# Environmental and Social Safeguarding

Friday 20 May 2022

Jose Rubio

CRITICAL ECOSYSTEM PARTNERSHIP FUND

FAUNA & FLORA INTERNATIONAL

FONDATION biotope POUR LA BIODIVERSITÉ

Let’s start with a short quiz!

https://arcg.is/041DTq0

# What are financial institutions safeguards?

- To “raised the bar” on the level of environmental and social review and performance for many international projects.
- Loans and funding subject to environmental and social performance.
  - Credit risk
  - Liability risk
  - Reputational risk
- International financial Institutions (IFIs) have developed environmental and social risk management practices and policies.
- These practices and policies can, and frequently do, exceed the legal regulatory requirements established by host country governments.
- This presents new opportunities and challenges for project developers, financial institutions and consultants.

# What agencies are using safeguards?

- The types of financial institutions who are implementing environmental and social reviews into their business practices include:
  - Multilateral Development Banks
    - World Bank Group
    - Inter-American Development Bank (IDB)
    - European investment Bank (EIB)
    - Asian Development Bank (ADB)
    - European Bank for Reconstruction and Development (EBRD)
  - Equator Principles Financial Institutions (80)
    - Commercial Banks
    - Export Credit Agencies
    - Other investment groups
  - Other Commercial Investors

# ENVIRONMENTAL AND SOCIAL SAFEGUARD – FOCUSING ON BIODIVERSITY

## PS6: BIODIVERSITY

AN OVERVIEW

# Structure of the presentation

Fundamentals of Performance Standard 6

Key deliverables for PS6 compliance

Conducting a Critical Habitat Assessment

# Fundamentals of Performance Standard 6

# International Finance Corporation (IFC)

IFC International Finance Corporation WORLD BANK GROUP

# IFC & the Performance Standards

PS1: Assessment & management of environmental & social risk & impacts

PS2: Labor & working conditions

PS3: Resource efficiency & pollution prevention

PS4: Community health, safety & security

PS5: Land acquisition & involuntary resettlement

PS6: Biodiversity conservation & sustainable management of living natural resources

PS7: Indigenous Peoples

PS8: Cultural Heritage



IFC International Finance Corporation WORLD BANK GROUP

# Why do they matter?

# Why biodiversity?

- **Biodiversity is undergoing rapid loss & degradation**
  - 12 to 55% of species in assessed groups threatened with extinction
  - Monitored wildlife populations fell by an average of 31% since 1970

- **Growing expectation for businesses to be a responsible member of the community: locally, nationally and globally**

- **Biodiversity-related risk can affect business operations**
  - Access to permits and license to operate
  - Impact on key environmental inputs (e.g. water, soil)
  - Delays, liabilities and lost revenues
  - Legal penalties for violation
  - Relationships with stakeholders, regulators, consumers or investors

IFC | International Finance Corporation
WORLD BANK GROUP

# The big picture

## Objectives

Protect & conserve biodiversity

Maintain benefits of ecosystem services

Promote sustainable management of living natural resources

## Issues

- ✓ Habitats
- ✓ Protected Areas & Int. Recognized Areas
- ✓ Invasive Alien Species

- ✓ Ecosystem services
- ✓ Integrated across projects

- ✓ Standards & Certification
- ✓ Supply Chains

IFC | International Finance Corporation
WORLD BANK GROUP

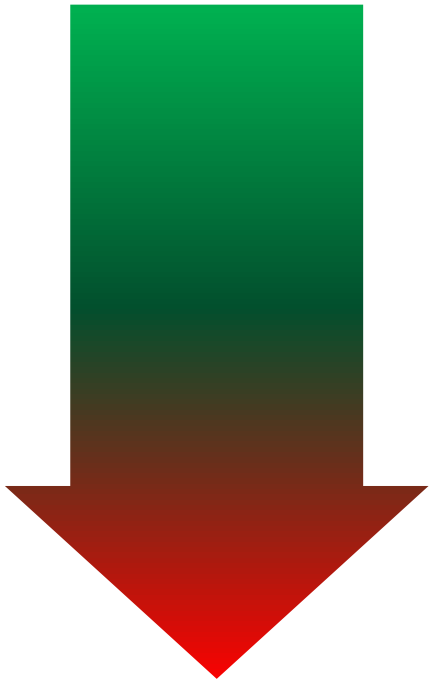
# The big picture

Key messages:

- Re-written in 2019 following extensive consultation
- Intended to inform WBG investment decisions **– However, the World Bank Group will no longer finance upstream oil and gas, after 2019***
- Launched at a time when there was a need for global consistency – and has therefore become a de facto good practice standard
- Many corporates apply the IFC standards and concepts – even though we rarely receive any direct WBG funding
- More often, ESG compliance (including PS6) is required when a JV partner is supported by the WBG

# The pillar of PS6: the mitigation hierarchy

Lower risk
Fixed, lower costs
Low external reliance
No time lags between impact & result



Higher risk
Uncertain & higher costs
High external reliance
Time lags between impact & result

**As a matter of priority, the client should seek to avoid impacts on biodiversity and ecosystem services.**



IFC International Finance Corporation
WORLD BANK GROUP

# Three IFC Habitat categories

A terrestrial, freshwater or marine geographical unit or airway that supports assemblages of living organisms and interactions with non-living environment

VERY IMPORTANT: Critical Habitat values can occur in Natural or Modified Habitats!



IFC International Finance Corporation WORLD BANK GROUP

# Modified and Natural Habitat

**A single project area may contain a mosaic of natural and modified habitat.**

- Largely non-native species
- Primary ecological function modified
- Species composition modified
- Result of human activity
- Excludes areas cleared in anticipation of project
- Sometimes defined at national level

- Viable assemblages of native species
- Primary ecological function
- Species composition
- Little modification by humans
- Human management may be required
- Sometimes defined at national level

**Experts with regional/local experience can help with setting defensible thresholds.**

IFC International Finance Corporation WORLD BANK GROUP

# Critical Habitat

Critically Endangered &/or Endangered species

Endemic &/or Restricted Range species

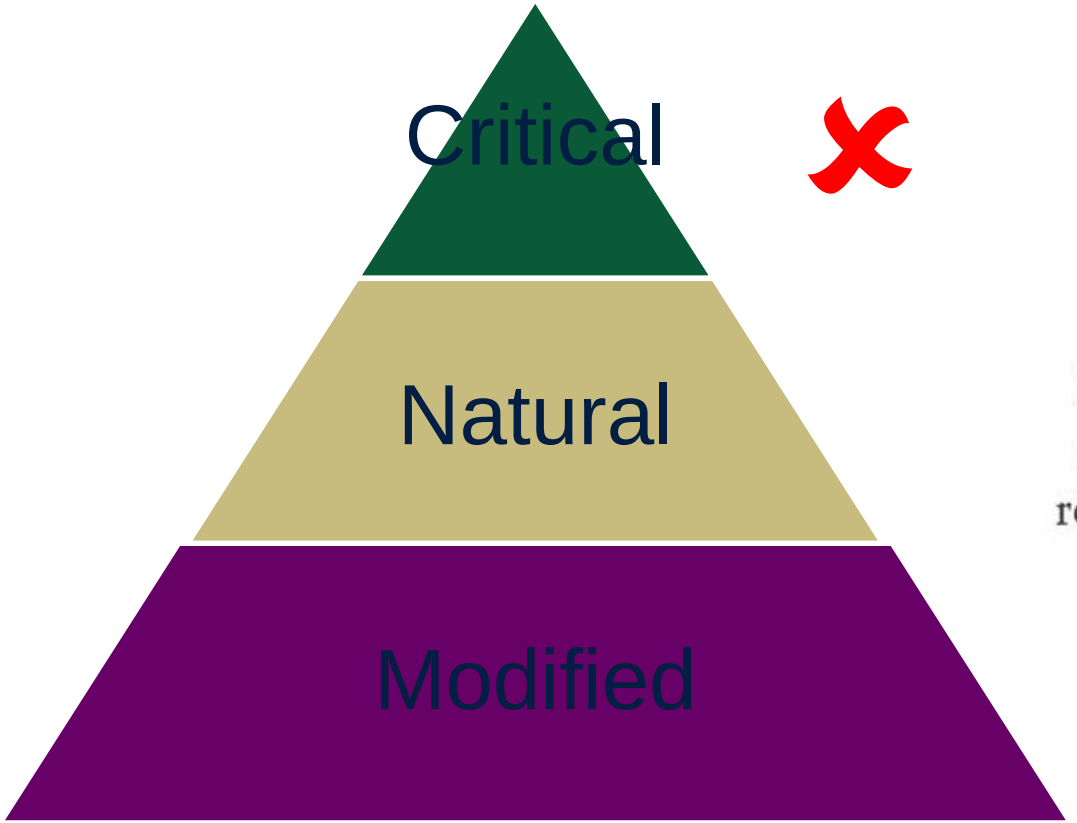
Globally significant concentrations of migratory or congregatory species

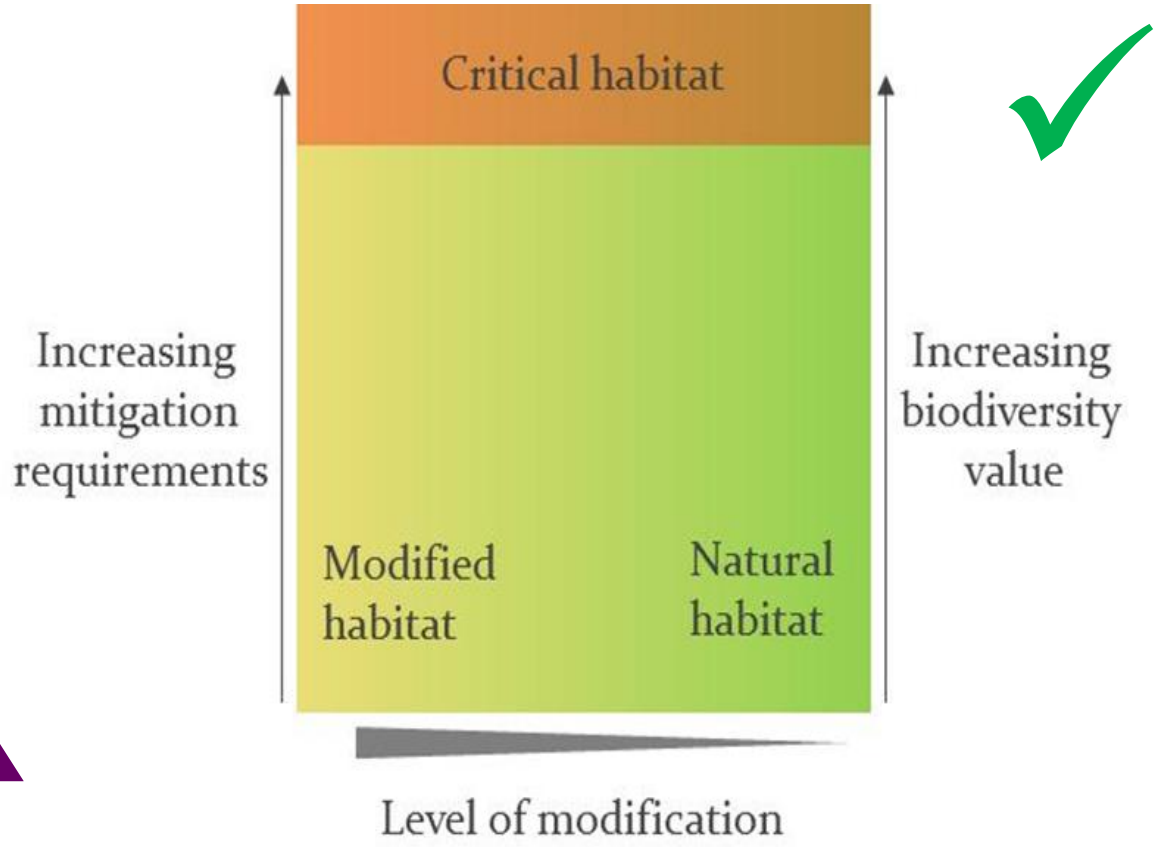
Highly threatened &/or unique ecosystems

Key evolutionary processes

See Guidance Note 6: GN71-97

# The relationship between Critical, Natural and Modified Habitat is often confused



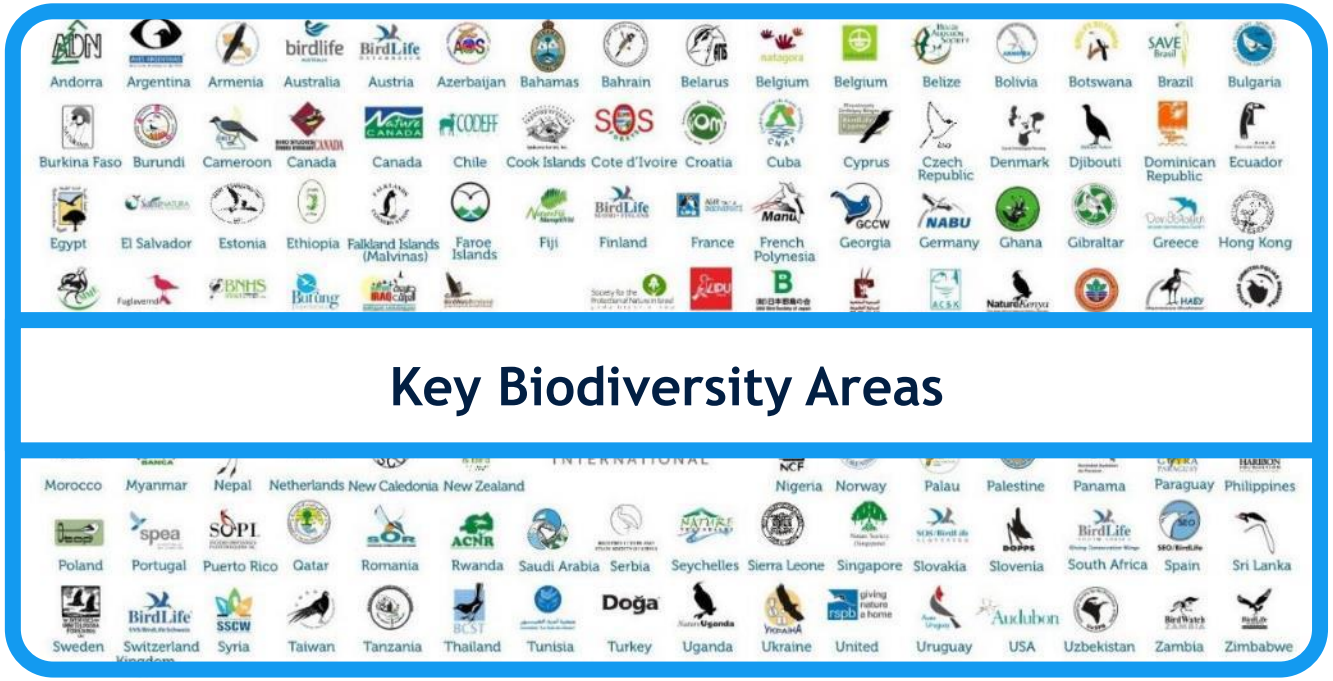

Must also consider indirect impacts, especially displacement or resettlement

# Protected Areas & Internationally Recognized Areas

A clearly defined geographical space, recognized, dedicated and managed through legal or other effective means, to achieve the long-term conservation of nature

- ✓ **Legal permission**
- ✓ **Consistency with management plans**
- ✓ **Consult managers & other stakeholders**
- ✓ **Additional programs to support sites**

## Recognized importance but not always legally protected




UNESCO
United Nations Educational, Scientific and Cultural Organization

World Heritage Convention

Ramsar

UNESCO
United Nations ducational, Scientific and Cultural Organization

MaB
Man and the Biosphere Programme

Fo

IFC International Finance Corporation
WORLD BANK GROUP

# More risks, more requirements

- ✓ PS6 applies if significant biodiversity values found
- ✓ Minimize impacts & mitigate as appropriate

- ✓ Alternatives analysis: No viable options in MH
- ✓ Stakeholder views on impacts
- ✓ No net loss for NH where feasible
- ✓ (Optional BAP in high risk projects)

- ✓ Alternatives analysis: No viable options in MH or NH
- ✓ Net gain for CH values
- ✓ Biodiversity Action Plan (BAP)
- ✓ Biodiversity Monitoring & Evaluation Plan (BMEP)
- ✓ IF biodiversity offsets used, provide technical rationale



IFC International Finance Corporation WORLD BANK GROUP

# Ecosystem Services

**Focus on management control or significant influence.**

- ✓ Stakeholder engagement process (PS1)
- ✓ Avoid & minimize impacts
- ✓ Maintain value & functionality
- ✓ See PS 4, 5, 7 & 8

- ✓ Minimize impacts
- ✓ Increase resource efficiency
- ✓ See PS 3



IFC | International Finance Corporation
WORLD BANK GROUP

# Invasive Alien Species

**Alien or non-native species introduced beyond original range. Invasives spread quickly due to lack of controlling factors.**

- No intentional introductions unless within regulatory framework
- Never deliberately introduce high risk alien invasives, regardless of regulation
- Risk assessment for any introductions
- Implement measures to avoid accidental/unintended introductions

- Avoid spreading to new areas
- Eradicate from Natural Habitat under client control, where practicable

IFC International Finance Corporation WORLD BANK GROUP

# Supply chains

## Purchasing primary production from regions with high risk of conversion of Natural or Critical habitats

- Adopt system to evaluate primary suppliers
- Integrate into ESMS
- Determined by client management control & influence

**System should:**

**Identify source of supply & habitat types**

**Support ongoing review of primary supply chains**

**Limit procurement to low risk suppliers, e.g. certified under credible standards**

**Require actions to shift supply chain to low risk suppliers over time**

IFC International Finance Corporation WORLD BANK GROUP

# Key Deliverables for PS6 Compliance

# The importance of biodiversity data for PS6

- Determine Modified or Natural Habitat
  - Biodiversity values (species composition)
  - Ecological functions
- Determine Critical Habitat
- Assess project Impacts on Priority Biodiversity Values
- Evaluate Environmental Flow Options (Impacts and Mitigation)
- Develop Mitigation Actions to reduce impacts
- Monitor indicators to demonstrate compliance with PS6



IFC International Finance Corporation WORLD BANK GROUP

# Determine the study area

- PS6 requires that the assessment of biodiversity values be conducted beyond the project footprint to include the surrounding area on an ecologically relevant scale.
- The study area should include biological communities and/or management issues that have more in common with those in the project footprint and with each other than they do with those in adjacent areas.
- Start with satellite imagery, vegetation maps and literature.
- For Hydropower projects, this means usually means Watershed



IFC International Finance Corporation WORLD BANK GROUP

# ESIA: To inform risk profile & applicability of specific IFC requirements. Integrates biodiversity assessment.

## Process

- Reference to core datasets?
  - IUCN Red List
  - Protected Areas
  - Key Biodiversity Areas
- Desktop review of existing biodiversity assessments, plans or data?
- Field survey dates, duration, methods & expertise?
- Application of mitigation hierarchy?
- External experts with regional experience?

## Key outputs

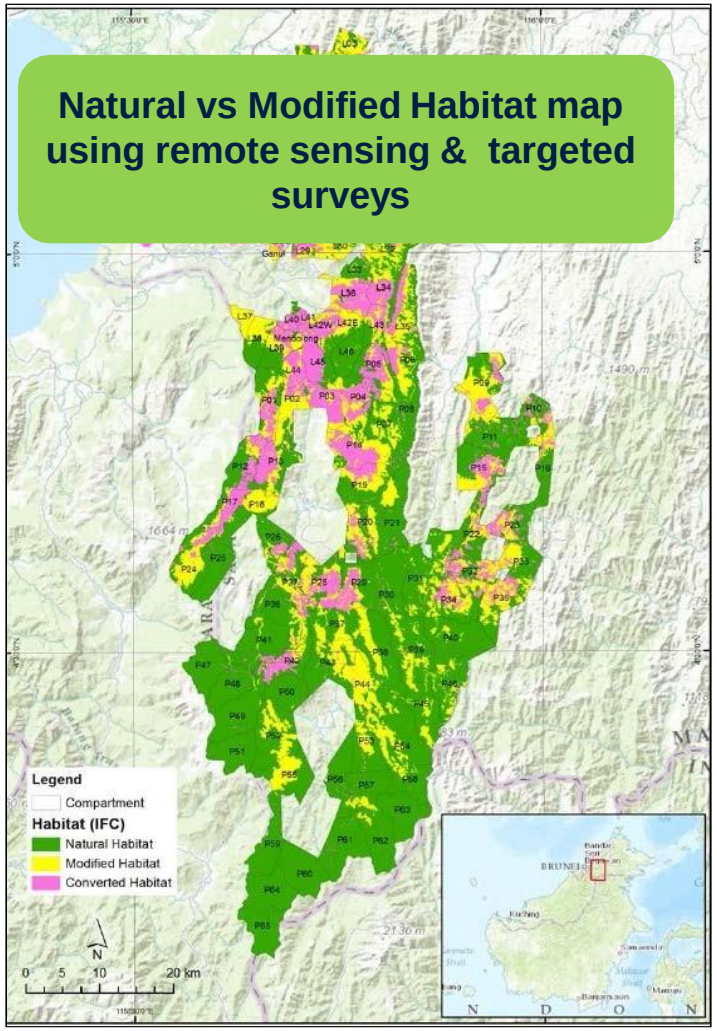
**Spatial representation of results wherever relevant**

- Regional context & proximity to biodiversity values, with maps?
- Location & extent of project area/AoI, with maps?
- Alternatives Analysis?
- Direct & indirect impacts?
- Significant residual impacts & need for offsets?
- Global, national & local biodiversity values?
- Priority ecosystem services?
- Location & extent of Natural vs Modified habitats, with maps?
- Alien species?
- Constraints map based on findings?



IFC International Finance Corporation WORLD BANK GROUP

# ESIA: To inform risk profile & applicability of specific IFC requirements. Integrates biodiversity assessment.

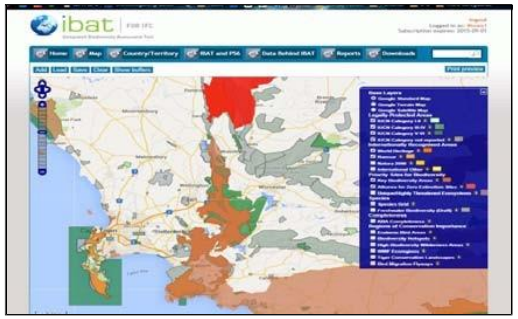


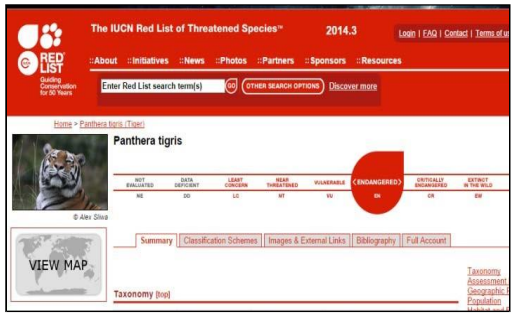

**Source: ERM & Hatfield Indonesia, 2014**

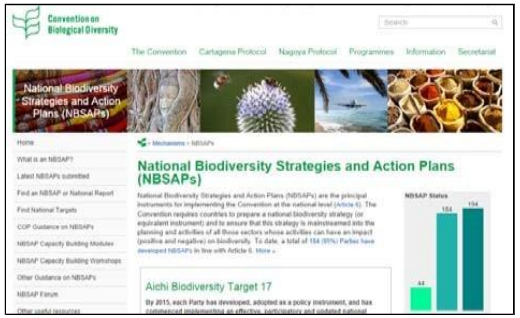
IFC International Finance Corporation WORLD BANK GROUP

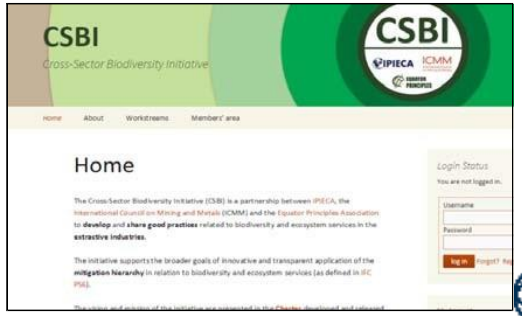
ESIA: To inform risk profile & applicability of specific IFC requirements.
Integrates biodiversity assessment.

## Resources








IFC International Finance Corporation
WORLD BANK GROUP

# Critical Habitat Assessment: Screening vs Assessment

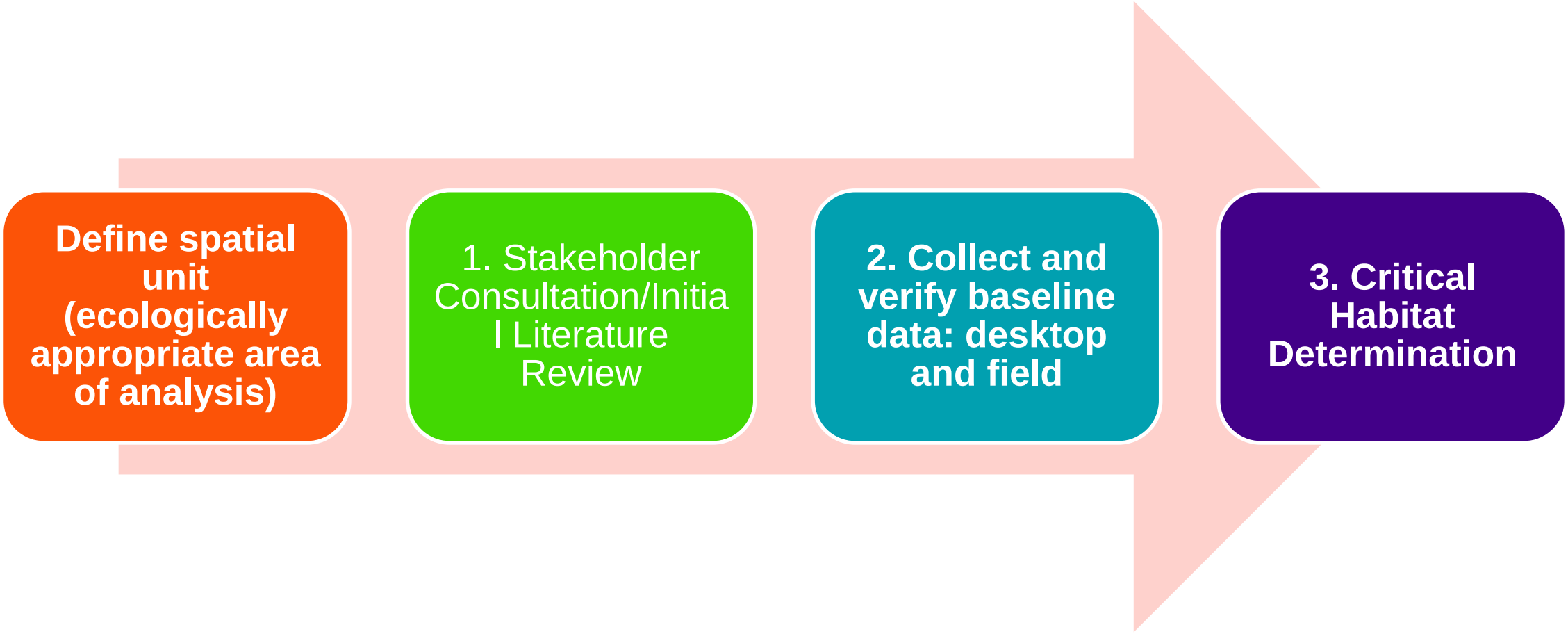
## Critical Habitat Screening

- **Tells you if CH is likely to be present**
- **Can be completed desktop**
  (using spatial biodiversity data layers: IBAT, IUCN Red List polygons, habitat maps, other available local data)

## Critical Habitat Assessment

- **Tells you which biodiversity features qualifies as CH**
- **Produces detailed maps of CH areas**
- **Requires fieldwork**
- **Is used to inform impact assessment, mitigation and offset design**

# 4 steps to Critical Habitat Screening / Assessment (same steps, different detail in the data)



# Critical Habitat Assessment

## Example of Critical Habitat determination

**Species** | **CH Trigger criteria** | **Rationale** | **Sources/data**

| Species Name | Common Name | Criteria 1 CR or EN Species | Criteria 2 Endemic/Restricted Range Species | Criteria 3 Migratory/Congregatory Species | Critical Habitat Tier 1 | Critical Habitat Tier 2 | Rationale | Information |
|---|---|---|---|---|---|---|---|---|
| **Mammals** | | | | | | | | |
| *Bos javanicus* | Banteng | EN | | - | - | √ | Criteria 1c<br><br>Regionally important population of EN species based on:<br>• The known population representing the largest sub-population in the species in East Malaysia (*pers comm. P. Gardner, 2014*);<br>• The potential to represent ≥1% of the global population, if the population in the Concession is confirmed to be greater than 50 individuals; | - Observed at: P04, P14, P20, P29, P37<br>- Study from 2014 identified 34 individuals present in a limited study area covering five compartments. Based on the survey effort to date and the habitat presence it is expected the population will be in excess of 50 individuals within the Concession.<br>- Maximum of 6 individuals recorded in 2011 by SFI staff in P37. Overall the population size in concession unknown.<br>-Once widespread in Borneo but now they are confined |

Source: ERM, 2014

| No. | Species | Common name[24] | CRITERION 1 CR and EN species | CRITERION 2 Restricted-range and Endemic species | Tier 1 Critical Habitat | Tier 2 Critical Habitat | Rationale |
|---|---|---|---|---|---|---|---|
| | PLANTS | | | | | | |
| 1 | *Cistanche deserticola* | Desert Cistanche | Potentially nationally EN | - | - | - | Does not meet Criterion 1 thresholds |
| 2 | *Iljinia regelii* | Regelian Iljinia | Potentially nationally EN | - | - | - | Does not meet Criterion 1 thresholds |
| **3** | ***Chesneya/Chesniella mongolica*** | **Mongolian Chesney** | **Potentially nationally EN** | - | - | **Yes** | **Criterion 1. 'nationally-important concentrations of a nationally Red Listed EN species' (>10% of the national population in the unit of analysis)** |

Source: The Biodiversity Consultancy, 2012

IFC International Finance Corporation WORLD BANK GROUP

# Mapping of Natural and Critical Habitat:

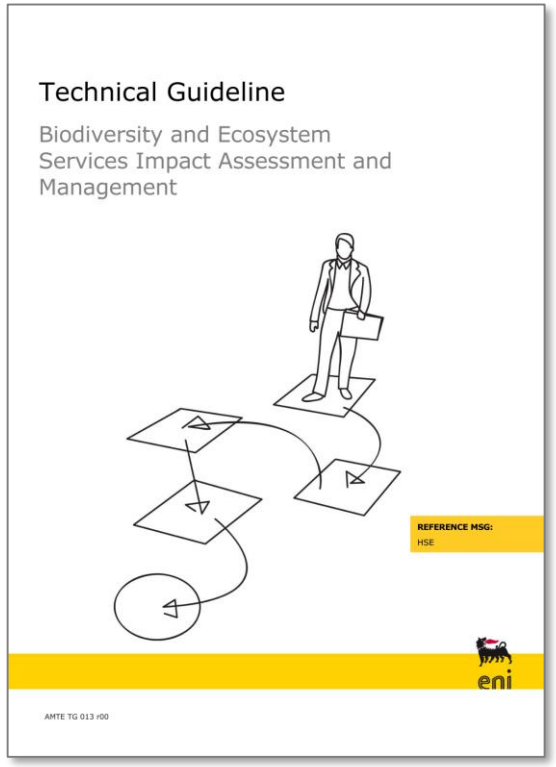
# Rationale, approach, results

# Context

- Eni uses the International Finance (IFC) Corporation Performance Standard 6 (PS6) in internal company guidance as a framework to identify and manage biodiversity risks for their business.

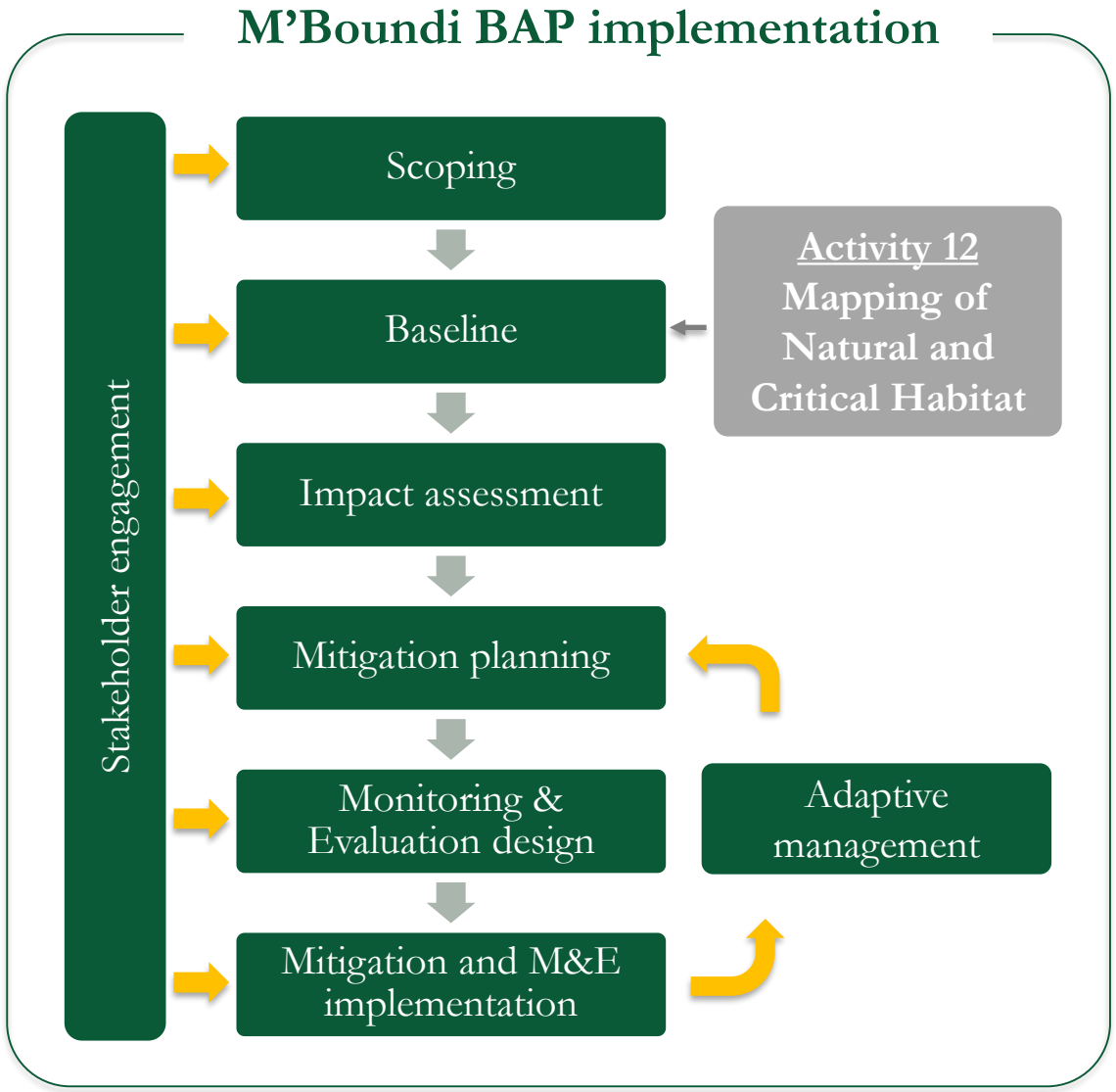
**“The BES management process aims to achieve No Net Loss (NNL) and preferably a Net Positive Impact/Net Gain (NPI/NG) of biodiversity for projects, respectively in Natural and Critical Habitats (in accordance with IFC PS6).”**

**AMTE TG 013 r00**



# Rationale

- The mapping of Natural and Critical Habitat is completed as part of the implementation of the M'Boundi Biodiversity Action Plan (BAP).
- Knowledge on the current extent of these habitats is key to:
  - improve the habitat baseline,
  - understand project impacts,
  - inform which good practice requirements apply,
  - inform and prioritize mitigation measures.
- Unmitigated impacts to Natural Habitat or features triggering Critical Habitat may result in higher reputational, financial and operational risks.



# Activity 12

## Objectives

- To map and quantify the extent of the different categories of habitats *sensu* IFC (Modified Habitat, Natural Habitat and Critical Habitat) within the M'Boundi BAP area of interest[1].

## Overall approach

- Natural and Modified Habitat were identified based on the description of vegetation types developed during earlier activities, in particular Activity 4 (Baseline habitat mapping).
- These data have been complemented with the results of the fauna surveys (Activities 5 to 11), in order to identify which habitat classes harbor species triggering Critical Habitat.
- The maps developed under Activity 12 allow for a thorough Critical Habitat Screening based on global datasets, as well as field data and expert opinion.

[1]*The BAP area of interest (AOI) is delineated by a 20 kilometers buffer around all Eni-Congo infrastructures where impacts are likely to occur.*

# Natural / Modified Habitat mapping

Using experts' opinion and field observations, classify each of the land cover types described by MBG into NH and MH as per IFC PS6 definitions

Input:
- MBG habitat layer for the year 2016 (Slide 12)

Interim output:
- Reclassification of land cover types as Natural / Modified Habitat (Slide 13)

Mapping of NH and MH by reclassifying MBG land cover map

Outputs:
- Natural Habitat and Modified Habitat map (Slide 18)

# Critical Habitat mapping

Update the list of species qualifying the AOI as Critical Habitat using IFC PS6 Criteria with most up to date field data

Use of baseline data and taxonomic experts' opinion to identify which land cover types likely harbor each of the CH species

Mapping of CH species distribution using MBG land cover types as proxies. Exclusion of some areas for hunted species based on field data and observations

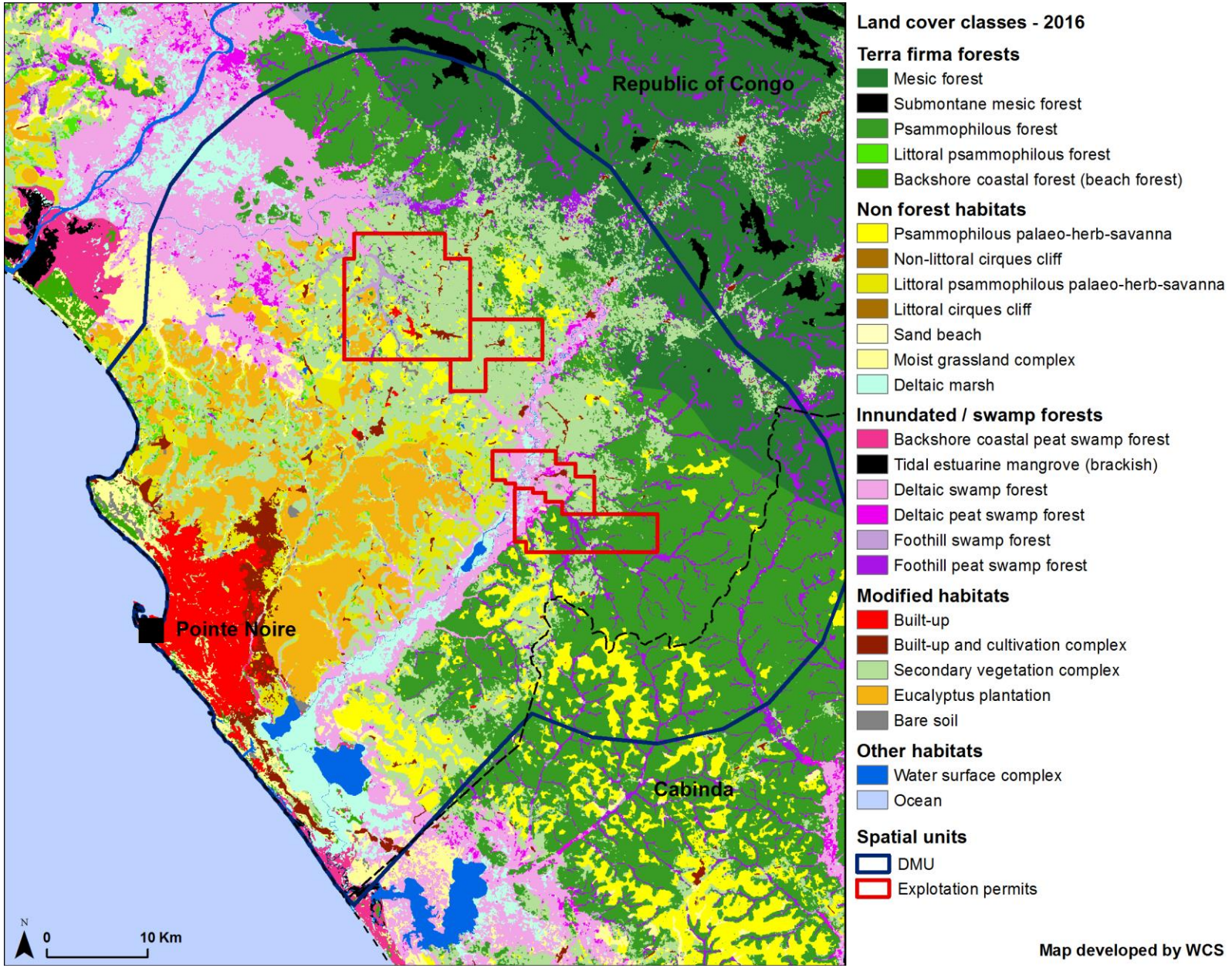
Combination of all CH species distributions to map CH. Development of weighted maps based on the number of species potentially triggering CH in each land cover type.

Input:
- Habitats layer for 2016 (Slide 12)
- List of CH species potentially present in AOI (Slide 14)

Interim output:
- Distribution maps of CH species (Slide 15)

Outputs:
- Critical Habitat map (Slide 19)
- Critical Habitat map weighted by number of overlapping CH species (Slide 20)
- Critical Habitat maps for taxonomic groups with different occurrence status (Slides 21-23)

# Land cover data used to map Natural, Modified and Critical Habitat



# Reclassification of land cover types as Natural / Modified Habitat

| Land cover type | Natural / Modified | Land cover type | Natural / Modified |
|---|---|---|---|
| **Mesic forest** | Natural | **Psammophilous palaeo-herb-savanna** | Natural |
| **Submontane mesic forest** | Natural | **Littoral psammophilous palaeo-herb-savanna** | Natural |
| **Psammophilous forest** | Natural | | |
| **Littoral psammophilous forest** | Natural | **Non-littoral cirques cliff** | Natural |
| **Backshore coastal forest (beach forest)** | Natural | **Littoral cirques cliff** | Natural |
| **Backshore coastal peat swamp forest** | Natural | **Sand beach** | Natural |
| **Tidal estuarine mangrove (brackish)** | Natural | **Water surface complex** | Natural |
| **Deltaic swamp forest** | Natural | **Ocean** | Natural |
| **Deltaic peat swamp forest** | Natural | **Built-up** | Modified |
| **Foothill swamp forest** | Natural | **Built-up and cultivation complex** | Modified |
| **Foothill peat swamp forest** | Natural | **Secondary vegetation complex** | Modified |
| **Deltaic marsh** | Natural | **Eucalyptus plantations** | Modified |
| **Moist grassland complex** | Natural | **Bare soil** | Modified |

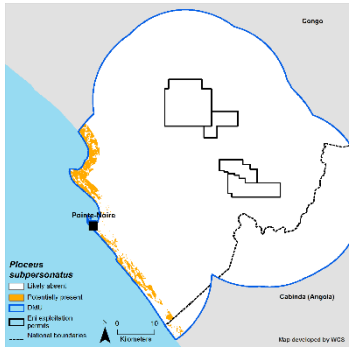
[1] Description of each habitat type is provided in **Senterre, B., Stévart, T., Bidault, E., Wagner, M., and Lowry, P. (2017).** *Mapping habitat-types in south-east Kouilou (Republic of Congo)* (Saint Louis, Missouri, USA: Missouri Botanical Garden).

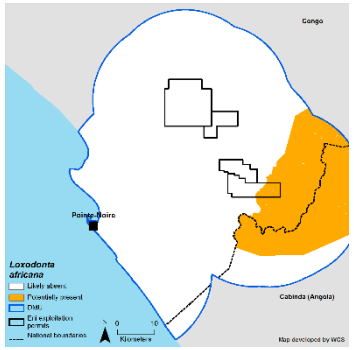
# Priority species triggering CH potentially present in the AOI

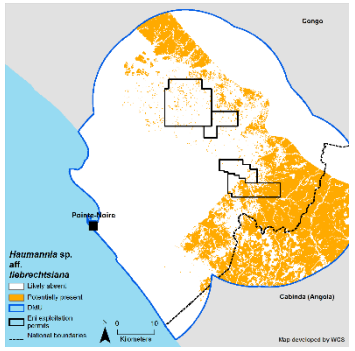
| Taxa | Scientific name | English name | IFC Criteria | Occurrence status | Method to map CH |
|---|---|---|---|---|---|
| Mammal | *Pan troglodytes* | Chimpanzee | 1e + GN20 / CH Tier 1 | Confirmed | Habitat as a proxy + exclusion zones |
| Mammal | *Gorilla gorilla gorilla* | Western gorilla | 1c + GN20 / CH Tier 1 | Confirmed | Habitat as a proxy + exclusion zones |
| Mammal | *Loxodonta Africana* | African elephant | 1c / CH Tier 2 | Confirmed | Habitat as a proxy + exclusion zones |
| Reptile | *Mecistops cataphractus* | Slender-snouted crocodile | 1c / CH Tier 2 | Confirmed | Habitat as a proxy + exclusion zones |
| Bird | *Ploceus subpersonatus* | Loango weaver | 2b / CH Tier 2 | Confirmed | Habitat as a proxy in a 3km band from coast |
| Amphibian | *Hemisus perreti* | Perret's snout-burrower | 2b / CH Tier 2 | Confirmed | Habitat as a proxy |
| Amphibian | *Phrynobatrachus mayokoensis* | - | 2b / CH Tier 2 | Confirmed | Habitat as a proxy |
| Plant | *Baphia vili* | - | 2b / CH Tier 2 | Confirmed | Habitat as a proxy |
| Plant | *Carpolobia gabonica* | - | 2b / CH Tier 2 | Confirmed | Habitat as a proxy |
| Plant | *Cola vel sp. nov.* | - | 1a, 1b, 1c, 2a / CH Tier 1 | Confirmed | Habitat as a proxy |
| Plant | *Grossera aff. vignei sp. nov* | - | 1a, 1b, 1c, 2a / CH Tier 1 | Confirmed | Habitat as a proxy |
| ~~Plant~~ | ~~*Haumania sp. aff. liebrechtsiana*~~ | ~~-~~ | ~~1a, 1b, 2a~~ | ~~Confirmed~~ | ~~Habitat as a proxy~~ |
| Plant | *Palisota aff bogneri sp. nov* | - | 1a, 1b, 1c, 2a / CH Tier 1 | Confirmed | Habitat as a proxy |
| Plant | *Rytigynia hirsuta sp. nov.* | - | 1a, 1b, 2a / CH Tier 1 | Confirmed | Habitat as a proxy |
| Plant | *Salacia arenicola* | - | 2b / CH Tier 2 | Confirmed | Habitat as a proxy |
| Fish | *Enteromius rouxi* | Barb | 2b? / CH Tier 2? | Potentially present | Flooded habitats / watersheds / rivers' Strahler orders |
| Fish | *Enteromius stauchi* | Barb | 1a, 2b / CH Tier 1 | Reported by literature | Flooded habitats / watersheds / rivers' Strahler orders |
| Fish | *Labeobarbus roylii* | Yellowfish | 1a, 2b, 3b / CH Tier 1 | Reported by literature | Flooded habitats / watersheds / rivers' Strahler orders |
| Fish | *Plataplochilus sp. nov* | Lampeye sp. | 2a?, 2b? / CH Tier 1? 2? | Reported by literature + expert | Flooded habitats / watersheds / rivers' Strahler orders |
| Fish | *Thysochromis sp. nov* | Cichlid | 2b? / CH Tier 2? | Potentially present | Flooded habitats / watersheds / rivers' Strahler orders |

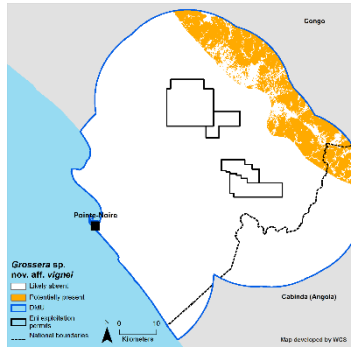
*See species list in Excel format for more details*

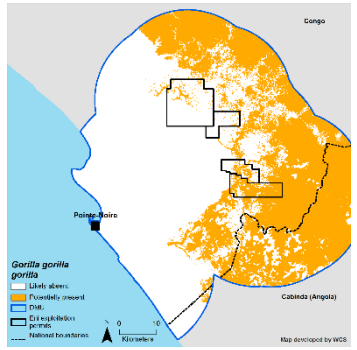
# Distribution maps of CH species

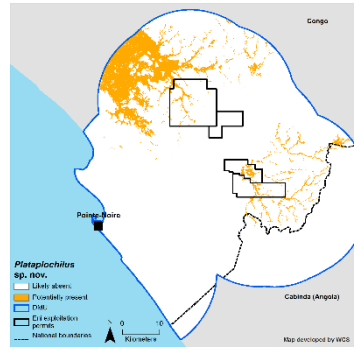


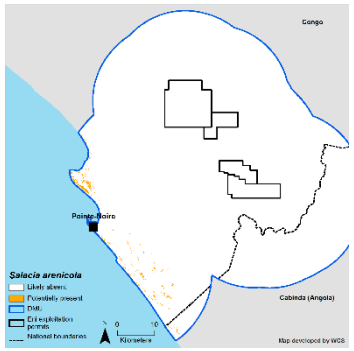



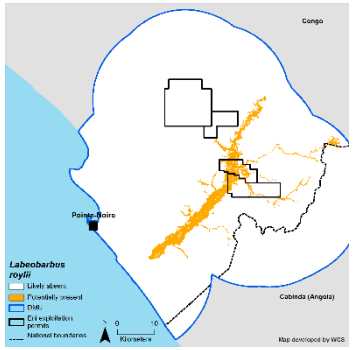



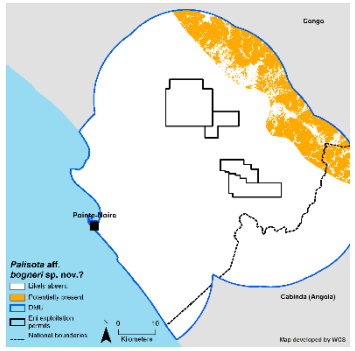



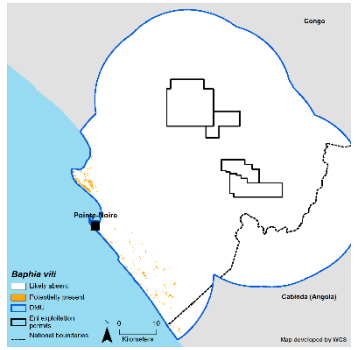



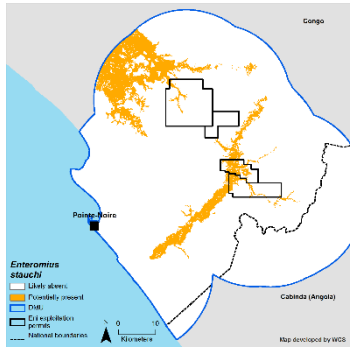



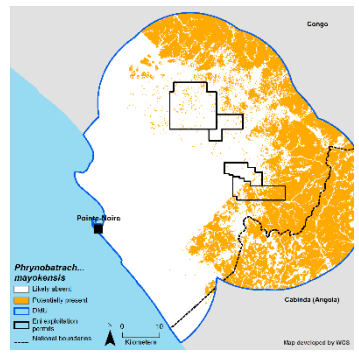



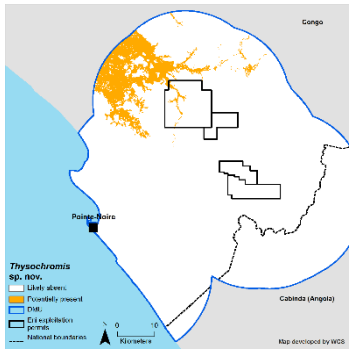



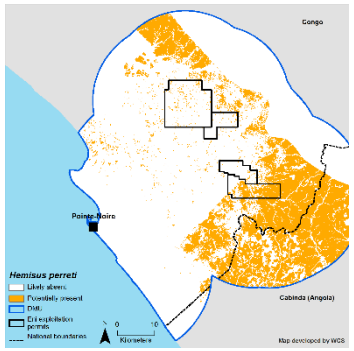



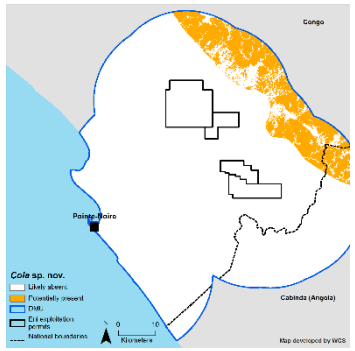



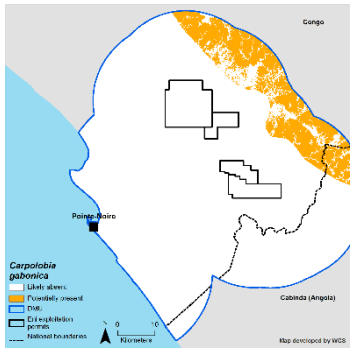



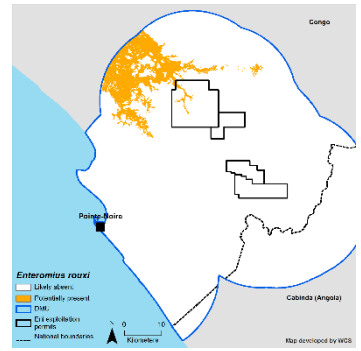



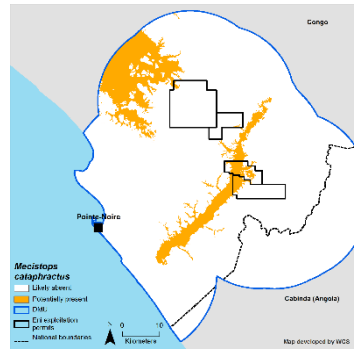



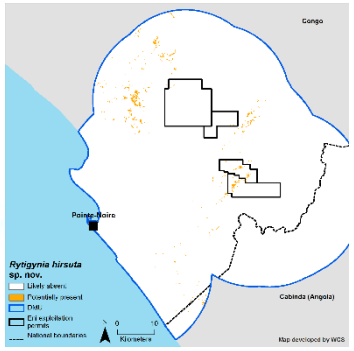



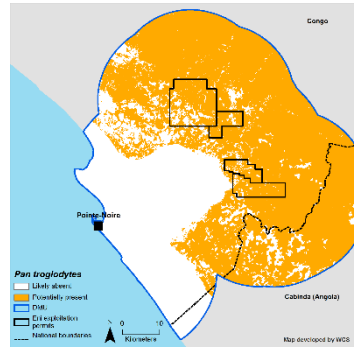



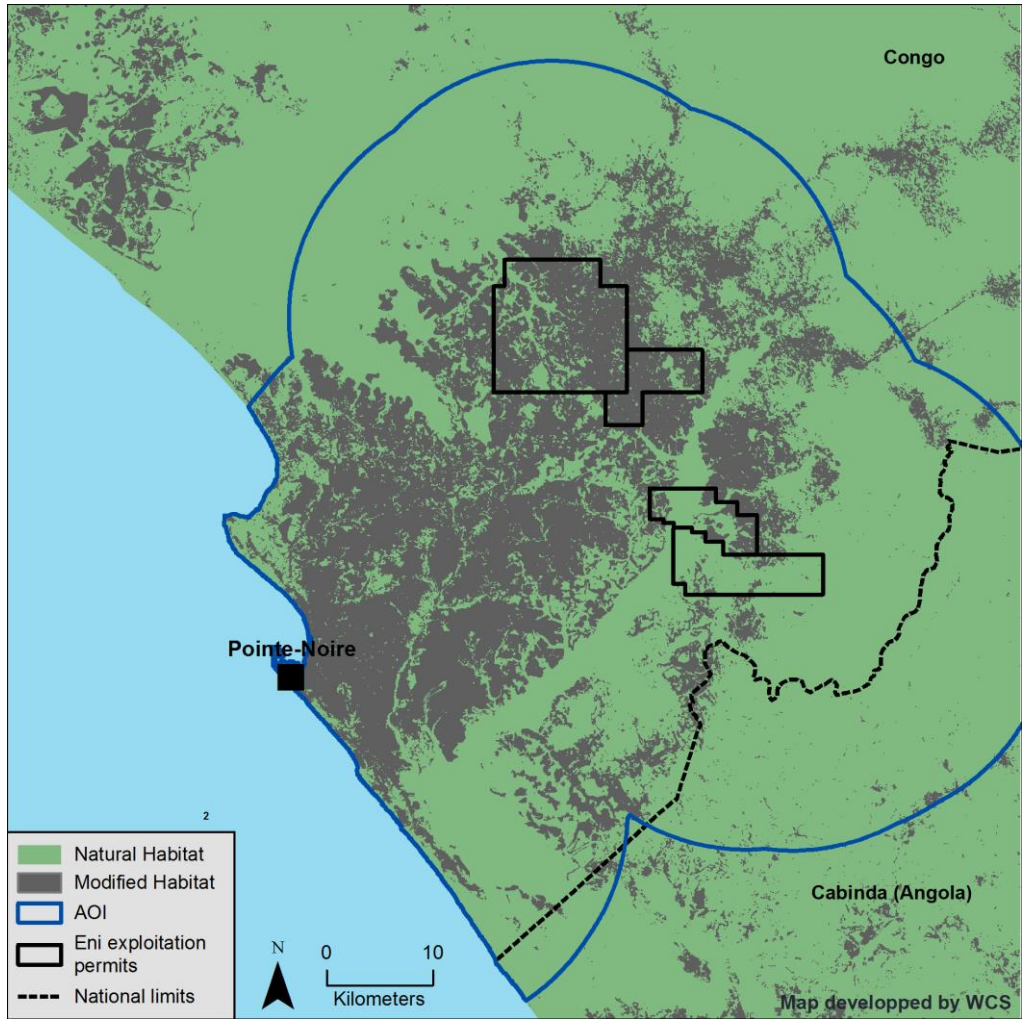



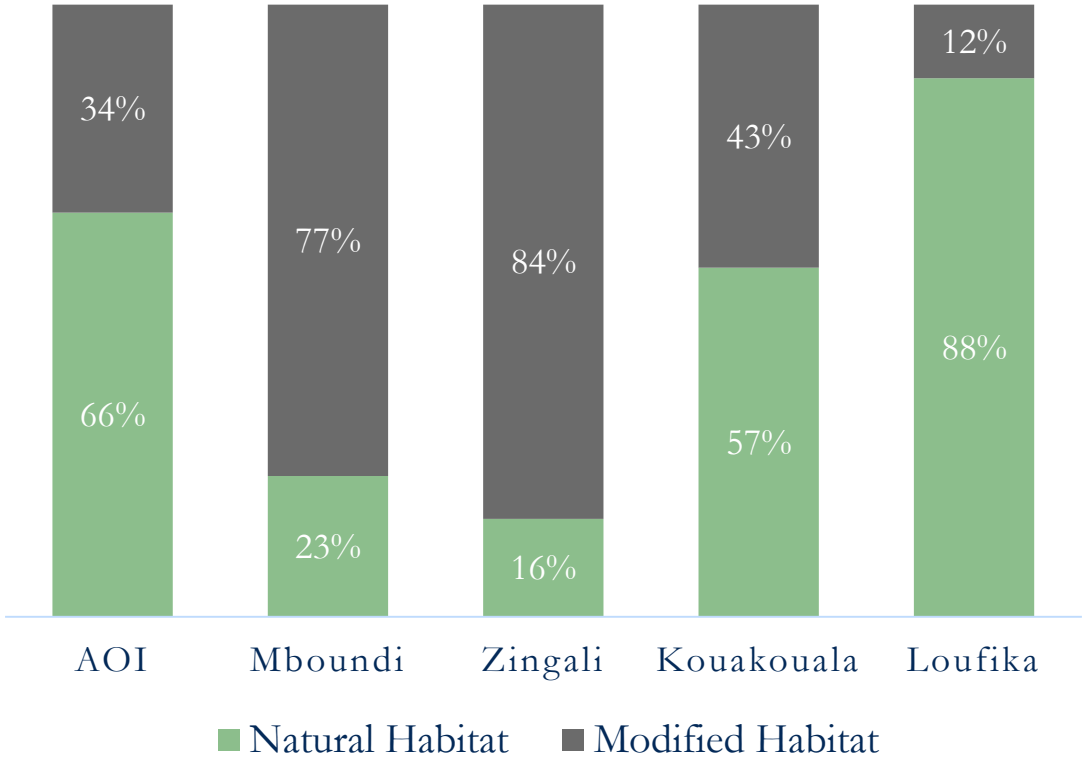
# Summary of results

| | Total area (km²) | Natural Habitat (km²) | Modified Habitat (km²) | Critical Habitat (km²) |
|---|---|---|---|---|
| AOI | 4,432 | 2,925 | 1,507 | 3,058 |
| Mboundi | 148 | 34 | 114 | 117 |
| Zingali | 39 | 6 | 33 | 35 |
| Kouakouala | 39 | 22 | 17 | 36 |
| Loufika | 61 | 54 | 7 | 58 |

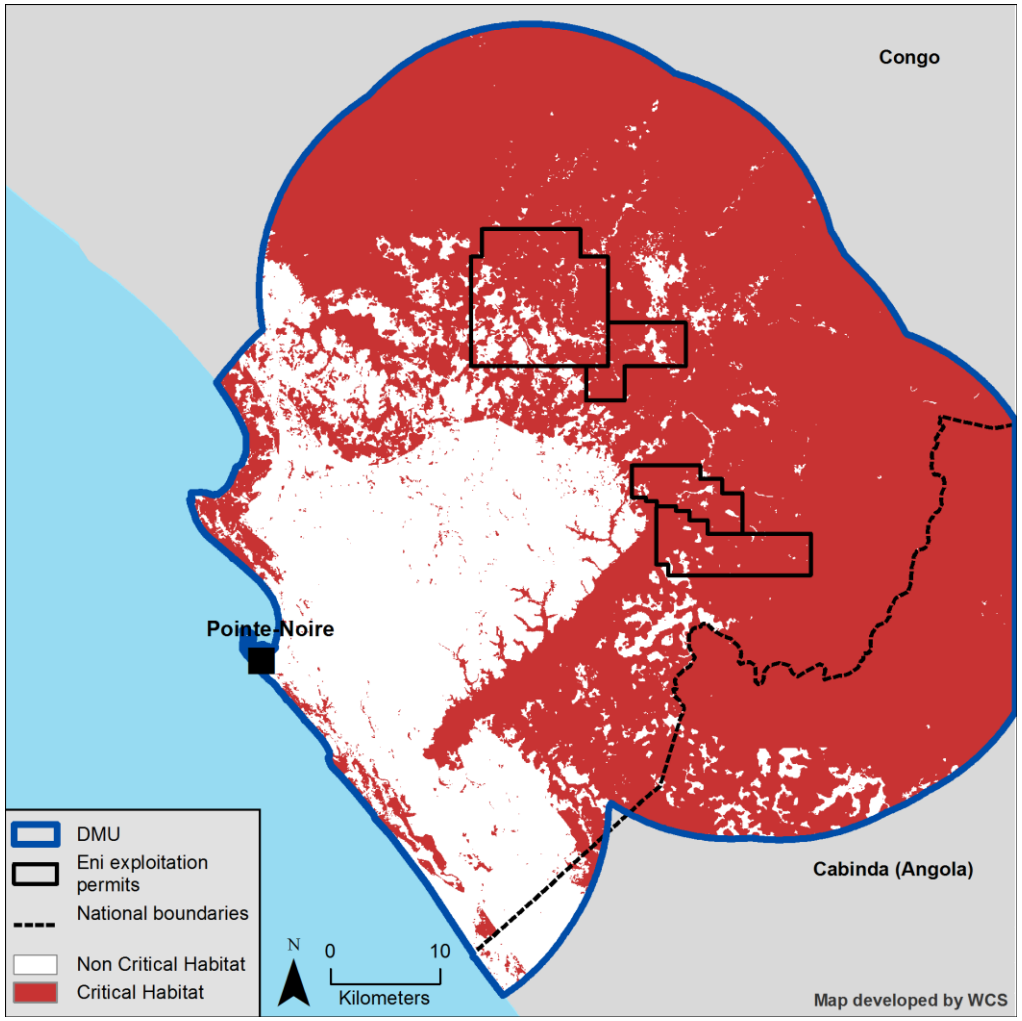
# Natural / Modified Habitat



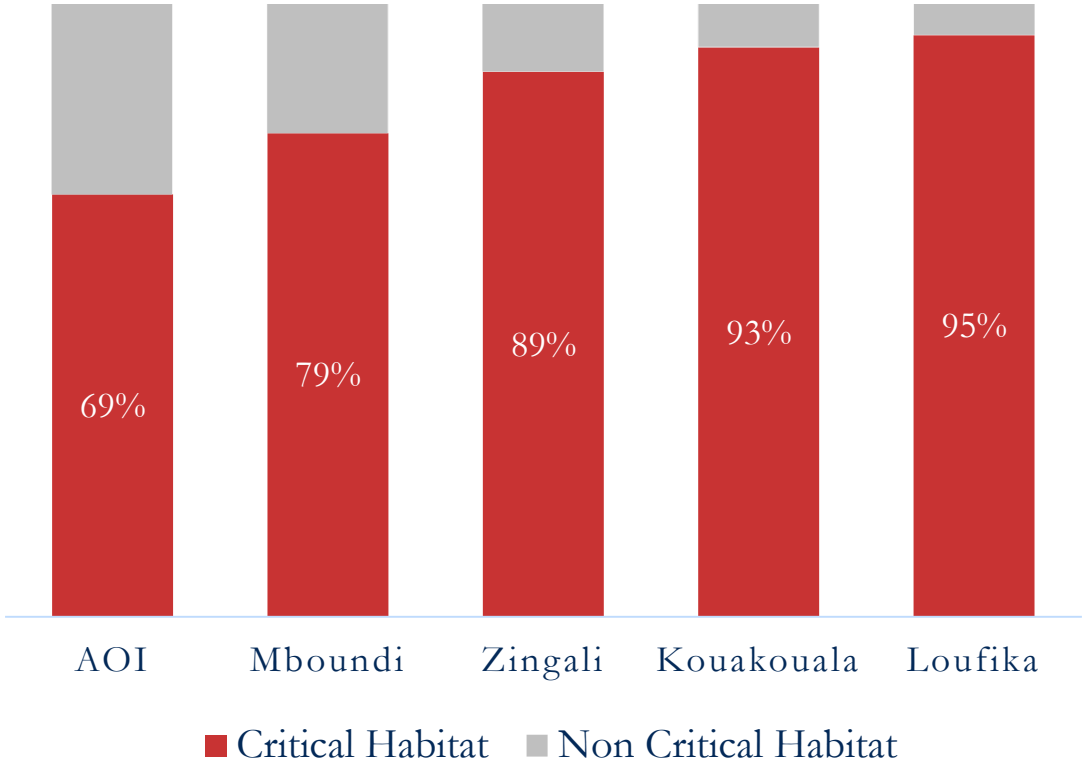

Natural / Modified Habitat - 2016



# Critical Habitat



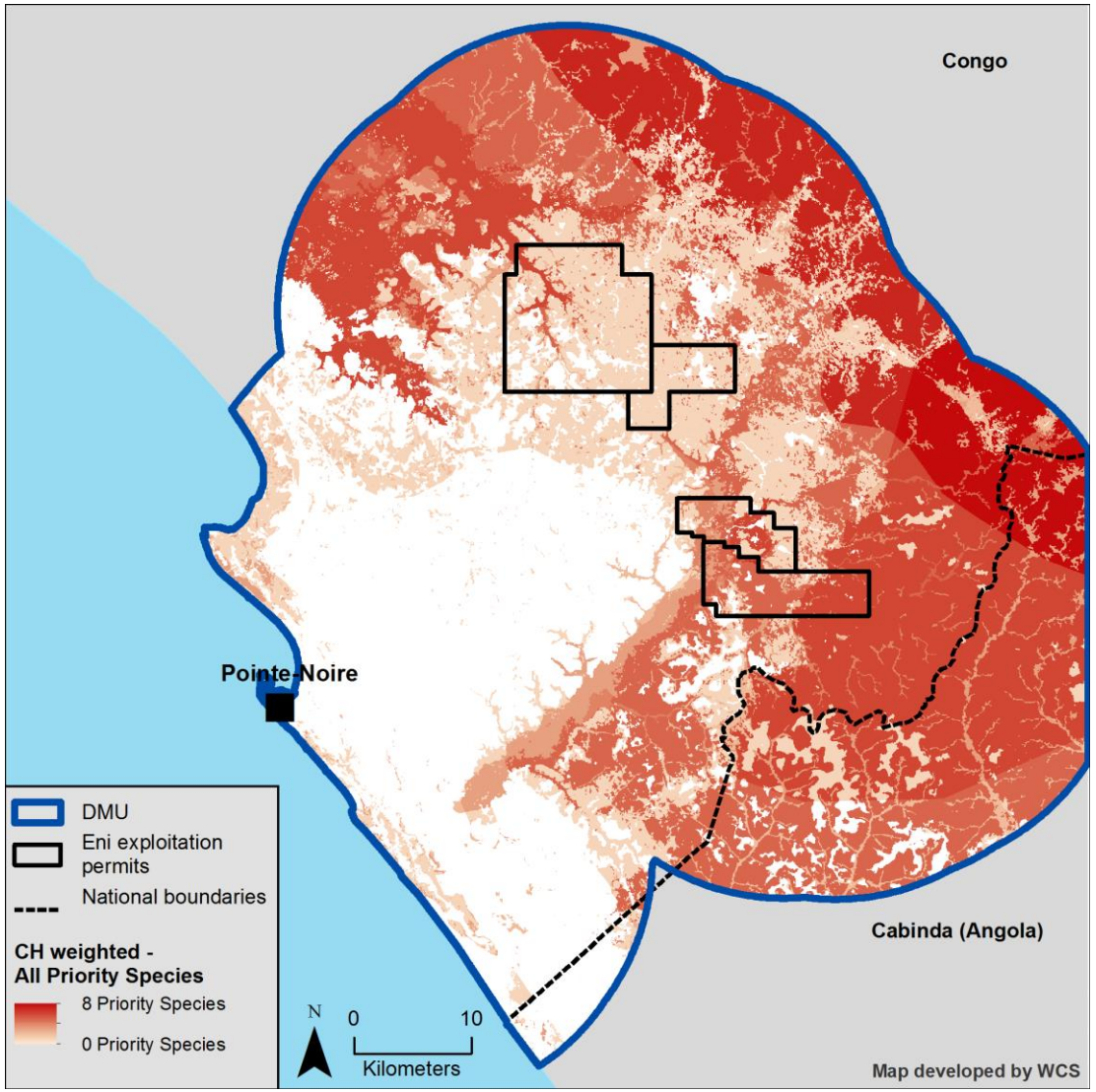

Critical Habitat - 2016



# Critical Habitat weighted by number of overlapping CH species

Weighted map of CH based on distributions of all 20 priority species, independent of their occurrence status (confirmed, potentially present, reported by literature).

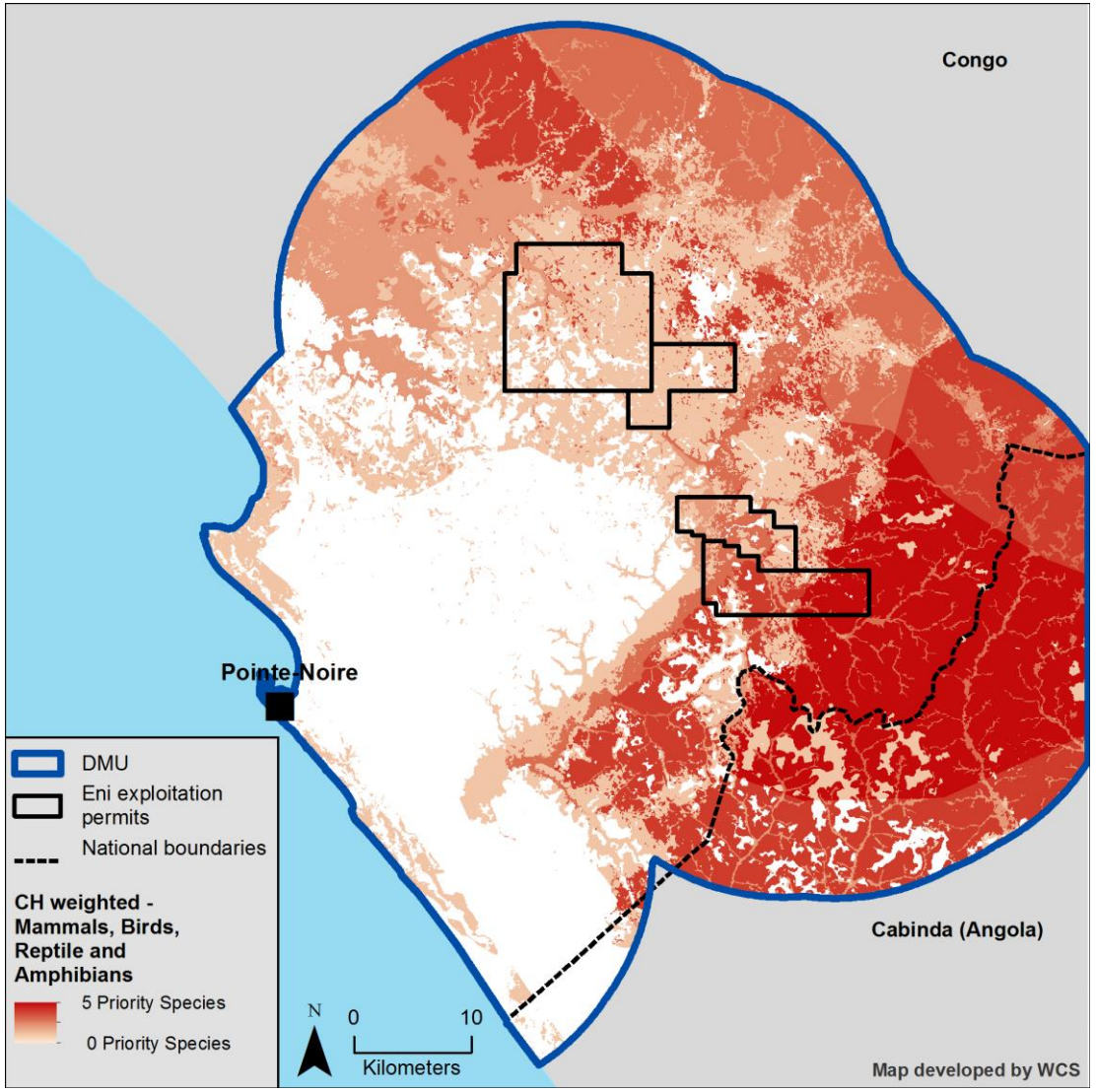
Darker colors indicate multiple distribution maps of CH species are overlapping.



# Critical Habitat triggered by mammals, reptiles, birds, amphibians

Weighted map of CH based on distributions of mammals, reptiles, birds and amphibians' priority species (7 species).

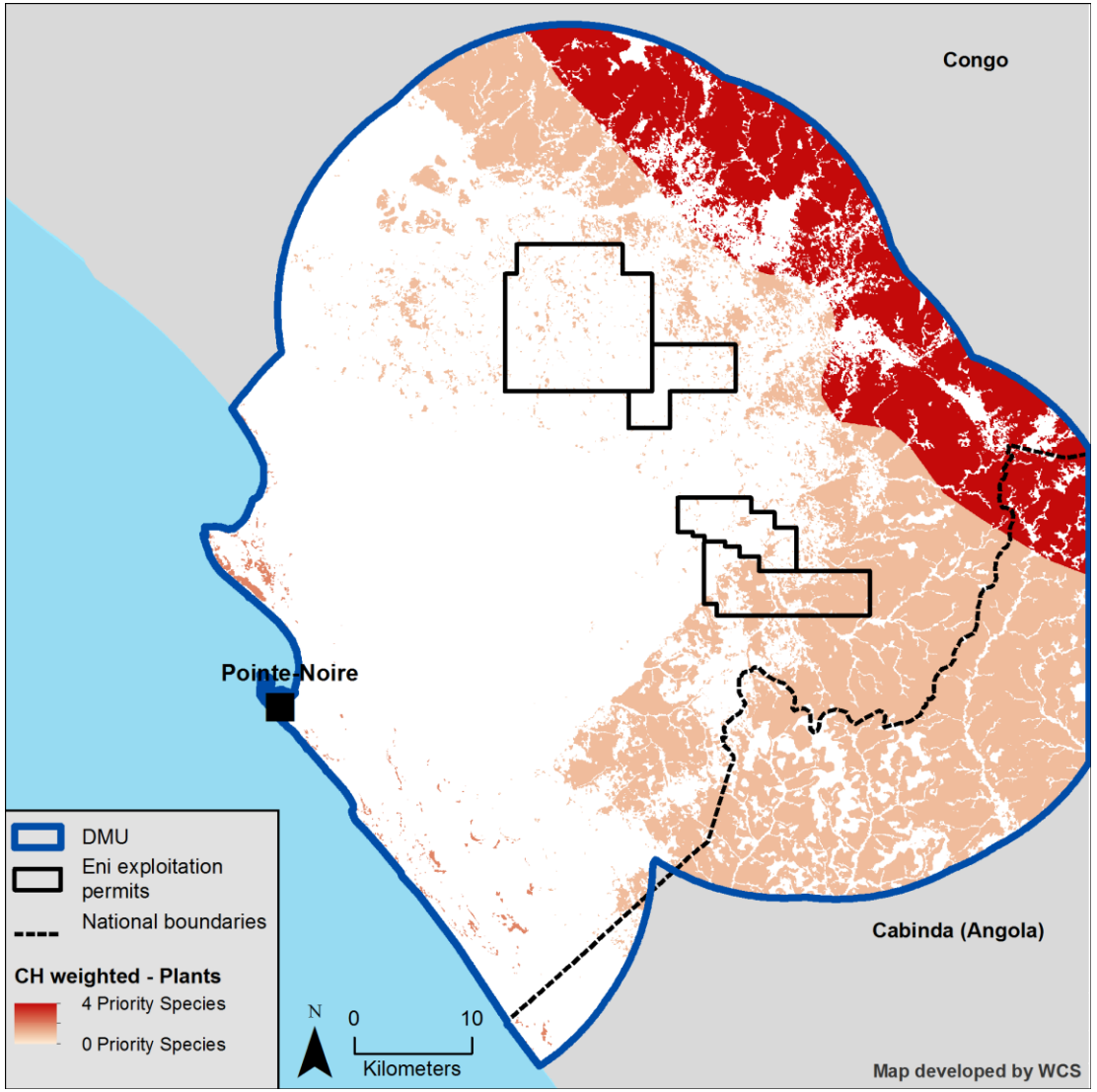
These species were confirmed present in the AOI during the biodiversity baseline surveys.



# Critical Habitat triggered by plants species

Weighted map of Critical Habitat for plant priority species (8 species).

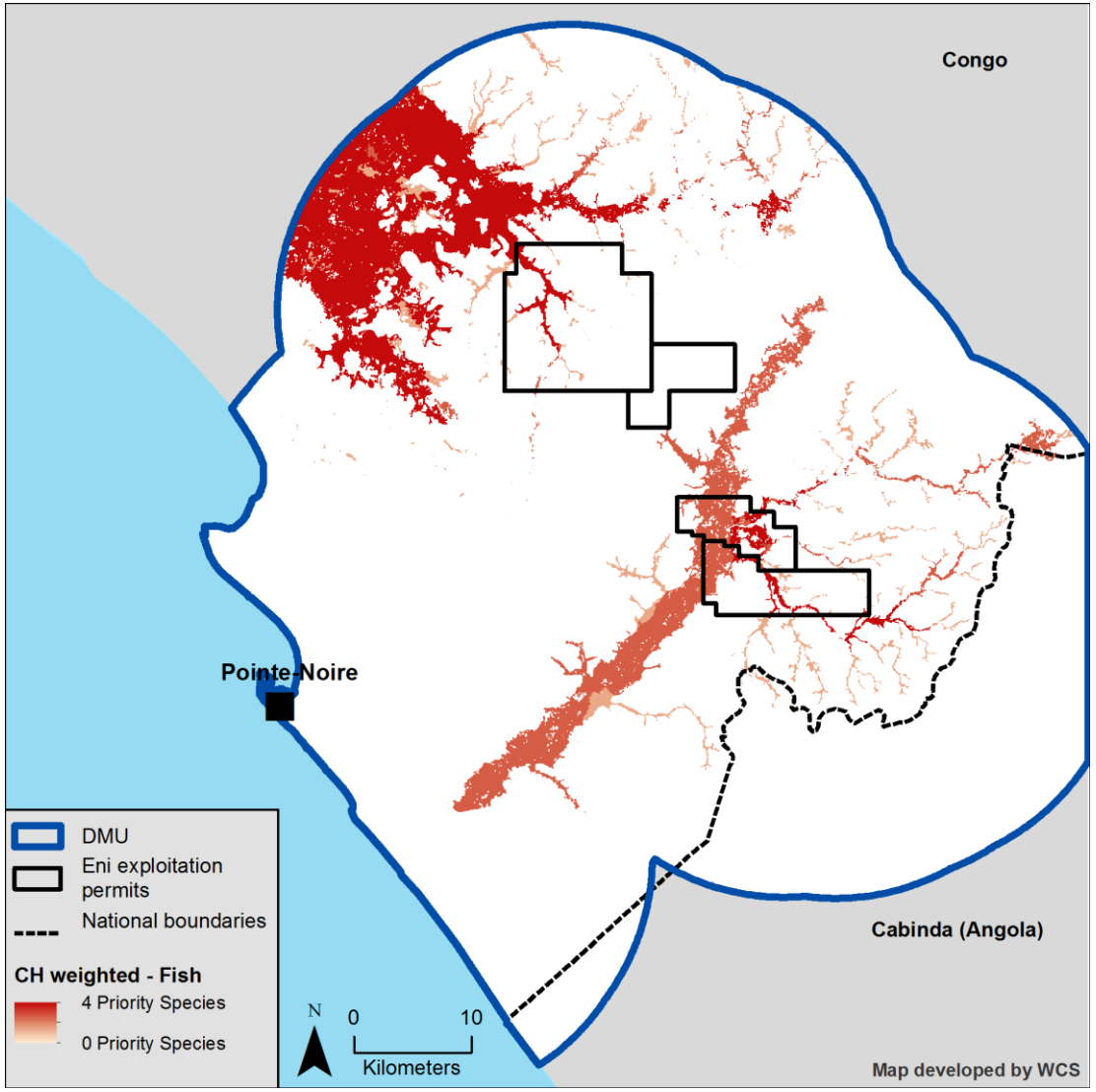
Although these species were confirmed present in the AOI during the biodiversity baseline surveys, uncertainty remains about the important character of some of these species for biodiversity due to a lack of regional data on these species.



# Critical Habitat triggered by freshwater fish species

Weighted map of CH for fish priority species (5 species).

Fish species were identified as potentially present in the AOI based on a literature review (Activity 6.1). On-the-ground occurrence is not confirmed for all fish species as fish baseline surveys have been postponed to 2019.



# Summary of results

- Baseline surveys and literature reviews have identified up to 20 species triggering CH as potentially present within the AOI. Among these 15 have been confirmed present during baseline surveys, however more detailed evaluation of plant species is needed (5 species).
- Modified Habitat is most prevalent in the Mboundi and Zingali permits, covering respectively 77% and 84% of the permits. Natural Habitat is most prevalent in the Kouakouala and Loufika permits, covering respectively 57% and 88% of the permits.
- Critical Habitat coverage is high in all four permits (>69%). The Loufika permit area is of the highest importance with both a high % of CH cover and significant numbers of CH species.
- Some land cover types harbor more CH species than others (e.g. forests and wetlands).

# The seven Paragraph 9 Critical Habitat Criteria

1. Critically Endangered and Endangered Species
2. Endemic and restricted-range species
3. Migratory and Congregatory Species
4. Unique assemblages of species
5. Key evolutionary processes
6. Key ecosystem services
7. Biodiversity of significant social, economic or cultural importance to local communities

IFC International Finance Corporation WORLD BANK GROUP

# Criteria 1-3

- Earlier application of PS6 involved delineating very specific portions of habitat within the project area of influence as Critical Habitat which does not have any ecological sense and leaves little room for management intervention
- It is important to include unites of analysis whereby spatial units in which species are found are determined to be Critical Habitat.
- The relevant unit of analysis is first decided: this is a Discrete Management Unit. A discrete management unit is a distinct site whose boundaries can be relatively easily defined as a distinct patch, a mountain or a protected area of some kind.

There is no universally accepted or automatic formula for making determinations on critical habitat. The involvement of external experts and project-specific assessments is of utmost importance, especially when data are limited (as will often be the case.).

# Criterion 4: Highly threatened and/or unique ecosystems

- Consideration of  sites at risk of decreasing in area or quality
- Small spatial extent (globally)
- Contain unique assemblages of species
- Includes areas determined to be of high significance based on conservation planning carried out by governmental bodies, academic institutions and/or other relevant qualified organisations (e.g., NGOs)
- Areas recognised as having high conservation significance in existing regional or national plans, such as the NBSAP
- See also IUCN Red List of protected species

IFC | International Finance Corporation
WORLD BANK GROUP

# Criterion 5: Key Evolutionary Process

- Features in a landscape that are potentially ‘spatial catalysts’ for evolutionary and ecological processes.
- Leading to species diversification
- Primary examples:
  - Small Islands
  - Isolated mountains (inselbergs)
  - Thermal vents, seamounts

IFC International Finance Corporation WORLD BANK GROUP

# PS6 requirements for CH Para 17.

NO GO unless all of the following are demonstrated:

- No viable alternatives
- No measurable adverse impacts on the biodiversity values for which the CH was designated, and on the ecological processes supporting those biodiversity values
- No net reduction in the global and/or national/regional population of any CR or EN species
- Implementation of a robust, appropriately designed, long-term biodiversity monitoring and evaluation program

# PS6 requirements for CH Para 18 and 19.

- **P. 18: the project's mitigation strategy will be described in a Biodiversity Action Plan and will be designed to achieve net gains15 of those biodiversity values for which the critical habitat was designated.**

- **P 19: In instances where biodiversity offsets are proposed as part of the mitigation strategy, the client must demonstrate through an assessment that the project's significant residual impacts on biodiversity will be adequately mitigated to meet the requirements of paragraph 17**.

- Offsets are difficult, costly and controversial tools for conservation, and the advice is to avoid them through the full application of the Mitigation Hierarchy.

# Biodiversity Action Plan (BAP)

**Required for IFC's internal purposes to describe corrective actions for fulfilling compliance with Performance Standard 6.**

**BAP can be defined differently by some stakeholders**

## Purpose of BAPs

**Address corrective actions**

**Demonstrate leading practice**

## BAP Framework

| ID | Topic/ Aspect | Action Description | Completion Indicator | Timeframe[2] |
|---|---|---|---|---|
| Implementation of Onsite Mitigation Measures | | | | |
| 1 | Bird Flight Diverters | OT will :(i) complete installation of flight diverters on high-voltage power transmission line from the Chinese border to the Oyu Tolgoi site;<br>(ii) complete installation of flight diverters on medium-voltage power transmission lines from the Oyu Tolgoi site to the Gunii Hooloi borefield.<br>(iii) complete installation of flight diverters on medium-voltage power transmission lines from the Oyu Tolgoi site to Khanbogd *soum* centre. | (ia) Begin installation of flight diverters on high-voltage power transmission line<br>(ib) Complete installation of flight diverters on high-voltage power transmission line<br>(iia ) Begin installation of flight diverters on medium-voltage power transmission lines | (ia) Q1 2012<br>(ib) Q2 2012<br>(iia) Q3 2012<br>(iib) Q2 2013 |
| | | (flight diverters include "Bird Mark – Model BM-AG (After Glow)"; and the "Swan " spiral flight diverter). | (iib) Complete installation of flight diverters on medium-voltage power transmission line | |



IFC International Finance Corporation WORLD BANK GROUP

# Biodiversity monitoring & Evaluation plan

**Required to monitor habitats and species over life of project in Critical Habitats. Recommended in Natural Habitats.**

**In-field monitoring of high biodiversity values**

**Monitoring implementation & effectiveness of mitigation**

**Monitoring external threats to high biodiversity values**

**Usually designed in consultation with & undertaken by third-parties with biodiversity monitoring experiences e.g. credible conservation organization or university**

**Establish acceptable thresholds of variability for biodiversity values**

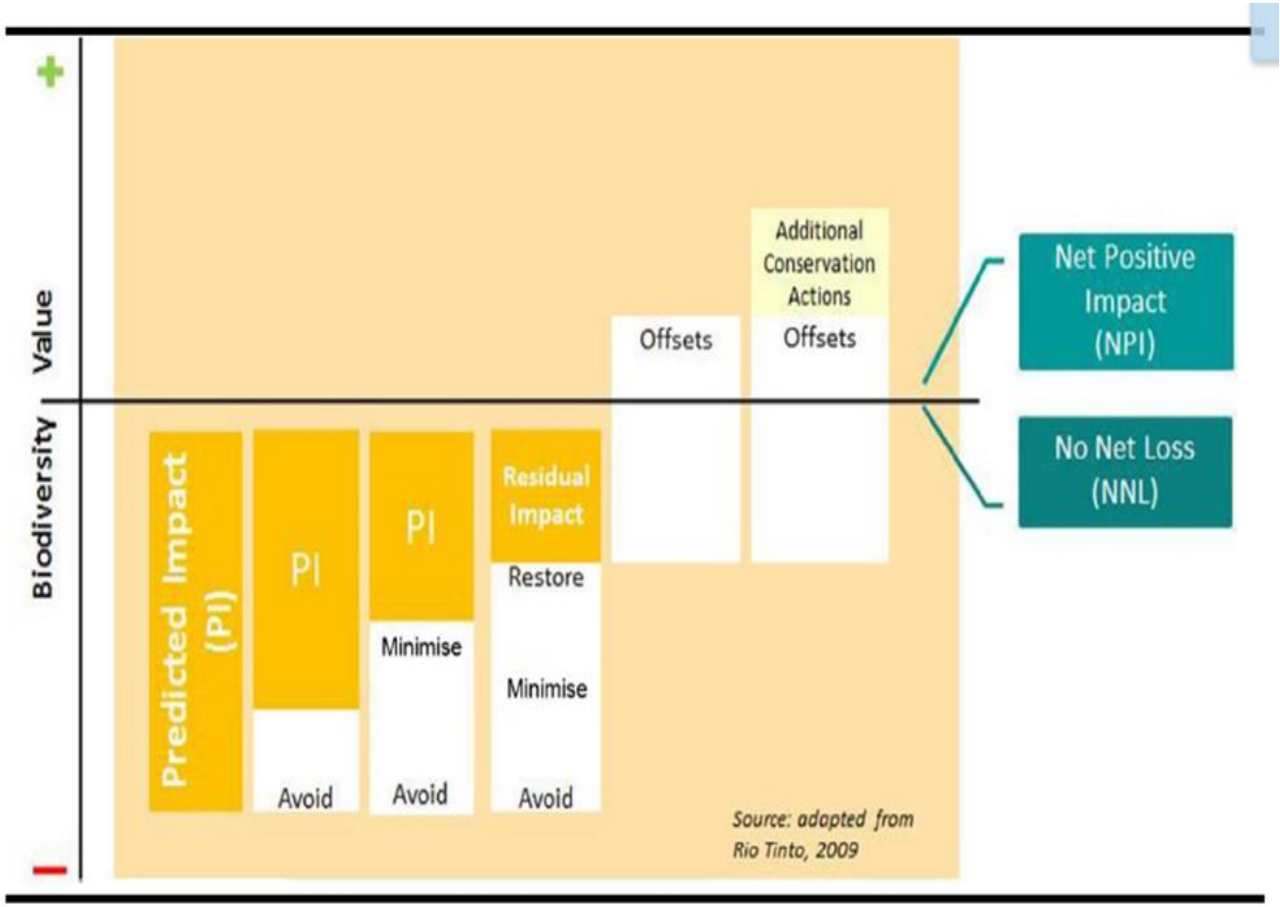
**Measurable results outside thresholds for set time periods indicate non-compliance**

# The mitigation hierarchy and biodiversity offsets for NPI

- Aim of No Net Loss to biodiversity:
  - Demonstrate that a project has NO measurable impacts on **SIGNIFICANT** biodiversity features

- Aim of Net Gain to biodiversity:
  - To demonstrate that the project can provide have a POSITIVE effect impact on **SIGNIFICANT** biodiversity features.

- **All mitigation activities should be quantitatively assessed**




IFC International Finance Corporation WORLD BANK GROUP

# Biodiversity Offsets Management Plan

**To justify and describe implementation of a biodiversity offset.**

- Evidence of mitigation hierarchy?
- Significant residual impacts?
- Regulatory context & political feasibility?
- Biodiversity metrics?
- Biodiversity baseline/counterfactual?
- Biodiversity loss & gain forecast & assumptions?
- Offset sites, actions & dependencies?
- Stakeholder responsibility & capacity?
- Long-term financing & governance?
- Monitoring & evaluation?

BBOP Business and Biodiversity Offsets Programme

IUCN

IFC International Finance Corporation WORLD BANK GROUP

# Other points to note….

- You have to look beyond the site's boundary to meet the requirement "Focus on no measureable impact on the values for which CH designated or the processes that support them"
- There is a requirement to undertake a landscape scale assessment of impacts and mitigation actions / offsets (also for NH)
- Include consideration of habitat fragmentation (also for NH)
- For CR and EN species, 'no net reduction' means globally when the status is IUCN red list and regionally/nationally when status is regional/national
- Species-specific specialists must be engaged when CH due to EN and/or CR species

# PS6 and NPI

- Compliance means NPI in CH, which in turn means:

- Evidence that the MH was adhered to:
  - Avoidance, minimisation and plans for restoration
  - E.g., evidence that infrastructure was sited in Modified Habitat where possible (therefore good idea to map all 3 – MH, NH and CH – at early stages)

- Quantified evidence that offsetting strategy more than equates to the losses that cannot be avoided or restored

- Financing
  - PS6 requires accurate assessment of the real costs required to effectively implement the offset(s) in the long term
  - Trust fund?
  - Consider future fluctuations (e.g., in costs, interest rates, drawn down, etc)

# Take home messages on Critical Habitat

Classification as Critical Habitat is unrelated to the type or scale of impact – it is to do with the ecological sensitivity of the area

Critical Habitat remains Critical Habitat whether triggered by one EN species or twenty EN species

Some Critical Habitatis very difficult to operate within if compliance with PS6 is required or intended

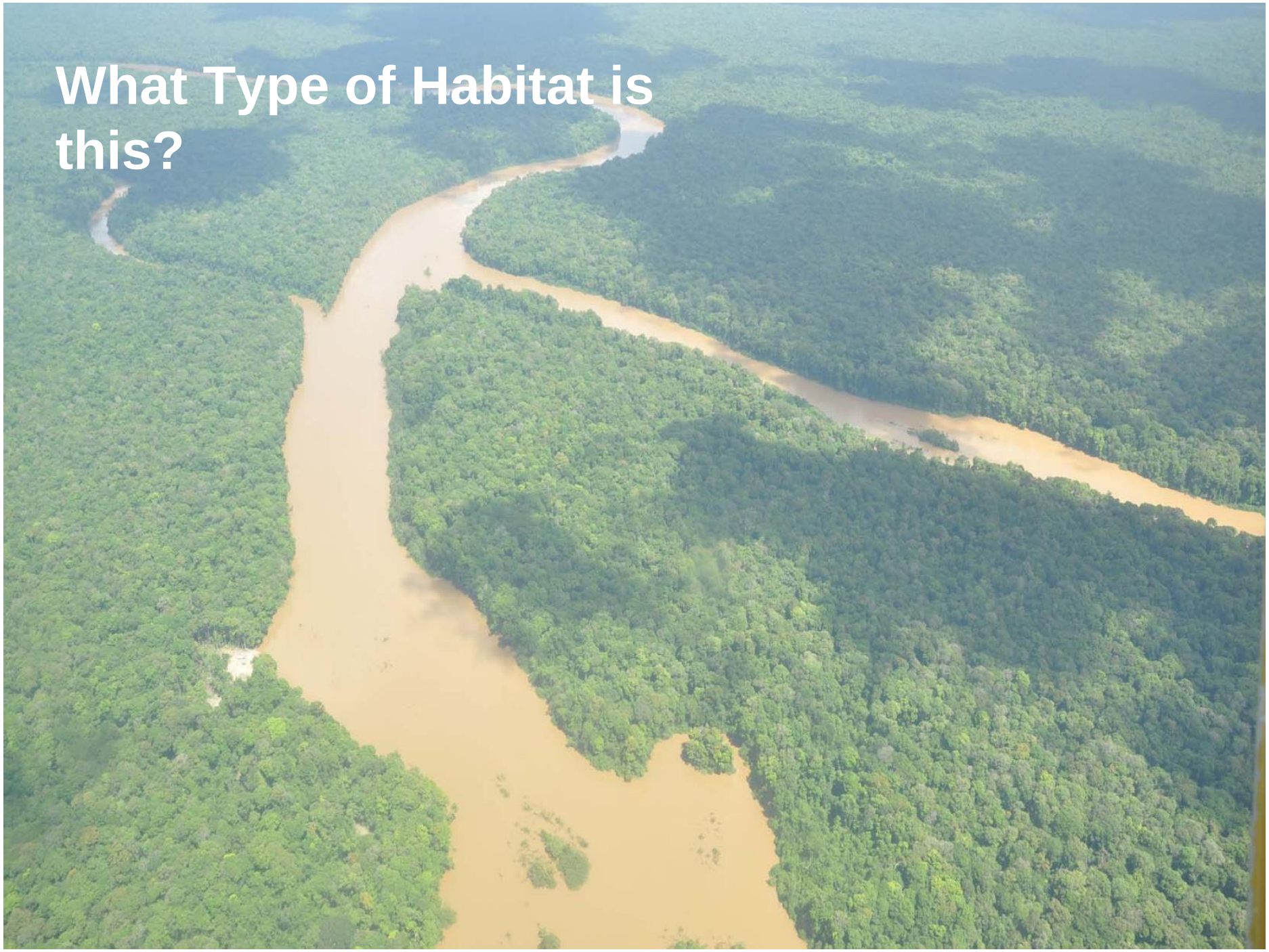
Critical Habitat is not necessarily a No Go for development, but a warning sign for careful mitigation of impacts

PS6 requires demonstration of NET POSITIVE IMPACT where Critical Habitat is affected by the operation

# PS6 in Practice

# What Type of Habitat is this?

# What Type of Habitat is this?


What Type of Habitat is this?

# Final quiz and recap!

https://arcg.is/18X5Du

IFC | International Finance Corporation
WORLD BANK GROUP

# First thing to do

Characterize the area - Which 'habitat' is the project associated with? Modified, natural or critical – without this basis, we will not know which requirements apply

Need to maintain a 'landscape perspective' and not only focus on the concession area

The goal is to understand:

- is habitat truly degraded / modified?
- What are the important biodiversity features associated with the area (and near the area)?

Note that important biodiversity features are often called *biodiversity values* - these will become the focus of mitigation

IFC International Finance Corporation WORLD BANK GROUP

# First thing to do

Conduct a literature review of (i) available environmental studies, scientific literature, and biodiversity data for the area of each concession, (ii) Identify existing eco-regional plans (developed by the government and/or NGOs), NGO conservation initiatives in the areas and their surroundings, protected or recognized areas of importance to conservation, and biodiversity corridors

IFC | International Finance Corporation
WORLD BANK GROUP

# Second

- Carry out interviews with government representatives and relevant conservation NGOs in the country to understand the regional context of each of the areas where the concessions are located and their  importance in terms of biodiversity conservation.

- Carry out interviews with company staff and consultants who were involved in the any previous biodiversity surveys in the areas to obtain an understanding of the biodiversity values of each concession and their  surroundings (area of influence, if possible) and the extent of anthropogenic modification of the concessions and their surroundings.

# Then

Use satellite imagery and vegetation maps to 1) determine major habitat types and 2) map and calculate the area of modified and natural habitat within the project footprint and surrounding area.

If relevant, describe any watershed, interfluvial zone or other relevant defining landscape features in which the concessions are located.

If possible, provide comment on the uniqueness of each concession area with respect to larger landscapes (i.e., is it well-represented? This is an important topic that should be covered as part of the interviews with conservation

organizations).

IFC | International Finance Corporation
WORLD BANK GROUP

# Then

Figura de tipos de vegetación

Figu

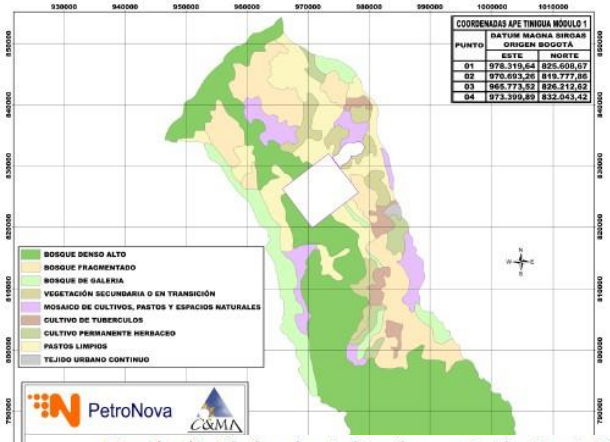
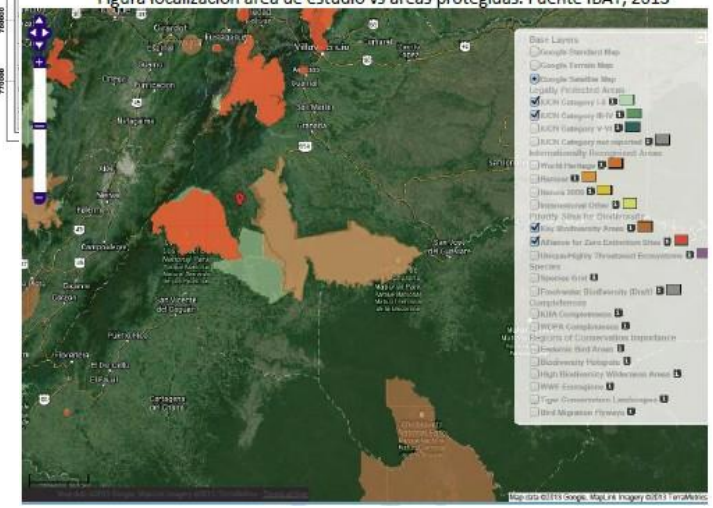



Figura localización área de estudio vs áreas protegidas. Fuente IBAT, 2013



IFC International Finance Corporation WORLD BANK GROUP

# Then

- Objective is to document the current status of the biodiversity and habitats within the concession area. This is essential to establish the conditions that would prevail in the absence of the project and to provide data for assessing risks and managing impacts during exploration.

- The outcome of the biodiversity assessment should be a list of the major ‘biodiversity values’ associated with the study area and its surrounding landscape. These should serve as guiding criteria from which to help design the field surveys.

# Then

- Surveys within the major habitat types within the concession areas (how many days/nights of sampling in each habitat type?).
- Sampling of a range of taxonomic groups, including plants, large and small mammals, birds, reptiles and amphibians, and select insect groups (if appropriate).
- If there are significant freshwater resources within the concession, aquatic groups including fishes, benthos and aquatic insects should be surveyed.
- Contract qualified biodiversity experts who know the flora and fauna of the region to conduct the surveys.
- Follow international standards for sampling protocols (see Guidance for suggestions).
- An evaluation of the major habitat types and the extent of anthropogenic disturbance (degradation, invasive species, prior human activities) within the concession areas.  If the sites are a mosaic, provide calculations of the extent of any remnant areas of potential conservation value.

# Then

- Overlay of the concession with established or proposed protected areas, Key Biodiversity Areas (KBAs), Important Bird Areas (IBAs), Alliance for Zero Extinction (AZEs) Sites or habitat of Endangered, Vulnerable or Near Threatened species.
- A map showing the regional context for each concession, including protected areas, corridors, location of each concession with respect to any ecoregional planning of governments/NGOs (this section will incorporate relevant findings from interviews conducted).
- Comment on broad habitat types with respect to the modified and natural habitat definition as defined in Performance Standard 6, including comment on the type and extent of anthropogenic activities.
- Scientific reports for each taxonomic group surveyed, including lists of species recorded and sampling details (location, dates, points length, methods, field workers, etc)
- Description of biodiversity values for each concession with respect to para. 16 of Performance Standard 6.
- Provide comment on any other biodiversity values of importance in each concession area, such as Critically Endangered or Endangered species, CITES species, endemic species, etc.
- Identification of any data gaps.

# Then

- The data should be evaluated by a well-qualified person/consultant using PS6 criteria and the Guidance Note for PS6 (GN6) to determine if the area qualifies as Critical Habitat or Natural Habitat.
- *Keep in mind that critical habitat is determined based on the biodiversity values inherent to an area and is irrespective of the impacts that the project may have on these values.* If the area qualifies as Critical Habitat, the project will be required to demonstrate Net Positive Gain of the important biodiversity values identified. If the area is categorized as Natural Habitat, No Net Loss of Biodiversity (where feasible) is required.
- IFC primarily focuses on the following 'criteria' for determining Critical Habitat. The selection of a 'priority' list of high biodiversity values is often based on their regional (or global) vulnerability and irreplaceability.
  - IUCN (global) Critically Endangered (CR) or Endangered (E) species;
  - Endemic / restricted range species (are there any species endemic to the area?);
  - Migratory and/or congregatory species with globally significant concentrations;
  - Highly threatened (in the region) and/or regionally unique ecosystems.
  - Key evolutionary processes.

# Assess Impacts

- Conduct an assessment of potential impacts of the exploration activities on important biodiversity values (both species and habitats) identified through Activities 1-5.

- Predict the impact magnitude for both direct and indirect impacts. Evaluate how the environmental status will change due to the project. Include calculations of how much forest will be cleared for exploration and evaluate the indirect impacts (e.g. in-migration or invasive species) that roads may bring.

- Evaluate significance of the impacts on each key biodiversity value

IFC | International Finance Corporation
WORLD BANK GROUP

# Assess Mitigation Options

- Apply the mitigation hierarchy as described in PS6 to avoid, minimize or remedy the impacts from exploration activities on sensitive biodiversity areas, focusing on avoidance as a first step (location of access roads, camp infrastructure, etc). If avoidance is not possible then minimizing and mitigating any impacts on-site (restoration, changing operations to have less impact, etc.).

- Develop a set of mitigation measures that can be incorporated into the project Standard Operating Procedures (SOPs).

- After mitigation is taken into account, determine the residual impact and its significance. Identify impacts that cannot be avoided or mitigated and thus will need to be offset.

- As part of the subsequent ESIA and Feasibility Study process, the project should take into account the biodiversity values identified during the biodiversity assessment and incorporate these findings into future design work (Alternatives Analysis!).

# Biodiversity offsets

Considered after appropriate avoidance, minimization, restoration (“Mitigation Hierarchy”) have been applied

Biodiversity offsets are only to be undertaken if significant residual impacts remain after all prior steps in the mitigation hierarchy have been fully assessed and implemented

IFC | International Finance Corporation
WORLD BANK GROUP

# Biodiversity offsets

Can be many types of activities or “Measurable Conservation Outcomes”

Examples:

Classic - creation of a new area or extending an existing area

Activities in an existing area that are designed to address existing threats (hunting, rangeland management) and increase biodiversity

The design of a biodiversity offset must adhere to the “like- for-like” principle

Must result in “measurable” outcome “on-the-ground”

IFC International Finance Corporation WORLD BANK GROUP

# Biodiversity offsets

Offsets are designed using "loss / gain" methods - i.e., measuring the loss of biodiversity in one area versus the "biodiversity gains" in another area

Loss / gain methods should be as quantitative as possible and a technical rationale should be developed

Must be carried out in alignment with best available information and current practices

External experts with knowledge in offset design and implementation must be involved

IFC International Finance Corporation WORLD BANK GROUP