

Clearing House Mechanism (CHM) and National Biodiversity Database as part of the Revision Process of the National Biodiversity Strategy and Action Plan (NBSAP) of the Kingdom of Bahrain

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Central Informatics Organization

Table of Contents

	2
EXECUTIVE SUMMARY	4
BACKGROUND	5
INTERNATIONAL CHM (CHM OF THE CBD)	6
NATIONAL CHM (CHM OF THE KINGDOM OF BAHRAIN)	7
<i>ESTABLISHMENT & IMPLEMENTATION</i>	7
<i>BAHRAIN CHM FOCAL POINT INFORMATION</i>	8
<i>BAHRAIN CHM WEBSITE LINK</i>	8
BAHRAIN CHM ROAD MAP	9
BAHRAIN NATIONAL BIODIVERSITY DATABASE	10
BAHRAIN CHM WEBSITE	11
NATIONAL CHM TRAINING & INVOLVEMENT OF ALL STAKEHOLDERS	12
LINKING THE BAHRAIN CHM TO THE IMPLEMENTATION OF THE STRATEGIC PLAN FOR BIODIVERSITY 2011-2020	13
PLANNING, REPORTING & EXCHANGE	15
REFERENCES	16
ANNEXES	17
ANNEX 1	18
ANNEX 2	19
ANNEX 3	28

Executive Summary

The Kingdom of Bahrain has embarked upon the revision of its National Biodiversity Strategy and Action Plan (NBSAP) in fulfillment of its obligation under the Convention on Biological Diversity (CBD) and as part of the kingdom's efforts and commitment to conserving its biodiversity and the sustainable management of its natural resources. As part of this project, the kingdom has also initiated its plans for establishing its Clearing-House Mechanism (CHM) in support of the implementation of the Strategic Plan for Biodiversity (2011-2020). The main aims of the Bahrain CHM are:

- To provide easy access to biodiversity information in Bahrain and how the kingdom's efforts feed into the process of implementing the CBD and its Strategic Plan for Biodiversity 2011-2020 based on the Aichi Biodiversity Targets.
- To highlight the existing cooperation between different governmental entities and partners across all sectors to implement the Bahrain NBSAP.
- To assist users in finding all relevant information and expertise, which will benefit biodiversity not just locally but also regionally and globally - hence, encouraging and assisting global scientific cooperation.
- To act as an inter-operable platform linking and directing the users to websites of all relevant organisations in Bahrain and thus, connecting national community of practices and all stakeholders.

In order to do this, a road map has been adopted to draw the path towards the establishment of a Bahrain Clearing-House Mechanism (Bahrain CHM), which includes setting up the Bahrain National Biodiversity Database (Bahrain NBD), which involves the assessment of available data and the existing gaps. Following the principles outlined in the CBD Guidance Document for Developing National Clearing-House Mechanisms, which are being adapted to national circumstances, Bahrain is classified to be at Level 2 as per the roadmap outlined by the CBD CHM classification system.

This report presents an overview of efforts made towards planning the foundation of the Bahrain CHM for its establishment and implementation, which will seek the guidance of Mr. Mostafa Madbouhi, the official MENA CBD CHM Focal Point during the planned Bahrain CHM Training Workshop. Lastly, opportunities and methods of linking the Bahrain CHM to the implementation of the Bahrain NBSAP and Strategic Plan for Biodiversity (2011-2020) have also been explored.

Note to reader: The purpose of this work plan is to help develop a clear idea and agreement on what is required to create a national biodiversity database, which shall feed into the establishment of Bahrain's Clearing House Mechanism (CHM). The work plan aids in examining the current available information within the Supreme Council for Environment and other organisations along with creating data tracking systems to identify future needs to bridge the gaps in knowledge and data.

Background

Biodiversity means the variety of life - recognizing the importance of biodiversity to human well-being and daily life in general and the continuous pressures that humans are placing on the earth that sustains their own existence, governments came together to adopt the CBD as a framework for action in 1992.

Understandably scientific and technological knowledge play a vital role in the implementation of the Convention. However, expertise in managing information and technology varies enormously from country to country. Hence, the Convention has established a "Clearing-House Mechanism" (CHM) to ensure that all governments have access to the information and technologies required for their work on biodiversity (CBD Secretariat (a), 2015).

Originally, the term "clearing-house" was referred to a financial establishment where checks and bills are exchanged among member banks so that only the net balances need to be settled in cash. Today, its meaning has been extended to include any agency that brings together seekers and providers of goods, services or information, thus matching demand with supply (CBD Secretariat (a), 2015).

Under the theme of "Living in harmony with nature," the Strategic Plan for Biodiversity (2011-2020) was adopted by the parties to the CBD at the tenth Conference of the Parties (COP10) in October 2010. The plan encompasses a ten-year framework for action by all countries and stakeholders along with twenty targets known as the Aichi biodiversity targets, which aim at safeguarding biodiversity and the benefits it provides along with its sustainable use.

In decision X/15, the Conference of the Parties (COP), adopted the mission, goals and objectives of the CHM for the period 2011-2020, and in paragraph 11 of decision XI/2 welcomed the work programme for the CHM in support of implementation of the Strategic Plan for Biodiversity 2011-2020 (UNEP/CBD/COP/11/31) and agreed to keep this work programme under review.

The Mission of the CHM is as follows:

- To contribute significantly to the implementation of the CBD and its Strategic Plan for Biodiversity 2011-2020 through effective information services and other appropriate means.
- To promote and facilitate technical and scientific cooperation, knowledge sharing and information exchange.
- To establish a fully operational network of parties and partners.

International CHM (CHM of the CBD)

Embracing the spirit “towards a biodiversity knowledge network for scientific and technical cooperation,” the CHM of the CBD was established further to Article 18.3 of the Convention. Built upon the philosophy that broad participation and easy access must be a top priority, information and knowledge sharing was set out with the aim of making such information easily accessible and widely shared in order to contribute towards the implementation of the Convention.

The Clearing-House is coordinated by the Executive Secretary and overseen and guided by an Informal Advisory Committee (IAC) set up by the Parties to the Convention. The committee works in a transparent and cooperative manner to promote awareness of the multiple needs and concerns facing various communities, countries and regions (CBD Secretariat (b), 2015).

Moreover, in order to address matters relating to technical and scientific cooperation, a network of national focal points for the mechanism is currently being established. The need to strengthen the role of focal points were emphasized by the parties whilst noting that building a network of non-governmental organizations and other institutions working on biodiversity could contribute to achieving this goal. Establishing National, Regional, Sub-regional and Thematic Clearing-House Focal Points for specific topics could also aid in this process.

The CHM’s mission is articulated around three major goals (CBD Secretariat (b), 2015):

- The central CHM provides effective global information services to facilitate the implementation of the Strategic Plan for Biodiversity 2011-2020.
- National CHMs provide effective information services to facilitate the implementation of the national biodiversity strategies and action plans.
- Partners significantly expand the CHM network and services.

As part of its resources and activities, the CHM seeks to support the Convention's thematic and cross-cutting programmes of work by promoting cooperation, exchanging information and developing a network of partners. Initially the mechanism's first priority was to ensure universal access to the Convention's official records such as the Convention’s text, official documents and list of signatories, however since then the service was expanded towards making various information available such as submitted national reports and NBSAP documents.

The Clearing-House also seeks to increase public awareness of Convention programmes and issues through establishing an Internet-based system to facilitate greater collaboration among countries through education and training projects, research cooperation, funding opportunities, access to and transfer of technology, and repatriation of information (CBD Secretariat (a), 2015).

National CHM (CHM of the Kingdom of Bahrain)

A National CHM is basically a website that provides relevant information on the CBD in a particular country. In this light, the Bahrain CHM aims to provide easy access to information on biodiversity in Bahrain and how the kingdom's efforts feed into the process of implementing the CBD, its Strategic Plan for Biodiversity 2011-2020 and the Aichi Biodiversity Targets.

The Bahrain CHM also aims at highlighting how different governmental entities and partners across all sectors are working together to implement the Bahrain NBSAP, which is a key element in implementing the Convention and its Strategic Plan for Biodiversity.

Moreover, the Bahrain CHM shall outline various approaches adopted in the kingdom which includes examples of practical tools and grassroots initiatives that can be used to help meet the objectives and targets of the CBD in addition to the involvement of civil society groups, research institutions and the private sector. It aims to assist users in finding all relevant information and expertise, which will benefit biodiversity not just locally but also regionally and globally.

The Bahrain CHM shall also act as a linking and connecting platform whereby it shall direct users to websites of all relevant organisations in the Bahrain where more detailed information can be found. Finally, the Bahrain CHM is a part of the global network of CHMs under the Convention. Lastly, the Supreme Council for Environment (SCE) is the official authority for ensuring that the Kingdom of Bahrain fulfills its commitments as a Party to the CBD.

Establishment & Implementation

Following the principles outlined in the CBD Guidance Document for Developing National Clearing-House Mechanisms, which encourages parties to adapt guidance to national situation, Bahrain is classified to be at Level 2 as per the roadmap outlined by the CBD CHM classification system (Table 1). Therefore, in order to proceed in fulfilling its obligation to the Convention which also requires parties to establish their national CHMs, Bahrain is required to build a national CHM website through adopting an integrated approach taking into consideration the technical components of the website but also the method of which the content shall be provided and updated.

Table 1. Roadmap for establishing and strengthening national CHMs (CBD) (Olivier de Munck, 2015)

Level	Situation	Action	Bahrain's Position
0	No CHM National Focal Point (NFP)	Convince Party to nominate CHM NFP	✓
1	CHM NFP not equipped	Find solutions to provide basic infrastructure & communication facilities	✓
2	No national CHM website	Get tools & support to establish web presence	✓
3	National CHM web presence	Enhance web content Improve user experience	×
4	Good national CHM website	Expand information services Establish interoperability mechanisms Support other national CHMs	×

Bahrain CHM Focal Point Information

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Bahrain CHM website link

Although Bahrain possesses the basic infrastructure and necessary communication facilities to establish its CHM, it still needs to prepare its institutional arrangements (i.e. ToR's and partnership). In addition, it is required to establish its web presence. Following exploration and as of October 2014 the Bahrain CHM website is now being hosted by the CBD CHM network based in Belgium at the Royal Belgian Institute of Natural Sciences which acts as a central CHM for many Parties. The Bahrain CHM website can hence be accessed via the following link: <http://www.biodiv.be/bahrain/> [Please note that as of 13 August 2015 no content has been uploaded onto the website].

Bahrain CHM Road Map

Initial contact with Mr. Mostafa Madbouhi, the official MENA CBD CHM Focal Point was made at the twelfth meeting of the Conference of Parties (COP12) which was held in Pyeong Chang, Republic of Korea early October 2014. Several meetings were held between the NBSAP Project Coordinator, Ms. Reem Al Mealla and Mr. Mostafa Madbouhi under the guidance of the Former Acting Director of Biodiversity at the SCE, Mr. Abdulqader Khamis. The outcomes of the meetings included developing an initial idea of what was required to put together the Bahrain CHM and the commencement of developing Bahrain's National Biodiversity Database, which is a crucial element for the success of the CHM, as it brings together all information available on biodiversity in the country. Both parties agreed that once the basics have been established, further contact shall be made.

Following this, the Project Coordinator began the process of outlining the roadmap that would lead to the establishment of the national CHM which included sending introductory official letters to various relevant governmental and non-governmental organisations which outlined the mission of the CHM and the Bahrain National Biodiversity Database.

This initiative was warmly welcomed by the Central Informatics Organisation (CIO) which acts as a central database for all of Bahrain's information, who offered their full support and opened the path to creating a partnership whereby the CHM website which shall be managed by the SCE would host all necessary information as appropriate shall also include a link to a portal established by the CIO which will display maps that highlight information such as locations of Protected Areas in Bahrain and mapping of ecosystems all of which shall embrace an open access philosophy for the benefit of policy-makers and stakeholders including members of the public to gain and spread awareness of the importance of biodiversity, locations of hotspots and methods to attain their conservation status, restoration and sustainable use. In order to do this, the following road map was put together (Figure 1).



Figure 1. Road Map for the establishment of the Bahrain CHM

Bahrain National Biodiversity Database

In preparation for the implementation of the set roadmap to establish the Bahrain CHM, a work plan for the establishment of the Bahrain National Biodiversity Database (Bahrain NBD) was submitted to the SCE in December 2014 outlining the steps to be taken to establish Bahrain NBD (refer to Annex 1).

Following this, a rapid assessment was conducted to identify all possible sources of information, which could provide historical and secondary data on Bahrain’s biodiversity (Figure 2). The collection of data for the establishment of the Bahrain NBD begun as early as June 2014 as data was being sorted out throughout the preparation of the Fifth National Report to the CBD. Between October 2014 and April 2015, a more in-depth search began with the aim of gathering all relevant information on Bahrain’s biodiversity of which the results are displayed in Annex 2 from sources outlined in Figure 2. Official letters of request for data were sent to various authorities and organisations across all sectors on the 18th of December 2014, which included an introduction of the Bahrain CHM & National Biodiversity Database Project and invitations for partnership. Moreover, a public call for information and data was also made on the 24th of February 2015 at the Second National NBSAP Workshop whereby all stakeholders were informed about the project and a welcome for participation was also extended.

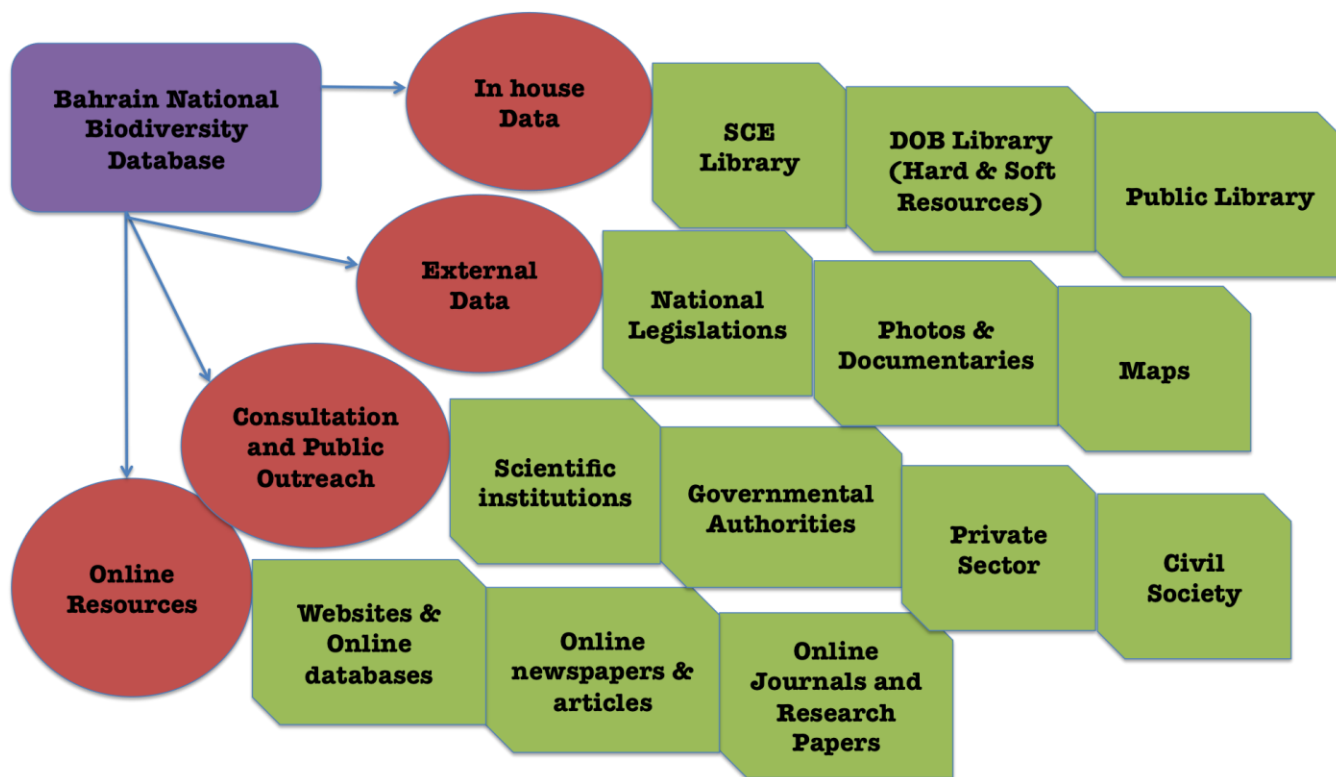


Figure 2. Mapping of possible sources for the data collection process [SCE = Supreme Council for Environment; DOB = Directorate of Biodiversity]

Bahrain CHM Website

Following the first initial steps of creating a web presence which included hosting the website, the next steps involve utilising a Content Management System (CMS) based website infrastructure which will aid in managing the national CHM website as outlined in the guidance document on developing national CHMs by the CBD Secretariat (Figure 3). This would see the website divided into two spaces, one which would be considered to be a public space whereby the public have full access to all information and one would be a protected space whereby collaborations and projects are being managed (e.g. discussion forums).

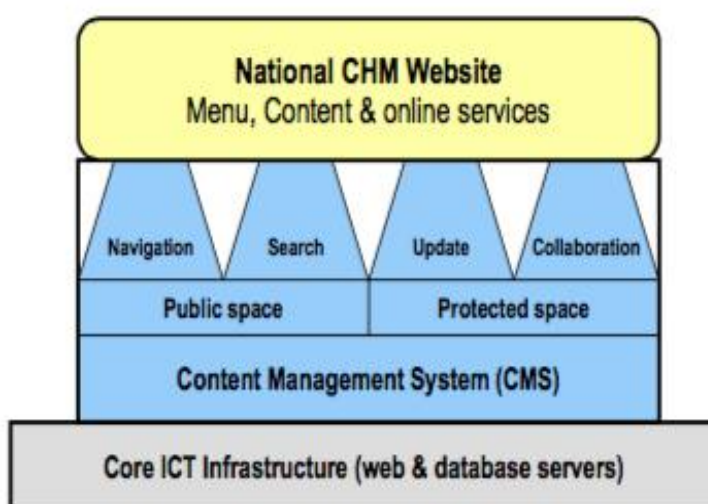


Figure 3. CMS-based website infrastructure (Olivier de Munck, 2015)

Once the CMS-based website infrastructure is set up, the web content needs to be enhanced through applying basic information architecture which grants the website its structure in order to provide visitors access to various sections of the website through web navigation (menus, header, footer, search bar). In order to achieve a positive user friendly experience, the Bahrain CHM web content must be attractive, easy to find, up-to-date, relevant and possess material that help national and international visitors to connect with the kingdom's biodiversity essence. Figure 4 displays a proposed site map for the Bahrain National CHM Website. The site map consists of a total of five components namely:

- The Convention
- Biodiversity in Bahrain
- Implementation
- Cooperation [This would include Regional and International Cooperation]
- Information Services [This would include an about us section and information on the international CHM]

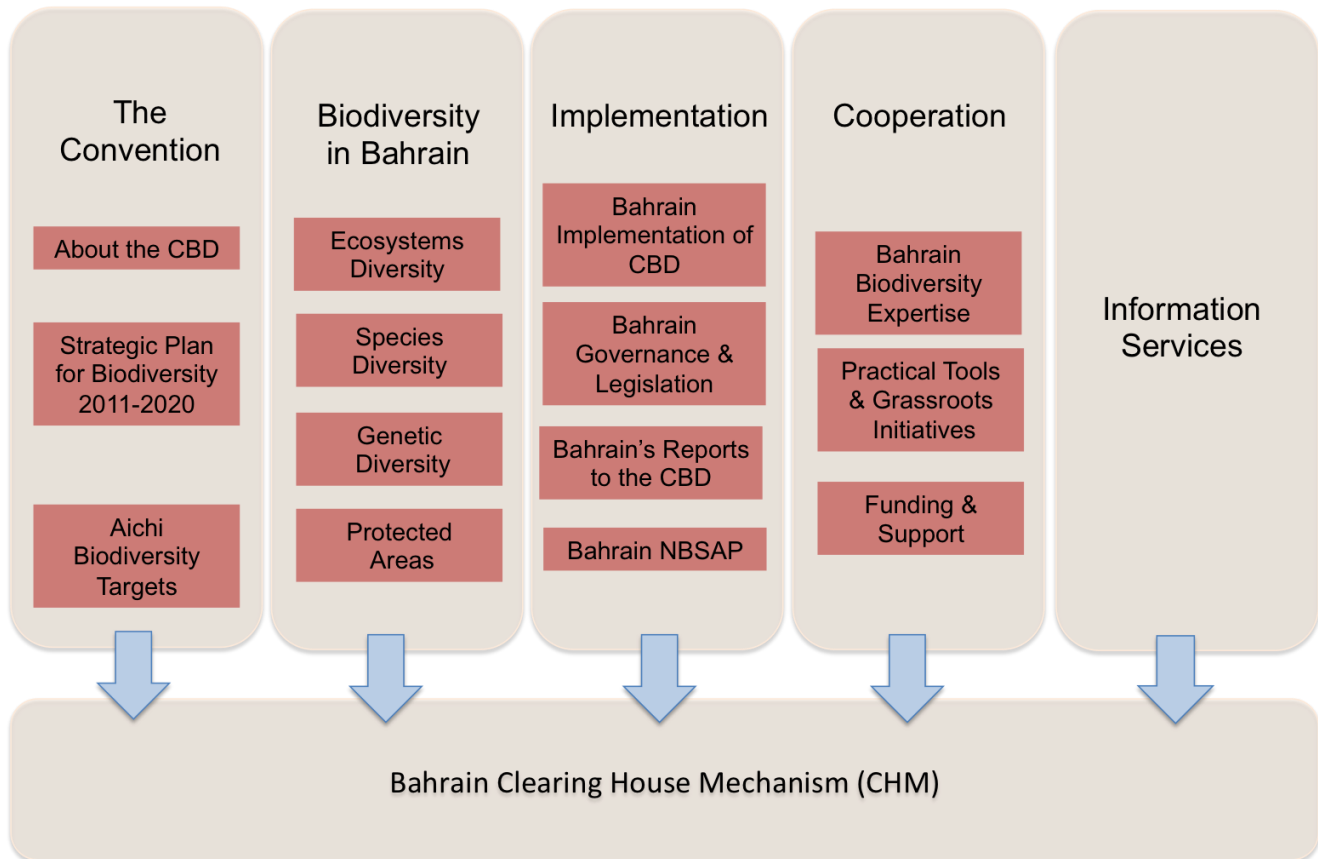


Figure 4. Proposed Outline (or Sitemap) for the Bahrain CHM

National CHM Training & Involvement of all Stakeholders

In order to proceed with the Bahrain CHM whereby the theoretical method outlined in this report is put to practice, the project coordinator approached Mr. Madboubi on the 15th of April 2015 to request support for the implementation of the Bahrain CHM as the official approval for its establishment was received on the 8th of April 2015.

At the ninth meeting of the Conference of the Parties (COP9) to the CBD, all parties were requested to:

- Designate a CHM national focal point;
- Establish a national CHM;
- Develop a national strategy for its CHM;
- Establish a national structure to coordinate the development of the CHM and;
- Define roles and responsibilities for collecting, reviewing and managing the content of the CHM.

In light of the requirements and to ensure the sustainability of the CHM project, the involvement of all relevant stakeholders from the beginning is very crucial. Therefore, a five-day training workshop lead by the official MENA CBD CHM Focal Point, Mr. Mostafa Madbouhi, is currently being planned whereby representatives of all relevant stakeholders across all sectors shall be invited to put together the Bahrain CHM strategy, share and coordinate the roles and responsibilities amongst themselves to review and manage the content of the CHM.

Outcomes of the training workshop will also invite stakeholders to set the CHM Vision & Strategy through either altering or adopting the current proposed CHM aims and work plan. Annex 3 illustrates a provisional agenda for this training meeting. Following the workshop, a report shall be put together summarizing the workshop and its outcomes.

Linking the Bahrain CHM to the implementation of the Strategic Plan for Biodiversity 2011-2020

Component 5 of the Sitemap covers information services, which shall include links to biodiversity relevant information and websites. This part comes under Level 4 of the CBD CHM classification system that covers information services. Typical information services offered by various CHMs are illustrated in Figure 5 as per the CBD CHM Guidance Document.

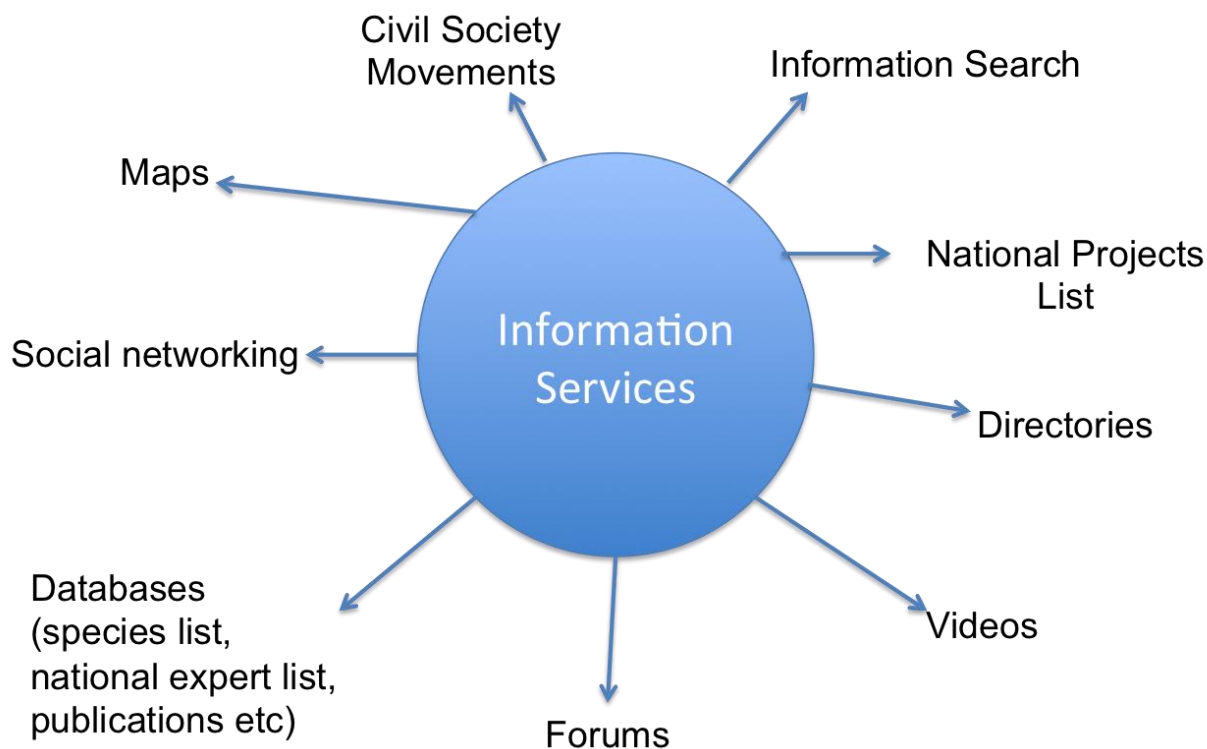


Figure 5. Types of Information Services offered by CHMs

Information services have proved to contribute towards the Strategic Plan for Biodiversity whereby information services offer a connecting platform whereby highly specialized information displayed can be used to measure the progress made towards achieving the Aichi Strategic Goals. Figure 6 illustrates how available knowledge presented through the information services can help link each piece of information to the Strategic Plan for Biodiversity (2011-2020), hence, aiding in measuring its implementation.



Figure 6. Puzzle Illustration of linking available information to determine the progress in achieving the Strategic Plan for Biodiversity (2011-2020) [Information adapted from the CBD CHM Guidance Document]

Planning, Reporting & Exchange

The above mentioned specialized information services can also be utilised for planning and reporting. This process can feed into Bahrain’s national planning under the guidance of its updated national biodiversity strategy and action plan (NBSAP) which shall outline the national strategy and priorities which aim to achieve the national chosen targets who’s attainment shall be measured by the set national indicators - all of which is monitored via a reporting process which shall report on the progress or failure made through the national reporting.

The Bahrain CHM’s role shall aid in raising public awareness on national challenges and priorities and create an atmosphere of participative planning through stakeholder consultations and engagement to in-cooperate the views and suggestions of all stakeholders. The national CHM also offers an opportunity to disseminate the NBSAP to all stakeholders and members of the general public whilst mobilizing possible support for participation to implement the NBSAP and Strategic Plan along with attaining feedback on the existing NBSAP for planning of its future revisions.

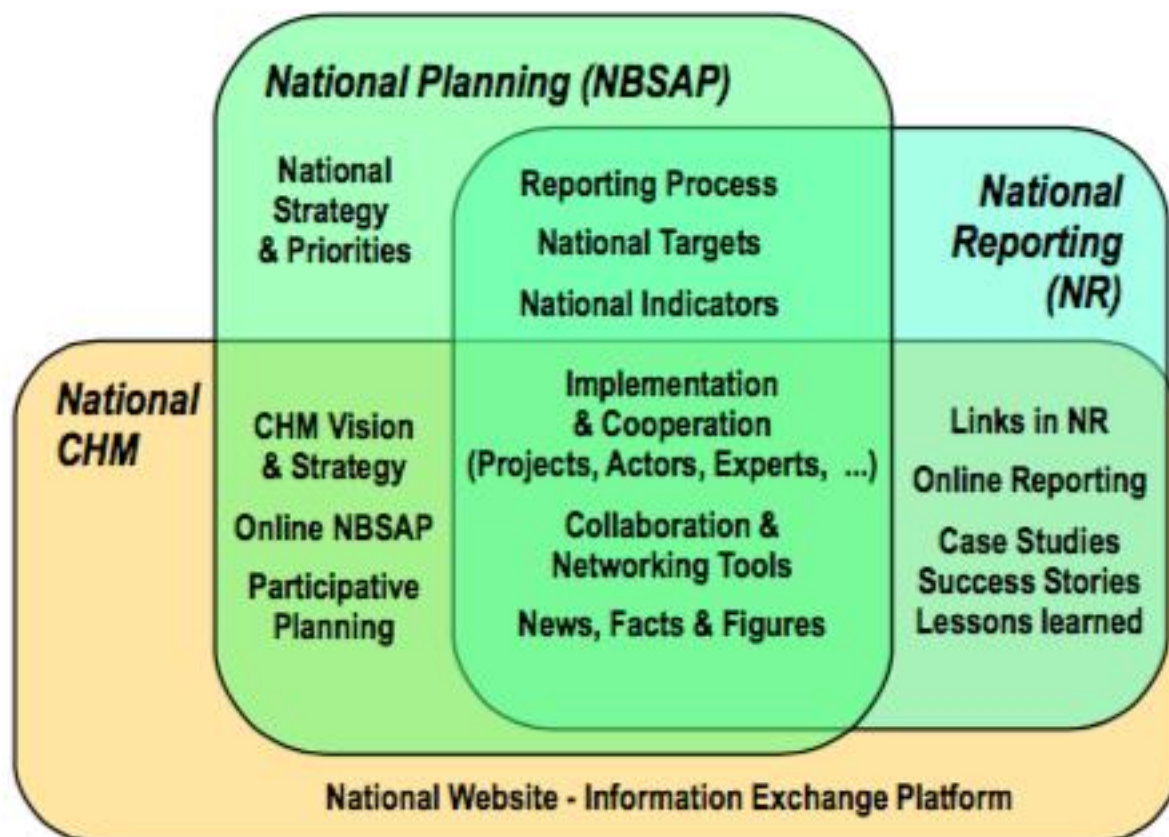


Figure 7. Linking the National NBSAP to the CHM (Olivier de Munck, 2015)

In terms of reporting, the Bahrain CHM shall act as a hub for all information including stakeholder's inputs for all future national reports to the CBD along with providing all relevant sources of data and case studies for reporting. Moreover, the national CHM shall provide up-to-date content to ensure that all stakeholders are informed on the progress made in the field of biodiversity conservation and the implementation of the Convention. In addition, it shall ease the process of collecting comments and inputs from stakeholders on national draft reports through online collaboration and help in disseminating and promoting of the final versions of the reports once published.

Lastly, the Bahrain CHM website shall act as an information exchange platform for all stakeholders which is crucial to keep data up-to-date, for online reporting on success stories and lessons learned from new trials and on ground projects in addition to creating opportunities for further collaboration on the implementation of the Strategic Plan for Biodiversity (2011-2020) and cooperation amongst various stakeholders.

References

CBD Secretariat (a) (2015) Introduction - Clearing-House Mechanism

< <https://www.cbd.int/chm/intro/default.shtml>> Last accessed: 29 April 2015

CBD Secretariat (b) (2015) Mission - Clearing-House Mechanism

<<https://www.cbd.int/chm/>> Last accessed: 29 April 2015

Olivier de Munck (2015) Guidance for Developing National Clearing-House Mechanism. CBD Secretariat

<http://slideplayer.com/slide/1471874/> Last accessed: 1 May 2015

Annexes

Annex 1

Table A1. Work plan for establishing the Bahrain National Biodiversity Database which was submitted to the SCE in December 2014.

No	Category	Actions Taken	Future Actions
1	Books	A bibliography of all books available in the SCE library and Directorate of Biodiversity was created	Create a bibliography of books related to Bahrain biodiversity not available in the SCE through internet searches and visiting the national library.
2	Research and Studies	Compile reports, studies and research available in the Directorate of Biodiversity were compiled. Corresponded with the pertinent universities and national research centers	Add submissions from stakeholders.
3	Newspaper articles	Memos were sent to the Department of international relations to request available documents and articles for the period 2010 to 2014.	Follow up with the Department of International Relations Search for articles related to biodiversity in Bahrain online.
4	Correspondence with Stakeholders	Official letters were sent to the offices of CE's office for signing on 24 December 2014.	Follow up with the Chief Executive's Office. Public call for information at the second national stakeholder workshop.
5	Photographs	Photographs available in the Directorate of Biodiversity were collected.	Collect photos from photographers and citizens
6	Websites and Online Databases	In the process of making a record of all websites with relevant biodiversity information in Bahrain	Complete the search process.

Annex 2

Table A2. Sources of information and data on Bahrain's biodiversity retrieved as part of the data collection process for the National Biodiversity database.

National Biodiversity Database	
Item No.	Name
1	Climate Change
1.1	Bahrain's first communication report to the UNFCCC
1.2	Bahrain's second communication report to the UNFCCC
2	Ecosystems
2.1	<i>Agriculture</i>
1	Agriculture affairs and marine resources report 2014
2.2	<i>Ecosystem studies</i>
1	Application for the EBA : Management of pearling zones
2	Application of an ecosystem based approach - Al Mealla 2014 (English)
3	Application of an ecosystem based approach - Al Mealla 2014 (Arabic)
4	Ecosystem services studies
	a. Northern Oyster Beds - Abdullah 2013
	b. Bahrain Cost Of Environmental Degradation (COED) - World Bank 2013
5	Monitoring Program for oyster beds
	a. Monitoring Program for Oyster beds - MOC 2012
	b. Appendices
2.3	<i>Freshwater Springs</i>
1	Heritage Impact Assessment - Maritime
2.4	<i>Marine</i>
1	Fisheries Data
	a. Fish Database
	b. Annual Fish Statistics Report 2012
	c. Total Landings 2004 to 2013
	d. عدد الرخص والصيادين للتنوع الحيوي
2	Studies encompassing Bahrain
	a. Review of Sawfish in the Arabian Gulf
	b. Sharks in the Arabian Gulf
3	Bahrain Action Plan for Marine World Heritage
4	Bahrain Benthos human impact on marine biodiversity
5	Bahrain Elasmobranchs - Moore & Pierce 2013

6	Bahrain's list of marine species
7	Coasts of Gulf Urbanisation - Burt 2014 CITY
8	Coastal and Marine Environments in Bahrain (presentation) - Naser 2012
9	Survey of Benthic Algae of Bahrain - Besson 1989
3	Flora & Fauna
1	IUCN redlist of threatened species
3.1	<i>Bahrain's National Species List</i>
1	Bahrain's provisional species list 2006
2	Unofficial threatened and endangered species list
3.2	<i>Birds</i>
1	Phoenix No. 26 (2010)
2	Bird species lists and status
3	Breeding of Spanish Sparrow in Bahrain - Kavanagh 2009
4	Breeding terns on Jarim Islands - Kavanagh 2010
5	Turtle Dove nesting in Bahrain - Kavanagh & Kaabi 2012
6	Sooty Falcons on Hawar Island - Kavanagh 2008
3.3	<i>Mammals and Insects</i>
1	Mammals and Insects species list
3.4	<i>Plants</i>
1	Plant species list
3.5	<i>Turtles</i>
1	Leatherback assessment Bahrain- IOSEA 2006
2	Monitoring marine turtle mortality in Bahrain - IOSEA 2007
5	Legislation
1	List of Environmental Legislations in Bahrain
2	List of Environmental Legislations in Bahrain (updated)
5.1	<i>Decisions by the General Directorate of Marine Resources</i>
1	Decision No. 1 of 2003
2	Decision No. 2 of 2003
3	Decision No. 3 of 2003
4	Decision No. 4 of 2000
5	Decision No. 7 of 2005
6	Decision No. 8 of 2005
7	Decision No. 8 of 2007
8	Decision No. 9 of 2005
9	Decision No. 10 of 2005
10	Decision No. 11 of 2005

11	Decision No. 12 of 2005
12	Decision No. 13 of 2005
13	Decision No. 15 of 2005
14	Legal Decree No. 20 of 2002
5.2	<i>Decisions by the Public Commission for Protection of Marine Resources, Environment and Wildlife</i>
1	Decision No. 1 of 1998
2	Decision No. 1 of 1999
3	Decision No. 1 of 2001
4	Decision No. 1 of 2002
5	Decision No. 2 of 2001
6	Decision No. 2 of 2005
7	Decision No. 3 of 2000
8	Decision No. 3 of 2005
9	Decision No. 3 of 2006
10	Decision No. 4 of 1999
11	Decision No. 4 of 2003
12	Decision No. 4 of 2005
13	Decision No. 4 of 2006
14	Decision No. 4 of 2007
15	Decision No. 5 of 2015
16	Decision No. 6 of 1996
17	Decision No. 7 of 2002
18	Decision No. 8 of 2002
19	Decision No. 10 of 1998
20	Decision No. 10 of 1999
21	Decision No. 10 of 2005
22	Decision No. 10 of 2006
23	Decision No. 16 of 1996
24	Decision No. 41 of 2002
25	Decision No. 43 of 2005
26	Decision No. 45 of 2002
27	Decision No. 50 of 2002
28	Decision No. 53 of 2006
29	Decision No. 1 of 2001
30	Legal Decree No. 1 of 2001
31	Legal Decree No. 12 of 2000
32	Legal Decree No. 21 of 1996

5.3	<i>Decisions made by the Supreme Council for Environment</i>
1	Legal Decree No. 47 of 2012
2	Decree No. 9 of 2013
3	Decree No. 90 of 2012
4	Decree No. 91 of 2012
7	<i>International Conventions</i>
1	ABS Protocol
2	Cartagena Protocol
3	CITES Convention
4	UNFCCC
5	CMS Agreement
6	Convention on Biological Diversity
7	Desertification Convention
8	GCC Convention
9	Kuwait Convention
10	RAMSAR Convention
5.4	<i>National Legislation</i>
1	Decision No. 1 of 1998 EIA
2	Decision No. 1 of 2002 Mashtan Protected Area
3	Decision No. 2 of 2005 Hunting Ban on Bulbul and Hubara
4	Decision No. 2 of 2001 Environmental Inspectors
5	Decision No. 3 of 2000 Environmental Consultants
6	Decision No. 2 of 2001 Environmental Standards Amendment
7	Decision No. 3 of 2005 Regulating Fishing around Hawar Islands
8	Decision No. 8 of 2007 Hayr Bulthama Protected Area
9	Decision No. 10 of 1998 Permission fees
10	Decision No. 10 of 1999 Environmental Standards
11	Decision No. 13 of 2005 Fishing in Hawar Islands
12	Decision No. 16 of 1996 Hawar Protected Area
13	Decree No. 17 of 1978 Kuwait Convention
14	Decree No. 9 of 1990 ROPME Land Based Protocol
15	Decree No. 20 of 2002 Regulations of Fisheries
16	Decree No. 20 of 2006 Coastline Protection
17	Decree No. 3 of 1997 Ramsar Convention
18	Decree No. 9 of 1997 Desertification Convention
19	Decree No. 28 of 2000 Acceding of Alareen to the Public Commission
20	Law No. 2 of 2011 Cartagena Protocol
21	Law No. 53 of 2006 Tubli Bay Protected Area

22	Legal Decree No. 20 of 2002 Fisheries and Protection of Marines Resources
23	Legal Decree No. 2 of 1995 Wildlife Protection
24	Legal Decree No. 2 of 2002 Ratification of the GCC Wildlife Convention
25	Legal Decree No. 12 of 2000 Wildlife Protection Amendment
26	Legal Decree No. 18 of 1996 Convention on Biological Diversity
27	Legal Decree No. 21 of 1996 Environment
5.5	National Strategies
1	2007 NBSAP
5.6	Green Strategies of Various Organisations
1	Investing in Agriculture - NIAD 2013 AR
2	Ministries of Municipalities and Agriculture
3	MoF Green Policy 2010
4	National Planning Strategy
5	National Youth Strategy Bahrain- Environment
6	Strategic Plan for Biodiversity- 2011-2020
7	استراتيجية شؤون الزراعة (2010-2015م)
8	الاستثمار في الزراعة المبادرة الوطنية لتنمية القطع الزراعي
6	Maps
1	Change in land area from 2012-2014
2	Marine Habitat Maps - CIO
3	Thematic Mapping of threatened areas
4	Vegetation Cover - 2011
7	Meteorological Information
1	CIO : Average rainfall patterns
2	CIO: Average temperature and humidity
8	MPAs
1	Assessment of Hawar Islands and Al-Areen
2	Bahrain's MPA information
3	Earth trends : Biodiversity and Protected Areas
4	Hawar Islands Management Plan
5	MPA Overview Information
6	National Protected Area GPS co-ordinates
9	National Indicators List
1	Bahrain Biodiversity Indicators Workshop Report
2	Bahrain Biodiversity Indicators Workshop
	a. Aichi Targets Info
	b. CBD NBSAP guidance documents

	c. Indicator Info
	d. NBSAP Info
	e. Workbooks
	f. Workshop Presentations
	g. Bahrain's fourth National Report to the CBD
	h. Bahrain NBSAP Indicators Workshop
	i. BIP National Indicator Guidance_ AR
	j. BIP National Indicator Guidance_ EN
	k. CBD MENA National NBSAP workshop
	l. BIP National Portal
10	Publications and Reports
1	Bahrain Sea Alarm Country Wildlife response profiles
10.1	<i>CBD National Reports</i>
1	Bahrain's fourth national report 2010
2	Bahrain's first national report 2006
3	Bahrain's fifth national report 2015
10.2	<i>Media Articles</i>
1	Bahrain signs NBSAP project- UNEP 2012
2	Bahrain's inception NBSAP workshop - 2013
3	Bahrain's participation in Nagoya - Al Wasat 2010
4	GDN Ferry service Tubli Bay - GDN 18 Jan 2015
5	Counting cost of Tubli Protection - GDN 5 Feb 2015
6	Tubli Safe Zone Halved - GDN 14 Dec 2008
7	Reclamation threatens survival of Tubli Bay - Gulf News 30 April 2005
8	Urban expansion in Bahrain - Landsat Science 2014
9	Society organises visit to Tubli Bay - GDN 11 March 2005
10	Move to lift Tubli Bay building ban - GDN 18 March 2006
11	Fish deaths spur Tubli Project SOS - GDN 08 August 2015
12	MP's outrage over Tubli - GDN 12 March 2006
13	New coastline to help save Tubli - GDN 16 Jan 2006
14	Help save Tubli plea to King - GDN 17 Feb 2005
15	More guards to help protect Tubli Bay - GDN 3 March 2005
16	Tubli Bay action plan on the way - GDN 23 July 2008
17	Tubli bay dying - GDN 27 Aug 2007
18	Tubli Bay shrinks after land grabs - GDN 14 Dec 2013
19	Work to fence off Tubli on way - GDN 4 May 2014
20	Tubli Bay clamp on illegal reclamation - GDN 16 Dec 2012
21	Hawar Project backed - GDN 12 Feb 2014

22	Hawar Resort to re-open after facelift - GDN 15 March 2009
23	Hawar project set to start - GDN 27 Feb 2005
24	Key Hawar accord signed - GDN 28 July 13
25	Hawar mosque to be renovated - GDN 4 March 2006
26	My love affair with Hawar - GDN 20 Aug 2005
27	Hawar boat trips ban re-imposed - GDN 28 April 2006
28	UNESCO Conventions Approved - GDN 25 Nov 2013
29	Bahrain wins membership to UNSECO - GDN 26 Oct 2007
30	Strategy to preserve mangroves on way - GDN 29 March 2015
10.4	Municipality Waste Reports
1	Municipality annual report 2012, page 23
2	تقرير بمناسبة مرور عشر سنوات على افتتاح موقع حفيرة وتقرير 2010
10.5	RAMSAR
1	COP 9 National planning tool for the implementation of the Ramsar Convention - Bahrain
10.6	University of Bahrain Publications
1	A Checklist of Vascular Plants of Bahrain - Eloqlah and Abbas - 1994
2	Assemblages of macro-fauna associated with two seagrass beds in Bahrain - Alwedaei <i>et al.</i> - 2011
3	Baseline ecological survey of Hawar Islands - Zainal <i>et al.</i> - 2007
4	Distribution and communities of halophytic plants in Bahrain - Abbas and Eloqlah - 1992
5	Dugongs in Arabia - Preen <i>et al.</i> - 2012
6	Ecological Characteristics of the Littoral Fauna at Tubli Bay - Alsayed <i>et al.</i> - 1995
7	Ethnomycological aspects of the desert truffle among native Bahraini and non-Bahraini people of Bahrain - Mandeel & Allaith - 2007
8	Fungal Contamination of Some Imported Species - Mandeel - 2005
9	Human Impacts on Marine Biodiversity-Macrobenthos in Bahrain - Humood Naser - 2011
10	Impact of Biochemical and Calorific Contents on the Reproductive Activity of the Marine Edible Snail Turbo coronatus Gmeline - Frejie and Alsayed - 2008
11	Keratinophilic fungi from selected soils of Bahrain - Deshmukh <i>et al.</i> - 2008
12	Lichens of Bahrain - Mandeel and Aptroot - 2004
13	Microfungal community associated with rhizosphere soil of zygophyllum qatarense in arid habitats of Bahrain - Mandeel - 2001
14	Mycoflora of Herbal Drug Plants from Bahrain - Mandeel - 2007

15	Observation on Macrobenthic Invertebrates and Wader Bird Assemblages in a Protected Marine Mudflat in Bahrain - Alsayed <i>et al.</i> - 2008
16	Observations on the Carapace Length Width & Carapace Width Weight Relationships of the Blue Swimming Crab - Alrumaidh <i>et al.</i> - 2005
17	Occurrence of Vesicular Arbuscular Mycorrhizae in coastal habitats of Bahrain - Mandeel and Gul - 1999
18	Periodicity of Reproduction in Pearl Oyster_ Pinctada Radiata in Bahrain - Hashim Alsayed - 1996
19	Plant Communities Bordering the Sabkhat of Bahrain Island - Abbas - 2002
20	Plant communities of a protected area in the desert of Bahrain island - Abbas <i>et al.</i> - 1991
21	Rare or rarely collected- comatricha mirabilis from the desert of Bahrain - Mandeel and Blackwell - 2008
22	Review of Spawning Studies of Some Commercially Important Marine Organisms in the Coastal Waters of Bahrain - H Alsayed - 2009
23	Survey of Fusarium Species in an arid environment of Bahrain - Mandeel and Abbas - 1994
24	Survey of Fusarium species in an arid environment of Bahrain - Mandeel <i>et al.</i> - 2005.
25	Survey of Fusarium species in an arid environment of Bahrain III- Abbas and Mandeel - 1995.
26	Survey of the Benthic Marine Algae of Bahrain - Basson et al - 1989
27	The Cumulative Impact of Reclamation and Dredging on the Marine Ecology and Land-use in the Kingdom of Bahrain - Zainal <i>et al.</i> - 2012
28	The Epiphytic lichen flora of Bahrain - Mandeel and Aptroot - 2006
29	The Flora of Bahrain - Ronald Good - 1955
30	Wild Flowers of Kuwait and Bahrain - Violet Dickson - 1955
11	Resources
1	Directorate of Biodiversity - In house bibliography and CDs
12	Surveys
12.1	Reported dead marine species
1	Reported dead marine species
	a. October 2014 - Photos
	b. Dead Marine Species Monitoring data
2	Surveys filled out by Directorate of Biodiversity

12.2	<i>Surveys filled by the DOB</i>
1	Questionnaire of the FOC-CIO-SDGs-051
2	Surveys for implementing EBA Resolutions
13	Miscellaneous
1	Implementation of the Mauritius Strategy and Barbados Program of Action 2009
2	EPI Ranking 2014
3	Info regarding GEF funded projects on Climate Change

Annex 3

Table A3. Provisional agenda for the CHM training workshop (in Arabic).

الموضوع	التوقيت
اليوم الأول:	
استقبال وتسجيل المشاركين	9:00 – 8:30
الافتتاح الرسمي للورشة	9:25 – 9:00
تقديم للدورة التكوينية	9:40 – 9:25
عرض خلق آلية تبادل المعلومات	10:00 – 9:40
استراحة	
عرض حول حزمة أدوات بوابة آلية تبادل المعلومات "PTK CHM"	11:00- 10:30
خلق حساب خاص بالمستخدم	11:20 – 11:00
إضافة مجلد (Folder)	12:10 – 11:20
إضافة صفحة (HTML Document)	13:00 – 12:10
الغذاء	
عرض حول آلية تبادل المعلومات للمغرب	14:30 – 14:00
إضافة عناصر داخل الصفحة (صور، جدول، إلخ).	15:30 – 14:30
استراحة	
إضافة عناصر داخل الصفحة (صور، جدول، إلخ). (تابع)	16:30 – 16:00
إضافة ملف (File)	17:00 – 16:30
اليوم الثاني:	
تمارين حول الدروس المستفادة في اليوم الأول	09:30 – 09:00
إضافة مستجد (News)	10:30 – 09:30
استراحة	
إضافة حدث (Event)	12:00 – 11:00
إضافة روابط (Link)	13:00 – 12:00
الغذاء	

إضافة مستجد، حدث، روابط	15:00 – 14:00
إضافة روابط داخل الصفحة	15:30 – 15:00
استراحة	
جلسة حرة للإجابة عن أسئلة المشاركين وتوضيح المسائل العلقية	17:00 – 16:00
اليوم الثالث:	
تمارين حول الدروس المستفادة في اليوم الثاني	10:00 – 09:00
إضافة مختصر (Pointer)	10:30 – 10:00
استراحة	
إضافة مختصر (Pointer) (تابع)	11:30 – 11:00
تحضير صور وإضافتهم	12:30 – 11:30
الغذاء	
عروض من طرف المشاركين حول التنوع الحيوي كل حسب اختصاصه أو حسب القطاع المنتمي إليه: <ul style="list-style-type: none"> - الحالة الراهنة للتنوع الحيوي (عددها، نوعيتها، توزيعها، إلخ). - الإمكانيات التي سخرت لحماية التنوع الحيوي، الاستراتيجيات، المشاريع، القوانين، إلخ. - الدراسات والأبحاث (المرجو من المشارك أن يأتي ببعض منها لوضعا على البوابة). - المعاهد والمؤسسات التي تقوم بحمايتها (العنوان الإلكتروني). - الجمعيات التي تنشط في ميدان حماية التنوع الحيوي (العنوان الإلكتروني). - التعاون الدولي. 	17:00 – 13:00
اليوم الرابع:	
تتمة العروض المقدمة من طرف المشاركين حول التنوع الحيوي	13:00 – 09:00
إدخال المعلومات التي عرضت من طرف المشاركين إلى آلية تبادل المعلومات الرسمية	
الغذاء	
تتمة إدخال المعلومات التي عرضت من طرف المشاركين إلى آلية تبادل المعلومات الرسمية	17:00 – 14:00
اليوم الخامس:	
إدارة البوابة	13:00 – 09:00
إدارة البوابة (تابع)	
تدبير المعلومات والمستخدمين	
الغذاء	

تدبير المعلومات والمستخدمين (تابع)	16:00 – 14:00
اختتام الورشة	