2018-2028) national objective 1 and 3 2030 SDG Goal 6 - NBAP (2018-2028) national objective 4.2 and 1 2030 SDG Goal 7 - NBAP (2018-2028) national objective 5 2030 SDG Goal 8 - NBAP (2018-2028) national objective 6 and 7 2030 SDG Goal 9 - NBAP (2018-2028) national objective 6 2030 SDG Goal 12 - NBAP (2018-2028) national objective 3 and 1 2030 SDG Goal 13 - NBAP (2018-2028) national objective 1.1 2030 SDG Goal 14 - NBAP (2018-2028) national objective 1 and 4.2 2030 SDG Goal 15 - NBAP (2018-2028) national objective 1, 2, 3, 4, 5

Section V. Description of the national contribution to the achievement of the targets of the Global Strategy for Plant Conservation (completion of this section is optional)

Using the template below, please describe your country's contribution towards the achievement of the targets of the Global Strategy for Plant Conservation. This template should be replicated for each of the 16 targets of the Global Strategy for Plant Conservation.

V. Description of the national contribution to the achievement of the targets of the Global Strategy for Plant Conservation

Turkey has two gene banks (National Gene Bank- İzmir, Turkey Seed Gene Bank-Ankara).

The National Biodiversity Inventory and Monitoring Project was prepared and launched in 2013 by Former Ministry of Forestry and Water Affairs, General Directorate of Nature Conservation and National Parks for the purpose of preserving our biological richness. Within the scope of the project, biodiversity inventory and monitoring studies of Turkey continue in the following live groups

- Vascular plants (Literature and fieldwork)
- Mammals (Literature and fieldwork)
- Birds (Literature and fieldwork)
- Reptiles (Literature and fieldwork)
- Amphibians (Literature and fieldwork)
- Cryptogamic plants (Literature)
- Invertebrate animals (Literature)

Biodiversity data from all provinces of Turkey are collected in Noah's Ark National Biodiversity Database. In the scope of project, plant lists have been generated and taxonomic studies have been continued. Taxa records have been increased from 11707 to 11840.

Does your country have national targets related to the GSPC Targets?

☒ Yes. Please provide details on the specific targets below:

NBAP (2018-2028) national objective 2

or:

☐ No, there are no related national targets

Please provide information on any active networks for plant conservation present in your country.

http://www.nuhungemisi.gov.tr/

http://194.27.225.161/yasin/tubives/index.php

https://www.bizimbitkiler.org.tr/list.html

Category of progress towards the target of the Global Strategy for Plant Conservation at the national level:

GSPC Target 1, 2, 3…

☐ On track to achieve target at national level

☒ Progress towards target at national level but at an insufficient rate ☐ No significant change at national level **Please explain the selection above:** Although all targets have not been achieved, Turkey carries out many studies and projects related to plant species inventory and their conservation and sustainable use.
Please describe how and to what extent your country has contributed to the achievement of this GSPC Target and summarize the evidence used to support this description: Turkey carries out many studies and projects related to plant species inventory and their conservation and sustainable use.

Section VI. Additional information on the contribution of indigenous peoples and local communities (completion of this section is optional)

Using the template below, please provide any additional information on the contribution of indigenous peoples and local communities to the achievement of the Aichi Biodiversity Targets if not captured in the sections above

VI. Additional information on the contribution of indigenous peoples and local communities to the achievement of the Aichi Biodiversity Targets if not captured in the sections above
Please provide any additional information on the contribution of indigenous peoples and local communities to the achievement of the Aichi Biodiversity Targets if not captured in the sections above. Not Applicable. There are no indigenous peoples and local communities in Turkey.

Section VII. Updated biodiversity country profiles

Please review and update your country's biodiversity profile currently displayed on the clearing-house mechanism. Biodiversity country profiles provide an overview of information relevant to your country's implementation of the Convention.

VII. Updated biodiversity country profile (Please review and update the text currently displayed at https://www.cbd.int/countries[1])
Biodiversity facts

[1] *Note*: If the online reporting tool is being used, the text of the current biodiversity profile will be displayed. A time stamp will be added to indicate the date when the update was published.

Status and trends of biodiversity, including benefits from biodiversity and ecosystem services and functions:

Of the world's seven bio-geographic regions, three (Mediterranean, Euro-Siberian, and Irano-Turanian) have elements in Turkey, each of which has unique species and natural ecosystems. The Mediterranean element hosts the largest cypress forests available in the world. The Euro-Siberian element is comprised of the Black Sea mountainous forest involving alpine pastures.

The Irano-Turanian element includes the steppes of Central Anatolia and Eastern Anatolia. Climatic and geographical features change within short intervals of space due to Turkey's position as a bridge between two continents. Consequently, it has the character of a small continent from the stand point of biological diversity with forest, mountain, and steppe, wetland, coastal and marine ecosystems and different forms and combinations of thereof.

This extraordinary ecosystem and habitat diversity has produced considerable species diversity. Faunal biological diversity is quite high in Turkey compared with that of other countries in the temperate zone.

Invertebrates account for the largest number of species, with an estimated 60 000 to 80 000 species, the majority of which are insects. The insect subclass Pterygota (winged insects) alone has 22 125 identified species in 18 orders in Turkey.

The total number of vertebrate species identified to date is near 1 500. There are 694 freshwater and marine fish species, 460 bird species, 30 amphibian species, 161 mammal species, and 120 reptile species.

The number of vascular plant species in Europe (excluding Turkey) is about 12 500 with 28% of these species being endemic to Europe. Within Europe, the Mediterranean Region has the highest plant diversity.

A species, or other category of organism that is unique to a defined geographic location such as an island, nation, country, or habitat type is considered endemic to that location. The endemism rate of the Turkish flora is 31.8% and each year new such species are identified. The richest plant family for endemism in Turkey is Asteraceae having a total of 572 endemic taxa, followed by Fabaceae (385 taxa) and Lamiaceae (326 taxa). Also 14 genera are endemic.

The rate of endemism is relatively high when compared with other European countries such as 18% in Spain, 15% in Greece, 3% in France, and only 0.1% in Poland.

Due to exceptional amount of endemism that brings a huge responsibility to Turkey, it is to ensure that these species are adequately protected from threats or extinction, particularly for those which are related to the crops upon which much of the world depends. Of the country's seven geographical regions, the Mediterranean Region boasts the highest number of endemic species confined to a single region.

Within that region, Antalya is the richest province with 587 endemic plant species. High levels of endemism within Turkey are concentrated in specific areas, such as the Amanos Mountains, the Ilgaz Mountains, the Central Taurus Mountains, the Taşeli Plateau, the Bolkar and Aladağlar Mountains, the Kaz Mountains, Uludağ Mountain, the mountains between Gümüşhane and Erzincan, the Munzur Mountains, and Lake Tuz and its saline steppes. Of the 3 649 endemic plant taxa in Turkey, several are relatives of crop species that feed the world, i.e., some field crops (such as wheat, barley, rye, oat, linseed, lentil, chickpea and pea), pasture plants (such as alfalfa, clover,

sainfoin, vetch, and grasses), and horticultural plants (such as cherry, apricot, plum, almond, fig, and grape).

Further, General Directorate of Nature Conservation and National Parks carries out the following projects;

- The National Biodiversity Inventory and Monitoring Project
- The Project on Registration of Traditional Knowledge Associated with Biodiversity
- Technical Assistance for Strengthening the National Nature Protection System for Implementation of Natura 2000 Requirements
- Addressing Invasive Alien Species Threats at Key Marine Biodiversity Areas GEF VI Project
- Conservation and Sustainable Management of Turkey's Steppe Ecosystem Project
- Addressing of Invasive Alien Species Threats in Terrestrial Areas and Inland Waters in Turkey.

Main pressures on and drivers of change to biodiversity (direct and indirect):

The main pressure on biodiversity in Turkey is insufficiency of legal mechanisms for conservation, sustainable use of biodiversity and fair and equitable sharing of benefits arising from use of genetic resources and related traditional knowledge.

The other pressures are over-consumption and exploitation of natural resources, invasive alien species, land-use change, climate change, pollution, genetic erosion, etc.

Measures to enhance implementation of the Convention

Implementation of the NBSAP:

The National Biodiversity Coordination Council is established for effective implementation of Convention.

Overall actions taken to contribute to the implementation of the Strategic Plan for Biodiversity 2011-2020:

The National Biodiversity Coordination Council is established.

Support mechanisms for national implementation (legislation, funding, capacity-building, coordination, mainstreaming, etc.):

The National Biodiversity Coordination Council is established.

Mechanisms for monitoring and reviewing implementation:

The National Biodiversity Coordination Council is established for monitoring and reviewing implementation.