United Nations

Supreme Council for Environment

The Sixth National Report **on Biodiversity**

2022

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Convention on Biological Diversity

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CONFERENCE OF THE PARTIES TO THE
CONVENTION ON BIOLOGICAL DIVERSITY
Thirteenth meeting
Cancun, Mexico, 4-17 December 2016
Agenda item 19

DECISION ADOPTED BY THE CONFERENCE OF THE PARTIES TO THE CONVENTION ON BIOLOGICAL DIVERSITY

XIII/27. National reporting

The Conference of the Parties

1. *Adopts* the guidelines, including the reporting templates, for the sixth national report;

2. *Requests* the Executive Secretary:

(a) To make the guidelines, including the reporting templates, for the sixth national report available to Parties in the six official languages of the United Nations no later than 31 March 2017, including through the clearing-house mechanism of the Convention and the voluntary online reporting tool;

(b) To further develop the voluntary online reporting tool with a view to fully aligning it with the reporting templates for the sixth national report, by 31 March 2017 at the latest;

(c) To finalize the resource manual for the sixth national report, taking into account, among other relevant elements, guidance on common data sources, indicators and other relevant information provided by the secretariats of other biodiversity-related conventions and to the Liaison Group of biodiversity-related conventions, and to make it available through the clearing-house mechanism of the Convention and other means;

3. *Encourages* Parties to submit their sixth national report by 31 December 2018, taking into account preparations for the fifth edition of the *Global Biodiversity Outlook*, and *encourages* Parties to submit elements of their sixth national report as soon as they are ready, as appropriate, through the voluntary online reporting tool;

4. *Requests* the Global Environment Facility to provide adequate funding for the preparation of the sixth national report in a timely and expeditious manner to developing countries, in particular least developed countries and small island developing States as well as Parties with economies in transition;

5. *Invites* Parties, other Governments and relevant organizations to provide, including through the Biodiversity Indicators Partnership and the Group on Earth Observations–Biodiversity Observation Network, where possible, support for developing countries in the preparation of their sixth national reports, in particular with regard to the development of indicators and the use of scientifically sound data for reporting and the assessment of progress in the achievement of national targets;

6. *Requests* the Executive Secretary, subject to the availability of resources, and, where possible and appropriate, in collaboration with relevant partners and related processes, to organize capacity-building activities, such as regional workshops, to support developing countries, in particular the least developed countries and small island developing States as well as Parties with economies in transition, in the preparation of their sixth national reports, including the use of the voluntary online reporting tool;

7. *Invites* Parties to facilitate, as appropriate, the full and effective participation of indigenous peoples and local communities and relevant stakeholders, including focal points for other biodiversity-related conventions and Rio conventions, in the preparation of the sixth national report to ensure that national reports reflect national implementation, and to increase alignment and coordination in reporting to the Convention and its Protocols and synergies in reporting among related conventions;

8. *Requests* the Executive Secretary, in consultation with the Bureau of the Conference of the Parties, to develop, subject to subsequent endorsement by the Conference of the Parties serving as the meetings of the Parties to the Cartagena and Nagoya Protocols, proposals for the alignment of national reporting under the Convention and its Protocols, and to report on progress to the Subsidiary Body on Implementation at its second meeting, taking into account the following elements:

(a) Synchronized reporting cycles for the Convention, the Cartagena Protocol and the Nagoya Protocol, with common deadlines for submission of the reports after the fifteenth meeting of the Conference of the Parties to the Convention, the tenth meeting of the Conference of the Parties serving as the meeting of the Parties to the Cartagena Protocol on Biosafety and the fourth meeting of the Conference of the Parties serving as the meeting of the Parties to the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization, in 2020;

(b) A common approach to the format of the national reports under the Convention and its Protocols;

(c) Gradual integration of the reporting facilities available in the clearing-house mechanism, the Biosafety Clearing-House and the Access and Benefit-Sharing Clearing-House, including unified user accounts, a single portal to access the reports for each of the three instruments, a common branding and design for all national reports, and a common system to analyse and display national report submissions;

(d) Appropriate cross-linkages between future strategic plans of the Convention and its Protocols with a view to facilitating alignment in reporting to the Convention and its Protocols;

9. *Requests* the Executive Secretary, subject to the availability of resources, in collaboration with the secretariats of the biodiversity-related conventions and Rio conventions, and the United Nations Environment Programme's World Conservation Monitoring Centre, to explore options for enhancing synergy on national reporting among these conventions, including consideration of the following possibilities:

(a) Common sets of indicators, where appropriate;

(b) Common reporting modules on shared issues;

(c) Interoperability of information management and reporting systems;

(d) Harmonization of tools for national reporting;

10. *Also requests* the Executive Secretary to submit a report on the progress of the activity referred to in paragraph 9 above to the Subsidiary Body on Implementation at its second meeting.

Annex

GUIDELINES FOR THE SIXTH NATIONAL REPORT

I. Introduction

1. Parties are required by Article 26 of the Convention to submit national reports to the Conference of the Parties on measures taken for the implementation of the Convention and their effectiveness in meeting the objectives of the Convention. The sixth national reports are due by 31 December 2018. Given the time required to prepare, approve and submit a national report, Parties are encouraged to start preparing their sixth national report well before the deadline.

2. The sixth national reports should provide a final review of progress in the implementation of the Strategic Plan for Biodiversity 2011-2020 and towards the Aichi Biodiversity Targets, including relevant national targets, based on information concerning the implementation of national biodiversity strategies and action plans and other actions taken to implement the Convention. Parties should provide updates since the last national report was submitted. This includes information on new or recently completed actions or efforts, as well as updates on ongoing actions or efforts. It also includes recent changes to the status and trends of biodiversity and to the pressures on it.

3. Parties are encouraged to involve relevant stakeholders in the preparation of their national report. This includes national focal points for the Cartagena Protocol on Biosafety and the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from Their Utilization as well as the national focal points for the biodiversity-related Conventions, the Rio Conventions and other relevant international and regional conventions. Representatives of indigenous peoples and local communities, as well as representatives from relevant sectors, business, civil society organizations and non-governmental organizations should also be involved in the preparation of the national report.

II. Structure and format of the report and its submission

4. The sixth national report contains seven sections:

(a) Information on the targets being pursued at the national level;

(b) Implementation measures taken, assessment of their effectiveness, associated obstacles and scientific and technical needs to achieve national targets;

(c) Assessment of progress towards each national target;

(d) Description of the national contribution to the achievement of each global Aichi Biodiversity Target;

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

(f) 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 (completion of this section is optional)

(g) Updated biodiversity country profiles.

5. To facilitate the preparation of the sixth national report, each section of the report is accompanied by a template that contains specific questions with a selection of possible answers. Space to provide narrative information to further substantiate the answers given is also provided. In addition, space is provided to indicate any relevant websites, web links or documents where additional information may be found, eliminating the need to include this information directly in the national report.

6. A resource manual has been prepared to provide further guidance and explanations on the use of the guidelines and contains directions to potential sources of information for the preparation of the sixth national report.[1]

7. To facilitate the preparation of the sixth national report an online reporting tool has been developed. The online reporting tool can be accessed from https://chm.cbd.int/. This tool allows multiple nationally designated users to draft elements of the national report and prepare it for review, internal approval and formal submission. It also allows for parts of the national report to be submitted as they are finalized or for the entire report to be submitted once all of the sections are completed. For those Parties with limited Internet access or who prefer to submit their national reports in document form, an offline version of the reporting templates will be made available. If the national report is submitted in document form, it should be accompanied by an official letter from the national focal point or the senior government official responsible for the implementation of the Convention. Parties not using the online reporting tool may send their sixth national report to the main email address of the Secretariat of the Convention on Biological Diversity (secretariat@cbd.int).

III. templates for the sixth national report

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

If your country has set and/or adopted national targets or equivalent commitments related to the Strategic Plan for Biodiversity 2011-2020 please use the following template to describe them. Please complete this template for each of your country's national targets. National targets entered in this section will be linked to section III so that progress in their implementation can be assessed. If your country has not set or adopted any national targets related to the Strategic Plan for Biodiversity 2011-2020 please indicate so in the first box and move to section II.

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 or ☐ 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 1 Protect an additional 10% of Bahrain's territorial marine and coastal areas.

[1] The resource manual is being made available at: https://www.cbd.int/nr6/resource-manual.

Rationale for the national target

The National Targets for Bahrain were set following the SPB 2011-2020 guidance and aligned with the twenty Aichi Biodiversity Targets Whereby National Target 1 aligns with Aichi Target 11. Through increasing the marine and coastal protected areas, the national target ultimately aims to strengthen the existing ecological functioning systems and improve resilience their resilience by maintaining or increasing marine life abundance, ensuring the sustainable management of marine stock/natural resources.

Strengthen existing ecological functioning systems and improve resilience of all ecosystems by:

1. Work towards increasing the abundance of all organisms;
2. Establish a network of protected areas;
3. Ensure sustainable management of marine stock/natural resources;
4. Restore coral reefs and increase artificial reefs.

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.)

Main related Aichi Biodiversity Targets (Please select one or more Aichi Biodiversity Target to which the national target is wholly or partially related. Parties can select an entire target or a target component (not shown below))

☐ 1	☐ 6	☒ 11	☐ 16
☐ 2	☐ 7	☐ 12	☐ 17
☐ 3	☐ 8	☐ 13	☐ 18
☐ 4	☐ 9	☐ 14	☐ 19
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Other related Aichi Biodiversity Targets (Please select one or more Aichi Biodiversity Target to which the national target is indirectly related.)

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or

☐ National target has no corresponding Aichi Biodiversity Target or relates to other parts of the Strategic Plan for Biodiversity – please explain

<Text entry>

Other relevant information (Please use this field to provide any other relevant information, such as the process of developing and adopting the national target, the stakeholders involved or the strategies and plans in which this national target has been included.)

<Text entry>

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.)

<Add link> <Add file>

National Target 2

To reduce the number of by-catch from fishing by 10%.

Rationale for the national target

Strengthen the governance of biodiversity conservation in national development strategies

1. Revise and update the existing laws and put in place effective mechanisms and tools for their implementation;

Strengthen existing ecological functioning systems and improve resilience of all ecosystems

1. Work towards increasing the abundance of all organisms;

3. Ensure sustainable management of marine stock/natural resources;

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>**

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Other relevant information (Please use this field to provide any other relevant information, such as the process of developing and adopting the national target, the stakeholders involved or the strategies and plans in which this national target has been included.)

<Text entry>

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.)

<Add link> <Add file>

National Target 3 Improve seawater quality by 50% from wastewater and sewage discharge resulting from municipal treatment plants
Rationale for the national target **Strengthen the governance of biodiversity conservation in national development strategies** 1. Mainstream biodiversity conservation into national development strategies; 2. Revise and update the existing laws and put in place effective mechanisms and tools for their implementation
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.)

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Expanding the use of treated sewage water for irrigation purposes in the aim of limiting the use of groundwater. in 2014, the number of farms connected to the treated sewage water network has reached 410, which represents 75% of the total number of farms resulting in reduction of in the discharge of sewage into the sea.

(Directorate of agriculture affairs and marine resources 2014)

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.) **<Add link> <Add file>**
National Target 4 Protect no less than 25% of remaining unprotected coral reefs.
Rationale for the national target **Strengthen existing ecological functioning systems and improve resilience of all ecosystems** 1. Work towards increasing the abundance of all organisms; **3**. Ensure sustainable management of marine stock/natural resources; **4**. Restore coral reefs and increase artificial reefs.
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>**

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<Text entry>

Other relevant information (Please use this field to provide any other relevant information, such as the process of developing and adopting the national target, the stakeholders involved or the strategies and plans in which this national target has been included.)

<Text entry>

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.)

<Add link> <Add file>

National Target 5

Raise awareness among 90% of key stakeholders and 50% of the general public.

Rationale for the national target

Infuse biodiversity conservation in schools, universities curricula and develop outreach programs addressed to the general public.

1. Upgrade schools and universities curricula and teaching programs to integrate biodiversity of Bahrain in educational material and courses;

2. Develop communication strategy on all aspects of biodiversity conservation addressed to decision-makers, investors and the general public;

3. Develop a framework to strengthen capacities and increase awareness on the value of biodiversity and its role in ensuring human well-being.

Bridge the gaps between scientists, citizens and decision-makers by fostering innovation and research

1. Design and develop a national research policy and program in partnership with universities, civil society and politicians, industries and NGOs;

2. Establish a national research council/Center with necessary budget responsible of monitoring the implementation and progress of the national research program with its appropriate guidance;

3. Put in place a science-policy interface system.

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

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

☒ **National/federal**

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

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Other relevant information (Please use this field to provide any other relevant information, such as the process of developing and adopting the national target, the stakeholders involved or the strategies and plans in which this national target has been included.)

<Text entry>

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.)

<Add link> <Add file>

National Target 6

Rehabilitate mangroves by 25% and increase migratory bird species by 10%.

Rationale for the national target

Strengthen existing ecological functioning systems and improve resilience of all ecosystems

1. Work towards increasing the abundance of migratory bird species;
2. Rehabilitate mangroves degraded areas;
3. Ensure sustainable management of coastal natural resources.

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.)

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or

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<Text entry>

Other relevant information (Please use this field to provide any other relevant information, such as the process of developing and adopting the national target, the stakeholders involved or the strategies and plans in which this national target has been included.)

<Text entry>

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.)

<Add link> <Add file>

National Target 7 To protect at least 60% of remaining desert ecosystems and wildlife.
Rationale for the national target **Strengthen existing ecological functioning systems and improve resilience of all ecosystems** 1. Work towards increasing the abundance of all organisms;
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.)

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<Text entry>

Other relevant information (Please use this field to provide any other relevant information, such as the process of developing and adopting the national target, the stakeholders involved or the strategies and plans in which this national target has been included.)

<Text entry>

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.)

<Add link> <Add file>

National Target 8

Rehabilitate desert ecosystems for the promotion of eco-tourism by 17%.

Rationale for the national target

- Strengthen existing ecological functioning systems and improve resilience of all ecosystems

1. Work towards increasing the abundance of all organisms;

- Infuse biodiversity conservation in schools, universities curricula and develop outreach programs addressed to the general public.

1.Upgrade schools and universities curricula and teaching programs to integrate biodiversity of Bahrain in educational material and courses.

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.)

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or

☐ **National target has no corresponding Aichi Biodiversity Target or relates to other parts of the Strategic Plan for Biodiversity – please explain**

<Text entry>

Other relevant information (Please use this field to provide any other relevant information, such as the process of developing and adopting the national target, the stakeholders involved or the strategies and plans in which this national target has been included.)

<Text entry>

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.)

<Add link> <Add file>

National Target 9

Revive agricultural land systems including palm groves by 25%.

Rationale for the national target

- Strengthen existing ecological functioning systems and improve resilience of all ecosystems

1. Work towards increasing the abundance of all organisms;

2. Establish a network of protected areas;

- Strengthen the governance of biodiversity conservation in national development strategies

1. Mainstream biodiversity conservation into national development strategies;
2. Revise and update the existing laws and put in place effective mechanisms and tools for their implementation;

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

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

☒ **National/federal**

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

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Other relevant information (Please use this field to provide any other relevant information, such as the process of developing and adopting the national target, the stakeholders involved or the strategies and plans in which this national target has been included.)

<Text entry>

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.)

<Add link> <Add file>

National Target 10

Decrease pest infestations in palm grove by 100% and other pest infestation.

Rationale for the national target

Strengthen existing ecological functioning systems and improve resilience of all ecosystems

1. Work towards increasing the abundance of all organisms;

2. Establish a network of protected areas;

- Strengthen the governance of biodiversity conservation in national development strategies

1. Mainstream biodiversity conservation into national development strategies;

Revise and update the existing laws and put in place effective mechanisms and tools for their implementation;

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

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☐ **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.)

Main related Aichi Biodiversity Targets (Please select one or more Aichi Biodiversity Target to which the national target is wholly or partially related. Parties can select an entire target or a target component (not shown below))

☐ 1 ☐ 6 ☐ 11 ☐ 16
☐ 2 ☐ 7 ☐ 12 ☐ 17
☐ 3 ☐ 8 ☐ 13 ☐ 18
☐ 4 ☒ 9 ☐ 14 ☐ 19
☐ 5 ☐ 10 ☐ 15 ☐ 20

Other related Aichi Biodiversity Targets (Please select one or more Aichi Biodiversity Target to which the national target is indirectly related.)

☐ 1 ☐ 6 ☐ 11 ☐ 16
☐ 2 ☐ 7 ☐ 12 ☐ 17
☐ 3 ☐ 8 ☐ 13 ☐ 18
☐ 4 ☐ 9 ☐ 14 ☐ 19
☐ 5 ☐ 10 ☐ 15 ☐ 20

or

☐ **National target has no corresponding Aichi Biodiversity Target or relates to other parts of the Strategic Plan for Biodiversity – please explain**

<Text entry>

Other relevant information (Please use this field to provide any other relevant information, such as the process of developing and adopting the national target, the stakeholders involved or the strategies and plans in which this national target has been included.)

<Text entry>

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.)

<Add link> <Add file>

National Target 11

Protect no less than 75% of healthy freshwater spring.

Rationale for the national target

- **Strengthen the governance of biodiversity conservation in national development strategies**

1. Mainstream biodiversity conservation into national development strategies;
2. Revise and update the existing laws and put in place effective mechanisms and tools for their implementation;

- **Strengthen existing ecological functioning systems and improve resilience of all ecosystems**

1. Work towards increasing the abundance of all organisms;

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.)

Main related Aichi Biodiversity Targets (Please select one or more Aichi Biodiversity Target to which the national target is wholly or partially related. Parties can select an entire target or a target component (not shown below))

☐ 1 ☐ 6 ☐ 11 ☐ 16
☐ 2 ☐ 7 ☐ 12 ☐ 17
☐ 3 ☐ 8 ☐ 13 ☐ 18
☐ 4 ☐ 9 ☒ 14 ☐ 19
☐ 5 ☐ 10 ☐ 15 ☐ 20

Other related Aichi Biodiversity Targets (Please select one or more Aichi Biodiversity Target to which the national target is indirectly related.)

☐ 1 ☐ 6 ☒ 11 ☐ 16
☐ 2 ☐ 7 ☐ 12 ☐ 17
☐ 3 ☐ 8 ☐ 13 ☐ 18
☐ 4 ☐ 9 ☐ 14 ☒ 19
☐ 5 ☐ 10 ☒ 15 ☐ 20

or

☐ **National target has no corresponding Aichi Biodiversity Target or relates to other parts of the Strategic Plan for Biodiversity – please explain**

<Text entry>

Other relevant information (Please use this field to provide any other relevant information, such as the process of developing and adopting the national target, the stakeholders involved or the strategies and plans in which this national target has been included.)

<Text entry>

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.)

<Add link> <Add file>

National Target 12

Increase green area in the governorates by 30%.

Rationale for the national target

- **Strengthen the governance of biodiversity conservation in national development strategies**

1. Mainstream biodiversity conservation into national development strategies;
2. Revise and update the existing laws and put in place effective mechanisms and tools for their implementation;

- **Strengthen existing ecological functioning systems and improve resilience of all ecosystems**

1. Work towards increasing the abundance of all organisms.

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.)

Main related Aichi Biodiversity Targets (Please select one or more Aichi Biodiversity Target to which the national target is wholly or partially related. Parties can select an entire target or a target component (not shown below))

☐ 1 ☐ 6 ☒ 11 ☐ 16
☐ 2 ☐ 7 ☐ 12 ☐ 17
☐ 3 ☐ 8 ☐ 13 ☐ 18
☐ 4 ☐ 9 ☐ 14 ☐ 19
☐ 5 ☐ 10 ☐ 15 ☐ 20

Other related Aichi Biodiversity Targets (Please select one or more Aichi Biodiversity Target to which the national target is indirectly related.)

☐ 1 ☐ 6 ☐ 11 ☐ 16
☐ 2 ☒ 7 ☒ 12 ☐ 17
☐ 3 ☒ 8 ☐ 13 ☐ 18
☒ 4 ☒ 9 ☐ 14 ☒ 19
☒ 5 ☐ 10 ☐ 15 ☐ 20

or

☐ **National target has no corresponding Aichi Biodiversity Target or relates to other parts of the Strategic Plan for Biodiversity – please explain**

<Text entry>

Other relevant information (Please use this field to provide any other relevant information, such as the process of developing and adopting the national target, the stakeholders involved or the strategies and plans in which this national target has been included.)

<Text entry>

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.)

<Add link> <Add file>

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

- **National Biodiversity Steering Committee**

In 2016, Kingdom of Bahrain restructured the National Biodiversity Steering Committee (NBSC), which was establish in 2011 (Decisions: No. 44/2011 and No. 81/2011). It gathers eleven members designated by the SCE, Central Informatics and Telecommunications Organization (1 member), Ministry of Education (1 member), Ministry of Works, Municipalities and Urban Planning (2 members), Ministry of Industry, Commerce & Tourism (1 member), Ministry of Interior (2 members), Ministry of Information Affair (1 member), Information & e-Government Authority (1 member), Bahrain Authority for Culture and antiquities (1 member), University of Bahrain (1 member) and Bahrain Chamber of Commerce & Industry (1 member).

NBSC will bring on board additional members to support the three technical teams in their work on NBSAP's implementation. The main task of the NBSC is to supervise the processes of monitoring and evaluation of NBSAP's implementation (in 2009 and 2021) as well as ensuring the mainstreaming of biodiversity conservation in all sectors. Meanwhile, in order to ensure mainstreaming of biodiversity conservation in the various sectors and aligning MEAs targets and other targets of existing national action plans related directly or indirectly to biodiversity conservation, the NBSC will have on board additional representatives listed below from each of the agencies.

1. Directorate of Fisheries (DOF)
2. Directorate of Agricultural Affairs (DAA)
3. National Oil and Gas Authority (NOGA)
4. Port and Maritime Affairs
5. Bahrain Authority for Culture and Antiquities (BACA)
6. Directorate of Budget (DOB)
7. Industries: ALBA, Bahrain Steel, etc.
8. Academic sector and Research: UOB and AGU
9. Bahrain Development Bank
10. TAMKEEN
11. NGOs

- **Technical Teams**

Moreover, Technical Teams (TTs) were established to ensure mainstreaming of biodiversity conservation in the various sectors and national policies and to provide the needed technical support for NBSAP implementation. Each technical team was assigned a set of Terms of Reference to ensure the effectiveness of biodiversity conservation governance starting with national assessment to issuance of law and their implementation. It was agreed by all stakeholders to establish three TTs on the following areas: Marine and Coastal biodiversity, Agriculture biodiversity and Urban biodiversity (Fig. 1). The TT constitution involves experts and academics as well as practitioners in the fields of marine and coastal biodiversity, agriculture

biodiversity and urban biodiversity. The tasks of each of these teams target all technical and scientific issued related to NBSAP's implementation as well as requirement for capacity building at all levels. It is worth noting that TTs will assist in mainstreaming process to avoid duplication and overlap with any other national policy instruments. The National Initiative for Agricultural Development (NIAD), as part of the TT will be a major partner on the projects/programs related to reforestation (green corridor/belt, ecotone, public gardens), Environmental Education at schools, Environmental awareness, as well as women empowerment in the agricultural sector. NGOs selected to join the technical teams based on their organization's missions and capacities.

- **Sub-national committees**

Sub-national committee established to ensure mainstreaming of NBSAP and as part of stakeholders participation. There are four governorates in the Kingdom of Bahrain; the Capital, Northern, Southern and Muharraq. Each governorate has its own municipality council. Four interdisciplinary sub-national committees formed with an elected rapporteur whose main task is to report to the NBSC (Fig. 2). The NBSC delegates a representative to join each of the technical teams whose main task is to update the committee on the needs, advances in the implementation processes or any emerging issues and needed support.

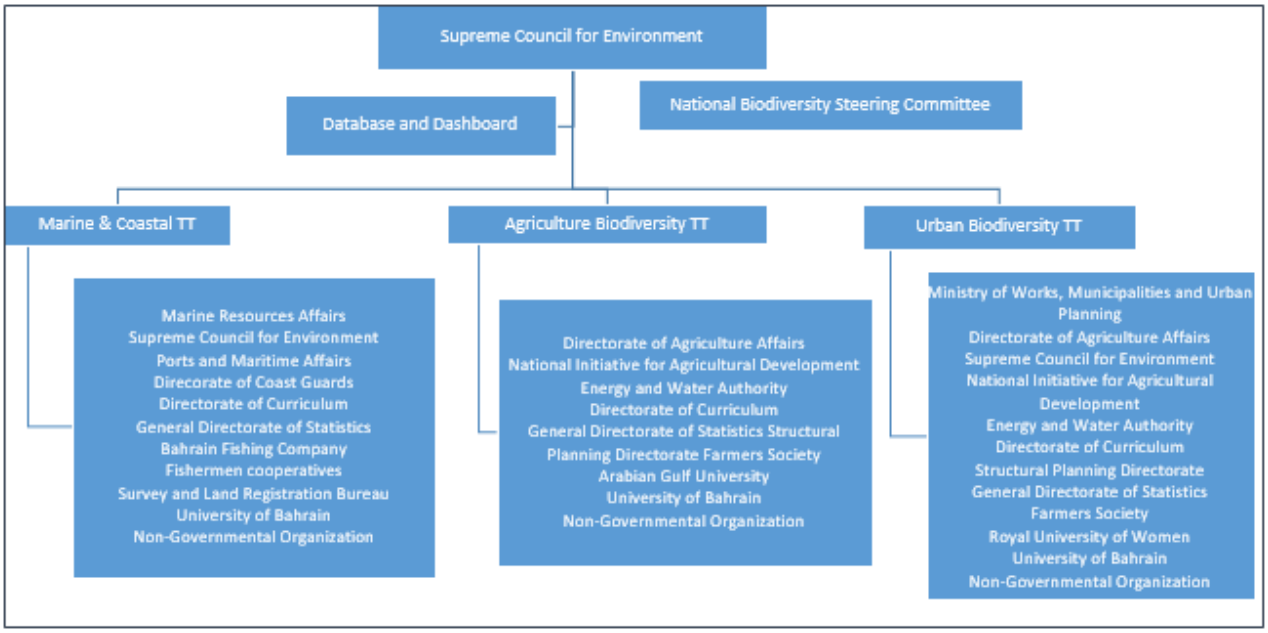

Figure 1: Structure and membership of the NBSC and technical teams responsible for all aspects of NBSAP's implementation**.**

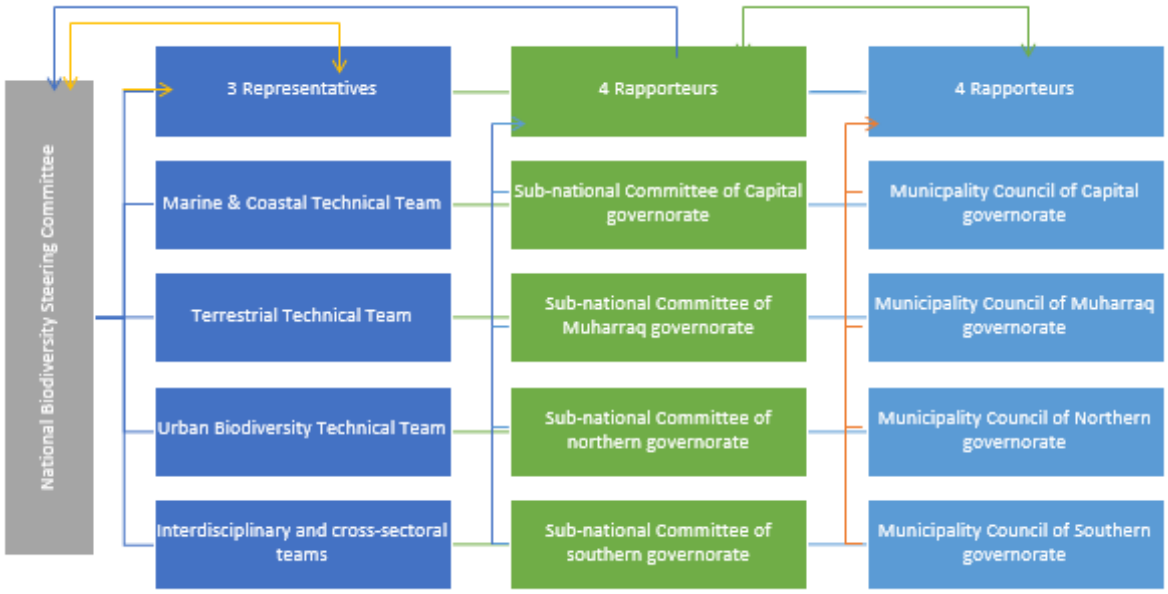

Figure 2: National and sub-national coordination structure for NBSAP's implementation.

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

All of the above-mentioned implementation measures contribute to both national and Aichi biodiversity targets.

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

The Supreme Council for Environment in the Kingdom of Bahrain work towards bringing together public and private agencies whereby their terms of reference under each activity align with their national mandates. This is done through a decentralized system linked through an inter-operable platform; the inter-operable platform brings together authorized users nominated by the relevant authority, in addition to validating-users designated from the concerned agencies.

The evaluation of the implementation of actions based on the measurement of the defining indicators by the relevant agencies:
In terms of monitoring and reporting, each of the agencies, TTs and sub-national committees (Fig. 2) have a set of specific terms of references. The NBSC and TTs following up on the monitoring and evaluation of the mainstreaming of the NBSAP's implementation as well as the evaluation of the plan of work and aligning actions with biodiversity-related to biodiversity conservation and other MEAs. This evaluation methodology Is still in its implementation phase and is partially effective.

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.sce.gov.bh/en/
- https://www.bahrain.bh

Other relevant information, including case studies to illustrate how the measure taken has resulted in (or is expected to result in) outcomes that contribute to the implementation of the NBSAP

Protection of the environment and conservation of natural resources are key elements in the Government Action Plan (2015-2018) & Government Action Plan (2019-2022). This plan emphasizes on the following:

• Giving priority, in particular for projects related to the protection of coastal and marine protected areas and to support greening projects.

• Developing measures for the conservation of the environment and the protection of species, ecosystems, and resources with environmental, economic, and cultural importance.

• Developing new control measures and increasing the frequency of inspections.

• Reviewing and updating the legislative framework on environmental issues to keep up with the rapid developments, and to ensure the protection of natural habitats, wild flora and fauna and marine life.

• Developing awareness and environmental education projects, and to strengthening the partnership with the local community in various environmental fields.

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

- https://www.bahrain.bh/wps/wcm/connect/8824a860-8f2f-4906-b50d-2a0b584f9043/government_action_plan_2015-2018.pdf?MOD=AJPERES

- https://www.fdpm.gov.bh/action_plan.html

Obstacles and scientific and technical needs related to the measure taken: Please describe what obstacles have been encountered and any scientific and technical needs for addressing these, including technical and scientific cooperation, capacity development activities or the need for guidance materials.

Currently, some information in the form of thematic reports, research works, scientific research themes, investigation projects, etc. were conducted by individuals and organizations funded by the government, international organizations is scattered. The information sharing mechanism between relevant ministries/sectors, agencies is still constrained.

Relevant websites, web links and files (Please use this field to indicate any relevant websites, web links or documents where additional information related to these obstacles and scientific and technical needs can be found).
<Add link> <Add file>

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 each national target
Target 1: Protect an additional 10% of Bahrain's territorial marine and coastal area protected.
Category of progress towards the implementation of the selected target: ☒ On track to exceed target ☐ On track to achieve target ☐ Progress towards target but at an insufficient rate ☐ No significant change ☐ Moving away from target ☐ Unknown
Date the assessment was done: From 2014 to 2019
Additional information (Please provide information on the evidence used in the assessment of this target, drawing upon relevant information provided in section II, including obstacles in undertaking the assessment). Kingdom of Bahrain has executed an ambitious project aiming for the incorporation of an ecosystem-based approach into their national environmental policy. This ambitious project involves conducting of a study aiming to assessing the state of the environment with the application of an ecosystem-based approach to further enhance the environmental protection of Najwat Bulthama, Hayr Bulthama, Hayr Shtayah and Hayr Bu A'mamah which were recently listed as World Heritage Sites. These locations represent 18% of (the total area of Bahrain's territorial waters (Fig. 3). In 2017 Bahrain launched the national plan to revive the pearl industry after studies showed that insufficient harvesting in previous years led to the loss of vast numbers of oysters from the Kingdom's oyster beds due to overpopulation. Accordingly, a series of measures and initiatives have been put in place to regulate pearl diving. The plan focuses on the following areas: promoting and regulating pearl diving, protecting Bahrain's oyster beds, strengthening Bahrain's status as a global centre for natural pearls, and developing the national pearls and gemstones laboratory, Danat, into a global centre for examination and assessment. In order to maintain a sustainable oyster population, the Ministry of Works, Municipalities and Urban Planning issued a Ministerial Order to regulate the procedures to obtain a pearl diving license (for Bahrainis only), and to set the criteria and rules that dive centres must meet in order to operate pearl diving trips for tourists and Bahrainis alike. Unlike anywhere else in the world, local and foreign tourists on sanctioned trips have the option to keep or sell any pearls that they find. As part of the plan, Bahrain also established Danat, a world-class pearl and gemstones testing facility, in 2017. Anyone who finds a pearl in Bahraini waters is encouraged to get it examined, tested, and certified by Danat as a natural saltwater pearl.

In strengthening efforts to protect oyster beds in the northern part of the Kingdom (Hayr Bul Thama, Hayr Bu Ammamah, Hayr Shtayyah), the SCE issued two orders in 2017 (2,3) to improve site protection and efficiently regulate fishing and other maritime activities. The orders cover Najwat Bul Thama, the three oyster beds, and a buffer zone around the oyster beds – all of which are designated as a UNESCO World Heritage Site – to improve protection, covering a total area of 1336km^2. The orders set out rules and regulations for each designated area, depending on the ecosystem.

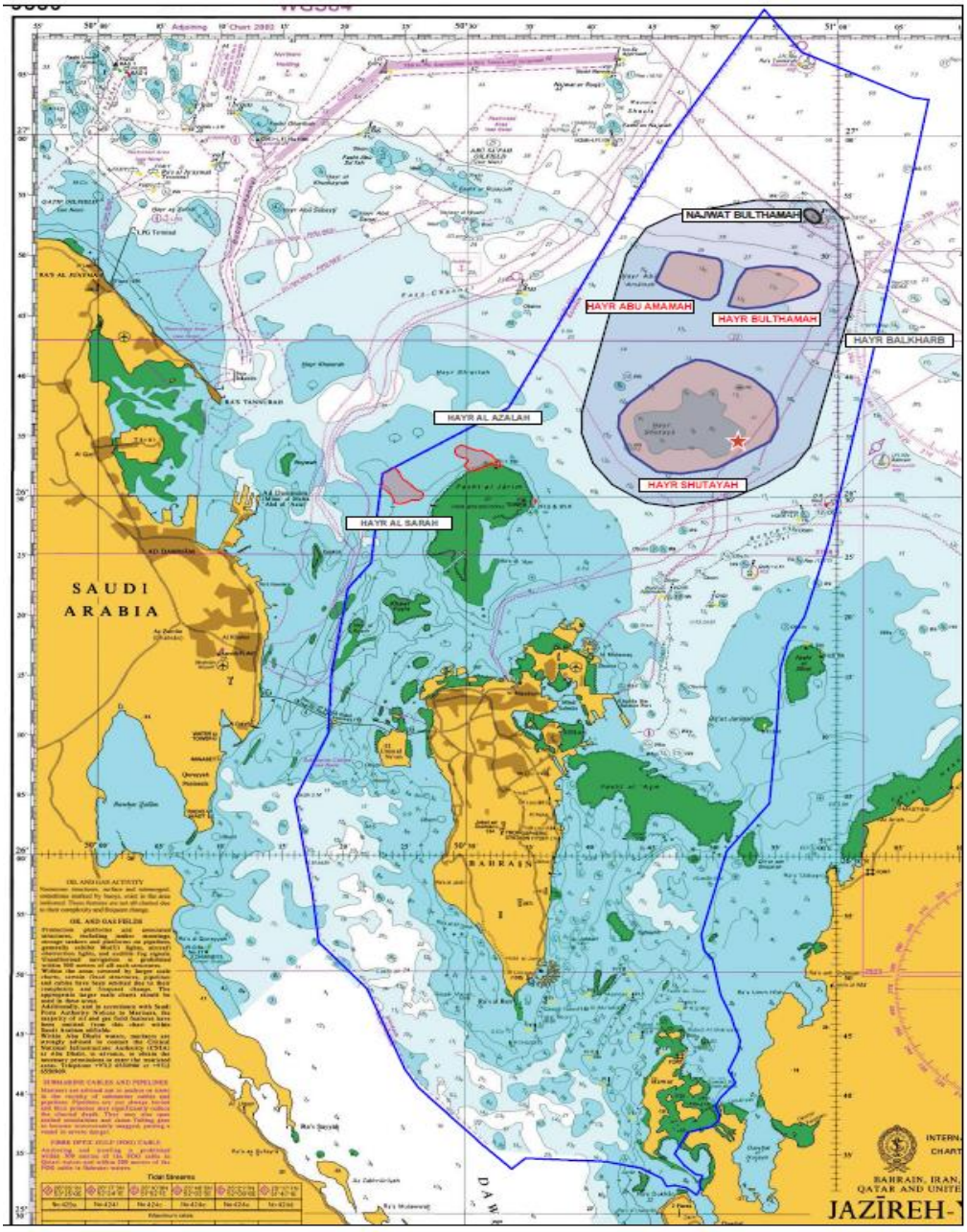

Figure 3: Locations of oyster beds in the northern part of the Kingdom (Hayr Bul Thama, Hayr Bu Ammamah, Hayr Shtayyah).

Indicators used in this assessment

Indicator(s)used in this assessment

- Number of decisions signed
- Number of Management plans
- Number of Managers and assistants hired
- Official paper signed

Please describe any other tools or means used for assessing progress

<Text entry>

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).

- www.sce.gov.bh
- www.danat.bh
- www.mun.gov.bh/agri
- http://www.culture.gov.bh

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.

"Based on comprehensive evidence" was chosen, kingdom of Bahrain developed number of indicators and action plans to implement and achieve Aichi Targets, in addition to the biodiversity steering committee which was established to pursuing the achievement of the national targets.

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 target is monitored and indicate whether there is a monitoring system in place

Kingdom of Bahrain represented by supreme council for environment launched the National Environmental Strategy (NES), which was approved by the Council of Ministers in 2006 (Edict No. 02-1902 on 8/10/2006). NES identifies mechanisms by which principles of sustainable development can be implemented, including enforcing the role of EIA during planning, implementation and after commissioning phases of major projects, adopting principles of integrated environmental management for coastal and marine environments, applying valuation systems to estimate the costs of environmental degradation and rehabilitation, strengthening institutional and legal frameworks, and increasing public awareness and participation.

Moreover, number of technical teams have been established to follow-up the implementation of supreme council for environment plans, recommendations, and all national & international obligations.

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)

<Add link> <Add file>

Target 2: To reduce the number of bycatch from fishing by 10%.

Category of progress towards the implementation of the selected target:

☐ On track to exceed target
☒ On track to achieve target
☐ Progress towards target but at an insufficient rate
☐ No significant change
☐ Moving away from target
☐ Unknown

Date the assessment was done:

From 2014 to 2021

Additional information (Please provide information on the evidence used in the assessment of this target, drawing upon relevant information provided in section II, including obstacles in undertaking the assessment).

Kingdom of Bahrain characterized by enormous biological diversity because of its environment and its geographical location.

The various facets of the Kingdom of Bahrain's biodiversity are threatened by anthropological pressures which namely includes the rapid urban growth the Kingdom is witnessing. This in turn has decreased both the diversity and number of wildlife, thus leading to some species being listed as endangered or threatened.

In order to maintain and restore the fish stocks, government of Bahrain represented by Agriculture & Marine Resources affairs has taken number of important actions:

- Demarcation and identification of specified shrimp fishing sites.
- Imposing a seasonal fishing ban for shrimp, which was extended from 4 months to 6 months.
- Imposing a seasonal fishing ban on crabs.
- Imposing a seasonal fishing ban preventing the catching of the *Scomberomorus commerson* (Al-Kana'ad) fish using nets.
- Imposing a fishing ban on shrimps using bottom trawls (Al-Karaf).

Amid the accelerating challenges and pressures facing the marine environment in the Kingdom of Bahrain, Decision No. (205) of 2018 on the Prohibition of Bottom Trawling (Al-Karaf) played a central and key role in mitigating these pressures, where by-catch is considered one such pressure that is directly reflected by

depleting fish stocks, especially marine finfish. Moreover, by-catch has a negative pressure that directly impairs the hierarchical distribution of food chains, for example, many scientific studies have suggested that bottom trawlers (Al-Karaf) are directly responsible for most turtle deaths, especially the green sea turtles, which are among the main endangered species nationally and internationally according to the international union for conservation of nature (IUCN).

Several studies, which included and relied on information obtained directly from fishermen, have indicated that the number of turtles caught in bottom trawls for the years 1998 to 2003 was approximately between 234 and 433 cases, which is the equivalent to the fishing effort of 36,000 to 44,000 fishing days.

Recently, through field surveys carried out within the framework of the Marine Life Mortality Control Program which is carried out by the Supreme Council for Environment, promising results have been recorded of an overall decline in marine life mortality, particularly marine turtles and especially during the shrimp fishing ban period.

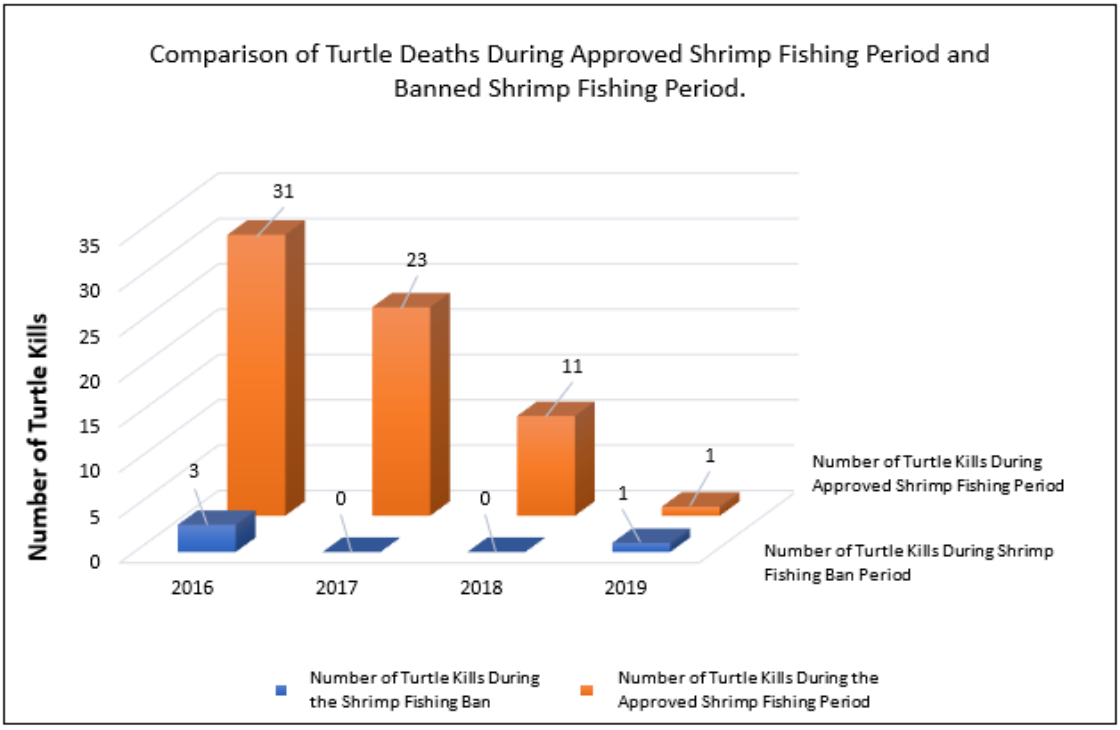

Figure 4: comparison of turtle deaths during approved shrimp fishing period and banned shrimp fishing period (2016-2019)

A quick look at the most positive gains of the decision to ban bottom trawling (Al-Karaf), statistics from the Agriculture and Marine Resources Affairs has shown that fish landing in local markets has grown by nearly 25%. In addition, local markets have seen a significant 30% decline in fish prices compared to previous years.

With a closer look, the first quarter of the period from 2017 to 2019 saw a steady increase in total catch (Metric ton) from the traditional fishing sector. For example, consider the average landing rate of finfish in local markets for January during the years 2017, 2018 and 2019, it can clearly be seen that the average fish landing in local markets was 511.43 metric tons, followed by a marked increase in January 2019 with 780.15 metric tons.

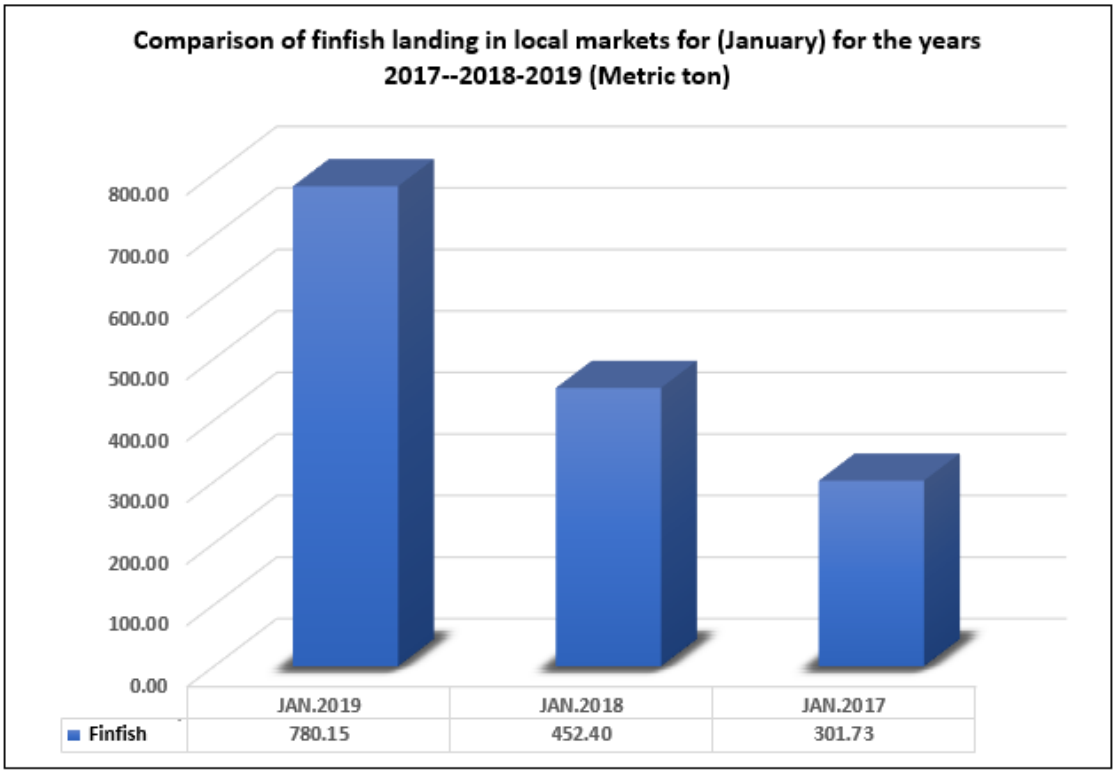

Figure 5: finfish in local markets comparison for (January) in (2017-2019) .

Furthermore, the average landing rates in local markets during February, March, and April of 2017-2018-2019 was around 389.50, 473.39 and 581.15 metric tons, respectively.

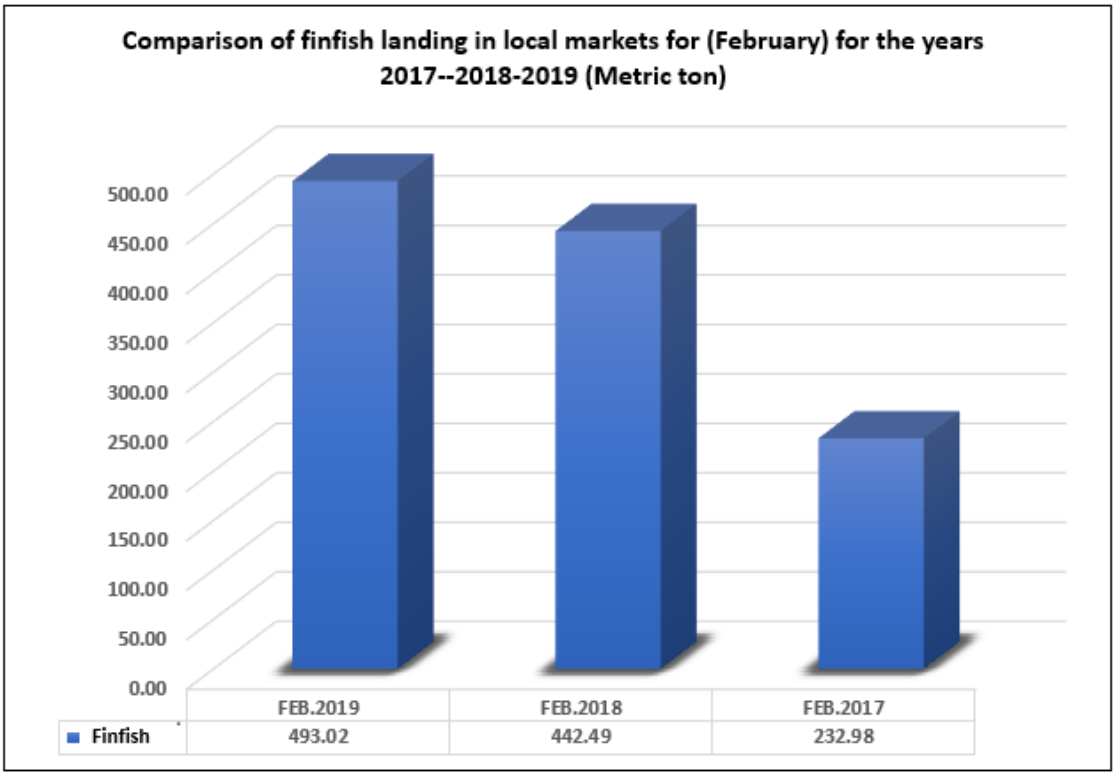

Figure 6 : finfish in local markets comparison for (February) in (2017-2019) .

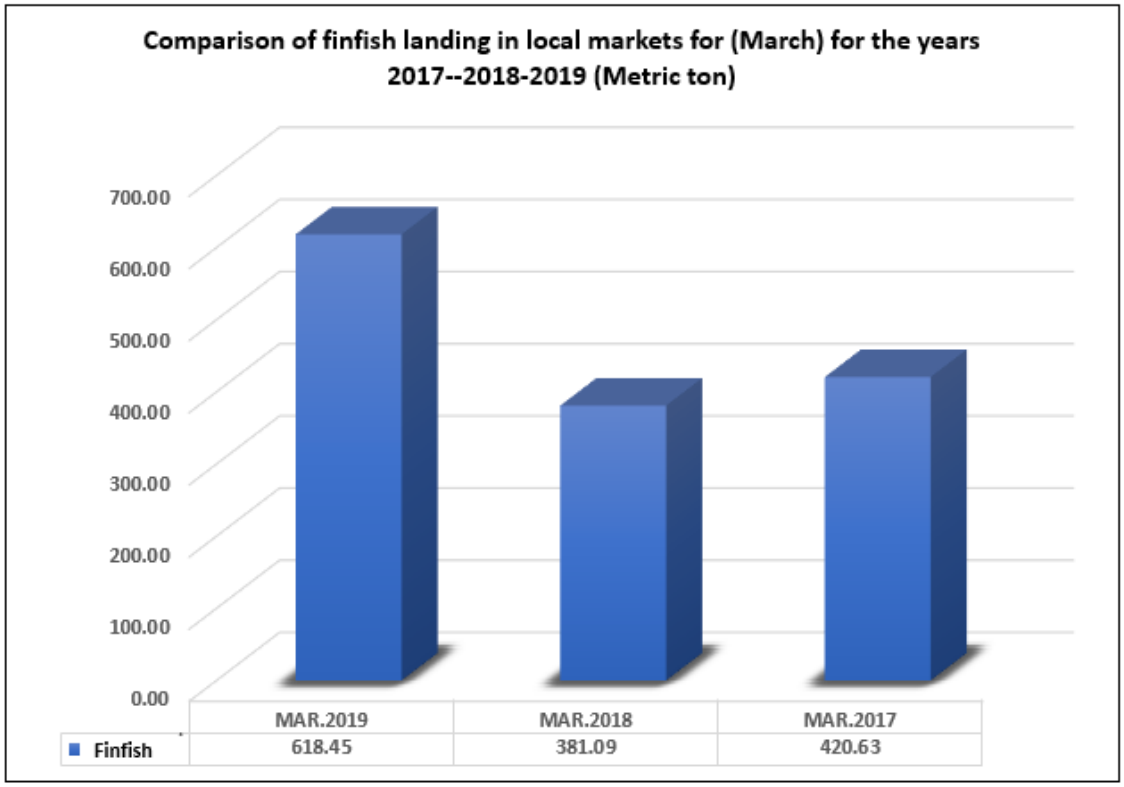

Figure 7: Finfish in local markets comparison for (March) in (2017-2019) .

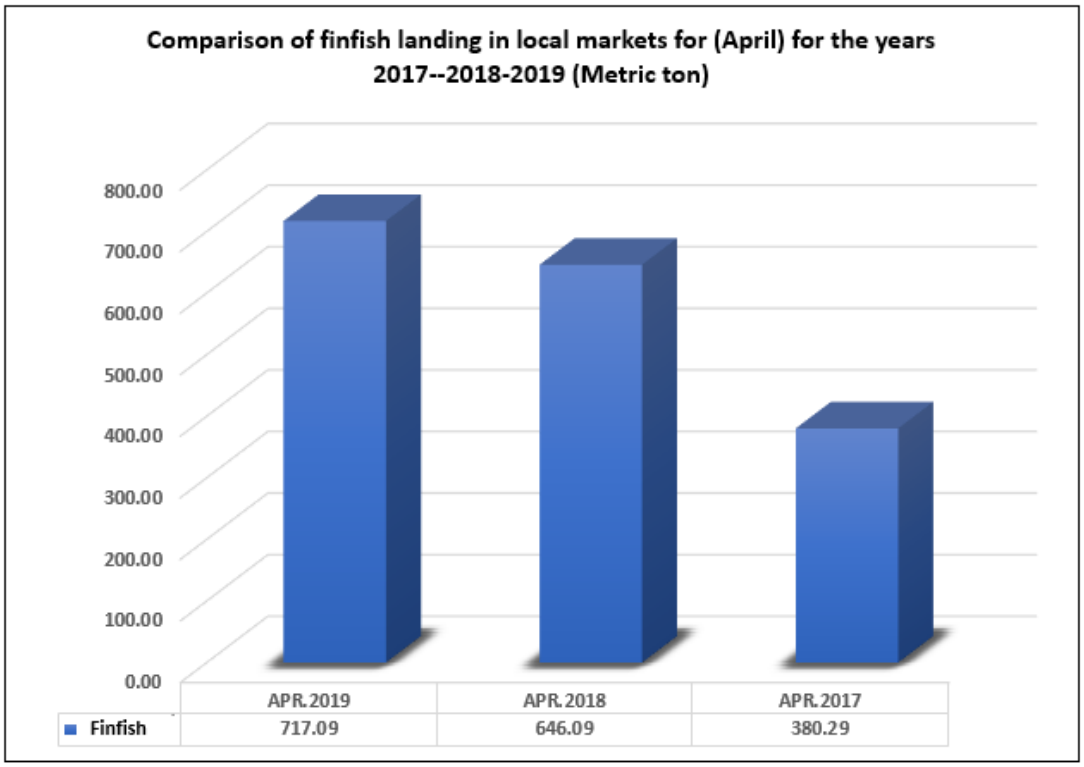

Figure 8 : Finfish in local markets comparison for (April) in (2017-2019) .

It should be noted that the official authorities, with the commendable cooperation of shrimp catchers, have contributed significantly to the successful implementation of Resolution No. (205) of 2018 on the Prohibition of Bottom Trawling (Al-Karaf), where a notable decrease in the landing of crustaceans in local markets (shrimp-crab-lobster) was recorded during the implementation of this resolution as compared to previous years. This has contributed to a general increase in the productivity of food chains in the marine environment and particularly the fish sector.

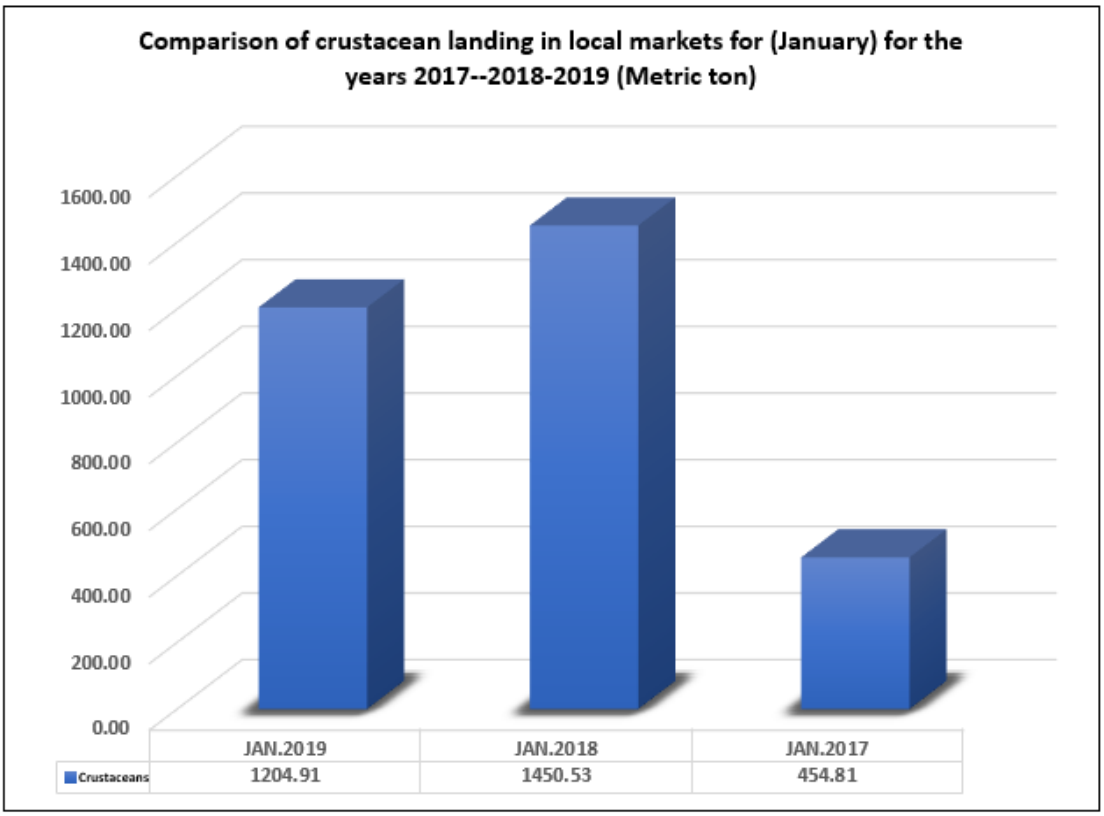

Figure 9: Crustacean in local markets comparison for (January) in (2017-2019) .

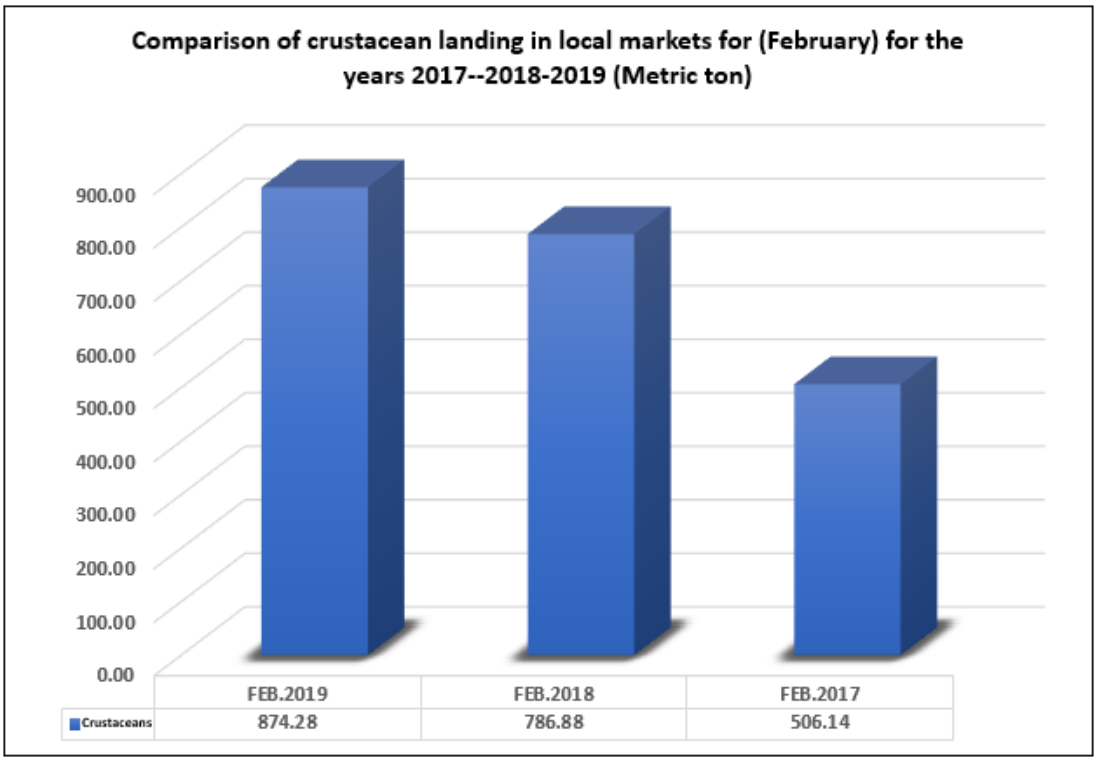

Figure 10: Crustacean in local markets comparison for (February) in (2017-2019) .

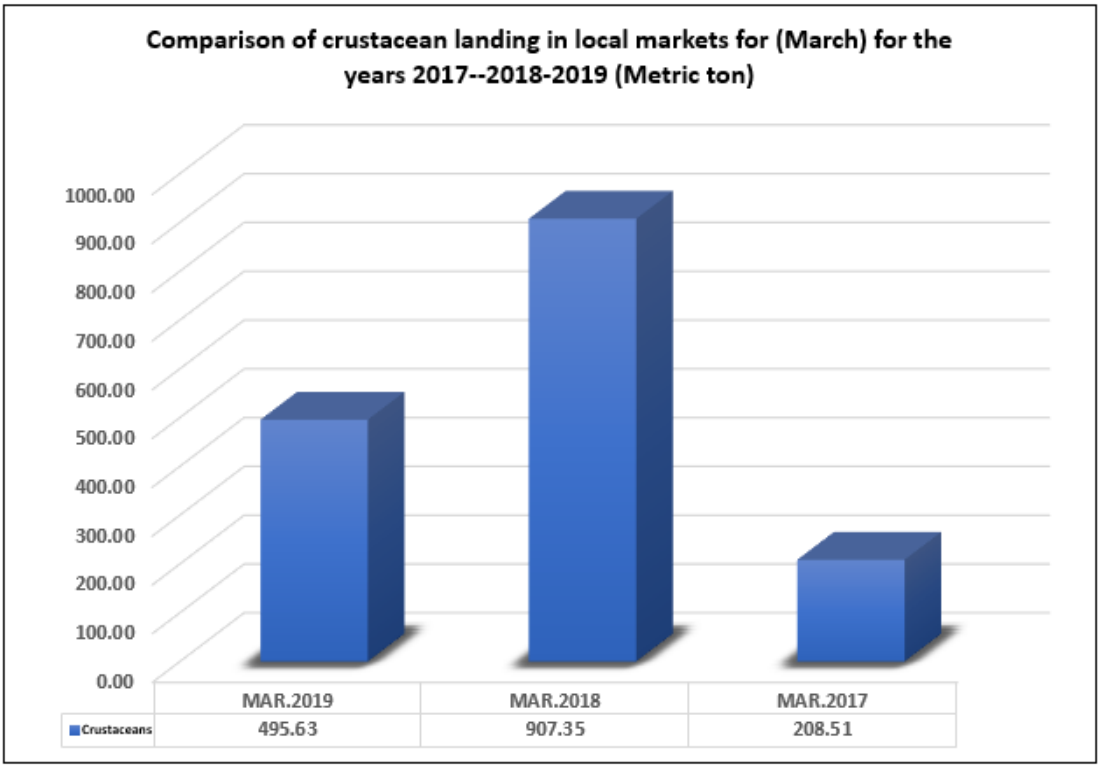

Figure 11: Crustacean in local markets comparison for (March) in (2017-2019) .

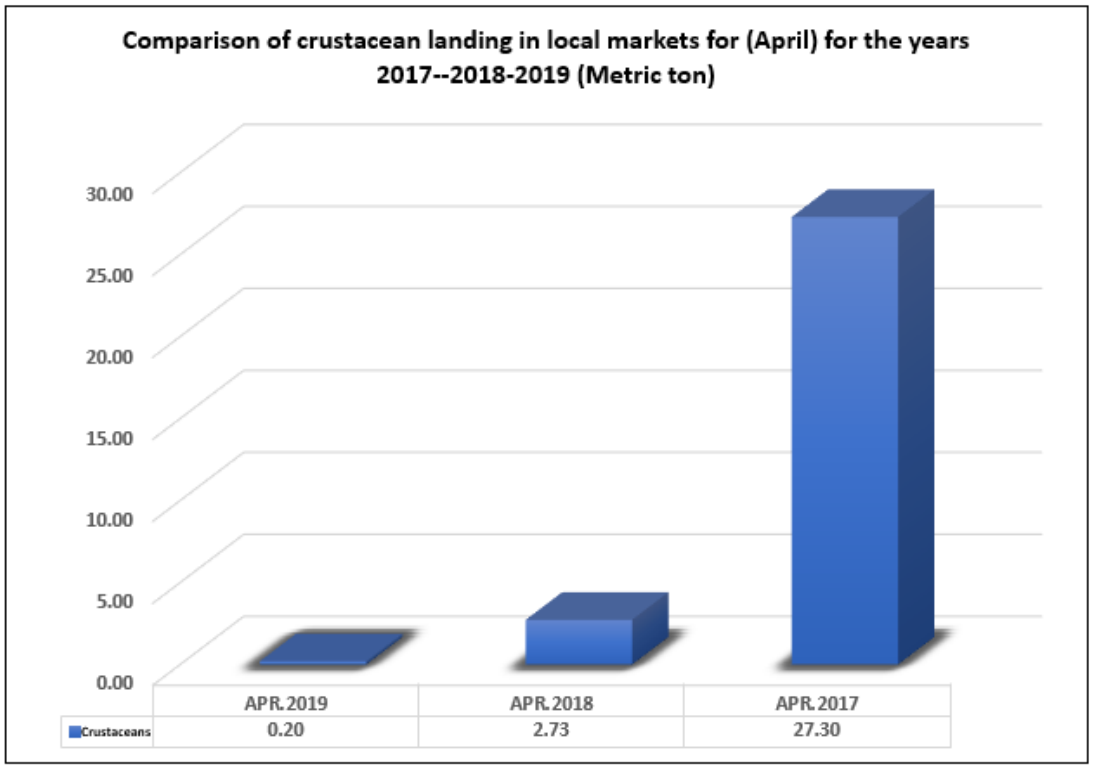

Figure 12: Crustacean in local markets comparison for (April) in (2017-2019) .

Indicators used in this assessment.

Indicator(s)used in this assessment.

- Quantity of by catch/month| number of fines.
- fish landing in local markets.
- Number of Turtles mortality

or:
☐ No indicator used

Please describe any other tools or means used for assessing progress

<Text entry>

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).

- www.mun.gov.bh/agri
- www.sce.gov.bh
- www.interior.gov.bh

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.

"Based on comprehensive evidence" was chosen, kingdom of Bahrain developed number of indicators and action plans to implement and achieve Aichi Targets, in addition to the biodiversity steering committee which was established to pursuing the achievement of the national targets.

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 target is monitored and indicate whether there is a monitoring system in place

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Moreover, number of technical teams have been established to follow-up the implementation of supreme council for environment plans, recommendations, and all national & international obligations.

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)

<Add link> <Add file>

Target 3: Improve seawater quality by 50% from wastewater and sewage discharge from municipal treatment plants

Category of progress towards the implementation of the selected target:

☐ On track to exceed target
☒ On track to achieve target
☐ Progress towards target but at an insufficient rate
☐ No significant change
☐ Moving away from target
☐ Unknown

Date the assessment was done:

2014-2021

Additional information (Please provide information on the evidence used in the assessment of this target, drawing upon relevant information provided in section II, including obstacles in undertaking the assessment).

Bahrain identity has been shaped deeply by its marine environment due to its great influence on economy and society. Hence, Bahrain has always taken necessary measures to protect its marine environment and ensure its sustainability for future generations. Giving the vital role of marine environmental quality to healthy seas and marine life, marine environmental quality monitoring is considered a very important tool for integrated marine environment management.

Bahrain launched its first marine environmental quality monitoring program in 1993. The program has developed over the years and now includes 25 marine locations that are being monitored routinely as per the requirement of the president of the Supreme Council for Environment no. (1) for the year 2017 in respect to measuring environmental indicators in territorial waters and Tubli bay.

Moreover, in 2018, SCE has signed a memorandum of understanding with UK's Centre for Environment, Fisheries and Aquaculture Science (Cefas) to collaborate on marine pollution and marine biodiversity issues. Under the 'marine pollution' theme, a joint study on marine sediment quality was undertaken between 2017 and 2019 and its results have been published in Oct 2020. Another study on risks posed by metal contamination has been finalized and has been accepted for publication. This study was accompanied by preparation of proposed sediment quality guidelines for the kingdom of Bahrain.

Three studies on marine pollution load assessment, marine water quality, and contaminants in some marine organisms (crabs and oysters) are underway and expected to be finalized in 2022.

In addition to the mentioned efforts, Kingdom of Bahrain working to implement a height environmental standard in the Sewage Treatment Plant processes, in 2018, Ministry of Works, Municipalities Affairs and Urban Planning has announced an important project to upgrade Tubli wastewater treatment plant, this project aims to upgrade the secondary treatment unit at Tubli STP, using the 'HYBACS' technique, which is to improve the quality of water and the 100,000 m^3/day overflow to Tubli Plant. The project deploys proprietary SMARTTM reactor units that stimulate a special and specific bacterial pattern with a high biological activity that has the ability to deal with different levels of organic materials. This will reflect on the quality of waters discarded in Tubli Bay. It will also create balance between the present capacity of the plant (200,000 m^3/day) and the daily flow to the plant, which is estimated to be 300,000 m^3. The upgrade of the plant will address the 100,000 m^3/day difference subordinately.

Indicators used in this assessment

Indicator(s)used in this assessment

- Number of records registered.
- Monitoring plan.

or:
☐ No indicator used

Please describe any other tools or means used for assessing progress

<Text entry>

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).

- www.mun.gov.bh
- www.sce.gov.bh

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.

"Based on comprehensive evidence" was chosen, kingdom of Bahrain developed number of indicators and action plans to implement and achieve Aichi Targets, in addition to the biodiversity steering committee which was established to pursuing the achievement of the national targets.

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 target is monitored and indicate whether there is a monitoring system in place

Kingdom of Bahrain represented by supreme council for environment launched the National Environmental Strategy (NES), which was approved by the Council of Ministers in 2006 (Edict No. 02-1902 on 8/10/2006). NES identifies mechanisms by which principles of sustainable development can be implemented, including enforcing the role of EIA during planning, implementation and after commissioning phases of major projects, adopting principles of integrated environmental management for coastal and marine environments, applying valuation systems to estimate the costs of environmental degradation and rehabilitation, strengthening institutional and legal frameworks, and increasing public awareness and participation.

Moreover, number of technical teams have been established to follow-up the implementation of supreme council for environment plans, recommendations, and all national & international obligations.

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)

<Add link> <Add file>

Target 4: Protect no less than 25% of remaining unprotected coral reefs.

Category of progress towards the implementation of the selected target:

☐ On track to exceed target
☒ On track to achieve target
☐ Progress towards target but at an insufficient rate
☐ No significant change
☐ Moving away from target
☐ Unknown

Date the assessment was done:

2014-2019

Additional information (Please provide information on the evidence used in the assessment of this target, drawing upon relevant information provided in section II, including obstacles in undertaking the assessment).

Njwat Bulthama is one of the healthiest coral reefs in Kingdom of Bahrain and it located 70 km north of Muharraq island and covers an area of 7.8 km^2. With an average depth of 12 meters, Njwat Bulthama is not as deep as neighbouring areas. However, it is relatively deeper compared to the overall Bahrain's territorial waters, where maximum depth reaches 69 meters. The weather at the Njwat Bulthama is nicer than the rest of the coasts of Bahrain, with temperatures less than 3 to 5 degrees Celsius. In 2017, resolution (2) was issued, announcing Njwat Bulthama a protected marine area.

In parallel with this resolution and in order to reduce the damages in coral reefs and oyster beds from the boats anchoring, the supreme council for environment has installed (5) mooring stations in Njwat Bulthama, these came after record number of damages in the coral reefs in over the past years, and came in line with the fishermen's and divers wishes and suggestions.

Indicators used in this assessment

Indicator(s)used in this assessment

- Laws issues and approved by Council of Ministers, Nb of persons hired for the protection
- Monitoring program

or:
☐ No indicator used

Please describe any other tools or means used for assessing progress

<Text entry>

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).

- www.sce.gov.bh

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.

"Based on comprehensive evidence" was chosen, kingdom of Bahrain developed number of indicators and action plans to implement and achieve Aichi Targets, in addition to the biodiversity steering committee which was established to pursuing the achievement of the national targets.

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 target is monitored and indicate whether there is a monitoring system in place

Kingdom of Bahrain represented by supreme council for environment launched the National Environmental Strategy (NES), which was approved by the Council of Ministers in 2006 (Edict No. 02-1902 on 8/10/2006). NES identifies mechanisms by which principles of sustainable development can be implemented, including enforcing the role of EIA during planning, implementation and after commissioning phases of major projects, adopting principles of integrated environmental management for coastal and marine environments, applying valuation systems to estimate the costs of environmental degradation and rehabilitation, strengthening institutional and legal frameworks, and increasing public awareness and participation.

Moreover, number of technical teams have been established to follow-up the implementation of supreme council for environment plans, recommendations, and all national & international obligations.

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)

<Add link> <Add file>

Target 5: Raise awareness among 90% of key stakeholders and 50% of the general public.

Category of progress towards the implementation of the selected target:

☒ On track to exceed target
☐ On track to achieve target
☐ Progress towards target but at an insufficient rate
☐ No significant change
☐ Moving away from target
☐ Unknown

Date the assessment was done:

2014-2021

Additional information (Please provide information on the evidence used in the assessment of this target, drawing upon relevant information provided in section II, including obstacles in undertaking the assessment).

During the period 2014- 2019, many awareness programs and activities (Table-1) were carried out between this period to promote and strengthen public awareness regarding biodiversity issues, this includes:

• Presenting environmental awareness lectures in cooperation with other governmental ministries, the private sector and civil society institutions.

Table (1): Awareness-raising lectures by the Environmental Awareness and Education Sector at the Supreme Council for Environment

Year	No. of presentations given to schools	No. of presentations given to civil society institutions	Total no. of presentations
2014	30	7	37
2015	15	4	29
2016	27	3	30
2017	28	2	30
2018	29	8	37
2019	46	5	51

• Organizing awareness training programs such as summer activities and cultural competitions in cooperation with ministries, the private sector and civil society institutions (for example: annual participation in the "*Khaimat Nukhool*")

• Annual celebration of environmental events such as (National Environment Day, World Environment Day, World Ozone Day).

• Participation in exhibitions and outdoor events to promote environmental awareness, such as annual participation in the Bahrain International Garden Fair and participation in the Southern Governorate's "Basta" Market.

• Several clean-up campaigns have been organized by the Supreme Council for the Environment for the islands and shores of the Kingdom of Bahrain, such as the clean-up campaign for the islands of Fasht Al Jarem, Dohat Arad, Abu Sabah coast, the bottom of the north of the Kingdom's territorial waters, and the national campaign "Our sea is clean".

• Organizing trips to Tubli Bay and Dohat Arad Park and protected areas.

• Designing content like leaflets or brochures and digital content for electronic posts.

• Participating in national, regional, and international committees on media, environmental awareness, and cultural activities like the Committee of His Highness Sheikh Nasser bin Hamad Al Khalifa Award for "Best Camp".

• The Supreme Council for Environment hosted approximately 36 different events during the Environment Month in cooperation with several governmental institutions. The month included visits to protected reserves and several educational lectures to illustrate the importance of sustainability for environmental conservation and the role of individuals in protecting their environment which was held in different schools around Bahrain, as well as in private sector societies and companies. Events pertaining to "Environment Month" were held under the slogan "Let's Work for a Sustainable Environment" in March 2016. During that month, the Supreme Council for Environment aimed to raise environmental awareness and spread eco-friendly culture to all segments of society and emphasized the role and importance of collaboration between ministries, the private sector and civil society institutions in maintaining the integrity and health of the environment. It also aimed to contribute to the Kingdom's vision of environmental sustainability.

- In 2015, the SCE in collaboration with the Global Environment Facility (GEF), conducted a comprehensive study to determine the relationships among stakeholders using Fuzzy Cognitive Mapping based on specific criteria for the main ecosystem types, and to identify and categorize of ecosystems stakeholders and their mapping in a power/ interest matrix for the main ecosystem types to move forward to raise the awareness of those key stakeholders.

- The Kingdom of Bahrain contributed to the implementation of the United Arab Emirates project surrounding the atlas of habitat and protected areas in the Arabian Peninsula.

- The central informatics organization has an electronic portal that can access a national database which includes data on habitat maps and marine species in Bahrain as well as the ministry of municipalities and urban planning which maintain a comprehensive database including information on agriculture and fisheries.

Indicators used in this assessment

Indicator(s)used in this assessment

- Number of partnership and initiatives with Public Private Partnerships.

or:
☐ No indicator used

Please describe any other tools or means used for assessing progress

<Text entry>

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).

- www.sce.gov.bh
- www.iga.gov.bh
- https://portals.iucn.org/library/sites/library/files/documents/RL-53-003.pdf
- https://www.iucn.org/resources/publication/conservation-status-and-distribution-reptiles-arabian-peninsula

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.

The Kingdom of Bahrain has developed a number of indicators and action plans to implement and achieve the Aichi Targets, in addition to establishing the Biodiversity Steering Committee to aid in pursuing and achieving the national targets.

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 target is monitored and indicate whether there is a monitoring system in place

The Kingdom of Bahrain represented by the Supreme Council for Environment launched the National Environmental Strategy (NES), which was approved by the Council of Ministers in 2006 (Edict No. 02-1902 on 8/10/2006). NES identifies mechanisms by which principles of sustainable development can be implemented, including enforcing the role of EIA during planning, implementation and after commissioning phases of major projects, adopting principles of integrated environmental management for coastal and marine environments, applying valuation systems to estimate the costs of environmental degradation and rehabilitation, strengthening institutional and legal frameworks, and increasing public awareness and participation.

Moreover, a number of technical teams have been established to follow-up the implementation of supreme council for environment plans, recommendations, and all national & international obligations.

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)

<Add link> <Add file>

Target 6: Rehabilitate mangroves by 25% and increase migratory bird species by 10%.

Category of progress towards the implementation of the selected target:

☒ On track to exceed target
☐ On track to achieve target
☐ Progress towards target but at an insufficient rate
☐ No significant change
☐ Moving away from target
☐ Unknown

Date the assessment was done:

2014-2021

Additional information (Please provide information on the evidence used in the assessment of this target, drawing upon relevant information provided in section II, including obstacles in undertaking the assessment).

Mangrove preservation has many benefits, which include the provision of habitat for various species. The SCE began its Mangrove Planting Project in 2013 and has since successfully restored mangroves in several areas around Bahrain. In 2016, the SCE expanded the transplanting of mangroves, and built the first self-irrigation nursery in Ras Sanad with funding from the National Initiative for Agricultural Development (NIAD).

To date, approximately 7,000 mangrove seedlings have been planted in Ras Sanad and Arad Bay. The SCE is working on multiple projects including a mangrove cultivation plan, which aims to quadrupling restoration of mangroves by 2030, and proposed the inclusion of citizens in its efforts.

Figure 13 (a) – Ras Sanad before mangrove rehabilitation

Figure 13 (b) - Ras Sanad after mangrove rehabilitation

A multi-pronged strategy is being proposed to leverage the restoration process to contribute to the Kingdom's wider national socio-economic development, including increasing ecotourism revenues, generating blue carbon credits, improving public health by encouraging physical activity and interaction with greenspaces, and providing shoreline protection against sea level rise.

In addition to government efforts, this project proposes scaling transplanting of mangrove saplings through citizen restoration (manual methods), drone planting through Ministry of Interior (MoI) (mechanical method), or a hybrid approach.

Citizen restoration would take place under the supervision of environmental and marine scientists, pre-authorized by the SCE. Scientists would be responsible for training tourism and scuba diving operators to run both short i.e., one-time, and longer i.e., week/month-long marine restoration excursions.

In future and in association with Bahrain Petroleum Company (BAPCO), the SCE is working on the establishment of a facility/nursery, located at Ras Sanad, where the controlled production of mangrove saplings can be carried out. It is hoped that the facility will also act as an education centre, aimed at raising public awareness and encouraging the community to cooperate with official bodies. The facility would be fully funded by BAPCO and would have a capacity of approximately 3,432 pots.

In 2021 and during the 26th Conference of Parties (COP) under the United Nations Framework Convention on Climate Change (UNFCCC), the Kingdom of Bahrain has been announced the future plan to quadruple mangrove cover in the country by successfully planting around 1.2 million of mangrove trees around Bahrain coastlines by 2035.

Indicators used in this assessment

Indicator(s)used in this assessment

- Update the ecological and socio-economic assessment of the existing mangroves and develop a 'bookkeeping' for bird species populations
- Develop and implement adaptive Integrated Management Plans (IMPs)for mangroves
- Take immediate measures to reduce polluted effluents from the government treatment plants and wastewater by the industrial sector
- Number of mangrove trees planted.

or:
☐ No indicator used

Please describe any other tools or means used for assessing progress

<Text entry>

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).

- www.sce.gov.bh
- www.bapco.net
- www.niadbh.com

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.

The Kingdom of Bahrain developed number of indicators and action plans to implement and achieve Aichi Targets, in addition to the Biodiversity Steering Committee which was established to pursuing the achievement of the national targets.

Adequacy of monitoring information to support assessment

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Moreover, number of technical teams have been established to follow-up the implementation of supreme council for environment plans, recommendations and all national & international obligations.

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).

Target 7: To protect at least 60% of remaining desert ecosystems and wildlife.

Category of progress towards the implementation of the selected target:

☐ On track to exceed target
☐ On track to achieve target
☐ Progress towards target but at an insufficient rate
☒ No significant change
☐ Moving away from target
☐ Unknown

Date the assessment was done:

2014-2019

Additional information (Please provide information on the evidence used in the assessment of this target, drawing upon relevant information provided in section II, including obstacles in undertaking the assessment).

In general, the desert in the Kingdom of Bahrain has retained its geographical extent with the southern desert regions benefiting from high level of protection while desert areas in the northern region have registered a decline in area.

In 2000, the Kingdom of Bahrain announced Al-Areen Wildlife Park and Reserve which covers an area of 7 km and divided equally into a fenced reserve and a zoological and botanical park. The Park is built to modern standards allowing most animals to live in open semi-natural habitat with a minimum enclosure. The protected area harbours species of indigenous plants and animals in addition to exotic faunal species from Africa and west and south Asia. The Park also offers a modern facility supporting the falconry sport and the associated heritage in Bahrain.

The key objectives of Al-Areen Wildlife Park and Reserve are to promote scientific research, ecotourism, public awareness in addition to conservation of biodiversity in Bahrain. Currently, the park and the reserve are becoming an essential part of tourism development activity in Bahrain attracting visitors of all age groups. The captive breeding programs undertaken by Al-Areen have succeeded in the re-introduction of the sand gazelle and Arabian Oryx into open protected desert areas such as Hawar Islands.

Previously about 357 species of wild vascular plants have been recorded in the desert and cultivated areas in Bahrain. Desert plants are predominately perennial or annual herbs and shrubs exceptionally adapted to the harsh desert environment. Interestingly, in association with the rapid urbanization pace in the country, the range of exotic crops has diversified. According to a latest updated list, 21 species of butterflies have been reported. At least 20 species of reptiles and one species of amphibians are known to occur on the islands, and lizards are particularly abundant.

Indicators used in this assessment

Indicator(s)used in this assessment

- Population distribution of desert wildlife
- Traditional knowledge register
- Number of laws issued

or:
☐ No indicator used

Please describe any other tools or means used for assessing progress

<Text entry>

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).

- www.sce.gov.bh

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.

The Kingdom of Bahrain developed number of indicators and action plans to implement and achieve Aichi Targets, in addition to the biodiversity steering committee which was established to pursuing the achievement of the national targets.

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 target is monitored and indicate whether there is a monitoring system in place

Kingdom of Bahrain represented by supreme council for environment launched the National Environmental Strategy (NES), which was approved by the Council of Ministers in 2006 (Edict No. 02-1902 on 8/10/2006). NES identifies mechanisms by which principles of sustainable development can be implemented, including enforcing the role of EIA during planning, implementation and after commissioning phases of major projects, adopting principles of integrated environmental management for coastal and marine environments, applying valuation systems to estimate the costs of environmental degradation and rehabilitation, strengthening institutional and legal frameworks, and increasing public awareness and participation.

Moreover, number of technical teams have been established to follow-up the implementation of supreme council for environment plans, recommendations, and all national & international obligations.

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)

<Add link> <Add file>

Target 8: Rehabilitate desert ecosystems for the promotion of eco-tourism by 17%.

Category of progress towards the implementation of the selected target:

☐ On track to exceed target
☐ On track to achieve target

☒ Progress towards target but at an insufficient rate
☐ No significant change
☐ Moving away from target
☐ Unknown1`

Date the assessment was done:

2014-2019

Additional information (Please provide information on the evidence used in the assessment of this target, drawing upon relevant information provided in section II, including obstacles in undertaking the assessment).

Numerous efforts have been made to rehabilitate desert ecosystems for the promotion of eco-tourism in the Kingdom of Bahrain by for example managing camping activities in the Sakhir area which may represent a considerable threat to the biodiversity of the desert environment at that area. The temporal and spatial extents of camping activities have been restricted in attempt to minimize their impacts on wildlife. Additionally, intensive programs have been launched to increase awareness and to raise consideration of campers towards the conservation and sustainable use of the components of biodiversity at the camping area.

Moreover, Al Areen Wildlife Park and Reserve attracts a large number of visitors of all ages to see species reflecting the Arabian Peninsula's environment. The number of visitors to Al-Areen Nature Reserve whose area covers a total of 7 km^2 witnessed an increase from (231682) to (367510) visitors between the period (2014-2019) indicating an increase by approximately twice the initial number of visitors in (2014).

Indicators used in this assessment

Indicator(s)used in this assessment

- Number of visitors
- Outreach material produced

or:
☐ No indicator used

Please describe any other tools or means used for assessing progress

<Text entry>

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).

- www.sce.gov.bh
- www.southern.gov.bh/en/

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.

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Adequacy of monitoring information to support assessment

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☐ Monitoring is not needed

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

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Moreover, number of technical teams have been established to follow-up the implementation of supreme council for environment plans, recommendations, and all national & international obligations.

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)

<Add link> <Add file>

Target 9: Revive agricultural land systems including palm groves by 25%.

Category of progress towards the implementation of the selected target:

☒ On track to exceed target
☐ On track to achieve target
☐ Progress towards target but at an insufficient rate
☐ No significant change
☐ Moving away from target
☐ Unknown

Date the assessment was done:

2014-2021

Additional information (Please provide information on the evidence used in the assessment of this target, drawing upon relevant information provided in section II, including obstacles in undertaking the assessment).

<Text entry>

1. The Ministry of Works, Municipalities Affairs and Urban Planning has signed an agreement with the Food and Agriculture Organization of the United Nations (FAO) to prepare a food security strategy for the Kingdom of Bahrain. The agreement focuses on the provision of technical assistance services in several areas, including the identification of best practices for local production methods and the promotion of modern farming systems.
2. Promoting employment in the agricultural sector, especially for the youth, and supporting farmers in continuing to work in this sector, through several initiatives as follows:
    - Establishment of the "Hoorat A'ali" Agricultural Incubator Project, which is based on an area of 20,000m^2 and aims to train young workers of both sexes interested in farming in the aquaculture system. Two batches of entrepreneurs (17 trainees) and a batch from the Royal Charity Associates (11 trainees) were trained, as well as two batches from the Ministry of Education affiliates (33 teachers) were paid to use distance training technology (285 trainees) from different groups in society. The project includes 8 medium tech cooled sheltered houses, each of which has an area of 612m^2. In addition to 5 sheltered houses with an area of 360m^2 each, as well as supporting facilities, at a cost of 900 thousand dinars.
    - The allocation of sites for agricultural production in Hoorat A'ali, Al-Hamla and other lands under Agriculture and Marine Resources (Table 2).

Table (2): The area allocated to leasing land for agricultural use in Hoorar A`ali.

Total Area Rented by Agricultural Companies	Total Area Rented by Farmers
25 ha	18.79 ha

    - Encouraging investment in the agricultural sector through the allocation of several investor sites for the establishment of agricultural production farms. The proposed sites are for soil-free agriculture, consisting of 6 sites in the four governorates, which are the district of Sanad in the Capital governorate, Al-Dair in Al-Muharraq governorate, Al-Daraz, Hoorat A'ali and Shahrakan in the Northern governorate, and Al-Hanainiya in the southern province.

3. Many training courses for palm workers and those interested in the care and preservation of palms have been carried out as follows:
    - Training Course in the Service of the (plan tree head), which was offered over two periods during (17-21 November 2019) and (24-29 November 2019); a total of 33 trainees, representing several government agencies, participated in the study. (Municipal Affairs - Northern Municipality -

Muharraq Municipality - Southern Municipality – Central Municipal Council - Al-Areen Wildlife Reserve - Ministry of Health - National Guard) in addition to the participation of a number of young people interested in the palm tree service and care process, four trainers (Nakhlawiya) from sources outside the Ministry were hired to train participants.

- Palm tree planting course held over two periods (1-4 March 2020) and (8-11 March 2020). 24 trainers participated in this course. Nine trainees participated in the first round. The second round was of 15 trainees, including 7 from the Central Municipal Council under the Ministry of Municipalities. The purpose of the course was to introduce and train participants on the importance of palm growing and the different methods of conducting the process (manual inoculation - dry auto-inoculation – liquid autoinoculation).
- Construction of a nursery for local commercial types of palm seedlings. A total of 1155 palm seedlings have been grown, as well as a total of 411 (cultured palms) (Al-Khenaizi varieties) have been grown from the agriculture tissue culture laboratory for the nursery in the Eastern farms.

- The Ministry of Works, Municipalities Affairs and Urban Planning represented by the Agency for Agriculture and Marine Resources, was able to achieve success in terms of its cooperation with a Taiwanese team in the local production of orchids from its early stages in the laboratory. Agriculture Laboratory in Agriculture Affairs was able to produce during the (2019) a total of 4,222 orchids of various sizes, from laboratory to flowering size. The local production of orchids comes within the framework of a partnership with a Taiwanese team working to support the agency's efforts in this aspect, and to transfer the expertise they have to the Bahraini cadres. The ministry has been able, since the launch of this project, to provide training opportunities to a group of Bahraini citizens who have been able to use what they have gained from qualification and training to launch their own projects in the field of orchids.

- A Farmers Market is organized annually at Budaiya Botanical Gardens from December to April it was first organized in 2012, the Farmers' Market was an initiative to develop Bahrain's agricultural sector to support more sustainable food production and promote the sale of sustainably products. The Farmer Market is an economic, commercial, recreational and tourist destination. In addition to displaying Bahraini agricultural products of various local vegetables, fruits and agricultural plants, the importance of market regulation lies in the presentation and marketing of local agricultural products, which is an incentive for Bahraini farmers to practice agriculture, which leads to an increase in the competition of Bahraini production of imported

agricultural products, which contributes to the advancement of the agricultural sector and enhancing food security in Bahrain.

Indicators used in this assessment

Indicator(s)used in this assessment

- Number of trainees
- Number of palm commercial seedlings.

or:
☐ No indicator used

Please describe any other tools or means used for assessing progress

<Text entry>

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).

- www.sce.gov.bh
- https://www.agro.bh/
- www.niadbh.com
- https://www.mun.gov.bh/agri/

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.

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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 target is monitored and indicate whether there is a monitoring system in place

Kingdom of Bahrain represented by supreme council for environment launched the National Environmental Strategy (NES), which was approved by the Council of Ministers in 2006 (Edict No. 02-1902 on 8/10/2006). NES identifies mechanisms by which principles of sustainable development can be implemented, including enforcing the role of EIA during planning, implementation and after commissioning phases of major projects, adopting principles of integrated environmental management for coastal and marine environments, applying valuation

systems to estimate the costs of environmental degradation and rehabilitation, strengthening institutional and legal frameworks, and increasing public awareness and participation.

Moreover, number of technical teams have been established to follow-up the implementation of supreme council for environment plans, recommendations, and all national & international obligations.

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)

<Add link> <Add file>

Target 10: Decrease pest infestations in palm grove by 100% and other pest infestation.

Category of progress towards the implementation of the selected target:

☒ On track to exceed target
☐ On track to achieve target
☐ Progress towards target but at an insufficient rate
☐ No significant change
☐ Moving away from target
☐ Unknown

Date the assessment was done:

2014-2021

Additional information (Please provide information on the evidence used in the assessment of this target, drawing upon relevant information provided in section II, including obstacles in undertaking the assessment).

Numerous efforts have been made to Decrease pest infestations in palm grove by 100% and other pest infestation by:

1- Contributing to the sustainable management of agricultural areas to ensure biodiversity by encouraging farmers to implement integrated pest control programs to reduce the negative effects of the use of chemical pesticides on biodiversity, while providing pest control materials at a subsidized price to farmers and home gardeners to contribute to the success of the integrated pest control programs.
2- Providing technical advice on plant protection and the safe use of pesticides to preserve biodiversity. The of Agriculture directorate in Ministry of Works, Municipalities Affairs and Urban Planning, provides the public by all available means through field visits, audits of the client or department's headquarters, or by telephone. As many as 3150 consultations were provided during that period.

3- Establishment of a task force to supervise agricultural land use in "Hoorat A'ali", where weekly field visits are carried out, inquiries are made in the area regarding integrated pest management, regulation of pesticide use, and the providing encouragement for the farmers to introduce modern farming techniques to contribute to the protection of biodiversity.

4- Control of the import and circulation of pesticides and the verification of their quality through laboratory tests to reduce the circulation of decontaminated or non-compliant pesticides that may affect biodiversity. During that period, 855 licenses for the import of pesticides of various kinds were checked, issued and procedures applied when arriving in the Kingdom. Travelers are also not allowed to carry pesticides and imports are limited to licensed and periodically inspected companies.

5- Application of phytosanitary controls and measures governing the import and release of organisms used in plant pest control to preserve biodiversity.

6- Regulation of the import and cultivation of the "*Conocarpus erectus*" tree to reduce the negative impact of the "*Conocarpus erectus*" on the environment and plant biodiversity. A draft resolution to prevent the planting and importation of the "*Conocarpus erectus*" in urban areas, villages and urban areas will be released soon.

7- Enact legislation to ensure the safe disposal of expired and damaged pesticides and vacuum packets in approved ways that do not pose a threat to living organisms and the biological diversity of the Bahraini environment. Decree No. 127 of 2021 was promulgated regarding the requirements, controls, and procedures for pesticides.

8- Control of invasive pests and, in particular, *Rhynchophorus ferrugineus* pests through the implementation of project activities for the accounting and control of the *Rhynchophorus ferrugineus* pests. On 15 June 2015, the Cabinet approved the allocation of 1 million dinars to the Project for the Accounting and Control of *Rhynchophorus ferrugineus* pests. The project's activities are carried out through frequent and periodic surveys throughout the year at sites for planting trees and palm liquids. These activities include:

   a. **Scanning and counting red palm plantations infected with *Rhynchophorus ferrugineus* pests:** in the aim of the identification and incidence of farms and palm groves with red palm insect.

   b. **Fighting the *Rhynchophorus ferrugineus* pests:** with the aim of reducing the activity and spread of *Rhynchophorus ferrugineus* pests and controlling it economically, through various treatment procedures or the removal of the palm trees in the case of severe infestation.

c. **Monitor and control of *Rhynchophorus ferrugineus* pests using pheromonal catch:** with the aim to reduce the full extent of the Rhynchophorus ferrugineus pests by catching them through the use of fermionic keromonic catches which are then disposed. Identifying the *Rhynchophorus ferrugineus* pests period of activity is done during different months of the year.

d. **Awareness raising and guidance campaigns, and technical support** to raise awareness about ways to prevent trees and palm seedlings from becoming infected with *Rhynchophorus ferrugineus* pests and methods of controlling it.

Table (3): During the period from 2014 to 2020, the following were completed as part of the project activities:

Year	Number of Farms and Locations Surveyed	Number of Examined Palm Trees and (Palm seedlings)	Number of Infected Palm Trees Treated	Number of Infected Palm Trees Removed	Number of Insect Traps	Number of Insects Collected from Insect Traps	Average rate of Overall Infection (%)
2014	712	155,894	2883	2764	314	25598	3.5
2015	1662	361,358	5898	3877	2691	60371	2.7
2016	2902	655,436	7680	2701	2539	54865	1.6
2017	1420	301,798	2542	866	1500	25442	1.04
2018	1932	475,411	2873	1147	1929	30340	0.8
2019	1032	298,541	1868	525	884	18575	0.8
2020	877	246,225	5612	889	2017	49930	0.65

Indicators used in this assessment

Indicator(s)used in this assessment

- Laws issues and approved by Council of Ministers.
- Monitoring program.
- Number of licenses for the import of pesticides.
- Number of Infected Palm Trees Treated

or:

☐ No indicator used

Please describe any other tools or means used for assessing progress

<Text entry>

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).

- www.sce.gov.bh
- https://www.agro.bh/
- www.niadbh.com
- https://www.mun.gov.bh/agri/

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.

"Based on comprehensive evidence" was chosen, kingdom of Bahrain developed number of indicators and action plans to implement and achieve Aichi Targets, in addition to the biodiversity steering committee which was established to pursuing the achievement of the national targets.

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 target is monitored and indicate whether there is a monitoring system in place

Kingdom of Bahrain represented by supreme council for environment launched the National Environmental Strategy (NES), which was approved by the Council of Ministers in 2006 (Edict No. 02-1902 on 8/10/2006). NES identifies mechanisms by which principles of sustainable development can be implemented, including enforcing the role of EIA during planning, implementation and after commissioning phases of major projects, adopting principles of integrated environmental management for coastal and marine environments, applying valuation systems to estimate the costs of environmental degradation and rehabilitation, strengthening institutional and legal frameworks, and increasing public awareness and participation.

Moreover, number of technical teams have been established to follow-up the implementation of supreme council for environment plans, recommendations, and all national & international obligations.

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)

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Target 11: Protect no less than 75% of healthy freshwater spring.

Category of progress towards the implementation of the selected target:

☐ On track to exceed target
☐ On track to achieve target
☒ Progress towards target but at an insufficient rate
☐ No significant change
☐ Moving away from target
☐ Unknown

Date the assessment was done:

2014-2021

Additional information (Please provide information on the evidence used in the assessment of this target, drawing upon relevant information provided in section II, including obstacles in undertaking the assessment).

For centuries biodiversity has played a large role in defining the identity and heritage of the Kingdom of Bahrain. Most noteworthy is the unique presence of freshwater springs on both land and sea which gave Bahrain its name today which translates literally to "two seas".

Efforts are being made to halt the overexploitation of groundwater, which is, believed to be the main reason for the extinction of freshwater spring's habitats. These efforts include:

- The expansion in the desalination of sea water to provide water for domestic and industrial use.
- The expansion of utilizing sewage treated water for irrigation purposes in farms, roads and public gardens.

- The opening of Muharraq Sewage Treatment Station in 2014, which is estimated to contribute towards tripling the increase in production of treated water by 100000 m^3/day.

The Kingdom of Bahrain puts great importance to the conservation of freshwater springs, the most recent of these efforts was the preservation of "Ain Al-Saya", which was protected from future development projects in the region by registering it as part of the National Heritage List under the name of "The Historical Island of Al-Saya" in Decision No. (1) of 2021 of registering an archaeological site as part of the National Heritage List.

Indicators used in this assessment

Indicator(s)used in this assessment

- Water quality of freshwater springs
- Freshwater springs maps
- Water composition
- Laws issued, Number of freshwater springs protected

or:
☐ No indicator used

Please describe any other tools or means used for assessing progress

<Text entry>

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.agro.bh/
- https://www.mun.gov.bh/agri/

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.

"Based on partial evidence" was chosen, kingdom of Bahrain developed number of indicators and action plans to implement and achieve Aichi Targets, in addition to the biodiversity steering committee which was established to pursuing the achievement of the national targets.

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 target is monitored and indicate whether there is a monitoring system in place

Kingdom of Bahrain represented by supreme council for environment launched the National Environmental Strategy (NES), which was approved by the Council of Ministers in 2006 (Edict No. 02-1902 on 8/10/2006). NES identifies mechanisms by which principles of sustainable development can be implemented, including enforcing the role of EIA during planning, implementation and after commissioning phases of major projects, adopting principles of integrated environmental management for coastal and marine environments, applying valuation systems to estimate the costs of environmental degradation and rehabilitation, strengthening institutional and legal frameworks, and increasing public awareness and participation.

Moreover, number of technical teams have been established to follow-up the implementation of supreme council for environment plans, recommendations, and all national & international obligations.

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)

<Add link> <Add file>

Target 12: Increase green area in the governorates by 30%.

Category of progress towards the implementation of the selected target:

☒ On track to exceed target
☐ On track to achieve target
☐ Progress towards target but at an insufficient rate
☐ No significant change
☐ Moving away from target
☐ Unknown

Date the assessment was done:

2014-2022

Additional information (Please provide information on the evidence used in the assessment of this target, drawing upon relevant information provided in section II, including obstacles in undertaking the assessment).

In 2021 and under the patronage of Her Royal Highness Princess Sabeeka bint Ibrahim Al Khalifa, wife of The King of Bahrain and Chairperson of the Consultative Council of the National Initiative for Agricultural Development, a national campaign for afforestation was launched under the slogan “Forever Green” in cooperation with the Ministry of Works, Municipalities Affairs, and Urban Planning and the Supreme Council for Environment (SCE) in October 2021. The aim of the campaign is to support the state’s strategies through coordination with the public and private sectors to implement afforestation projects and expand the green areas in the country. The campaign also aims to sustain the development of the agricultural sector in the Kingdom of Bahrain, highlight the aesthetic features of the country and restore its historic agricultural legacy.

The main objectives of this campaign:

- Support the plans of Ministry of Works, Municipalities Affairs and Urban Planning to increase greenery in the Kingdom of Bahrain.
- Protect the environment and reduce the effects of climate change.
- Strengthen community partnership with civil society institutions and other relevant authorities.
- Encourage youth to volunteer in the field of agriculture.
- Honor Bahrain’s commitment towards UN Sustainable Development Goal 13 pertaining to climate action.
- Support the United Nations Decade for Ecosystem Restoration 2021 – 2030

Bahrain committed to multiply the number of trees in the country based on the Cop 26 goals and to increase Avicennia trees by a multiple of four

Currently there is approximately 1.8 million trees. Ministry of works and municipalities suggest releasing government initiatives and policies to increase afforestation by 250 thousand per year by allowing all members of the community to contribute. The government, private sectors and individuals' citizens shall contribute to tree plantation.

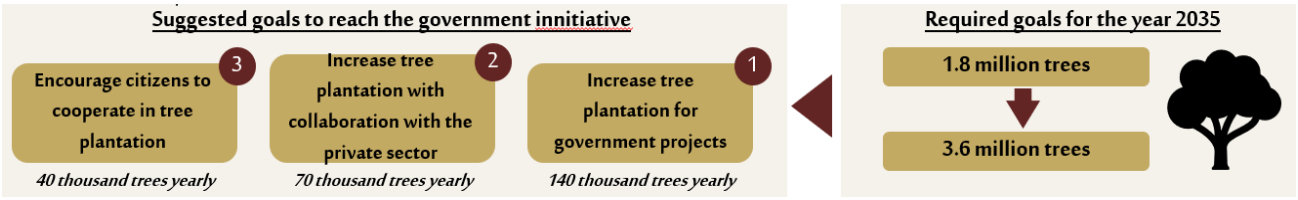

Figure (14) – Goals to achieve the 2035 tree planting initiative

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

<Text entry>

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).

<Add link> <Add file>

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.

"Based on comprehensive evidence" was chosen, kingdom of Bahrain developed number of indicators and action plans to implement and achieve Aichi Targets, in addition to the biodiversity steering committee which was established to pursuing the achievement of the national targets.

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 target is monitored and indicate whether there is a monitoring system in place

Kingdom of Bahrain represented by supreme council for environment launched the National Environmental Strategy (NES), which was approved by the Council of Ministers in 2006 (Edict No. 02-1902 on 8/10/2006). NES identifies mechanisms by which principles of sustainable development can be implemented, including enforcing the role of EIA during planning, implementation and after commissioning phases of major projects, adopting principles of integrated environmental management for coastal and marine environments, applying valuation systems to estimate the costs of environmental degradation and rehabilitation, strengthening institutional and legal frameworks, and increasing public awareness and participation.

Moreover, number of technical teams have been established to follow-up the implementation of supreme council for environment plans, recommendations, and all national & international obligations.

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)

<Add link> <Add file>

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

Using the template below, please describe your country's contribution towards the achievement of each global Aichi Biodiversity Target. This template should be replicated for each of the 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 each global Aichi Biodiversity Target.

IV. Description of national contribution to the achievement of each global Aichi Biodiversity Target

Target 1: By 2020, at the latest, people are aware of the values of biodiversity the steps they can take to conserve and use it sustainably.

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:

- The period 2011-2014 witnessed increased participation by civil society in implementing projects and programs related to biodiversity, some of which include environmental awareness programs, conducting surveys, restoration projects and monitoring programs.
- In this time, approximately 51 awareness lectures were conducted along with other activities (e.g. workshops and seminars) in the aim of raising people's awareness of the values of biodiversity and the threats faced.
- In 2014, a documentary was produced to shed light on unique biodiversity present in the Kingdom of Bahrain.
- Numerous publications were printed and distributed to schools and the general public in the form of books, magazines and brochures on biodiversity in Bahrain.
- Within the first half of 2014, over 30 articles related to biodiversity issues in Bahrain have been published in the daily local newspapers.
- The organizing committee of the Bahrain International Garden Show organizes this event annually whereby it has proven to be very popular amongst members of the public, tourists in addition to the public and private sectors. The show also aims to spread awareness on plant diversity to enhance food security through displaying samples of local plants, various agricultural techniques along with hosting competitions suited to all ages of the public.

Following this, for the period 2015-2020, Bahrain continued to implement and conduct awareness-raising activities directly related to biodiversity, this included:

- The Supreme Council for Environment's Environmental Awareness and Education Directorate conducted regular awareness-raising lectures aimed at raising environmental awareness and consolidating environmental concepts among individuals in cooperation with the Ministry of Education, a number of government ministries, private sector institutions and civil society organizations.
- On the occasion of World Wetlands Day, a field visit to Tubli Bay was arranged for a girl's school (Eman School) to learn and discuss the importance of wetlands and the mangroves.
- The Kingdom of Bahrain joined the global clean seas campaign "clean seas" in 2018, launched by the United Nations Environment Organization (UNEP) to protect the seas from plastic waste. This global campaign aims to engage governments, the general public, civil society and the private sector in the fight against marine plastic waste.
- The Supreme Council for the Environment organized the largest cleaning campaign for the Kingdom of Bahrain's coasts. The campaign included the simultaneous clean-up of 9 coasts across the

Kingdom's governorates, attracting approximately 525 participants and participation from various government institutions, civil sectors and civil society.

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.

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:

Numerous efforts have been made to enhance the integration of biodiversity values into national policies, programs, projects, activities and sector initiatives through the utilization of various tools such as strategic planning processes in sectors, legislations, environmental planning strategies, environmental impact assessment strategies and national committees.

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.

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:

- Economic incentives are given to support handicrafts produced using materials derived from palm trees in the aim of conserving cultural and heritage practices related to biodiversity.
- Economic incentives and support are also given to farmers to encourage them to utilize modern methods of farming.
- Economic incentives are further given to fishermen who are willing to abandon their fishing permit in an effort to limit the growing pressure on marine fisheries.
- Government support and economic incentives are provided to incentivise the sustainable use of biodiversity, especially within the agricultural sector. To date Tamkeen, a government agency dedicated to supporting businesses through financing, grants, and information, has provided, BHD4,450,000 worth of support towards individuals in the private agricultural sector.

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.

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:

- An annual 5 month shrimp fishing ban season is put into force during the breeding season in national waters.
- Restrictions are set on the export of fisheries.
- Encouraging fishermen to catch and export crustaceans and molluscs of low economic value in the local markets in an effort to lower the growing pressure on various finned fish species of high economic value.
- Encouraging citizens and expats to consume varied species of fish to lower the pressure on major fish groups that are of high economic value.

- Implement restrictions on the number of fishing permits in an effort to lower the pressure caused by fishing activities.
- Strengthening marine monitoring to ensure that fishermen are utilizing non-destructive fishing gear and are abiding by the law during the fishing ban season.
- Cooperation with neighboring countries in the Arabian Gulf to strengthen the regional sustainable management of fisheries (e.g. Mackerel fisheries)
- The adoption of an initiative that incorporates the encouragement of utilizing the mangroves present in Ras Sanad as a location for sustainable eco-tourism.

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.

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:

- The implementation of the mangrove planting project in the aim of rehabilitating deteriorated mangrove areas in addition to increasing the green area in the Kingdom of Bahrain.
- The development of the Mangrove Planting Project which was first initiated in 2013 and now includes the support of various entities in the form of funding, manpower for planting as well as the construction and expansion of the plant nurseries. As of 2020, this has brought the total mangrove plant nurseries in Bahrain to 4.
- The expansion in the construction of artificial reefs accompanied by the launch of initiatives for coral propagation in an effort to rehabilitate destroyed and degraded coral reefs.

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.

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:

- Efforts are similar to that stated under Target 4 above.
- During the period (2012-2014), an ambitious project was launched adopting the Ecosystem Based Approach in the Kingdom of Bahrain which incorporates preparing an environmental management plan for a UNESCO World Heritage site which includes three important oyster bed sites and a coral reef .

By 2020 areas under agriculture, aquaculture and forestry are managed sustainably, ensuring conservation of biodiversity.

- Integrating the requirements of conserving the green belt that includes the palm groves in the urban planning process.
- Economic incentives and technical support are given to farmers to strengthen sustainable farming activities whereby technical support is extended as consultations in restoring and rehabilitating degraded lands e.g. saline lands.
- Ensuring fish farms are subjected to regularly monitoring programs.
- Expanding the use of treated sewage water for irrigation purposes in the aim of limiting the use of groundwater. In 2014, the number of farms connected to the treated sewage water network has reached 410,

which represents 75% of the total number of farms (Directorate of Agriculture Affairs and Marine Resources, 2014).

• The registration of fertilizers and soil improves in an effort to limit any harm to the soil whereby, the number of certificates issued in 2011-2014 has reached a total of 300 certificates (Directorate of Agriculture Affairs and Marine Resources, 2014).

• Implementing regular programs to measure agricultural soil salinity and acidity, whereby, between January to May 2014, 20 farms have been surveyed and a total of 116 samples were analyzed (Directorate of Agriculture Affairs and Marine Resources, 2014).

Target 7: By 2020 areas under agriculture, aquaculture and forestry are managed sustainably, ensuring conservation of biodiversity.

- Integrating the requirements of conserving the green belt that includes the palm groves in the urban planning process.
- Economic incentives and technical support are given to farmers to strengthen sustainable farming activities whereby technical support is extended as consultations in restoring and rehabilitating degraded lands e.g. saline lands.
- Ensuring fish farms are subjected to regularly monitoring programs.
- Expanding the use of treated sewage water for irrigation purposes in the aim of limiting the use of groundwater. In 2014, the number of farms connected to the treated sewage water network has reached 410, which represents 75% of the total number of farms (Directorate of Agriculture Affairs and Marine Resources, 2014).
- The registration of fertilizers and soil improves in an effort to limit any harm to the soil whereby, the number of certificates issued in 2011-2014 has reached a total of 300 certificates (Directorate of Agriculture Affairs and Marine Resources, 2014).

Implementing regular programs to measure agricultural soil salinity and acidity, whereby, between January to May 2014, 20 farms have been surveyed and a total of 116 samples were analyzed (Directorate of Agriculture Affairs and Marine Resources, 2014).

Target 8: By 2020, pollution, including from excess nutrients, has been brought to levels that are not detrimental to ecosystem function and biodiversity.

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:

• On-going implementation of a project which aims to increase the receiving capacity of Tubli Sewage Treatment Plant.

• The construction of a temporary sewage treatment plant inside Tubli Sewage Treatment Plant to enhance the quality of treated water.

• The opening of Muharraq Station for Sewage Treatment that will contribute towards lowering the load on the Tubli Sewage Treatment Plant.

• The continuation of the seasonal marine environment quality monitoring program which is present opposite to the Tubli Plant effluent outflow executed by the Supreme Council for Environment.

• The continuation of the periodic monitoring program executed by the Supreme Council for Environment to assess the quality of treated sewage water expelled into the sea.

• The formation of a national committee to monitor and study the phenomena of red tides within national waters.

• The continuation of the monitoring program for deceased fish and marine life by the Supreme Council for Environment in collaboration with academic institutions and civil society.

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.

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:

• Monitoring of borders and exit points to ensure the entry of invasive species into the country is detected (especially poisonous and predatory species).

• Continuation of the House Crow (C. splendens) monitoring and management program in residential and agricultural areas.

• Increasing the efforts of the red palm weevil (R. ferrugineus) pest management program executed by the Directorate of Agricultural Affairs and Marine Resources following legislative, mechanical, cultural chemical and behaviour control which includes efforts related to monitoring, surveying, pest control and treatment. Examples of the most prominent efforts implemented during 2011-2014 include (Directorate of Agricultural Affairs and Marine Resources, 2014):

- The survey of 1815 farms and analysis of 738,062 palm trees to ensure that they are not infected by the red weevil.

- Preparation of a detailed map illustrating the geographic spread of red weevil infections in Bahrain.

- The treatment of 14,364 infected trees (either through pest control or removal .

- The distribution of 3,972 free red palm weevil pheromone traps and 12,023 pheromones on farmers .

- Conducting two workshops on palm tree services and mitigating the red palm weevil pest.

• Implementation of a project in collaboration with the International Research Centre for Research in Dry Areas (ICARDA) that aims to create an inventory for palm pests which includes agricultural insects whilst dividing them based on their economic importance in dry areas.

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.

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:

• Implementation of a strategic project aiming to revive reef fish stock by lowering the pressures on natural coral reefs through creating artificial reefs.

• The integration of biodiversity values in climate change mitigation policies, programs and activities especially those relating to assessing the sensitivity and adaptation rates of marine and coastal ecosystems to climate change.

Target 11: By 2020, at least 17 per cent of terrestrial and inland water, and 10 per cent of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved through effectively and equitably managed, ecologically representative and well connected systems of protected areas and other effective area-based conservation measures, and integrated into the wider landscapes and seascapes.

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:

- The declaration of Najwat and Hayr Bul Thamah, Hayr Amamah and Hayr Shtayyah as a UNESCO World Heritage Site covering a total area of approximately 1638.23 km2.
- Implementing the Ecosystem Based Approach in preparing the Environmental Management Plan for Najwat and Hayr Bul Thamah, Hayr Amamah and Hayr Shtayyah .
- The addition of MPA values in area planning projects for coastal and marine areas based on the 2030 Urbanization Plan.

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.

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:

- The continuation in implementing regular breeding programs in families from various rare and endangered species such as the Arabian Reem Gazelle (Gazella subgutturosa marica) and the Arabian Oryx (Oryx leucoryx), the marsh frog (R. ridibunda) and the Caspian turtle (M. caspica).
- Implementation of the monitoring of dead marine turtles which include periodic surveys and fishermen surveys to estimate the number of dead turtles in Bahrain.
- Efforts were made by civil society organizations to rehabilitate a number of injured marine turtles .

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.

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:

- The continuation of the “National campaign for planting a palm tree in every house” whereby a total number of 3752 saplings belonging to 23 varieties were distributed amongst 4376 homes through-out the country.
- The analysis of the genetic make-up of pure Arabian horses whilst maintaining documented records of relative species. In addition to the organization of periodic speed races and competitions for pure Arab thoroughbreds on various aspects.
- Encouragement of breeders to acquire and breed native pure Arab thoroughbreds.
- Bahrain has taken special interest in conserving the purity of Arab thoroughbreds whereby the royal stables for Arab thoroughbreds comprises approximately 20 stalls.
- Technical support is given to farmers to encourage them to grow local and native species of palm trees in addition to breeding palm species of high economic value using tissue culture.
- The establishment of a genetic centre which consists of a botanical garden where a total number of 200 trees belonging to 19 species of native and local species of plants are grown in addition to those that have adaptation to the country’s harsh environment.
- Free veterinary services are given to breeders to aid them in caring for good genetic breeds of farm animals (e.g. cows, goats, chickens etc).

	**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.
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: • Two studies were conducted during 2011-2014 to determine the services provided by ecosystems and various biodiversity aspects in the northern oyster beds and coral reefs of Bahrain . • In 2013, a specialized study was undertaken to assess the economic impacts resulting from the degradation of coastal and marine habitats in Bahrain's territorial waters . • Efforts are being made to halt the overexploitation of groundwater, which is, believed to be the main reason for the extinction of freshwater spring's habitats. These efforts include: - The expansion in the desalination of sea water to provide water for domestic and industrial use. - The expansion of utilising sewage treated water for irrigation purposes in farms, roads and public gardens. • The opening of Muharraq Sewage Treatment Station in 2014, which is estimated to contribute towards tripling the increase in production of treated water by 100000 m3/day.	
	**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.
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: • The launch of a mangrove planting project which involved planting 1004 seedlings during 2013-2014 in select coastal areas in Tubli Bay and Dohat Area with the aim of rehabilitating degraded mangrove sites in addition to increasing the vegetation cover within coastal areas . • Increase in planting campaigns in residential and public areas and roads thereby contributing towards mitigating the concentration of greenhouse gases. • The continuation in implementation of the "National campaign for planting a palm tree in every house" whereby free palm saplings are distributed among citizens • In 2014, a comprehensive scientific study was launched to investigate the degree of carbon sequestration in marine ecosystems within Bahrain's territorial waters.	
	**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.
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: • Imposing restrictions on importing genetic resources to protect the rights of exporting countries. • The Kingdom of Bahrain allows other countries access to its genetic resources including agricultural and marine resources such as vegetables and commercial fisheries based on certain restrictions.	

• Conducting a study to assess the benefits gained by the Kingdom of Bahrain on joining the Nagoya Protocol which included consulting national relevant stakeholders.

• Bahrain contributes along-side neighboring countries in the GCC in capacity building on access to genetic resources and the fair and equitable sharing of benefits arising from their utilization.

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.

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:

- The formation of the Directorate of Biodiversity following Decision No (44) of 2012 that oversees the implementation of the NBSAP.

The launch of the revision of the NBSAP project in collaboration with the United Nations Environment Programme (UNEP) and the support of the Global Environment Facility (GEF).

Target 18: By 2020, the traditional knowledge, innovations and practices of indigenous and local communities relevant for the conservation and sustainable use of biodiversity, and their customary use of biological resources, are respected, subject to national legislation and relevant international obligations, and fully integrated and reflected in the implementation of the Convention with the full and effective participation of indigenous and local communities, at all relevant levels.

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:

- Implementation of the "Pearl Route" Project which aims to revive the national heritage that accompanied pearling and its trade which was known to be the heart of the cultural and economic life for centuries in Bahrain .
- Encouraging the use of traditional fishing methods (such as *hadrahs* and *gargoors*).
- Numerous efforts are being made to conserve the inherited culture accompanying palm trees. The most significant being the establishment of a permanent handicrafts center for palm products.

The expansion of growing local plants that are used in traditional medicine in the medical botanical garden situated in Al Areen Nature Reserve.

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.

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:

- The Central Planning Organization has an electronic portal that can access a national database which includes data on habitat maps and marine species in Bahrain.
- The Ministry of Municipalities and Urban Planning maintains a comprehensive database which includes statistical information on agriculture and fisheries which is updated regularly.
- Specialists at the University of Bahrain and the Arabian Gulf University conduct regular studies on various biodiversity aspects in Bahrain.
- The Supreme Council for Environment possesses a database updated using GIS which outlines the geographic extent of marine, terrestrial and anthropogenic impacts on biodiversity (e.g. dredging and reclamation activities, camping activities, factories outfalls and quarries).

- The Kingdom of Bahrain contributed in the implementation of the United Arab Emirates' project surrounding the Atlas of habitat and protected areas in the Arabian Peninsula.
- The appointment of the latest technologies by the Directorate of Agricultural Affairs and Marine Resources some of which includes: distance consultations, genetic engineering applications and nanotechnology. The number of farms adopting hydroponic farming has reached 10 by 2014 (Directorate of Agricultural Affairs and Marine Resources, 2014).
- The period 2011-2013 has witnessed an increase in the number of companies and farmers who have adopted the method of farming using hydroponics hence increasing the area of land using this technique.

The Supreme Council for Environment utilizes the latest techniques in its monitoring programs, water quality assessment in addition to inspection of industrial activities programs.

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.

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:

- Completion of an updated national legislation draft which frames the establishment of an environmental fund.
- Completion of a draft legal legislation document illustrating compensation mechanisms for dredging and reclamation projects.
- The private sector contributes through financial donations to aid the implementation of projects involving biodiversity protection which includes captivity breeding programs.

Financial aid is given to farmers and garden owners through services such as the analysis of farm soil and sand samples whereby a total number of 3313 samples were analysed between January 2010 and May 2014 as for the number of soil samples taken reached 1279 within the same period (Directorate of Agricultural Affairs and Marine Resources, 2014).

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:

Goal 1: End poverty in all its forms everywhere

Goal 1 calls for an end to poverty in all its manifestations, including extreme poverty, over the next 15 years. All people everywhere, including the poorest and most vulnerable, should enjoy a basic standard of living and social protection benefits.

Goal 2: End hunger, achieve food security and improved nutrition and promote sustainable agriculture

Goal 2 seeks to end hunger and all forms of malnutrition and to achieve sustain- able food production by 2030. It is premised on the idea that everyone should have access to sufficient nutritious food, which will require widespread promotion of sustainable agriculture, a doubling of agricultural productivity, increased investments and properly functioning food markets.

Goal 3: Ensure healthy lives and promote well-being for all at all ages

Goal 3 aims to ensure health and well-being for all at all ages by improving reproductive, maternal and child health; ending the epidemics of major communicable diseases; reducing non-communicable and environmental diseases; achieving universal health coverage; and ensuring access to safe, affordable and effective medicines and vaccines for all.

Goal 4: Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all
Goal 4 focuses on the acquisition of foundational and higher-order skills; greater and more equitable access to technical and vocational education and training and higher education; training throughout life; and the knowledge, skills and values needed to function well and contribute to society.

Goal 5: Achieve gender equality and empower all women and girls
Goal 5 aims to empower women and girls to reach their full potential, which requires eliminating all forms of discrimination and violence against them, including harmful practices. It seeks to ensure that they have every opportunity for sexual and reproductive health and reproductive rights; receive due recognition for their unpaid work; have full access to productive resources; and enjoy equal participation with men in political, economic and public life.

Goal 6: Ensure availability and sustainable management of water and sanitation for all
Goal 6 goes beyond drinking water, sanitation and hygiene to also address the quality and sustainability of water resources. Achieving this Goal which is critical to the survival of people and the planet means expanding international cooperation and garnering the support of local communities in improving water and sanitation management.

Goal 7: Ensure access to affordable, reliable, sustainable and modern energy for all
Goal 7 seeks to promote broader energy access and increased use of renewable energy, including through enhanced international cooperation and expanded infrastructure and technology for clean energy.

Goal 8: Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all
Continued, inclusive and sustainable economic growth is a prerequisite for global prosperity. Goal 8 aims to provide opportunities for full and productive employment and decent work for all while eradicating forced labor, human trafficking and child labor.

Goal 9: Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation
Goal 9 focuses on the promotion of infrastructure development, industrialization and innovation. This can be accomplished through enhanced international and domestic financial, technological and technical support, research and innovation, and increased access to information and communication technology.

Goal 10: Reduce inequality within and among countries
Goal 10 calls for reducing inequalities in income, as well as those based on sex, age, disability, race, class, ethnicity, religion and opportunity—both within and among countries. It also aims to ensure safe, orderly and regular migration and addresses issues related to representation of developing countries in global decision-making and development assistance.

Goal 11: Make cities and human settlements inclusive, safe, resilient and sustainable
Goal 11 aims to renew and plan cities and other human settlements in a way that fosters community cohesion and personal security while stimulating innovation and employment.

Goal 12: Ensure sustainable consumption and production patterns
Goal 12 aims to promote sustainable consumption and production patterns through measures such as specific policies and international agreements on the management of materials that are toxic to the environment.

Goal 13: Take urgent action to combat climate change and its impacts
Climate change presents the single biggest threat to development, and its widespread, unprecedented effects disproportionately burden the poorest and the most vulnerable. Urgent action is needed not only to combat climate change and its impacts, but also to build resilience in responding to climate-related hazards and natural disasters.

Goal 14: Conserve and sustainably use the oceans, seas and marine resources for sustainable development
This Goal seeks to promote the conservation and sustainable use of marine and coastal ecosystems, prevent marine pollution and increase the economic benefits to Small Island developing States and LDCs from the sustainable use of marine resources.

Goal 15: Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss
Goal 15 focuses on managing forests sustainably, restoring degraded lands and successfully combating desertification, reducing degraded natural habitats and ending biodiversity loss. All of these efforts in combination will help ensure that livelihoods are preserved for those that depend directly on forests and other ecosystems, that biodiversity will thrive, and that the benefits of these natural resources will be enjoyed for generations to come.

Goal 16: Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels
Goal 16 envisages peaceful and inclusive societies based on respect for human rights, the rule of law, good governance at all levels, and transparent, effective and accountable institutions. Many countries still face protracted violence and armed conflict, and far too many people are poorly supported by weak institutions and lack access to justice, information and other fundamental freedoms.

Goal 17: Strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development
The 2030 Agenda requires a revitalized and enhanced global partnership that mobilizes all available resources from Governments, civil society, the private SCE- tor, the United Nations system and other actors. Increasing support to developing countries, in particular LDCs, landlocked developing countries and small island developing States is fundamental to equitable progress for all.

Please describe other activities contributing to the achievement of the Aichi Biodiversity Target at the global level (optional)

<Text entry>

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:

As described above, biodiversity obviously across many of the Sustainable Development Goals (SDGs). They contribute directly to human well-being and development priorities. Biodiversity is at the center of many economic activities, particularly those related to agriculture, livestock, forestry, and fisheries. Globally, nearly half of the human population is directly dependent on natural resources for its livelihood, and many of the most vulnerable people depend directly on biodiversity to fulfil their daily subsistence needs.

Aichi Biodiversity Targets have adopted under the Convention on Biological Diversity and has been recognized as setting the global framework for priority actions on biodiversity. The SDGs Agenda is consistent with other existing international commitments, including Aichi Biodiversity targets.

Table 4 offers a summary of linkages between SDGs, Aichi Biodiversity Targets and other biodiversity-related conventions as a short guidance for Bahraini government in order to help decision-makers and development professionals to understand more easily the contributions of biodiversity-related conventions to achieving the SDGs.

Table (4): Links between sustainable development goals and biodiversity-related conventions

SDGs	Aichi Targets	CMS Targets	CITES Objectives	Ramsar Targets
Goal 1	2, 6, 7, 14	2, 5, 6, 11	1.1, 1.4, 1.5, 1.6, 1.7, 3.1, 3.3, 3.4, 3.5	1, 2, 5, 7, 8, 9, 11, 12, 13
Goal 2	4, 6, 7, 13, 18	5, 6, 12, 14	1.1, 1.3, 1.4, 1.5, 1.6, 1.7, 3.2, 3.3, 3.4, 3.5	2, 3, 5, 7, 8, 9, 10, 11, 13, 16
Goal 3	8, 13, 14, 16, 18	7, 11, 12, 14	1.1, 1.3, 1.5, 3.2, 3.3, 3.4, 3.5	2, 8, 10, 11, 12, 16,
Goal 4	1, 19	1, 15	1.4, 1.5, 1.6, 1.8, 2.2, 2.3, 3.2, 3.3, 3.4, 3.5	8, 14, 15, 16, 19
Goal 5	14, 17, 18	11, 13, 14	1.1, 1.3, 1.5, 3.2, 3.3, 3.4, 3.5	8, 10, 11, 12, 16, 19
Goal 6	8, 11, 14, 15	7, 10, 11	1.3, 1.4, 1.5, 3.3, 3.4, 3.5	2, 5, 6, 7, 8, 11, 12,
Goal 7	5, 7, 14, 15, 19	5, 10, 11, 15	1.3, 1.4, 1.5, 1.6, 1.7, 1.8, 2.2, 2.3, 3.3, 3.4, 3.5	2, 7, 8, 11, 12, 13, 14, 15
Goal 8	2, 4, 6, 7, 14, 16	2, 5, 6, 11	1.1, 1.3, 1.4, 1.5, 1.6, 1.7, 3.1, 3.2, 3.3, 3.4, 3.5	1, 2, 3, 5, 7, 8, 9, 11, 12, 13
Goal 9	2, 4, 8, 14, 15, 19	2, 5, 7, 11, 15	1.1, 1.3, 1.4, 1.5, 1.6, 1.7, 1.8, 2.2, 2.3, 3.1, 3.2, 3.3, 3.4, 3.5	1, 2, 3, 8, 9, 11, 12, 14, 15
Goal 10	8, 15, 18, 20	7, 11, 14, 16	1.1, 1.3, 1.5, 2.1, 2.2, 2.3, 3.1, 3.2, 3.4	2, 8, 10, 12, 16, 17, 18
Goal 11	2, 4, 8, 11, 14, 15	2, 5, 7, 10, 11	1.1, 1.3, 1.4, 1.5, 1.6, 1.7, 3.1, 3.2, 3.3, 3.4, 3.5	1, 2, 3, 5, 6, 7, 8, 9, 11, 12
Goal 12	1, 4, 6, 7, 8, 19	1, 5, 6, 7, 15	1.1, 1.4, 1.5, 1.6, 1.7, 1.8, 2.2, 2.3, 3.2, 3.3, 3.4, 3.5	2, 3, 5, 7, 8, 9, 11, 13, 14, 15, 16, 19

Goal 13	2, 5, 10, 14, 15, 17	2, 7, 10, 11, 13	1.1, 1.3, 1.4, 1.5, 1.6, 1.7, 3.1, 3.3, 3.4, 3.5	1, 6, 7, 8, 11, 12, 19
Goal 14	1 – 20	1, 2, 4, 5, 6, 7, 8, 10, 11, 12, 13, 14, 15, 16	1.1, 1.3, 1.4, 1.5, 1.6, 1.7, 1.8, 2.1, 2.2, 2.3, 3.1, 3.2, 3.3, 3.4, 3.5	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19
Goal 15	1 – 20	1, 2, 4, 5, 6, 7, 8, 10, 11, 12, 13, 14, 15, 16	1.1, 1.3, 1.4, 1.5, 1.6, 1.7, 1.8, 2.1, 2.2, 2.3, 3.1, 3.2, 3.3, 3.4, 3.5	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19
Goal 16	17	13	3.4	19
Goal 17	2, 17, 19, 20	2, 13, 15	1.1, 1.4, 1.5, 1.6, 1.8, 2.1, 2.2, 2.3, 3.1, 3.3, 3.4, 3.5	1, 8, 11, 14, 15, 17, 18, 19

For further guidance to Bahraini government, table (3) provides summary about possible global indicators that could help in measuring progress in implementing Aichi targets and SDGs at national level:

Table (5): Suggested global indicators for measuring progress in implementing Aichi targets and SDGs at national level

Aichi targets		SDGs targets		Suggested indicators	Link to other biodiversity-related conventions	Websites
	**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.		**Target 4.7:** By 2030, ensure that all learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship and appreciation of cultural diversity and of culture's contribution to sustainable development	**Biodiversity Barometer:** The Biodiversity Barometer indicator measures the level of public awareness of biodiversity in five case countries, and relates to Aichi Target 1.	CITES – CMS – Ramsar	http://ethicalbiotrade.org/biodiversity-barometer/
			**Target 12.8:** By 2030, ensure that people everywhere have the relevant information and awareness for sustainable development and lifestyles in harmony with nature			
	**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.			N/A	N/A	N/A
	**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		**Target 2.3:** By 2030, double the agricultural productivity and incomes of small-scale food producers, in particular women, indigenous peoples, family farmers, pastoralists and fishers, including through secure and equal access to land, other productive resources and inputs, knowledge, financial services, markets and opportunities for value addition and non-farm employment	**Trends in potentially environmentally harmful elements of government support to agriculture (producer support estimate):** The data provides an indication on the trends in	CMS – Ramsar	www.oecd.org/tad/agriculturalpolicies/producerandconsumersupportestimate

Aichi targets		SDGs targets		Suggested indicators	Link to other biodiversity-related conventions	Websites
	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.		**Target 2.4:** By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters and that progressively improve land and soil quality	potentially environmentally harmful elements of government support to producers, as measured by the Producer Support Estimates (PSE). Government support refers to payments made to farmers to manage the supply of agricultural commodities, influence their cost, supplement producers' income and achieve other social and environmental aims.		
			Target 2.b: Correct and prevent trade restrictions and distortions in world agricultural markets, including through the parallel elimination of all forms of agricultural export subsidies and all export measures with equivalent effect, in accordance with the mandate of the Doha Development Round			
			**Target 15.9:** By 2020, integrate ecosystem and biodiversity values into national and local planning, development processes, poverty reduction strategies and accounts			
	**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.		**Target 8.4:** Improve progressively, through 2030, global resource efficiency in consumption and production and endeavor to decouple economic growth from environmental degradation, in accordance with the 10-year framework of programmes on sustainable consumption and production, with developed countries taking the lead	**Ecological Footprint:** The Ecological Footprint compares human demand on nature against nature supply. Demand is measured in terms of biologically productive areas a population uses for producing all the renewable resources it consumes and absorbing its waste. The availability of nature, called biocapacity, is measured in surface area, and represents the regenerative capacity of nature. An increase in a nation's Ecological Footprint stands for an increase in its population's pressure on biodiversity and a greater risk of biodiversity loss.	CMS – Ramsar	http://www.footprintnetwork.org/en/index.php/GFN/page/world_footprint/
			**Target 12.2:** By 2030, achieve the sustainable management and efficient use of natural resources			

Aichi targets		SDGs targets		Suggested indicators	Link to other biodiversity-related conventions	Websites
			**Target 14.3:** Minimize and address the impacts of ocean acidification, including through enhanced scientific cooperation at all levels	**Red List Index (impacts of utilization):** The RLI (impacts of utilization) shows trends in the status of all mammals, birds and amphibians worldwide driven only by the negative impacts of utilization or the positive impacts of measures to control or manage utilization sustainability. **This indicator is used also for SDG targets 8.4 & 12.2**		
			**Target 15.1:** By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements		CITES – CMS – Ramsar	http://intranet.iucn.org/webfiles/doc/SpeciesProg/RLI_Guidelines_Final_4_march09.pdf.
			Target 15.7: Take urgent action to end poaching and trafficking of protected species of flora and fauna and address both demand and supply of illegal wildlife products			
	**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.		**Target 6.6:** By 2020, protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes	**Wetland Extent Trends Index:** The WET index is already proving useful for evaluating progress on wetland-related policy objectives including those adopted under the Ramsar Convention and the Convention on Biological Diversity	CMS – Ramsar	http://www.sciencedirect.com/science/article/pii/S0006320715301476
			**Target 15.1:** By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements	**Forest area as a percentage of total land area:** Information on the extent of forests is regularly collected and analyzed by the Food and Agriculture Organization of the UN (FAO) through its Global Forest Resources Assessments (FRA)	CITES – CMS	http://www.fao.org/forest-resources-assessment/en/.

Aichi targets		SDGs targets		Suggested indicators	Link to other biodiversity-related conventions	Websites
	**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.		**Target 2.4:** By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters and that progressively improve land and soil quality	**Marine Trophic Index:** The Marine Trophic Index measures the mean trophic level for all Large Marine Ecosystems and hence indicates the extent of 'fishing down the food webs. **This indicator is used also for SDG 14**	CITES – CMS	http://www.seaaroundus.org/data/#/marine-trophic-index.
			**Target 12.2:** By 2030, achieve the sustainable management and efficient use of natural resources **Target 12.8:** By 2030, ensure that people everywhere have the relevant information and awareness for sustainable development and lifestyles in harmony with nature			
			**Target 14.4:** By 2020, effectively regulate harvesting and end overfishing, illegal, unreported and unregulated fishing and destructive fishing practices and implement science-based management plans, in order to restore fish stocks in the shortest time feasible, at least to levels that can produce maximum sustainable yield as determined by their biological characteristics	**Marine Stewardship Council (MSC):** MSC Certified Catch measures the green weight catch of fisheries certified by the Marine Stewardship Council, and compares this to total wild capture production as reported by the FAO. **This indicator is used also for SDG targets 14.7 & 14. b**	CMS	http://www.fao.org/fishery/statistics/global-capture-production/en
			Target 14.7: By 2030, increase the economic benefits to Small Island developing States and least developed countries from the sustainable use of marine resources, including through sustainable management of fisheries, aquaculture and tourism	**Proportion of fish stocks within biologically sustainable levels:** This directly indicates the level of progress towards sustainable management of fish stocks, in which overfishing is avoided and the impacts of fisheries on stocks, species and ecosystems are within safe ecological limits. **This indicator is used also for SDG targets 14.4, 14.7 & 14. c**	CITES – CMS – Ramsar	www.fao.org

Aichi targets		SDGs targets		Suggested indicators	Link to other biodiversity-related conventions	Websites
			Target14.b: Provide access for small-scale artisanal fishers to marine resources and markets	**Red List Index (impacts of fisheries):** The RLI is shows trends in the status of birds and mammals worldwide driven only by the negative impacts of fisheries or the positive impacts of measures to control or manage fisheries sustainably	CMS – Ramsar	http://intranet.iucn.org/webfiles/doc/SpeciesProg/RLI_Guidelines_Final_4march09.pdf.
			Target 14.c: Enhance the conservation and sustainable use of oceans and their resources by implementing international law as reflected in UNCLOS, which provides the legal framework for the conservation and sustainable use of oceans and their resources, as recalled in paragraph 158 of The Future We Want			
	**Target 7:** By 2020 areas under agriculture, aquaculture and forestry are managed sustainably, ensuring conservation of biodiversity.		**Target 2.5:** By 2020, maintain the genetic diversity of seeds, cultivated plants and farmed and domesticated animals and their related wild species, including through soundly managed and diversified seed and plant banks at the national, regional and international levels, and promote access to and fair and equitable sharing of benefits arising from the utilization of genetic resources and associated traditional knowledge, as internationally agreed	**Area of forest under sustainable management: total FSC and PEFC forest management certification**: The "forest certification" indicator measures the area certified as responsibly managed forests, including natural or semi-natural forests that are used to produce timber and non-timber forest products, and forest plantations. **This indicator is used also for SDG targets 8.4, 12.2, 12.5, 12.8, 15.1, 15.2, 15.3, 15.4, 15.5, 15.6, &15.c**	Ramsar	https://ic.fsc.org/en
			**Target 6.4:** By 2030, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity			
			Target 6.5: By 2030, implement integrated water resources management at all levels, including through transboundary cooperation as appropriate			
			Target 6.6: By 2020, protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes			
			**Target 8.4:** Improve progressively, through 2030, global resource efficiency in consumption and production and endeavor to decouple economic growth from environmental degradation, in accordance with the 10-year framework of programmes on sustainable consumption and production, with developed countries taking the lead			
			Target 12.2: By 2030, achieve the sustainable management and efficient use of natural resources	**Wild Bird Index (forest & farmland specialist birds):**	CITES – CMS – Ramsar	htt p:/ /w w

Aichi targets		SDGs targets		Suggested indicators	Link to other biodiversity-related conventions	Websites
			**Target 12.5:** By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse	The Wild Bird Index (WBI) is the average trend in relative abundance of a group of bird species during the breeding season, often grouped by their association and dependence on a particular habitat.		
			Target 12.8: By 2030, ensure that people everywhere have the relevant information and awareness for sustainable development and lifestyles in harmony with nature			
			**Target 15.1:** By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements			
			Target 15.2: By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally			
			Target 15.3: By 2030, combat desertification, restore degraded land and soil, including land affected by desertification, drought and floods, and strive to achieve a land degradation-neutral world			
			Target 15.4: By 2030, ensure the conservation of mountain ecosystems, including their biodiversity, in order to enhance their capacity to provide benefits that are essential for sustainable development			
			Target 15.5: Take urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity and, by 2020, protect and prevent the extinction of threatened species			
			Target 15.7: Take urgent action to end poaching and trafficking of protected species of flora and fauna and address both demand and supply of illegal wildlife products			
			Target 15.c: Enhance global support for efforts to combat poaching and trafficking of protected species, including by increasing the capacity of local communities to pursue sustainable livelihood opportunities			

Aichi targets		SDGs targets		Suggested indicators	Link to other biodiversity-related conventions	Websites
	**Target 8:** By 2020, pollution, including from excess nutrients, has been brought to levels that are not detrimental to ecosystem function and biodiversity.		**Target 2.4:** By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters and that progressively improve land and soil quality	**Trends in Loss of Reactive Nitrogen to the Environment:** Inefficient use of fertilizer and/or fossil fuels results in loss of reactive nitrogen to the environment. Eventually, the lost reactive nitrogen to the environment can end up close to the sources or in remote areas located far from human activities, where it is often the dominant source of reactive nitrogen. Once introduced there, the increased reactive nitrogen levels can severely impact associated biodiversity. Reactive nitrogen can also contribute to eutrophication of coastal ecosystems, acidification of forests, soils, and freshwater streams and lakes. **This indicator is used also for SDG targets 14.1, 15.1**	CMS – Ramsar	www.initrogen.org

Aichi targets		SDGs targets		Suggested indicators	Link to other biodiversity-related conventions	Websites
			**Target 14.1:** By 2025, prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution	**Trends in Nitrogen Deposition:** The Nitrogen Deposition Indicator (NDI) shows where energy and food production have resulted in increased ammonia and nitrogen oxide emissions to the atmosphere on a global and regional basis, with subsequent increase in nitrogen depositions. **This indicator is used also for SDG targets 2.4, 15.2**	CMS – Ramsar	jng@eservices.virginia.edu/albert.bleeker@pbl.nl/frank.dentener@jrc.ec.europa.eu
			**Target 15.2:** By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally **Target 15.3:** By 2030, combat desertification, restore degraded land and soil, including land affected by desertification, drought and floods, and strive to achieve a land degradation-neutral world	**Red List Index (impacts of pollution):** This version of the RLI shows trends in the status of all mammals, birds and amphibians worldwide driven only by the negative impacts of pollution or the positive impacts of measures to control pollution. **This indicator is used also for SDG targets 14.1**	CMS – Ramsar	http://intranet.iucn.org/webfiles/doc/SpeciesProg/RLI_Guidelines_Final_4march09.pdf.

Aichi targets		SDGs targets		Suggested indicators	Link to other biodiversity-related conventions	Websites
	**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.		**Target 15.8:** By 2020, introduce measures to prevent the introduction and significantly reduce the impact of invasive alien species on land and water ecosystems and control or eradicate the priority species	**Red List Index (impacts of invasive alien species):** This indicator shows trends in the status of all birds worldwide driven only by the negative impacts of invasive alien species or the positive impacts of their control. It is based on Birdlife International's assessments of extinction risk for all birds for the IUCN Red List, specifically the number of species in each Red List category of extinction risk, and the number moving categories between assessments owing to genuine improvement or deterioration in status driven by impacts of invasive alien species or their control.	CMS – Ramsar	http://intranet.iucn.org/webfiles/doc/SpeciesProg/RLI_Guidelines_Final_4march09.pdf.
				Trends in the numbers of invasive alien species introduction events: This indicator measures the trends of invasive alien species introduction events (IAS) of 21 countries, which were selected for having at least 30 records of species with known invasion date. The indicator was based on 3914 IAS and 4903 species-country records.	CMS – Ramsar	http://www.eea.europa.eu/highlights/publications/progress-towards-the-european-2010-biodiversity-target/

Aichi targets		SDGs targets		Suggested indicators	Link to other biodiversity-related conventions	Websites
				Proportion of countries adopting relevant national legislation and adequately resourcing the prevention or control of invasive alien species: This indicator measures the adoption of national legislation relevant to the prevention or control of invasive alien species.	CMS	www.bipindicators.net/islegislationadoption
				Trends in invasive alien species vertebrate eradications: Invasive species indicators and alien species trends allow assessment of the efficacy of biosecurity policies. Trends in policy responses, legislation and management plans to control and prevent spread of invasive alien species demonstrates the commitment of nations and institutions to addressing this threat.	CMS	http://diise.islandconservation.org/
	**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.		**Target 14.1:** By 2025, prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution **Target 14.2:** By 2020, sustainably manage and protect marine and coastal ecosystems to avoid significant adverse impacts, including by strengthening their resilience, and take action for their restoration in order to achieve healthy and productive oceans	**Cumulative Human Impacts on Marine Ecosystems:** The Cumulative Human Impact on Marine Ecosystems indicator predicts the impact on marine biodiversity and ecosystems from multiple anthropogenic stressors. Cumulative impact assessments model, or predict,	CMS – Ramsar	https://www.bipindicators.net/indicators/cumulative-human-impacts-on-marine-ecosystems

Aichi targets		SDGs targets		Suggested indicators	Link to other biodiversity-related conventions	Websites
				the overall impact from a suite of stressors based on the unique and cumulative vulnerability of biodiversity to anthropogenic stressors such as pollution, climate change and fishing.		
	**Target 11:** By 2020, at least 17 per cent of terrestrial and inland water, and 10 per cent of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved through effectively and equitably managed, ecologically representative and well connected systems of protected areas and other effective area-based conservation measures, and integrated into the wider landscapes and seascapes.		**Target 11.4:** Strengthen efforts to protect and safeguard the world's cultural and natural heritage	**Protected Area Coverage of Key Biodiversity Areas:** This indicator shows trends over time in the degree to which KBAs are covered by protected areas. **This indicator is used also for SDG targets 14.5, 15.4**	CMS – Ramsar	https://www.ibat-alliance.org/ibat-conservation/login.
			**Target 14.5:** By 2020, conserve at least 10 per cent of coastal and marine areas, consistent with national and international law and based on the best available scientific information	**Protected Area Coverage of Key Biodiversity Areas:** This indicator shows trends over time in the degree to which KBAs are covered by protected areas. **This indicator is used also for SDG targets 11.4, 15.1, 15.2, 15.3, 15.4, 15.5, 15.7, &15.c**	CMS – Ramsar	https://www.ibat-alliance.org/ibat-conservation/login.
			**Target 15.1:** By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements **Target 15.2:** By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally **Target 15.4:** By 2030, ensure the conservation of mountain ecosystems, including their biodiversity, in order to enhance their capacity to provide benefits that are essential for sustainable development	**Protected Areas Management Effectiveness:** This indicator provides information on status and trends in effectiveness of management of protected areas that can be disaggregated to examine environmental, social and managerial aspects of protected area management. The indicator records the number and area of assessments of management effectiveness completed by countries, and the overall	CMS – Ramsar	http://www.eci.ox.ac.uk/publications/downloads/coad11-protected-areas.pdf.

Aichi targets		SDGs targets		Suggested indicators	Link to other biodiversity-related conventions	Websites
			Target 15.5: Take urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity and, by 2020, protect and prevent the extinction of threatened species	management effectiveness score for each aspect of management. The indicator therefore measures how effectively and equitably managed protected areas are, which is of critical importance in meeting Aichi Target 11, as the declaration of a protected area does not always result in adequate protection. **This indicator is used also for SDG targets 11.4, 14.5**		
			Target 15.7: Take urgent action to end poaching and trafficking of protected species of flora and fauna and address both demand and supply of illegal wildlife products			
			Target 15.c: Enhance global support for efforts to combat poaching and trafficking of protected species, including by increasing the capacity of local communities to pursue sustainable livelihood opportunities			
	**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.		**Target 2.4:** By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters and that progressively improve land and soil quality	**Wildlife Picture Index:** The WPI is a biodiversity index that uses camera trap data to quantitatively measure changes in species variation over time. TEAM adopted the WPI as a way to quickly synthesize and understand how tropical wildlife is changing and why. The WPI is sensitive to changes in the number of species, their relative occurrence and evenness over time. The WPI is not limited to camera trap data, but can also be used for other presence/absence data, such as information collected using sound sensors. **This indicator is used also for SDG targets 15.1, 15.2,**	CITES - Ramsar	http://tinyurl.com/o7zg6z5
			**Target 6.6:** By 2020, protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes			
			**Target 11.4:** Strengthen efforts to protect and safeguard the world's cultural and natural heritage	See the Red List Index below		
			Target 12.2: By 2030, achieve the sustainable management and efficient use of natural resources			

Aichi targets		SDGs targets		Suggested indicators	Link to other biodiversity-related conventions	Websites
			**Target 12.4:** By 2020, achieve the environmentally sound management of chemicals and all wastes throughout their life cycle, in accordance with agreed international frameworks, and significantly reduce their release to air, water and soil in order to minimize their adverse impacts on human health and the environment			
			Target 12.5: By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse			
			**Target 13.1:** Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries			
			**Target 14.1:** By 2025, prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution	**Living Planet Index:** The Living Planet Index (LPI) is calculated using time-series data on more than 14,000 populations of over 3,700 vertebrate species from around the globe. The LPI uses data that is of high temporal resolution and spatially explicit through being tied to a particular location. This allows for recording of metadata on local threats and conservation action and allows for disaggregation at different scales. The LPI data are accessible online through the Living Planet Database. **This indicator is used also for SDG targets 15.1, 15.4, 15.5, 15.7, 15.8**	CITES – CMS – Ramsar	www.livingplanetindex.org
			Target 14.2: By 2020, sustainably manage and protect marine and coastal ecosystems to avoid significant adverse impacts, including by strengthening their resilience, and take action for their restoration in order to achieve healthy and productive oceans			
			Target 14.3: Minimize and address the impacts of ocean acidification, including through enhanced scientific cooperation at all levels			
			Target 14.4: By 2020, effectively regulate harvesting and end overfishing, illegal, unreported and unregulated fishing and destructive fishing practices and implement science-based management plans, in order to restore fish stocks in the shortest time feasible, at least to levels that can produce maximum sustainable yield as determined by their biological characteristics			
			Target 14.5: By 2020, conserve at least 10 per cent of coastal and marine areas, consistent with national and international law and based on the best available scientific information			

Aichi targets		SDGs targets		Suggested indicators	Link to other biodiversity-related conventions	Websites
			Target 14.7: By 2030, increase the economic benefits to Small Island developing States and least developed countries from the sustainable use of marine resources, including through sustainable management of fisheries, aquaculture and tourism			
			Target14.b: Provide access for small-scale artisanal fishers to marine resources and markets			
			Target 14.c: Enhance the conservation and sustainable use of oceans and their resources by implementing international law as reflected in UNCLOS, which provides the legal framework for the conservation and sustainable use of oceans and their resources, as recalled in paragraph 158 of The Future We Want			
			**Target 15.1:** By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements	**Red List Index:** The Red List Index (RLI) shows trends in the extinction risk of sets of species. It requires data from repeated assessments of species using the Red List categories and criteria, which are far more commonly available than detailed reliable time-series of population abundance data. Because such data are generally available for entire suites of species (e.g. all regularly occurring species in a country for a particular taxonomic group) they produce less-biased indicators than those based on a sample selected better-studied species. **This indicator is used also for SDG targets 2.4, 6.6, 11.4, 12.2, 12.4, 12.5,**	CITES – CMS – Ramsar	http://www.iucnredlist.org/about/publication/red-list-index
			Target 15.2: By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally			
			Target 15.4: By 2030, ensure the conservation of mountain ecosystems, including their biodiversity, in order to enhance their capacity to provide benefits that are essential for sustainable development			
			Target 15.5: Take urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity and, by 2020, protect and prevent the extinction of threatened species			
			Target 15.7: Take urgent action to end poaching and trafficking of protected species of flora and fauna and address both demand and supply of illegal wildlife products			

Aichi targets		SDGs targets		Suggested indicators	Link to other biodiversity-related conventions	Websites
			Target 15.8: By 2020, introduce measures to prevent the introduction and significantly reduce the impact of invasive alien species on land and water ecosystems and control or eradicate the priority species	**14.1, 14.2, 14.3, 14.4, 14.5, 14.7, 14.b, 14.c.**		
			Target 15.b: Mobilize significant resources from all sources and at all levels to finance sustainable forest management and provide adequate incentives to developing countries to advance such management, including for conservation and reforestation			
			Target 15.c: Enhance global support for efforts to combat poaching and trafficking of protected species, including by increasing the capacity of local communities to pursue sustainable livelihood opportunities			
	**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.		**Target 2.5:** By 2020, maintain the genetic diversity of seeds, cultivated plants and farmed and domesticated animals and their related wild species, including through soundly managed and diversified seed and plant banks at the national, regional and international levels, and promote access to and fair and equitable sharing of benefits arising from the utilization of genetic resources and associated traditional knowledge, as internationally agreed	**Proportion of local breeds classified as being at risk, not-at-risk or at unknown level of risk of extinction**: This indicator aims to show whether genetic diversity of farmed and domesticated animals is being maintained using the proportion of local breeds classified as at risk, not at risk and unknown risk of extinction at a certain moment in time, as well as the trends for those proportions.	CITES	http://dad.fao.org/
	**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		**Target 2.4:** By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters and that progressively improve land and soil quality	See Ocean Health Index Indicator below		

Aichi targets		SDGs targets		Suggested indicators	Link to other biodiversity-related conventions	Websites
	local communities, and the poor and vulnerable.		**Target 6.6:** By 2020, protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes	**Red List Index (species used for food and medicine):** This version of the RLI is based only on data for birds, mammals and amphibians that are known to be used by people for food or medicine. It shows changes in the aggregate extinction risk of these species over time. **This indicator is used also for SDG targets 12.2, 12.8, 14.2, 14.3, 14.4, 14.6, 14.7, 14.b, 14.c.**	CMS – Ramsar	http://intranet.iucn.org/webfiles/doc/SpeciesProg/RLI_Guidelines_Final_4march09.pdf.
			**Target 8.4:** Improve progressively, through 2030, global resource efficiency in consumption and production and endeavor to decouple economic growth from environmental degradation, in accordance with the 10-year framework of programmes on sustainable consumption and production, with developed countries taking the lead			
			**Target 9.4:** By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries taking action in accordance with their respective capabilities			
			**Target 12.2:** By 2030, achieve the sustainable management and efficient use of natural resources	**Ocean Health Index:** The Ocean Health Index (OHI) is a scientific method to assess the benefits the ocean provides to people, and was developed because of the need for a quantifiable and easily communicated method to define, measure, and evaluate 'ocean health'. The OHI method can be tailored to different geographies with different contexts, data, and priorities, and can be used to inform policy - particularly	Ramsar	http://ohi-science.org.
			Target 12.8: By 2030, ensure that people everywhere have the relevant information and awareness for sustainable development and lifestyles in harmony with nature			
			**Target 14.2:** By 2020, sustainably manage and protect marine and coastal ecosystems to avoid significant adverse impacts, including by strengthening their resilience, and take action for their restoration in order to achieve healthy and productive oceans			
			Target 14.3: Minimize and address the impacts of ocean acidification, including through enhanced scientific cooperation at all levels			

Aichi targets		SDGs targets		Suggested indicators	Link to other biodiversity-related conventions	Websites
			Target 14.4: By 2020, effectively regulate harvesting and end overfishing, illegal, unreported and unregulated fishing and destructive fishing practices and implement science-based management plans, in order to restore fish stocks in the shortest time feasible, at least to levels that can produce maximum sustainable yield as determined by their biological characteristics	when assessments are repeated to track changes through time. **This indicator is used also for SDG targets 2.4, 8.4, 15.5**		
			Target 14.6: By 2020, prohibit certain forms of fisheries subsidies which contribute to overcapacity and overfishing, eliminate subsidies that contribute to illegal, unreported and unregulated fishing and refrain from introducing new such subsidies, recognizing that appropriate and effective special and differential treatment for developing and least developed countries should be an integral part of the World Trade Organization fisheries subsidies negotiation			
			Target 14.7: By 2030, increase the economic benefits to Small Island developing States and least developed countries from the sustainable use of marine resources, including through sustainable management of fisheries, aquaculture and tourism			
			Target14.b: Provide access for small-scale artisanal fishers to marine resources and markets			
			Target 14.c: Enhance the conservation and sustainable use of oceans and their resources by implementing international law as reflected in UNCLOS, which provides the legal framework for the conservation and sustainable use of oceans and their resources, as recalled in paragraph 158 of The Future We Want			
			**Target 15.4:** By 2030, ensure the conservation of mountain ecosystems, including their biodiversity, in order to enhance their capacity to provide benefits that are essential for sustainable development	**Red List Index (pollinating species):** This version of the RLI is based only on data for birds	CITES – CMS – Ramsar	http://intranet.iucn.org/webfiles

Aichi targets		SDGs targets		Suggested indicators	Link to other biodiversity-related conventions	Websites
			Target 15.5: Take urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity and, by 2020, protect and prevent the extinction of threatened species	and mammals that are known or inferred to be pollinators and shows changes in the aggregate extinction risk of pollinator species over time. The decline in the Red List Index for pollinators indicates that ecosystems supporting them are not currently being adequately safeguarded. **This indicator is used also for SDG targets 2.4**		
			Target 15.6: Promote fair and equitable sharing of the benefits arising from the utilization of genetic resources and promote appropriate access to such resources, as internationally agreed			
			Target 15.7: Take urgent action to end poaching and trafficking of protected species of flora and fauna and address both demand and supply of illegal wildlife products			
			Target 15.c: Enhance global support for efforts to combat poaching and trafficking of protected species, including by increasing the capacity of local communities to pursue sustainable livelihood opportunities			
	**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.			N/A	N/A	N/A
	**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.			N/A	N/A	N/A
	**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.			N/A	N/A	N/A

Aichi targets		SDGs targets		Suggested indicators	Link to other biodiversity-related conventions	Websites
	**Target 18:** By 2020, the traditional knowledge, innovations and practices of indigenous and local communities relevant for the conservation and sustainable use of biodiversity, and their customary use of biological resources, are respected, subject to national legislation and relevant international obligations, and fully integrated and reflected in the implementation of the Convention with the full and effective participation of indigenous and local communities, at all relevant levels.		**Target 1.4:** By 2030, ensure that all men and women, in particular the poor and the vulnerable, have equal rights to economic resources, as well as access to basic services, ownership and control over land and other forms of property, inheritance, natural resources, appropriate new technology and financial services, including microfinance	**Index of Linguistic Diversity**: Over the past few decades, it has become clear that biodiversity and cultural diversity (including linguistic diversity) are inextricably interrelated and interdependent, and that the permanence of loss of diversity in one realm closely tracks the permanence or loss of diversity in the other realm. Furthermore, language and traditional environmental knowledge are intimately linked. Therefore, tracking the state of linguistic diversity over time provides evidence of changes in the state of "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".	Ramsar	http://d2ouvy59p0dg6k.cloudfront.net/downloads/biocultural_report_june_2014.pdf
			**Target 16.7:** Ensure responsive, inclusive, participatory and representative decision-making at all levels			
	**Target 19:**		**Target 11.4:** Strengthen efforts to protect and safeguard the world's cultural and natural heritage		CITES – CMS – Ramsar	http://www.gbif.or

Aichi targets		SDGs targets		Suggested indicators	Link to other biodiversity-related conventions	Websites
	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.		**Target 14.a:** Increase scientific knowledge, develop research capacity and transfer marine technology, taking into account the Intergovernmental Oceanographic Commission Criteria and Guidelines on the Transfer of Marine Technology, in order to improve ocean health and to enhance the contribution of marine biodiversity to the development of developing countries, in particular small island developing States and least developed countries	**Growth in Species Occurrence Records Accessible Through GBIF**: This indicator tracks the number of digitally-accessible records published through the Global Biodiversity Information Facility (GBIF). An increase in the value of this indicator means that a larger volume of records documenting the spatial and temporal occurrence of species is being shared by holders of biodiversity data, in formats that make them free for use by researchers and policymakers via the Internet. A decline would indicate reduced availability of such data for research and policy.		
			**Target 15.5:** Take urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity and, by 2020, protect and prevent the extinction of threatened species			
			Target 15.8: By 2020, introduce measures to prevent the introduction and significantly reduce the impact of invasive alien species on land and water ecosystems and control or eradicate the priority species			
			Target 15.9: By 2020, integrate ecosystem and biodiversity values into national and local planning, development processes, poverty reduction strategies and accounts			
			**Target 17.6:** Enhance North-South, South-South and triangular regional and international cooperation on and access to science, technology and innovation and enhance knowledge sharing on mutually agreed terms, including through improved coordination among existing mechanisms, in particular at the United Nations level, and through a global technology facilitation mechanism			
	**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		**Target 10.b:** Encourage official development assistance and financial flows, including foreign direct investment, to States where the need is greatest, in particular least developed countries, African countries, small island developing States and landlocked developing countries, in accordance with their national plans and programmes	**Official development assistance and public expenditure on conservation and sustainable use of biodiversity and ecosystems:** he Official Development Assistance in Support of the	CITES – CMS – Ramsar	http://www.oecd.org/dac/stats/biodiversity.htm .

Aichi targets		SDGs targets		Suggested indicators	Link to other biodiversity-related conventions	Websites
	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.		**Target 11.4:** Strengthen efforts to protect and safeguard the world's cultural and natural heritage	CBD indicator tracks the transfer of bilateral aid from OECD DAC members to developing countries for the effective implementation of their commitments under the Convention, thus monitoring the level of resource mobilization for the Strategic Plan 2011-2020.		
			Target 15.a: Mobilize and significantly increase financial resources from all sources to conserve and sustainably use biodiversity and ecosystems			
			**Target 15.b:** Mobilize significant resources from all sources and at all levels to finance sustainable forest management and provide adequate incentives to developing countries to advance such management, including for conservation and reforestation			
			**Target 17.3:** Mobilize additional financial resources for developing countries from multiple sources			

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

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

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

<Text entry>

or:
☐ No, there are no related national targets

Please provide information on any active networks for plant conservation present in your country.
<Text entry>

Please describe the major measures taken by your country for the implementation of the Global Strategy for Plant Conservation. (Parties can report on actions taken to implement these targets if they are not covered in sections II, III or IV)
<Text entry>

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:

<Text entry>

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:

<Text entry>

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.

<Text entry>

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[2])

Biodiversity facts

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

The Kingdom of Bahrain is an archipelago of around 84 islands, shoals and patches of reefs situated off the central southern coast of the Arabian Gulf. The country land mass covers a total area of 786.5 km2. The terrestrial landscape in Bahrain is predominately arid desert with limited inland waters. Alternatively, the marine biotopes are diverse and include extensive sea grass beds and mudflats, patchy coral reefs as well as offshore islands. Sea grass beds are important foraging grounds for some threatened species such as dugongs and the green turtle. Pearl diving was a thriving industry, substantially contributing to the national economy before it collapsed in the last century. The principal current sustainable uses of the components of biodiversity include an active, but declining food fishery and a declining, but diversifying agriculture. Of exceptional international importance, Hawar Islands Protected Area provides valuable feeding and breeding grounds for a variety of migratory seabirds. The breeding colony of Socotra cormorant on Hawar Islands is the largest in the world, and the dugongs foraging around the archipelago form the largest dugong group in the world. Urbanization is the major threat to the components of biodiversity Bahrain. A considerable proportion of the coastline has been modified by coastal development involving both dredging and infilling operations. Other major anthropogenic stresses on local biodiversity include industrial and oil pollution, over- fishing, and invasive alien species.

- **The Importance of Biodiversity and Ecosystems in Bahrain**
    - **Regional and International Importance**

Despite being characterised by limited land mass and harsh climatic conditions, Bahrain hosts important diverse biotic ecosystems, which are of high regional and international importance. Two of which are listed on the List of Wetlands of International Importance under the Ramsar Convention due to their unique features, namely Tubli Bay and Hawar Islands. Furthermore, the Northern Oyster Bed site which is comprised of three oyster beds and a coral reef namely *Najwat* & *Hayr Bul Thamah, Hayr Bu Am'ammah* and *Hayr Shtayyah* – which is also known to be the largest oyster bed site in the region were inscribed as a UNESCO World Heritage Site in June 2012.

[2] *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.

On the species level, the breeding colony of the Socotra cormorant (*Phalacrocorax nigrogularis*) on Hawar islands is the largest in the world. The largest breeding colony of the western reef heron (*Egretta gularis*) in the Middle East is also hosted in Bahrain. Moreover, Bahrain's territorial waters are also host to the second largest population of dugongs (*Dugong dugon*) in the world following Australia.

FIGURE (15): THE BREEDING COLONY OF SOCOTRA CORMORANTS (PHALACROCORAX NIGROGULARIS) ON HAWAR ISLAND, KINGDOM OF BAHRAIN (SOURCE: JUHANI KYYRO, 2006)

- **Socio-economic Importance**

The Kingdom's biodiversity provides a variety of ecosystem services including direct and indirect goods (fig. 15). Marine and costal habitats present a wide range of provisioning, supporting, regulating and cultural services. They provide valuable goods and services, from biomass, fisheries and pearls to heavy metal traps, coastal protection and recreation. The total economic value of three most important subtidal habitats was estimated at US$1.88 Billion/year. All three habitats of coral reefs, mangroves and seagrasses beds provide wide range of ecosystem services including carbon sequestration, shoreline stabilization, fish and shrimp breeding and spawning areas and nutrient cycling among others. The economic revenues from fisheries were estimated at BHD13.161 Million in 2012. The agricultural ecosystems constitute important transition zone supporting biodiversity, local crops varieties and biological control. The revenue from oil and gas is estimated

at BHD2.662 million in 2014. Desert ecosystem is a source of energy and has a great potential for scientific research similarly to the marine and coastal ecosystems.

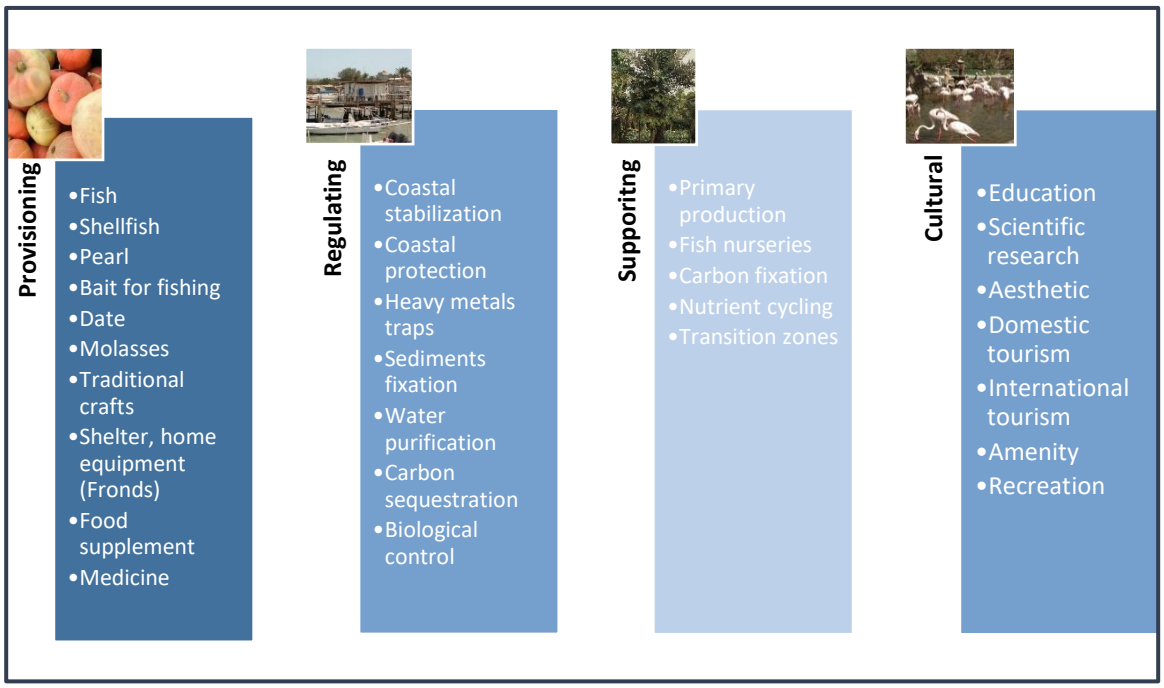

Figure 16: The ecosystems services found in the KoB.

The estimation of cultural services is limited to the tourism sector including travel whereby the monetary value accounts for BHD540 million in 2014 with an expected growth of 5% per year (BHD882.7 million by 2024). It is worth noting that this value does not necessarily reflect services provided solely by the ecosystems in the Kingdom, instead it primarily reflects the economic activity generated by the international tourism industries (i.e. hotels, travel agents, airlines and other passenger transportation services) and it includes the activities of the restaurant and leisure industries. The latter activities could reflect partially values of domestic tourism. Therefore, there is a need to initiate detailed mapping and valuation exercises of the services provided by of all four types of ecosystem found in Bahrain.

- **Cultural & Historic Importance**

For centuries biodiversity has played a large role in defining the identity and heritage of the Kingdom of Bahrain. Most noteworthy is the unique presence of freshwater springs on both land and sea which gave Bahrain its name today which translates literally to “two seas”. Moreover, Bahrain is also characterised by the pearl oyster beds which are of high historical and cultural importance especially prior to the discovery of oil by which they provided the backbone of the country’s economy. Despite the Kingdom’s development and rapid urbanization, palm trees and the dates they produce still retain their cultural importance and hence are

used widely amongst the local population. Moreover, traditional herbal medicine remains widely practiced and has gained remarkable popularity especially in the recent years.

- **Major changes in the status and trend of biodiversity**

  - **Ecosystem Level**

The qualitative assessment conducted during the preparation of this report indicates that in general, the status of ecosystems has not registered any significant improvement in comparison to their previous status in 2016. Despite this, it is safe to note deserts have maintained a wide geographical range (Table 6).

Table (6) the status and trends of the main ecosystems in the kingdom of Bahrain for the period 2016-2019. habitats are listed as per the ecosystem to which they belong.

Ecosystem	Habitat	Status and Trends
Arid and Semi-Arid Ecosystems	Desert	The desert has retained its geographical extent with the southern desert regions benefiting from high level of protection while desert areas in the northern region have registered a decline in area.
	Agricultural Lands	Agricultural land areas have witnessed a stable condition (since 2015) with a total area of 3700 hectares is actually in use hence utilizing 58% of the total agricultural lands area.
Inland Water Ecosystems	Reed Swamps	No improvement has been observed in the status of the areas of reed swamps.
	Irrigation Channels	Channels present along the western coast remaining in good condition.
Coastal Ecosystems	Mudflats	Mudflats located on the eastern shoreline and in Hawar Islands have remain stable and in pristine conditions.
	Salt Marshes	Salt marshes located on the eastern shoreline and in Hawar Islands have remain stable and in pristine conditions.
	Mangroves	Mangroves in Tubli Bay and Arad Bay (protected areas) have recorded an expansion in occupied area with improved conditions recorded.
	Rocky Shores	No improvement has been observed in the status of natural rocky shores located in the northern shoreline. However, rocky shores on Hawar Islands are seen to be in good and stable conditions. On another note, artificial rocky shores have witnessed an increase in length and expansion especially in the northern and eastern of Bahrain because of reclamation activates.
	Sandy Shores	Sandy shores have stable in size on the west coast areas. also, those present in Hawar remain in good condition. Moreover, the

		number of constructed sandy beaches have seen a marked increase in both number and area due to the reclamation activates.
Marine Ecosystems	Coral Reefs (*Fashts*)	Coral Reefs along the east coast remain in critical condition despite records of minor signs of improvement in some sites. It is important to note that the northern coral reefs are in better condition than those on the eastern side.
	Sea-grass beds	Sea grass beds have diminished in size along the eastern and northern coastline.
	Oysterbeds (*Hayrat*)	It is probable that oyster beds near the coast are witnessing rapid deterioration due to increasing pressures caused by shellfish harvesting. On the other hand, it is probable that oyster beds on the northern side of Bahrain in better condition those that located near the cost especially after the announcement of northern Hayr's as protected areas in 2017.

- **Species Level**

In terms of species, a total number of 1301 species have been identified. However, it should be noted that this number is probably an underestimate since many taxa are yet to be defined and identified.

The qualitative assessment conducted during the preparation of this report in cooperation with number of national and international experts (fig17.), indicated that in general, the status of the main taxonomic groups has not registered any significant improvement in comparison to their previous condition in 2010.

Figure 17: First meeting of biodiversity experts to update the appendices of the convention on the conservation of wildlife and its natural habitats.

- **Genetic Level**

There are no specialised studies available on the status of genetic diversity in the Kingdom of Bahrain conducted during the preparation of this report.

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

Emerging pressures and threats on biodiversity arising from both unsustainable anthropogenic activities and natural threats have been discussed in detail in the fifth National Report of the Kingdom of Bahrain to the Convention on Biological Diversity. Moreover, below the trend of the major pressures.

- **Land reclamation and dredging**

Using 2010 as a base year, mining, and quarrying (primarily oil and gas) accounted for 44% of real Gross domestic product (GDP) and decreased to 20% in 2012, while nominal GDP remained at 25% of GDP in both years. With the exception of real estate and mining and quarrying, the GDP share of all major sectors increased between 2000 and 2012. The three fastest growing sectors over this period were social and personal services, construction, and transportation and communications. *Given its limited land area (762 km^2), Bahrain has markedly been affected by coastal development. Nowadays, reclamation activities in Bahrain resulted in the addition of around 95 km^2 representing an increase of 12% of the total land area. Additionally, more than 80% of Bahrain's coastline has extensively been modified due to reclamation activities.* These activities constitute a major threat to the marine environment (i.e., mangroves, intertidal and seagrass beds). They have resulted in the loss of many productive intertidal habitats and have greatly increased the turbidity in the waters surrounding both reclaimed and dredged sites as well as the large-scale disappearance of seagrass beds. Land reclamation affects suspended sediments, turbidity, ocean currents and water movements as well as salinity. The disappearance of both intertidal habitat and seagrass beds affects respectively the marine mammals, the dolphins especially humpback dolphins and the dugong populations.

- **Alien species**

Following the increase in the maritime transport especially import operations, grey data shows a steady increase in imported goods, especially in new crop varieties and ornamental plants. It is likely expected that the import will keep the same pace among agricultural plant species and crop varieties resulting in a decrease in native plants' distribution, especially in northern Bahrain. On the other hand, two well-known invasive species of birds the *Corvus splendens* and *Acridotheres tristis*, predate on eggs and chicks of local bird species decreasing their populations' growth . It is worth noting that a quick appraisal with Bahraini's growers revealed

that farmers only care about crop yield. Consequently, imported varieties in the market will increase with time. There is a lack of governmental control on that issue especially for seed grown plants.

- **Overexploitation of marine resources**

National records reveal that a decline was observed in both bycatch fish size and abundance index. Overfishing was speculated to be the major cause of fish stock depletion between 2004-2014, leading to a rise in prices. During the same period, a decline in the catchment size of finfish (around 70-74) indicated that the status of fish stocks are outside the safe biological limits.

- **Oil spills and pollution**

The marine environment in Bahrain is under constant threat form oil spills resulting from tanker accidents, oil explorations, oil shipping and loading operations. In 1991, dugong deaths were witnessed because of a large oil spill. Other sources of oil pollution are ballast water discharged by oil tankers, oil water discharge from garages and machine shops as well as discharges to the sea from land-based industry and urban sources (i.e., loading terminals, oil leaks from loading and off-loading facilities in operation terminals, sewage effluent).

- **Climate change**

Bahrain's marine ecosystem has been affected by the changes in climate conditions for more than two decades. Potential detrimental effects of global warming have been observed on the plant communities in seagrass beds; increase in water depth and changes in tidal regimes and salinity; increased UV radiation, turbidity, and growth of epiphytes. Additionally, climate change has seriously affected coral reefs communities in the Kingdom through bleaching and killing over 90% in 1998.

Measures to enhance implementation of the Convention

1. Overview on the implementation of CBD

Bahrain ratified the Convention on Biodiversity in 1996 based on the Legislative Directive No. 18 of 1996. Bahrain has taken several initiatives toward implementing the CBD representing by strengthening the environmental governance, establishing protecting areas, incorporating biodiversity in education, and adopting participatory approach in biodiversity conservation. The main aspects of CBD implementation include:

Environmental governance: The establishment of the Directorate of Biodiversity at the Supreme Council for Environment in 2012, is considered as a major step toward strengthen the biodiversity governance.

Establishment of protected areas: Recognizing the role of protected areas in conserving and maintaining biodiversity and ecosystem services, Bahrain has established several terrestrial, coastal and marine protected areas. In addition to Al-Areen Wildlife Park, there are six natural protected areas in the marine environment of Bahrain (Table 7).

Table 7. Natural coastal and marine protected areas in Bahrain

Protected area	Ecological importance
Al Areen	In situ conservation of Reem Gazelle and endangered Arabian animal species. Ex situ conservation of endangered Arabian wildlife (rare birds, deer, Oryx, freshwater turtles) and wild plants.
Hawar Islands	Archipelago of 16 small islands preserving pristine conditions and surrounded by seagrasses. Host one of the largest Socotra cormorants, greater flamingo, black-head gull; and in its surrounding sea dugong and marine turtles. Cultural and Historical values.
Ras-Sanad area in Tubli Bay	Home for wintering birds such as Winged stilt, whimbrel, redshank.
Mashtan Island	Surrounded by corals. Hosts rare crustaceans' species. Seagrass beds feeding ground for dugong and sea turtles. Shelter for shrimp and finfish.
Dohat Arad	Intertidal mud and sand flats and nursery for commercially important prawns and fishes. Wintering area for 45 spp. Of waterbirds. Host the unique natural mangrove.
Najwat Bulthama	Highest percentage of living hard corals (Turbinaria peltata).
Hayr Bulthamah Hayr Shtayyah Hayr Bu Am'amah	Natural oyster bed with highest incidence of pearl.

Supporting laws: Bahrain has issued several laws or orders to support the conservation of biodiversity. These laws related to controlling reclamation, combating pollution, maintaining marine resources, and regulating marine sand extraction. These legislative instruments include among others, Law (37) 2014 on the extraction and sale of marine sand, Decree (20) 2002 with respect to the Regulation of Fishing and Exploitation of Marine Resources, and Ministerial Order (10) 1999 with respect to Environmental Standards (Air and Water), and its subsequent amendments. As well as the recently updated Law on the Environment [Law (7) of 2022].

National Biodiversity Strategy and Action Plan (NBSAP): Bahrain developed its NBSAP in 2007, and updated it in 2015. The Bahraini NBSAP specified the vision of Bahrain toward biodiversity, which states 'Strive towards improving resilience of all four ecosystems in the Kingdom and managing sustainably ecosystems services to ensure good quality of life for the Bahraini citizens by 2030.' The development of the NBSAP brought together a wide range of national stakeholders that covered the public and private sector, academia, and research institutions in addition to members from civil society. The NBSAP defined a 5 years strategy (2016-2021) for biodiversity conservation in the kingdom of Bahrain, and set the national priorities. The plan specified twelve national targets (aligned with the Aichi Biodiversity Targets), drew a road map for the implementation of priority actions, provided mainstreaming plan for biodiversity conservation into national policy instruments, and proposed financial sources need for biodiversity conservation in the Kingdom of Bahrain.

Education: Biodiversity and conservation issues have been incorporated into curricula of schools and universities. For instance, a course in conservation biology was introduced at the Department of Biology, University of Bahrain in 2009. This course explores the principles of conservation biology, including biological diversity and its value, threats to biological diversity, conservation at the population and species levels, and management of habitats and ecosystems. The course discusses aspects of biodiversity conservation in Bahrain. Several graduate students skilled in knowledge relating to conservation biology joined relevant institutions.

Environmental awareness: The Supreme Council for Environment in cooperation with the Ministry of Information and Ministry of Education has increased the aspects of environmental awareness through a rage of media and activities. These include organizing lectures and workshops, producing short films and TV advertisements concerned with biodiversity, spreading the knowledge of biodiversity in Bahrain through local newspapers and magazines.

Restoration programs: Transplantation project for the cultivating and planting mangrove seedlings along the coastline of Tubli Bay began in 2013. This project aimed at rehabilitating the coastal area in Tubli Bay, which hosts the last remaining mangroves in Bahrain. In 2021, over 8,000 mangrove seedlings were successfully transplanted in 3 nurseries, bringing the total mangrove seedlings transplanted in 2021 to approximately 11,000 seedlings across Bahrain, as well as providing neighbouring countries like Kuwait 500 seeds to support their mangrove planting project.

Ecosystem-based management:
A project aimed at improving the environmental, cultural, and socio-economic management of protected areas in Bahrain through the application of ecosystem-based management approach was carried out during the period 2012 to 2014. The project was implemented as collaboration between the Supreme Council for Environment, the Bahrain Authority for Culture and Antiquities and the United Nations Environment Program.

Studies related to ecosystem services valuation: Linking ecosystem services and human well-being can lead to a better understating of the importance of biodiversity by decision makers, stakeholders, and the public. Toward this, Bahrain has conducted initial studies to assess provisioning, supporting, and regulating cultural goods and services provided by coastal and marine ecosystems in Bahrain.

Participatory approach in biodiversity conservation: The SCE is adopting the participatory approach in the planning and implementing projects related to biodiversity in Bahrain. The involvements of stakeholders and NGOs in the programs related to the protection of biodiversity have substantially increased.

Scientific Research related to biodiversity: Scientific studies related to biodiversity have increased in the last five years. This is reflected by the increase in published articles, chapters and books related to biodiversity in Bahrain and the Arabian Gulf. The University of Bahrain and the Arabian Gulf University contribute significantly to the studies related to environment and biodiversity.

Non-Governmental Organizations (NGOs): Growing in the number of NGOs concerned with environment and biodiversity such as Bahrain Environment Society, Arab Youth Climate Movement, Youth and Environment Association, Friends of Environment Society. These societies are involving in several environmental initiatives and contributing to environmental awareness in Bahrain.

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

This report details some of the actions undertaken by the Kingdom of Bahrain to address the key scientific and technical needs related to the implementation of the Strategic Plan for Biodiversity 2011-2020. The Kingdom of Bahrain has paid special attention to the implementation of some of the topics that have been prioritized by the Convention on Biological Diversity, which have been reviewed in Section (1) in the form of case studies. Moreover, Section (2) illustrates the efforts and progress made nationally for the period (2011 – 2014) towards achieving each of the Aichi Targets (2020) for biodiversity whilst evaluating the status of its progress.

Section (1): Implementation of the Convention on Biological Diversity

Case Study (1): Applying the Ecosystem Based Approach

The Ecosystem Based Approach is considered one of the leading initiatives launched by the Convention on Biological Diversity and has been remarkably popular at the international level. The project was carried out during the period November 2012 to March 2014 and was implemented as collaboration between the Supreme Council for Environment, the Ministry of Culture of the Kingdom of Bahrain and the United Nations Environment Programme - Regional Office for West Asia (UNEP-ROWA). The project is considered the first of its kind in the region to aim at integrating the Ecosystem Based Approach into national strategies, plans and legislation as well as legal and environmental projects in the Kingdom of Bahrain.

The project involved a case study centred on the application of the Ecosystem Based Approach to enhance environmental protection of *Najwah Bul Thamah*, *Hayr Bul Thamah*, *Hayr Shtayyah* and *Hayr Bu Am'amah* which were (collectively) declared a World Heritage Site in 2012. As part of the project, four national workshops were organized and several specialised studies on the Ecosystem Based Approach were conducted, the most important of which identified relevant partners and analyzed their expected roles in the approach, evaluated the economic value of ecosystem services in the study area, as well as identified the beneficiaries of direct services provided by marine resources in that area. Within the areas studies, sectors of society that benefit from the direct services provided by marine resources were identified. As a result of the project, an Ecosystem Based Approach management plan was devised for *Najwah Bul Thamah*, *Hayr Bul Thamah*, *Hayr Shtayyah* and *Hayr Bu Am'amah.*

The project succeeded in attracting a wide range of national stakeholders, specifically representatives of government institutions, the private sector and civil society organizations who actively participated in the workshops and contributed to studies and the collection of information.

Case Study (2): Highlighting the Economic Value of Ecosystem Services

The Conferences of Parties to the Convention on Biological Diversity stresses economic importance of the services provided by biodiversity and ecosystem components in order to convince decision makers and the public of the importance of preserving biodiversity. In support of this, the Supreme Council for Environment, in collaboration with the World Bank, conducted a study highlighting the economic consequences (estimated financial value) for the deterioration observed in coastal and marine environments in the territorial waters of the Kingdom of Bahrain during the period 2011-2013.

Similarly, the Kingdom of Bahrain, in cooperation with the United Nations Environment Programme conducted a study on the economic value of the services provided by biodiversity and ecosystem components in *Najwah Bul Thamah*, *Hayr Bul Thamah*, *Hayr Shtayyah* and *Hayr Bu Am'amah.* The results of this study indicate that the services provided by this ecosystem contribute 3.4 to 227.1 billion/year (UNEP – ROWA, 2013). Following the results of the study, the Supreme Council for Environment, in cooperation with the Ministry of Culture, conducted a comprehensive survey to identify the stakeholders directly benefiting from the use of resources provided by *Najwah Bul Thamah*, *Hayr Bul Thamah*, *Hayr Shtayyah* and *Hayr Bu Am'amah.* It was found that raising the awareness of some of the stakeholders involved contributes effectively in the decision-making process.

It is hoped that these studies, which are the first of their kind in the Kingdom of Bahrain, will support the process of national decision-making by providing updated scientific information that highlights the economic and social consequences of biodiversity degradation.

Case Study (3): Engaging Civil Society

The Convention on Biological Diversity stresses the importance of adopting a participatory approach in the face of biodiversity issues by enabling the involvement of civil society in protection programs. The years between 2011 and 2014 witnessed expansion in civil society participation – including representatives of sports clubs and civil society groups and youth movements - in projects, programs and initiatives directed biodiversity.

Table (8): Selected examples of representatives of civil society contributions during the period 2011-2014 in the implementation of projects, programs and activities related to biodiversity in the Kingdom of Bahrain.

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Category	Organisation	Efforts
Local Community	Barbar Club	The club regularly organizes awareness events, and in 2014 it organized a lecture highlighting the historical importance of the coast of the village of Barbar.
	Municipalities Affairs	Conducts many coast clean-up campaigns with the participation of schools.
Civil Society Groups	Bahrain Environment Society	In 2014 the society held a marine survey to determine the types of marine habitats in the territorial waters of the Kingdom of Bahrain.
	Shark Conservation Society	In 2012, the society carried out a comprehensive survey to identify the shark species existing regional water and local markets in the Kingdom of Bahrain.
	Environmental Friends Society	In 2014 the society organised a workshop on sea turtles and contribute to the rehabilitation of some affected turtles.
	Bahrain Natural History Society	Society members implement an on-going bird ringing program that is considered the most comprehensive program of this type in the Arabian Gulf.
Youth	Arab Youth Climate Movement	In 2014, the group held a study on the economic and social aspects of *Najwah Bul Thamah*, *Hayr Bul Thamah*, *Hayr Shtayyah* and *Hayr Bu Am'amah*

Case study (4): Environmental Rehabilitation Programs

During the period 2011-2014, Bahrain carried out several projects for the rehabilitation of degraded sites. For example, the Supreme Council for Environment carried out in collaboration with the Ministry of Works, Municipalities Affairs and Urban Planning a project for the cultivation of plants and planting mangrove seedlings in order to rehabilitate degraded coastal areas and increase green areas in the coastal areas. During the seeding season in 2013, the project succeeded in the cultivation of more than 1,500 seedlings of mangroves all from Tubli Bay and Doha Arad. Meanwhile, the Directorate of Fisheries at the Ministry of Works, Municipalities Affairs and Urban Planning implemented a project that aims to increase fish stocks in the Kingdom of Bahrain through landing artificial reefs in hopes of contributing to the recovery of fish stocks to safe levels once more. The project was launched in 2012 by conducting a number of intensive surveys to determine suitable sites for the landing of artificial reefs before lowering nearly 2,500 concrete houses (Reef balls) in six key locations. Also, commercial fish fingerlings were cultured and released at the artificial reef sites in order to revive the fish stocks of those sites.

Case study (5): Clearing-House Mechanism

The kingdom of Bahrain is the first country in the GCC region to establish its Clearing-House Mechanism (CHM) in support of the implementation of the Strategic Plan for Biodiversity (2011-2020). Bahrain CHM is conceived as a virtual platform bringing together governmental entities, practitioners, scientists and experts to monitor the state of biodiversity in the KoB (fig. 13). It is set as an inter-operable system linking and directing the users to websites of all relevant organizations in Bahrain with the following aims:

- Providing easy access to biodiversity information in Bahrain;
- Ensuring transparency in the implementation processes of the CBD Strategic Plan for Biodiversity 2011-2020 and the advances towards meeting the Aichi Biodiversity Targets;
- Showing the existing cooperation between government agencies and national partners across all sectors to implement the NBSAP;
- Assisting users in finding all biodiversity related information; from theory to practices;
- Forming a national and regional hub for practitioners and experts to encourage global scientific cooperation;
- Communicating grassroots initiatives, EBM projects and on-going activities on biodiversity conservation.

The CHM will be used for the coordination among the three levels of coordination involving the NBSC, TTs and sub-national committees. The rapporteurs and representative will be designated as authorized users to share updates on merging issues and needs. The CBD-NFP and CHM-NFP will be the responsible on the validation of all information shared through the CHM and related to the NBSAP implementation.

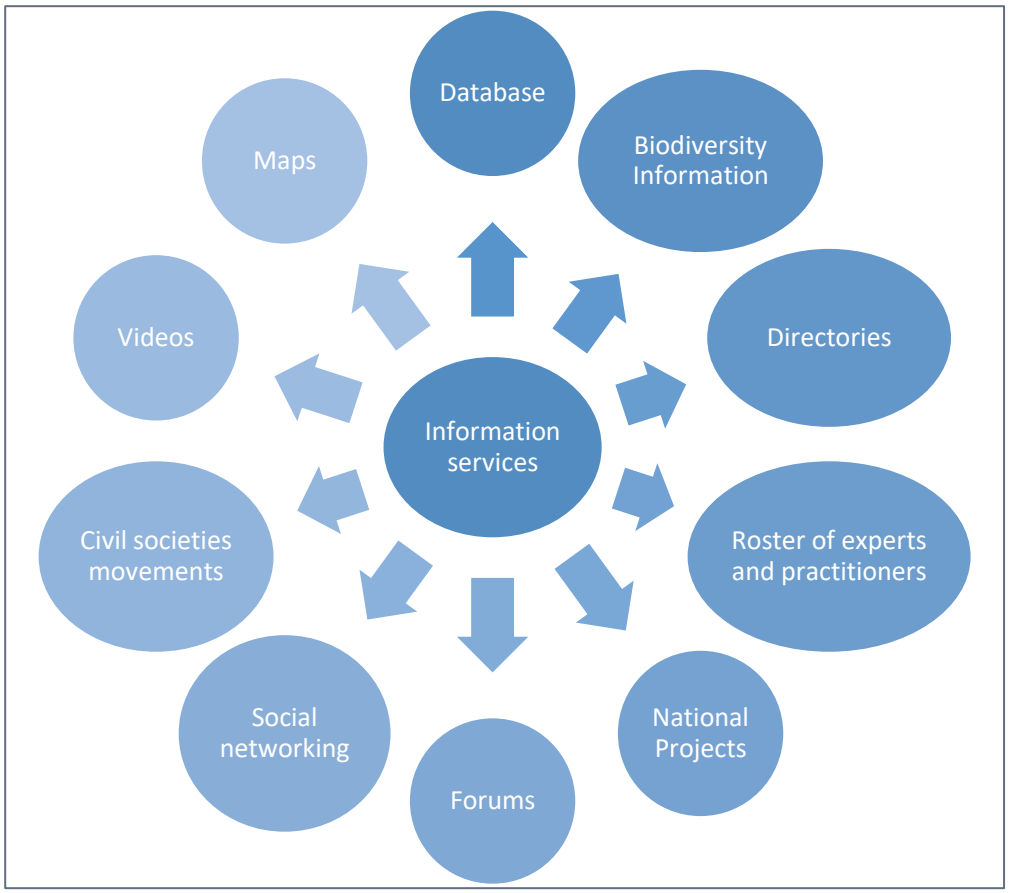

Figure 18 - Bahrain CHM information system (SCE, 2015)

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

Implementation of biodiversity related conventions is facilitated by a range of policies, strategies, national laws as well as regional and international agreements. The protection of biodiversity is widely reflected in several legal and environmental instruments ranging from the constitution and the governmental action plan to national laws and international agreements.

1. **Constitution of Bahrain**

Protection of biodiversity and natural resources is reflected in the Constitution of Bahrain including Article 11 which dictates the conservation of all natural resources; and Article 117 (A) which stresses on the legal regulation of the investment in natural resources.

2. **Economic Vision 2030**

The Bahrain Economic Vision (2030) stresses on the conservation of natural resources for future generations. This vision also encourages young Bahrainis to pursue knowledge related to their cultural heritage.

3. **National Environmental Strategy**

Bahrain launched the National Environmental Strategy (NES), which was approved by the Council of Ministers in 2006 (Edict No. 02-1902 on 8/10/2006). NES identifies mechanisms by which principles of sustainable development can be implemented, including enforcing the role of EIA during planning, implementation and after commissioning phases of major projects, adopting principles of integrated environmental management for coastal and marine environments, applying valuation systems to estimate the costs of environmental degradation and rehabilitation, strengthening institutional and legal frameworks, and increasing public awareness and participation.

4. **Government Action Plan 2015-2018**

Protection of the environment and conservation of natural resources are key elements in the Government Action Plan (2015-2016). This plan emphasizes on the following:

- Giving priority, in particular for projects related to the protection of coastal and marine protected areas and to support greening projects.
- Developing measures for the conservation of the environment and the protection of species, ecosystems, and resources with environmental, economic and cultural importance.
- Developing new control measures, and increasing the frequency of inspections.
- Reviewing and update the legislative framework on environmental issues to keep up with the rapid developments, and to ensure the protection of natural habitats, wild flora and fauna and marine life.
- Developing awareness and environmental education projects, and to strengthening the partnership with the local community in various environmental fields.

5. **Regional Agreements**

The Convention on the Conservation of Wildlife and their Natural Habitats in the Gulf Cooperation Council Countries (Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and United Arab Emirates) provides the basis for integrating biodiversity issues into national and regional environmental strategies and polices, and help in the implantation of biodiversity related conventions. This convention aims to effectively conserve ecosystems and wildlife habitats. It is also concerned with the protection of threatened species on a regional levels, especially when the distribution of these species exceed the international borders of two or more neighbouring countries or when these species migrate across the boundaries of the member states.

The Kuwait Regional Convention for Cooperation on the Protection of the Marine Environment from Pollution (Kuwait Convention), which was established in 1978, provides the basis for an integrated regional response to

protecting biodiversity and combating pollution. Currently, there are four Protocols under the Kuwait Convention; namely, protocol concerning regional cooperation in combating pollution by oil and other harmful substances in cases of emergency, protocol concerning marine pollution resulting from exploration and exploitation of continental shelf, protocol for the protection of the marine environment against pollution from land-based sources, and protocol on the control of marine transboundary movements and disposal of hazardous wastes. These protocols collectively address the pollution of marine environment and propose criteria for protection and management of ecosystems and marine resources.

6. National legislations

Environmental legislations related to biodiversity in Bahrain are based on a range of directive, laws, and orders with respect to the environment, regulation of fishing, exploitation of marine resources, protection of wildlife, environmental quality standards for wastewater effluents, declarations of protected areas, and banning of catching endangered species. These legal instruments contribute to the implantation of biodiversity related conventions.

Tables 9, 10 and 11 show a range of laws and orders related to the protection of ecosystems, species and natural resources that were identified in the Bahraini NBSAP (Pages 35-37):

Table 9 - Laws and orders related to the protection of ecosystems

Ecosystem	Law/Order	Objectives
All ecosystems	Law No. 21/ 1996	Protect human health, Reduce pollution and degradation
Coral Reefs	Decision No. 8/ 2007	Ban fishing with floating or trawling nets
Beaches, coasts, marine entries	Law No. 20/ 2006	Control or ban the use of beaches, reclamation.
All ecosystems	Law No. 33/ 2006	Protect ecosystems from domestic water disposal into public facilities
Mangroves	Law No. 53/ 2006	Ban all kinds of filling and reclamation
Mangroves	Decision No. 70/ 2011	Delineation of Tubli Bay
Marine submerged land	Decision 16/ 2005	Banning reclamation Owners of marine submerged properties
Agricultural	Decision No. 20/ 1983	Control on port of entry
Soil and ecosystems	Law No. 37/ 2005	Control the production, import, and use of pesticides in the GCC
Soil	Law No. 38/ 2005	Control the production, import, and use of fertilizers and soil amendments (GCC)

Table 10 - Laws and orders related to the protection of species

Species	Law/Order	Objectives
Sea cows, sea turtles, dolphins	Decision No. 3/ 2003	Total ban of hunting
Habara and Bahraini bulbul	Law No. 2/ 2005	Ban of hunting and trade
Local varieties of date Palm	Decision No. 3/ 2006	Ban import of date palm and ornamental palm trees from countries infested by palm trees insects
Shrimp	Decision No. 1/ 2007	Ban of fishing or selling, Control existence of fishing gears on boats, and exhibiting fresh shrimp for sale
Mackerel fish	Decision No. 1/ 2011	Permission to use floating net to catch with the exception of the area around Hawar Islands.
Crab	Decision No. 44/ 2011	Temporal ban of catchment, exhibition and selling
Sword fish	Decision No. 1/ 2012	Total ban of catchment and exhibition, selling, or use of the fish or any part of sword fish

Table 11 - Laws and orders related to the protection of natural resources

Resource	Law/Order	Objectives
Ground water	Law No. 12/ 1980	Regulate the use of groundwater Controls wells drilling
Water from Allat and Khubar layer Clean old neglected springs or wells	Law No. 4/ 1983 (Renewal of Decision 23/ 1980)	Ban water extraction Stop issuance of license
Ground water	Law No. 13/ 1983	Tariffs of consumption
Pesticides	Law No. 11/ 1989	Controlling the use of pesticides in agriculture
Urban Planning	Law No. 2/ 1994	Develop planning projects for cities and villages.
Fish stock and marine resources	Law No. 20/ 2002	Regulate methods of fishing and excavation of sand, marketing and manufacturing of fisheries
Agriculture drainage	Law No. 4/ 1985	Control the construction of agricultural drainage systems
Fish stock and shrimp	Decision No. 11/ 2009	Temporal ban
Sand excavation	Law No. 37/ 2014	Ban extraction and export

Mechanisms for monitoring and reviewing implementation:

The evaluation of the implementation of actions will be based on the measurement of the defined indicators by the relevant agencies. In terms of monitoring and reporting, each of the agencies, Technical Teams (TTs) and sub-national committees (Fig. 18) will have a set of specific terms of references. The National Biodiversity Steering Committee (NBSC) and TTs will follow up on the monitoring and evaluation of the mainstreaming of the NBSAP's implementation as well as the evaluation of the plan of work and aligning actions with biodiversity-related to biodiversity conservation and other Multilateral Environmental Agreements (MEAs).

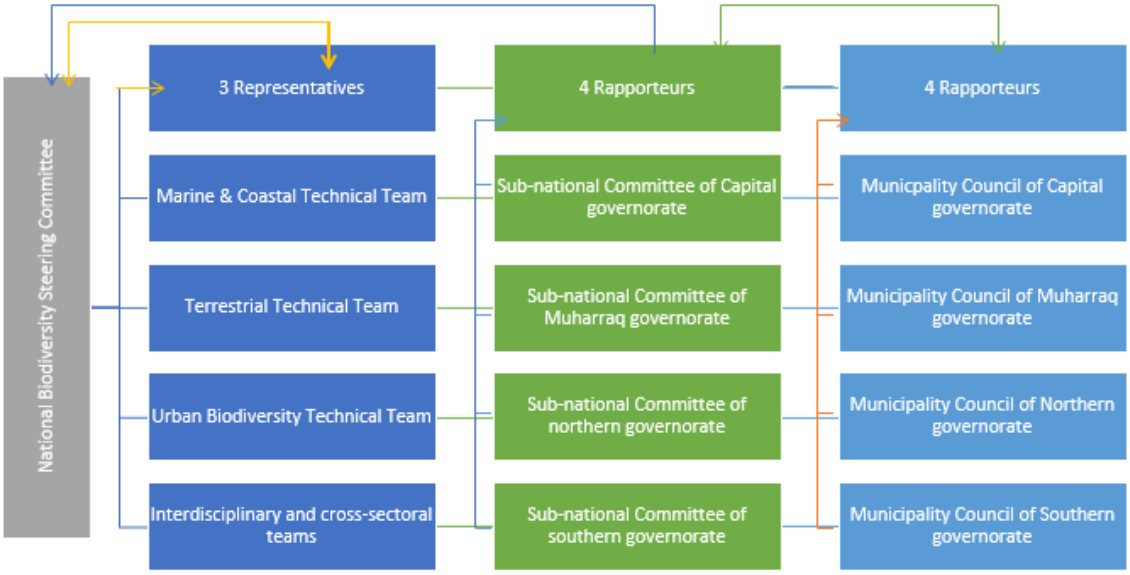

Figure 19: National and sub-national coordination structure for NBSAP's implementation3.

3 NB: The sub-national committees are linked to the technical teams through the designated 'Rapporteur'– the diagram presents the 3 layers of coordination.