



## National Biodiversity Planning to support the implementation of the CBD 2011-2020 Strategic Plan in Egypt, (NBSAP Project)

---

### Proposal for types of data needed for the NBSAP

Dr. Khaled Allam

24<sup>th</sup> November 2013

# Major data categories

**Section A: Social, Political and Economic issues**

**Section B: Biological data**

**Section C: Ecosystems valuation and services**

**Section D: Climate change (effects, adaptation, resilience and mitigation)**

**Section E: Available free web resources for data**



# Section A: Social, Political and Economic issues

## **A: Human population demography**

1. Population density and distribution
2. Projections of population density and distribution (10, 30, 50 years)
3. Exist and projected growth rate
4. Age distribution
5. Gender distribution
6. Educational levels
7. Literacy rate distribution
8. Health services (major diseases distribution, no of doctors/population, etc)
9. Relative proportion and distribution of urban/rural population
10. Size and patterns of human settlements
11. Population migration (historical, seasonal, current, expected movements)
12. Identification of key resources used by population



# Section A: Social, Political and Economic issues

## B: Infrastructure

1. Existing transportation network (density, pattern, types)
2. Projected transportation network over 10, 30, 50 years
3. Existing waste network (density, pattern, types)
4. Projected waste network over 10, 30, 50 years
5. Existing irrigation and drainage network (density, pattern, types)
6. Projected irrigation and drainage network over 10, 30, 50 years
7. Existing health services and hospitals network (density, pattern, types)
8. Projected health services and hospitals network over 10, 30, 50 years
9. Existing industrial infrastructure (density, pattern, types)
10. Projected industrial infrastructure over 10, 30, 50 years
11. Agriculture
12. tourism



# Section A: Social, Political and Economic issues

## **C: Land use and tenure**

1. Existing and projected investment map
2. Existing governorates boundaries and land ownership
3. Tribal land territory
4. Inland fishing areas
5. Marine fishing areas
6. Fresh water and marine aquaculture
7. Quantitative data and spatial distribution of quarries and mines

## **D: Economic aspects**

1. National annual income (per capita) (historical, current, expected)
2. Employment and un-employment statistics
3. Annual agriculture and aquaculture production and income
4. Annual oil and gas production and income
5. Annual tourists numbers and income
6. Annual industry production and income



# Section A: Social, Political and Economic issues

## **E: International conventions and agreements**

1. Date of signing and ratification
2. Date and copy of national reports
3. Responsible governmental bodies
4. Amount and date of financial contribution, if any
5. Summery of planned and implemented actions



# Section B: Biological data

## A: Habitat classification and use

### 1. Major habitat category:

- types of sub-habitats/ecosystems,
- area and distribution,
- % to major habitat as well as to Egypt,
- rate of habitat change over 10, 20 years ago and its future projections

### 2. Agriculture:

- Crop types (also wild or genetically modified)
- Crop production methods
- Intensity of crop production
- Rate of change in Intensity of crop production over 10, 20 years
- Amount of fertilizers use
- Amount of herbicides and pesticides
- Efforts for invasive species control
- Areas and % of sustainable and unsustainable agriculture



# Section B: Biological data

## A: Habitat classification and use

### 3. Livestock:

- Livestock density
- Degree and distribution of livestock diseases and control efforts
- Pasture, current and expected pasture

### 4. Fisheries:

- Annual production for each fresh water fish species over 10, 20 years
- Annual production for each marine fish species over 10, 20 years
- Annual production of crustacea and molluscs over 10, 20 years
- Annual catchment of marine mammals over 10, 20 years
- Annual catchment of sponge and corals over 10, 20 years
- List of most economically targeted species
- List and intensity of catchment methods for targeted species
- Migration routes of species outside the jurisdiction zone
- National case of over-fishing





# Section B: Biological data

## **B: Habitat pattern**

### 1. Physical parameters:

- Surface geology and structure
- Soil types
- Meteorology
- Topography
- Hydrology

### 2. Natural vegetation:

- Areas in km<sup>2</sup>
- % of total country area
- % within protected areas
- Vegetation quality (over 10 years ago, current, projected)



# Section B: Biological data

## B: Habitat pattern

### 3. Coastal and marine habitats:

- Sedimentary features
- Rocky/cliffed features
- Bay
- Riverine outlets
- Brackish lagoons
- Intertidal mud / sand flat
- Coastal dunes
- Coastal plains
- Coral reefs
- Islands
- Algal and sea grasses bed
- Salt marshes
- Mangroves
- Coastal grass
- ridges
- Areas in km<sup>2</sup>
- % of total country area
- % within protected areas



# Section B: Biological data

## B: Habitat pattern

### 4. Wetland habitats:

- Shallow marine water
- Subtidal aquatic beds
- Coral reefs
- Rocky marine shore
- Sandy beaches
- Estuarine water
- Permanent rivers and streams
- Seasonal streams
- Inland deltas
- Riverine flood plains
- Permanent freshwater lakes
- Seasonal freshwater lakes
- Saline lakes/marshes
- Freshwater ponds/marshes
- Water storage areas
- Aquaculture ponds
- Salt pans
- Intertidal mudflats
- Salt marshes
- Mangroves
- Brackish saline lagoons
- Freshwater lagoons
- Shrub swamps
- Freshwater swamp forests
- Freshwater springs
- Geothermal wetland
- Excavations
- Waste water treatments
- Irrigated land, rice fields
- Seasonally flooded arable land



# Section B: Biological data

## C: Species populations

- Country endemic species
- Country threatened species
- Endemic threatened species
- Globally migratory species
- Country red list
- Species for social importance
- Social for economic importance
- Flagship/indicator species
- Species within protected areas
- Species *ex situ* sites
- Species abundance/change in abundance
- Alien species distribution
- Invasive species distribution
- Habitats types used by species
- Threats



# Section B: Biological data

## D: Protected areas

- Gap analysis
- RAPPAM
- METT
- Finance of PAs
- PAs management plans
- National policies
- Threshold of habitats within PAs
- Site level evaluation
- PAs baseline inventory
- Threats
- Indicators
- No. visitors
- PAs boundaries and zonation
- Buffer zones of PAs
- PAs staff classification, qualifications, training and ranks



# Section B: Biological data

## E: Threats

- Major threats
- Types of threats
- Geographical coverage of threats
- Root causes of threats
- Threats ranking
- Reversibility of threats
- Mitigation measures
- Feasibility to remove threats
- Costs and duration of remediation
- 



# Section C: Ecosystems valuation and services

## A: Services

- Watershed management areas
- Wildlife management areas
- Soil erosion and control areas
- Freshwater fisheries areas
- Coastal protection zone
- Fish spawning areas
- Riparian protection zones
- Tourism/recreation
- Nature conservation areas
- Flood control
- Salinity and toxicants removal
- Migratory birds habitats
- Species protection areas
- Education areas
- Other service



## Section D: Climate change (effects, adaptation, resilience and mitigation)

- Historical fragmentation patterns (20 to 50 years ago).
- Data about future predictable fragmentation patterns (10, 20, 30 years)
- Habitats and species isolation (historical and projection).
- Different habitats and species adaptation mechanisms.
- Species distribution and demography under climate change.
- Baseline thresholds and tipping points for species and habitats (normal – climate change).
- National mitigation measures.
- Meta-population prediction models
- Other data





# Available free web resources for data

- [ArcGIS - Alliance for Zero Extinction \(AZE\) 2010](#)
- [GecoServ- Gulf of Mexico Ecosystem Services Valuation Database](#)
- [Global Maps](#)
- [APAAT - The assessment of African protected areas - European Commission](#)
- [Climate Change Knowledge Portal 2.0](#)
- [Egypt, Middle East and North Africa > The World Bank - Mapping for Results](#)
- [Global GIS Online Data](#)
- [SD : Environment : Specials : GIS](#)
- [Web Maps | population SEDAC](#)
- [Digitized Maps | EROS](#)
- [GeoCommons](#)
- [Go-Geo! - International search](#)
- [EarthExplorer](#)
- [Species Distribution Modelling - spatial-analyst.net](#)
- [Red list Data Download](#)
- [WCMC Datasets, Tools & Reports](#)
- [Home - CropLife International](#)
- [Welcome to CERA](#)
- [Earth Conservation Toolbox](#)
- [UNEP DTIE SCP Branch: Publications](#)
- [FAO Country Profiles](#)
- [ETI - Search the World Biodiversity Database](#)
- [Reef Check Monitoring Instruction](#)
- [Global Atlas](#)

# Available free web resources for data

- [Species 2000 - Welcome to Species 2000 website](#)
- [Global Biodiversity Information Facility Portal](#)
- [THE REPTILE DATABASE](#)
- [Critical Site Network Tool - Site search](#)
- [Global Deserts Outlook](#)
- [Species of Conservation Concern - Taxonomic-1st-level-Search](#)
- [CITES Trade database](#)
- [World Population Prospects, the 2012 Revision](#)
- [GeoNetwork - The portal to spatial data and information](#)
- [Data Access | LP DAAC :: ASTER and MODIS Land Data Products and Services](#)
- [Global land cover - Data User Element](#)
- [Global GIS Datasets Links | EDENext Data Portal](#)
- [Africa Soil information service - Map tool](#)
- [Geophysical Survey Data Viewer | ngdc.noaa.gov](#)
- [Coverage map viewfinderpanoramas.org](#)
- [CGER / Global Drainage Basin Database \(GDBD\)](#)
- [An inventory and comparison of globally consistent geospatial databases and libraries](#)
- [Free GIS Datasets - Categorised List](#)
- [USGS HydroSHEDS download](#)
- [Free Spatial Data | DIVA-GIS](#)
- [Data: Impacts | NCEAS](#)
- [\*crops Datasets\*](#)