



WRI INDONESIA

A photograph of a river flowing through a dense, lush green forest. The water is calm and reflects the surrounding trees. In the foreground, the bow of a wooden boat is visible, pointing towards the center of the river. The sky is overcast and grey.

Incorporating Land Use Change Analysis and High Conservation Value Area Identification to Assess Possibility of Land Swap and Better Spatial Planning

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WHY RESTORING LAND?

- Degraded ecosystem reduce ability for ecosystem to provide environmental service.
- Land degradation contributes to poverty and can lead to human-wildlife conflict.
- Bonn Challenge Initiative to restore deforested and degraded land up to 150 million hectare by 2020 and 350 million hectare by 2030 worldwide.

Bonn Challenge Initiative:

To achieve the benefits of restoration, restoration program should be designed based as Forest Landscape Restoration (FLR).

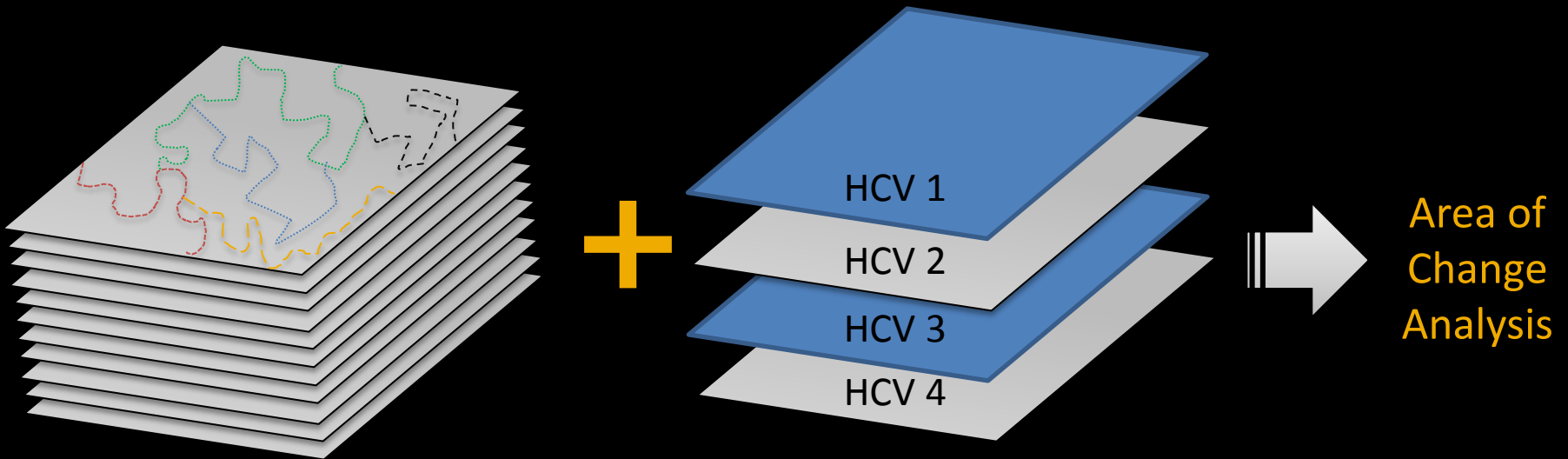
STUDY AREA



ANALYSES

Two spatial analyses:

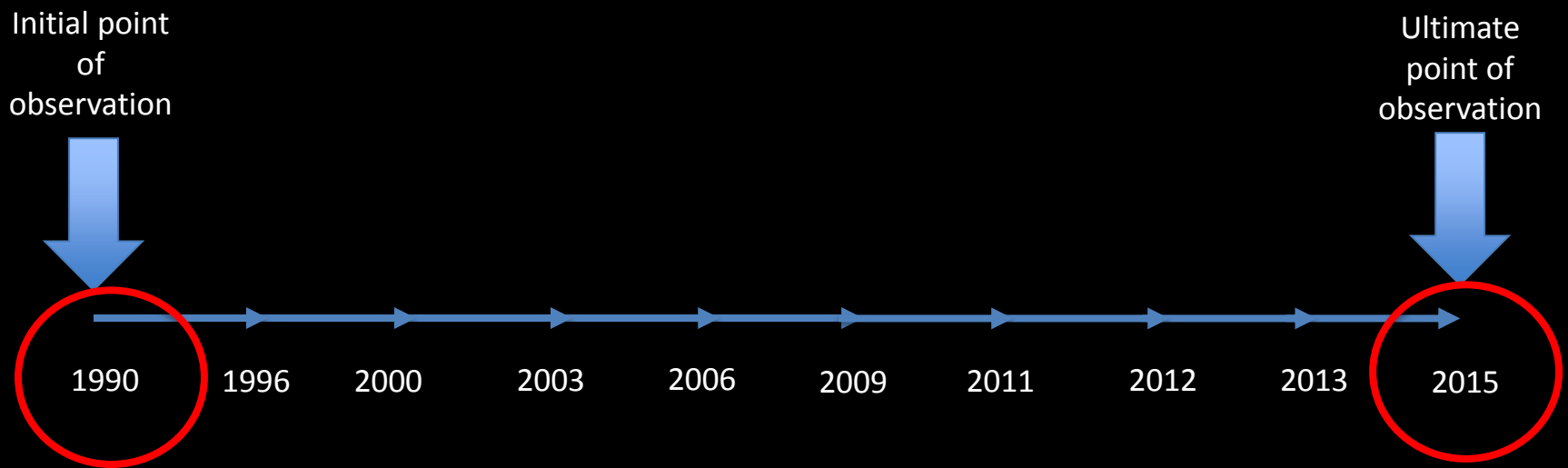
1. Land use change analysis,
2. HCV Area selection.



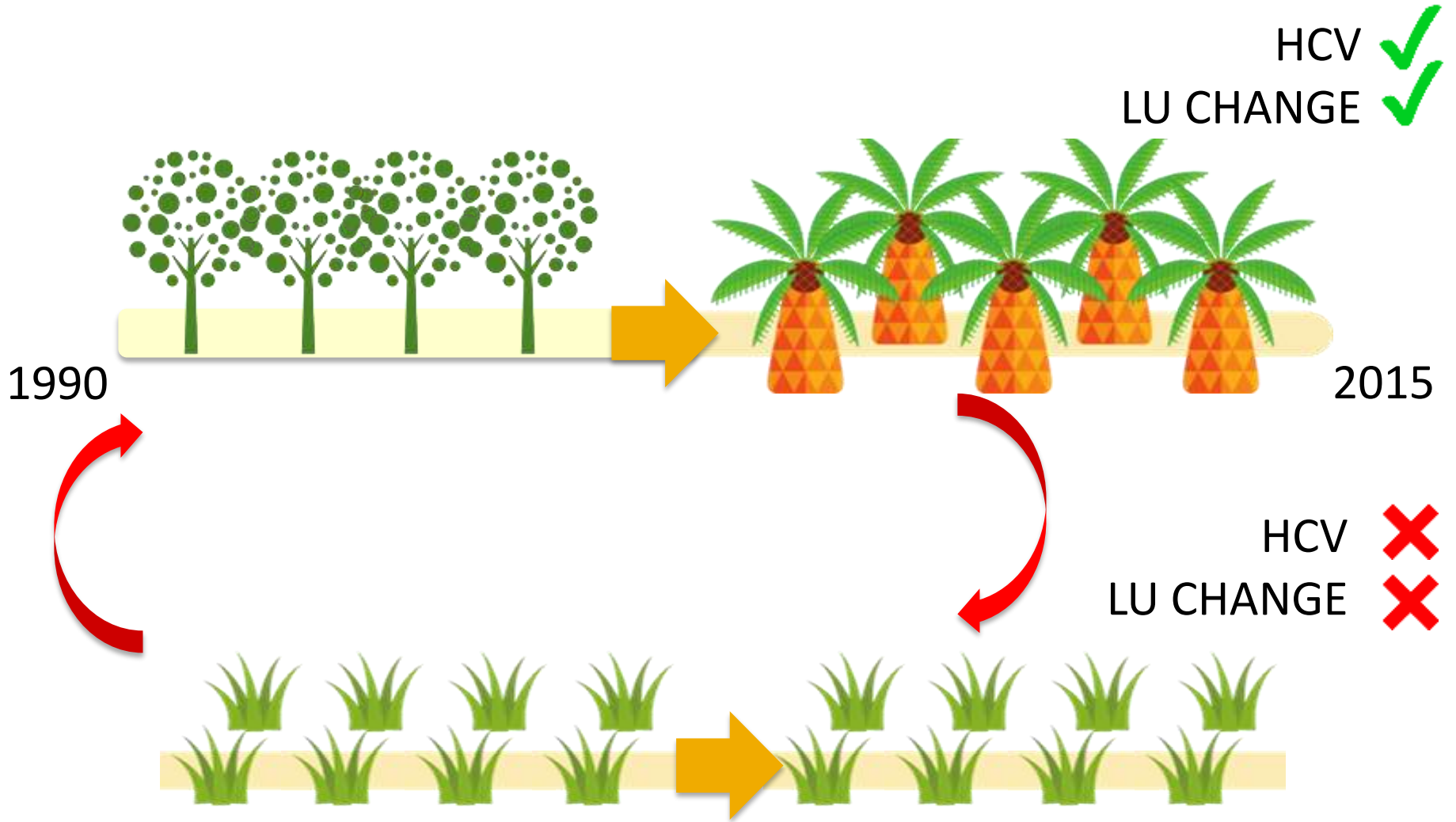
Land use data
(Ministry of Environment and Forestry,
Republic of Indonesia)

High Conservation Value Area Selection

LAND USE DATA



LAND SWAP



HIGH CONSERVATION VALUE

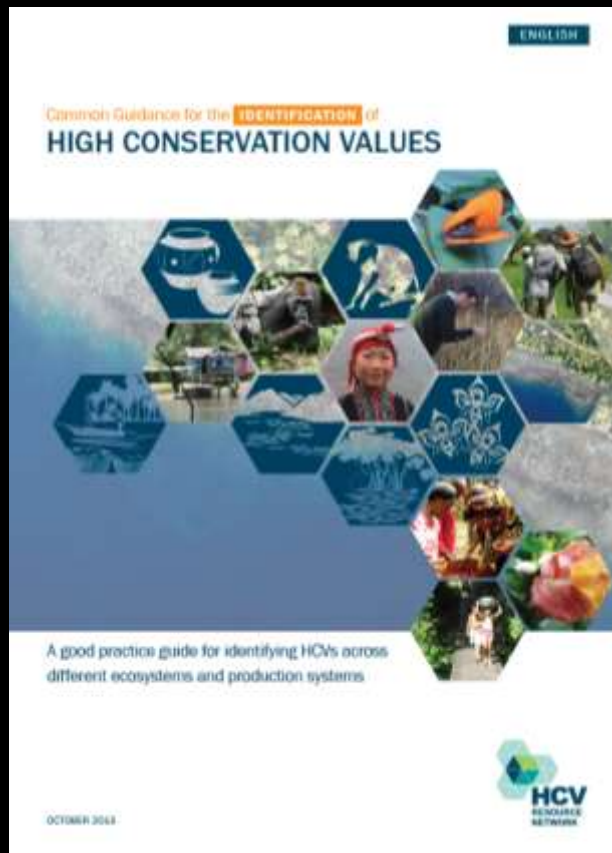
- Firstly developed by Forest Stewardship Council (FSC) to identify forest with conservation importance,
- Nowadays, it does not cover forest area only
→ HCV area,
- The loss or degradation of HCV area leads conservation issues,
- HCV concept applies at **Landscape Level.**

DATA

Land use data

No.	Land use (MoEF)
1	Primary Dry Land Forest
2	Primary Mangrove Forest
3	Primary Swamp Forest
4	Secondary Dry Land Forest
5	Secondary Mangrove Forest
6	Secondary Swamp Forest
7	Plantation Forest
8	Dry Rice Land
9	Dry Rice Land Mixed with Scrub
10	Plantation (Oil Palm, Rubber)
11	Rice Land
12	Fish Pond
13	Swamp Scrubland
14	Swamp
15	Scrubland
16	Savannah
17	Bare Land
18	Airport
19	Housing
20	Mining
21	Transmigration
22	Bodies of Water

HCV Area Identification



GUIDELINES for the IDENTIFICATION
of High Conservation Values in Indonesia
(HCV Toolkit - Indonesia)

by: The Consortium for Revision of the HCV Toolkit for Indonesia

Published by: The Consortium for Revision of the HCV Toolkit for Indonesia

HIGH CONSERVATION VALUE

HCV

HCV 1 - Areas with important level of biodiversity

- 1.1 Areas that Contain or Provide Biodiversity Support Function to Protection or Conservation Areas
- 1.2 Critically Endangered Species
- 1.3 Areas that Contain Habitat for Viable Populations of Endangered, Restricted Range
- 1.4 Areas that Contain Habitat of Temporary Use by Species or Congregations of Species

HCV 2 - Natural Landscapes and Dynamics

- 2.1 Large Natural Landscapes with Capacity to Maintain Natural Ecological Processes and Dynamics
- 2.3 Areas that Contain Representative Populations of Most Naturally Occurring Species

HCV 3 - Rare or Endangered Ecosystems

HCV 4 - Environmental Services

- 4.1 Areas or Ecosystems Important for the Provision of Water and Prevention of Floods for Downstream communities

RIAU

Major Land Use Change 1990 – 2015

**SECONDARY SWAMP
FOREST**



**TIMBER PLANTATION
OIL PALM, RUBBER**

165,455.346 Ha

340,427.349 Ha

A

**SECONDARY DRY
LAND FOREST**



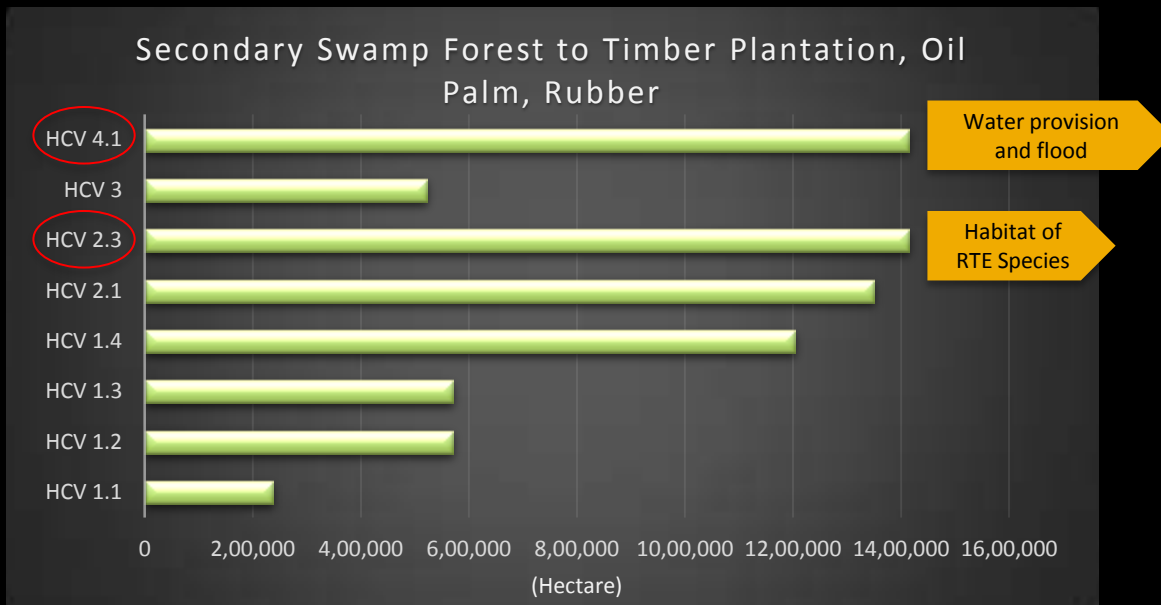
**TIMBER PLANTATION
OIL PALM, RUBBER**

443,982.284 Ha

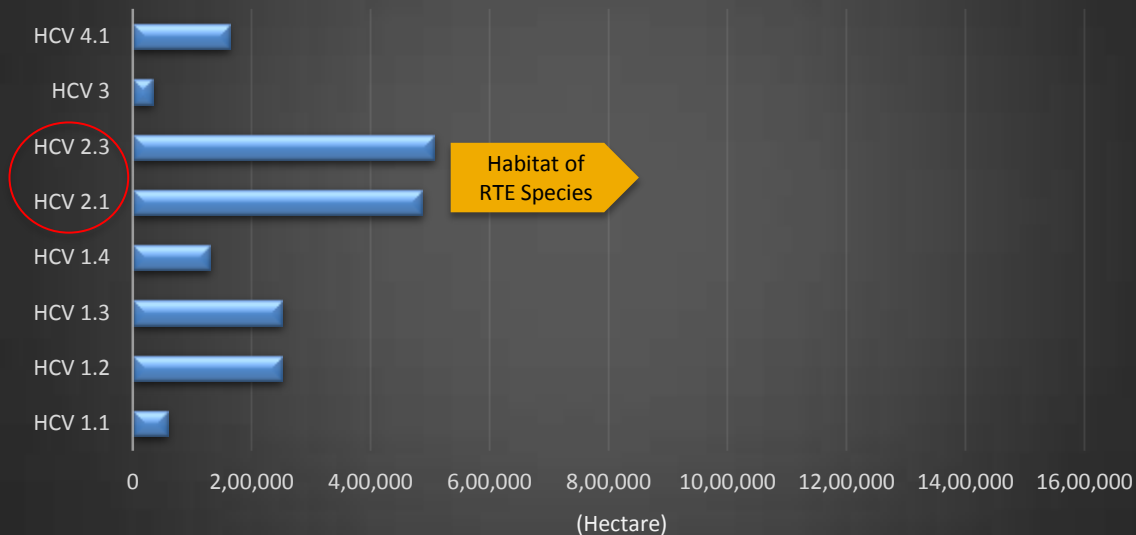
970,975.173 Ha

B

A

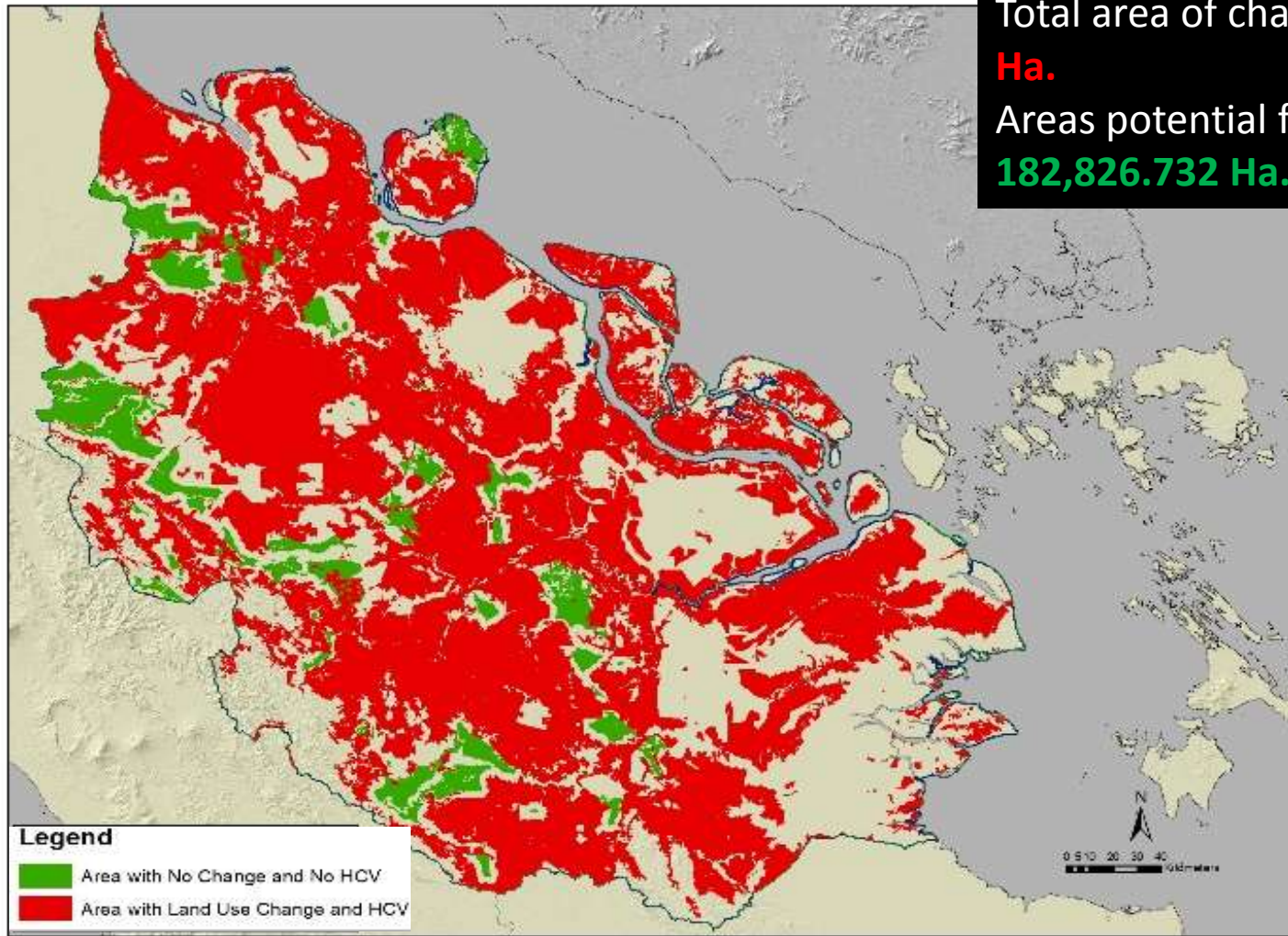


Secondary Dry Land Forest to Timber Plantation, Oil Palm, Rubber



B

RIAU



Total area of change **4,632,305.334 Ha.**

Areas potential for land swap is **182,826.732 Ha.**

SOUTH SUMATRA

Major Land Use Change 1990 – 2015

**SECONDARY SWAMP
FOREST**



**TIMBER PLANTATION
OIL PALM, RUBBER**

137,260.33 Ha

136,653.03 Ha

A

**SECONDARY DRY
LAND FOREST**



**TIMBER PLANTATION
OIL PALM, RUBBER**

64,193.81 Ha

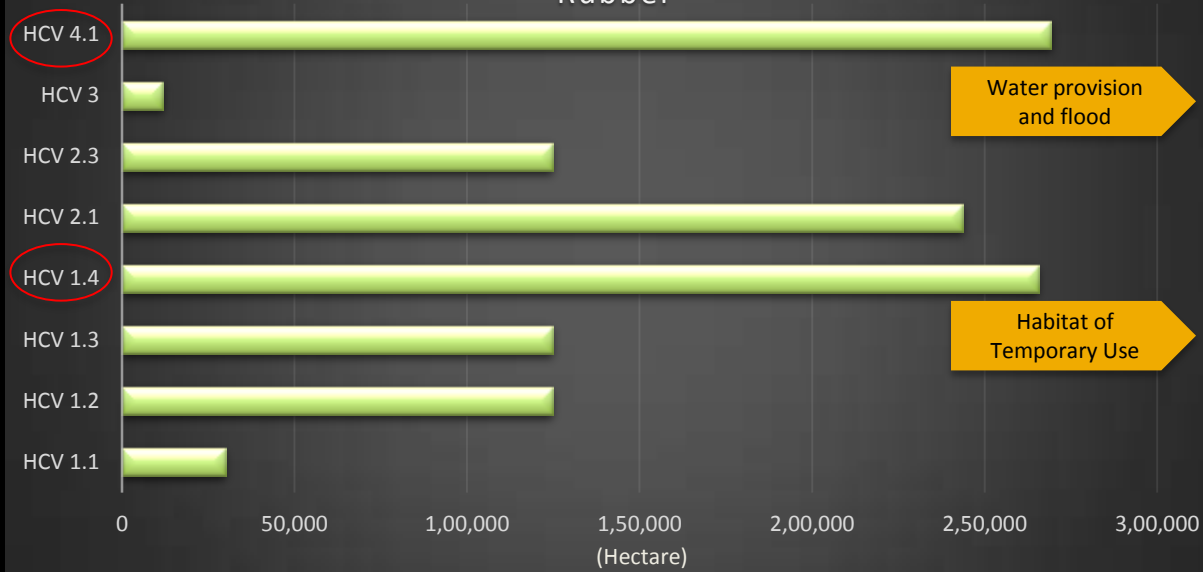
43,649.16 Ha

B

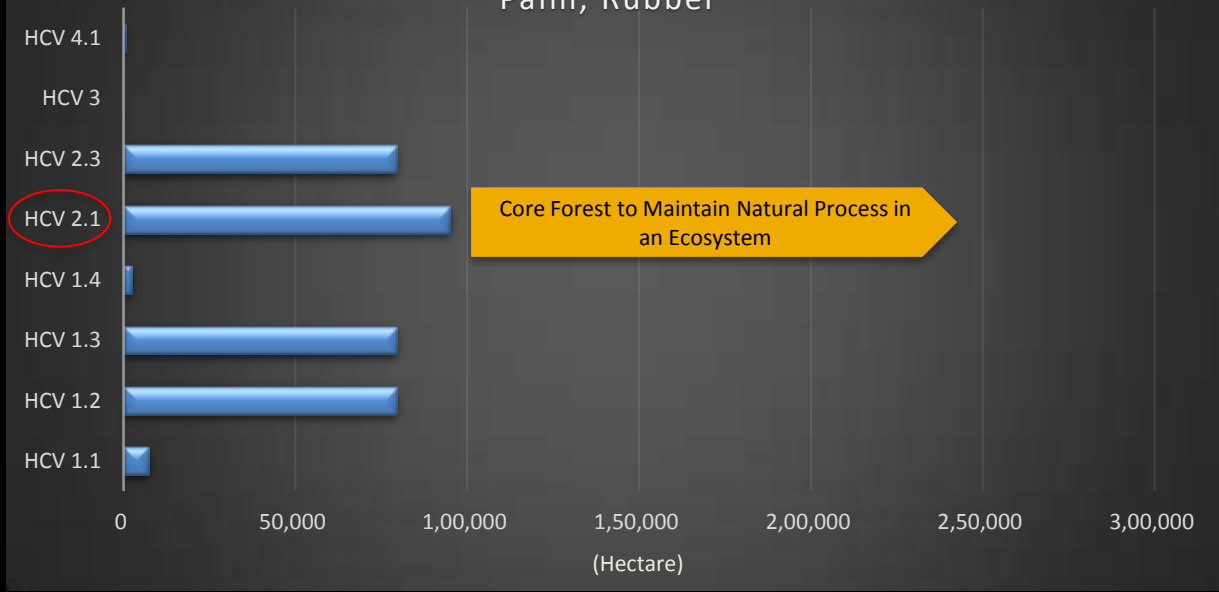
SOUTH SUMATRA

A

Secondary Swamp Forest to Timber Plantation, Oil Palm, Rubber



Secondary Dry Land Forest to Timber Plantation, Oil Palm, Rubber



B

SOUTH SUMATRA

