



Regional Workshop for Asian Countries on the Clearing-house Mechanism

29th Jan – 3rd Feb 2018

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Island Futures Division Manager
National Environment Service
Cook Islands



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COOK ISLANDS



Overview

- * **Biodiversity in the Cook Islands**
- * **Development of the Cook Islands Biodiversity Clearing House Mechanism**
 - **Cook Islands Biodiversity Database**
- * **Next steps/support needed**



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NBSAP Project



General Description

- Islands in the Cook Islands vary markedly in size from Suvarrow Atoll (0.4km²) to Rarotonga (67km²) and in landforms from volcanic islands to coral cays



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Cook Islands Biodiversity

- Terrestrial native biodiversity - relatively small number of species and lacks many of the common taxa found in larger islands and continental landmasses
 - no amphibians and only one land mammal
- species that are present assume greater significance and there are a number that are endemic
 - 20 flowering plants, 6 landbirds, 26 landsnails (14 of which are extinct), and a largely unknown number of invertebrates




Island	No. of native species present						
	Fern & fern allies	Flowering plants	Corals & sponges	Insects	Reptiles	Birds	Mammals
Mangaia	36	107	25	23+	0	13	2
Rarotonga	94	152	81	195+	2	18	3
Mauke	23	79	35	11+	1	17	0
Atiu	26	96	11	15+	1	14	1
Takutea	4	28	Not documented	1+	0	8	1
Mitiaro	16	89	11	4+	0	9	0
Manuae	4	30	Not documented	Not documented	Not documented	8	1
Aitutaki	10	43	50	34+	1	8	2
Palmerston	3	30	Not documented	1+	3	6	0
Suvarrow	2	24	Not documented	1+	2	11	2
Nassau	3	24	Not documented	Not documented	Not documented	4	0
Pukapuka	3	32	Not documented	31+	1	15	1
Manihiki	4	28	1+	7+	1	9	0
Rakahanga	3	28	Not documented	2+	Not documented	7	0
Penrhyn	3	30	Not documented	2+	2	12	3

Status of Biodiversity

OFFSHORE MARINE ENVIRONMENT


TUNA, SHARKS AND OTHER TARGETED SPECIES:



Status: Fair
Trend: Deteriorating
Data confidence: Medium


INSHORE MARINE ENVIRONMENT

**LIVE CORAL COVER:
REEF FISH AND URCHIN DENSITY AND BIOMASS:
REEF FISHERIES:**



Status: Fair
Trend: Mixed
Data confidence: Medium

MARINE MANAGED AREAS, RA'UI ON RAROTONGA AND PA ENUA



Status: Fair
Trend: Stable
Data confidence: Medium


LAGOON WATER QUALITY, RAROTONGA



Status: Poor
Trend: Deteriorating
Data confidence: Low

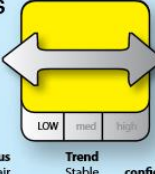
TURTLES AND CETACEANS

TURTLES




Status: Fair
Trend: Unknown
Data confidence: Low

WHALES




Status: Fair
Trend: Stable
Data confidence: Low

TERRESTRIAL PROTECTED AREAS




SPREP




Status: Fair
Trend: Improving
Data confidence: Medium

ENDEMIC, NATIVE AND THREATENED SPECIES

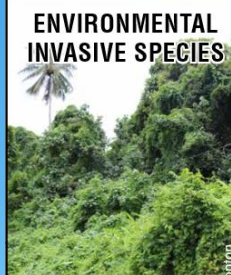


Cook Islands Biodiversity Database




Status: Fair
Trend: Deteriorating
Data confidence: Medium

ENVIRONMENTAL INVASIVE SPECIES

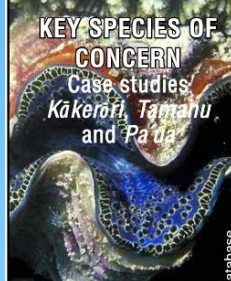


SPREP




Status: Poor
Trend: Deteriorating
Data confidence: Medium

KEY SPECIES OF CONCERN
Case studies
Kākerōri, Tamanu and Pa'ua




Cook Islands Biodiversity Database

KĀKERŌRI




Status: Fair
Trend: Improving
Data confidence: Medium

TAMANU




Cook Islands Biodiversity Database



Status: Unknown
Trend: Deteriorating
Data confidence: Low

PA'UA



Status: Fair
Trend: Mixed
Data confidence: Low



Cook Islands Biodiversity CHM



Development of the CHM

NBSAP 2.0

- * **Development of the NBSAP and a CHM for the Cook Islands included under our GEF/UNDP ‘National Biodiversity Planning to Support the implementation of the CBD 2011-2020 Strategic Plan in Cook Islands’**
- * **The development of the CHM was identified as a priority under consultation for the Capacity Needs Assessment and new NBSAP to support information management and awareness.**



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NBSAP Project

Development of the CHM

* The CHM has three goals

- To consolidate and link together relevant biodiversity information from all partners in a centralised space, with a focus on national and local levels.
- To provide a platform for access to biodiversity information to the public to facilitate awareness and communication
- To use this information to support decision making, facilitate scientific, technical and local cooperation.

* A framework for the Biodiversity CHM is online at www.biodiversity.gov.ck




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NBSAP Project

- Still needs input from key BD stakeholders to share and update information/links, media releases
- Expect to complete and launch this in 2018
- Home page includes feature articles and quick links to thematic areas such as Invasive Species and Protected Areas

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BIODIVERSITY COOK ISLANDS | HOME | ABOUT | BIODIVERSITY PARTNERS | BIODIVERSITY PROJECTS | BLOGS | CONTACT US | SITE MAP



Caring for our biodiversity and our environment

The Cook Islands Biodiversity Clearinghouse Mechanism

has been developed in accordance with Article 18.3 of the UN Convention on Biological Diversity to promote and facilitate technical and scientific cooperation between countries and to provide a mechanism for exchanging and integrating information on biodiversity between global, regional and national partner organisations.

Convention on Biological Diversity

The Convention on Biodiversity (CBD) came into force in 1993. It has 3 main objectives: (1) The conservation of biological diversity; (2) The sustainable use of the components of biological diversity; and (3) The fair and equitable sharing of the benefits arising...

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Biodiversity in the Cook Islands

The Cook Islands National Sustainable Development Plan (NSDP) 2016 – 2020 prioritises Biodiversity within its National Goal 11. The National Biodiversity Strategy and Action Plan (NBSAP) 2016-2020 outlines Cook Islands' plans for the conservation of its biodiversity as...


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Biodiversity Database and other resources

The Cook Islands Biodiversity Database has been an ongoing development by Gerald McCormack of the Cook Islands Natural Heritage Trust, in collaboration with the Bishop Museum, since March 2003. The database is based on information from local and overseas...

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Feature Article



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The Feature Article section can be about something current and topical

ABS | Endangered Species | Traditional Plants | Invasive Species | Protected Areas

Biodiversity Updates

ABS

The "Biodiversity Updates"

1. They are BLOGS and therefore are written up in the POSTS



Caring for our biodiversity and our environment.

Biodiversity Projects

QUICK-LINKS: [Convention of BD](#) [BD in the Cook Islands](#) [BD Resources](#)

National Environment Service Projects

[Ridge to Reef \(R2R\)](#)

[Access to Benefit Sharing \(ABS\)](#)

Main sections

- **Convention on Biological Diversity**
- **Biodiversity in the Cook Islands**
 - National reports e.g. 5th NR to CBD, surveys reports, policies and legislation e.g. Marae Moana (Cook Islands Marine Park) Act
- **Biodiversity Database and resources**
 - Direct link to BD Database
 - Education and awareness materials e.g. posters, videos
- **Biodiversity Projects**
 - Current biodiversity related projects e.g. ABS, Ridge to Reef, Bird Surveys
- **Biodiversity Partners**
 - Listing and linkages to BD Partner websites including regional and international partners

Cook Islands Biodiversity Database

- Multimedia biodiversity database has been online since 2003 – developed by the CI Natural Heritage Trust (NHT)
 - 4,500 existing species, native and introduced, including 2,500 with photographs to aid recognition.
- Well known groups, such as birds, lizards, fishes, flowering plants and ferns are essentially complete.
- Fulfils the Cook Islands' commitment to develop inventories of its biodiversity, as required under Article 7 of the CBD.



Cook Islands Biodiversity
& Natural Heritage



Original database: <http://cookislands.bishopmuseum.org/search.asp>

Cook Islands Biodiversity Database

- New database in the process of being developed
 - move to open source software, and to make the database online editable.
- It is hoped that the new Cook Islands biodiversity database will be online for the public by 2019– and then the real work of adding more data can continue.
- There are c1000 new species to be added once this is complete, mostly insects and fungi.



New database: <http://cookislands.pacificbiodiversity.net/cibed/dbs/search>.



Cook Islands Biodiversity and Ethnobiology Database

Scinames:

[Related Search Page](#)

[Results Page](#)

[Viewed Species List](#)

Adjust the display of results

Display: Images

Results: All

Sort by: Taxonomy

Local Names: National

Results 1 to 6 of 6
First | Last | All



Click to change size of all thumbnails

Symbols Key

+ Search Text: kukupa | kakerori | phaethon | sula*dac
Search Fields: [National Presence]

reminder of Search Text and other criteria

Default results display primary image + main names



Ptilinopus rarotongensis - Cook Islands Fruit-dove - Kūkupa^{RR}

Pomarea dimidiata - Rarotonga Flycatcher - Kākerōri^{RR}

[Ixora triflora](#)
Polynesian Ixora
'Itoa
RUBIACEAE

[Phaethon](#)
White-t
Rākoa

Click Latin Name to go to the Species Page



Pomarea dimidiata
Rarotonga Flycatcher
Kākerōri
MONARCHIDAE



Click thumbnail images to expand in pop-ups

Adult (year 4+) and subadult (year 1) - Cook Islands Rarotonga - Gerald McCormack



onga - Gerald McCormack [Close](#)

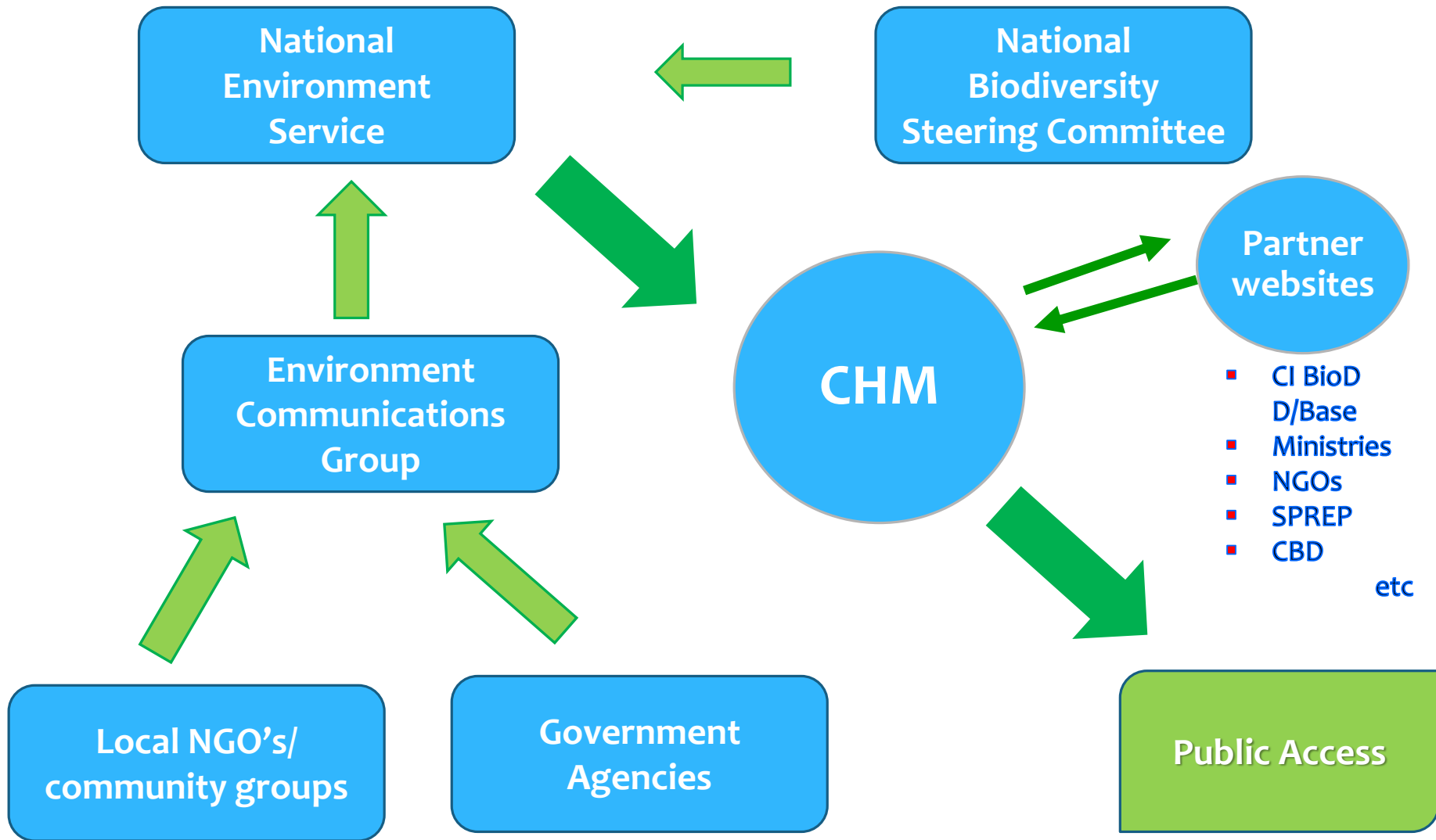
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National Biodiversity Partners

- * Natural Heritage Trust
- * Min. of Agriculture
- * Min. of Marine Resources
- * Min. of Cultural Development
- * Aronga Mana (House of Ariki & Koutu Nui)
- * Ministry of Education
- * Cook Islands Tourism
- * Office of the Prime Minister – Climate Change Office
- * Environment NGOS and Community grps e.g. Te Ipukarea Society (local Birdlife International partner)

- All are some of the members of the National Biodiversity Steering Committee
- CHM will be managed by the National Environment Service
- Under NBSAP, Environment Communications Group – coordinate and collaborate on education awareness activities, events, messages etc. including for biodiversity

Potential information flows



Next steps/Support needed

- How to manage content effectively – what should the content include.
- Lessons learned or good practices for coordination, communication and buy in of national and local partners
 - To maintain and sustain CHM
- Personnel to consolidate and upload information, reports, articles, media etc.
 - Capacity development to strengthen documentation of activities



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Next steps/Support needed

- Design of information management flows to the CHM
- Server space and information/knowledge management system to store files for the site
 - National Ridge to Reef Project (6 implementing partners in country) developing a knowledge management system of their products and outputs.
 - Hope to use this as a trial/model to scale up for CHM
- Translating information into Cook Islands Maori



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Meitaki Maata

TAKE BUT NOTHING
LEAVE BUT FOOTPRINTS

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- * **Development of the Cook Islands Biodiversity Clearing House Mechanism**
- * **Next steps**



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General Description

- Islands in the Cook Islands vary markedly in size from Suvarrow Atoll (0.4km²) to Rarotonga (67km²) and in landforms from volcanic islands to coral cays



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General Description

■ Depauperate

- ❖ lacking many taxa and habitat common to larger islands and continental landmasses
- ❖ Applicable to terrestrial and marine ecosystems

■ Causes

- ❖ Small land mass and distance from source populations in the west



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Species Attenuation

Number of Representative Native Species				
Country	Flowering Plants	Ferns & Allies	Birds	Terrestrial Mammals
New Caledonia	3000 ⁱ	300 ⁱⁱ	68 ⁱⁱⁱ	11 ^{iv}
Fiji ^{iv}	426+	230	57	6
Samoa ^v	~500	220	51	3
Cook Islands ^{vi}	185	100	29	1
Marquesas Islands	240 ^{vii}	94 ^{viii}	15	0

[i] (Morat, 1993)

[ii] (Brownlie, 1965)

[iii] (Chazeau, 1993)

[iv] (Government of Fiji, 2010)

[v] (Government of Samoa, 2009)

[vi] (McCormack, 2007)

[vii] (Wagner & Lorence, 2002)

[viii] (Adamson, 1932)



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Cook Islands Biodiversity

- Wide range of flora and fauna including endemic species of plants, birds, snails and ferns.



Mangaia Kingfisher



Cytandra lillianae

© CINHP / G. McCormack



Ptilinopus rarotongensis

© CINHP / G. McCormack



Fitchia speciosa



*Sclerotheca
viridiflora*

© CINHP / G. McCormack



Tekoulina pricei

© CINHP / G. McCormack



Haloragis stokesii

© CINHP / G. McCormack



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- The database development has three goals:
 1. To record in a single database all local plants and animals with images and key identification features;
 2. To record relevant traditional and scientific knowledge; and
 3. To make this information available to the public to facilitate awareness and communication.



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- Well known groups, such as birds, lizards, fishes, flowering plants and ferns are essentially complete.
- Fulfils the Cook Islands' commitment to develop inventories of its biodiversity, as required under Article 7 of the CBD.



Original database: <http://cookislands.bishopmuseum.org/search.asp>

Challenges

- In 2007 – work began to correct an underlying flaw in the data structure, move to open source software, and to make the database online editable.
- Especially challenging because of a lack of funding and a dependence on volunteer programmers.
- Although the original database remains online, it has been closed for data updates since mid-2007.
- A considerable amount of research and new data collected by ministries and researchers, which has not been included in the database.



Challenges

- It is hoped that the new Cook Islands biodiversity database will be online for the public by 2019– and then the real work of adding more data can continue.
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Main sections

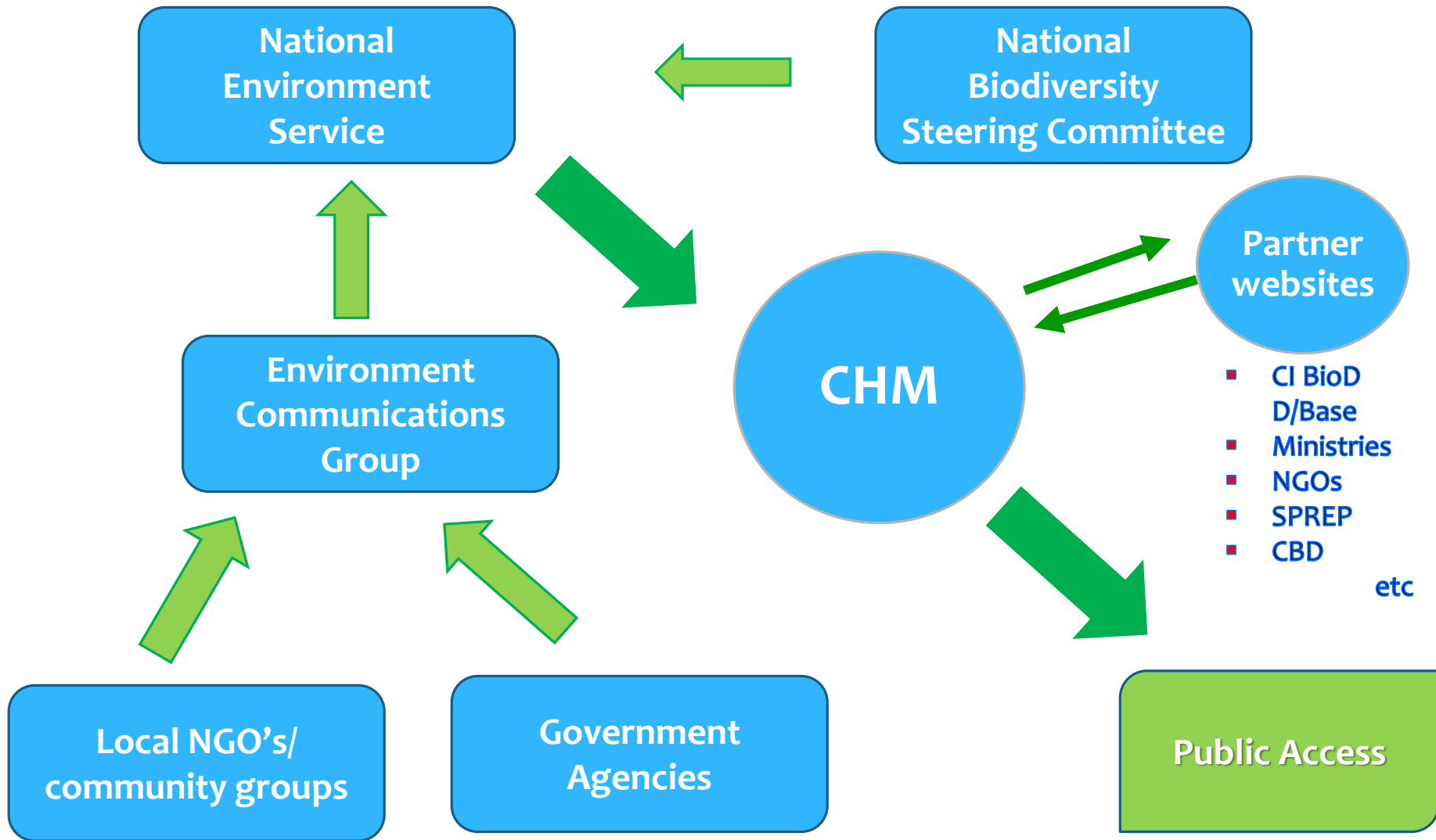
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