




# Integrating Biodiversity into Urban Planning – The Case Study of West Java

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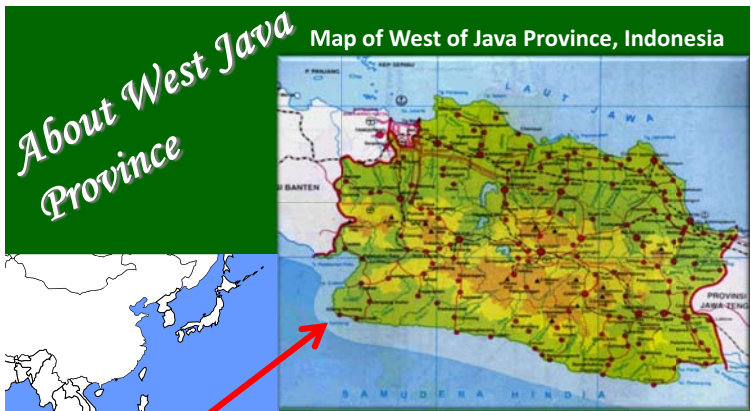



# 1

## Background Information On West Java Province

# About West Java Province

### Map of West of Java Province, Indonesia



**Total area : 35,581 Km<sup>2</sup>**  
**No. of pop. : 42.5 million (2008)**  
**Average of Pop. Growth : 1.80%**

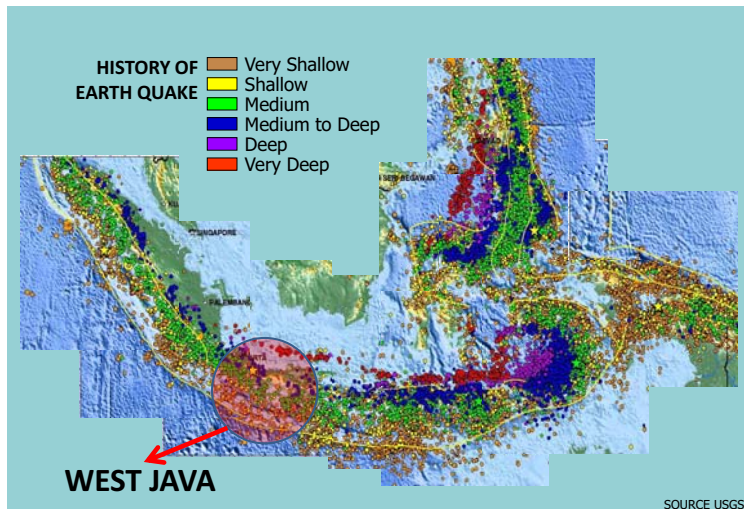
Map of Southeast Asia

### Major Volcanoes of Indonesia (with eruptions since 1900 A. D.)

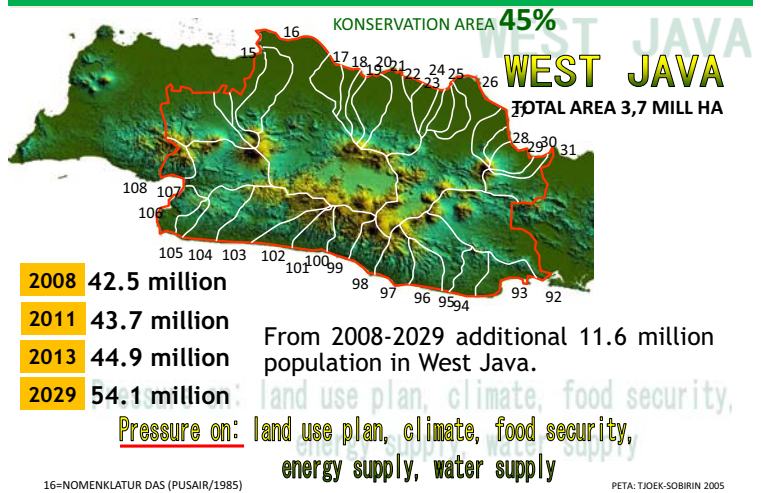


**WEST JAVA**

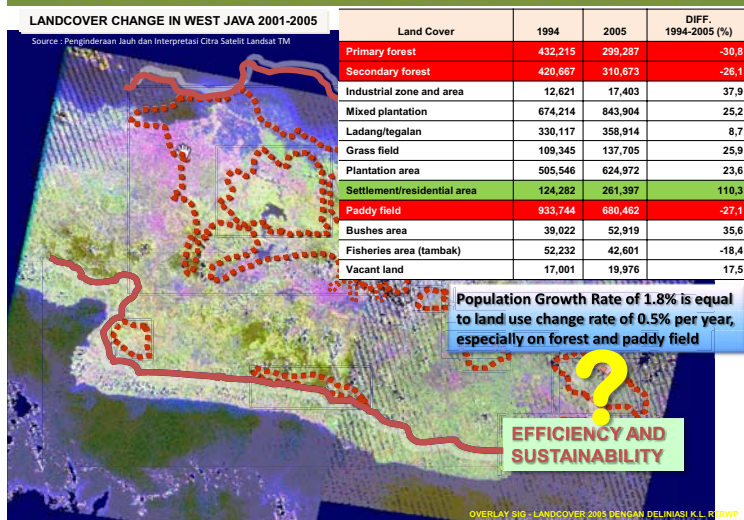
## RING OF FIRE IN INDONESIA



## Key Challenge : Population Growth



## LAND USE CHANGE : GROWTH OF BUILT AREA IN WEST JAVA



## EFFECTS ON BIODIVERSITY IN WEST JAVA PROVINCE

**Land use change** and environmental degradation in West Java also imply on **loss of biodiversity** due to reduction of **natural habitat**, resulting in negative implications on the quantity and quality of biodiversity in West Java.



IUCN world conservation board in 2008 noted that there are **5 mammals**, **7 birds** and **reptiles**, and **8 amphibian** endangered species in West Java.



Source: West Java ASER, 2009

## Vision and Mission of West Java Province

### • Mid-Term Development Plan (RPJMD): 2008-2013

**Vision:** "Independent, Dynamic, and Prosperous West Java in 2013"

**Mission # 4 :** To improve the environmental carrying capacity of West Java Province in supporting and sustaining development process

#### Goals:

1. Control the spread and growth of the population
2. Reduce pollution level, environmental degradation, and disaster risk
3. **Improve the function of conservation area in West Java**
4. Implement a sustainable land use plan
5. Promote alternative environmentally friendly-energy source

### • Long-Term Development Plan (RPJPD): 2005-2025

**Vision:** "West Java to become to most developed province in Indonesia"

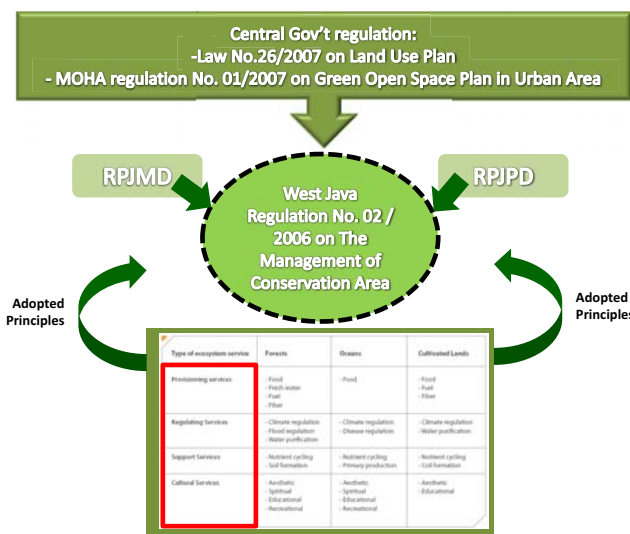
**Mission # 3 :** Improve environmental conservation and sustainability

#### Land Use Plan 2025 :

To Achieve Conservation area coverage of 45% in West Java  
"WEST JAVA GREEN PROVINCE"

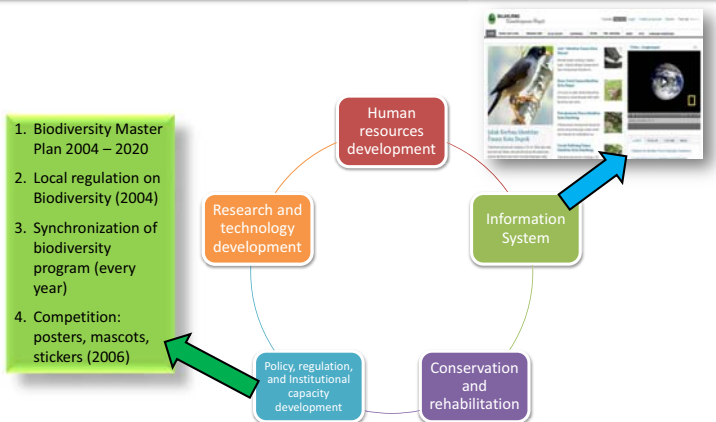


## Policy, Plan, and Strategy of West Java Province in Promoting Urban Biodiversity Conservation



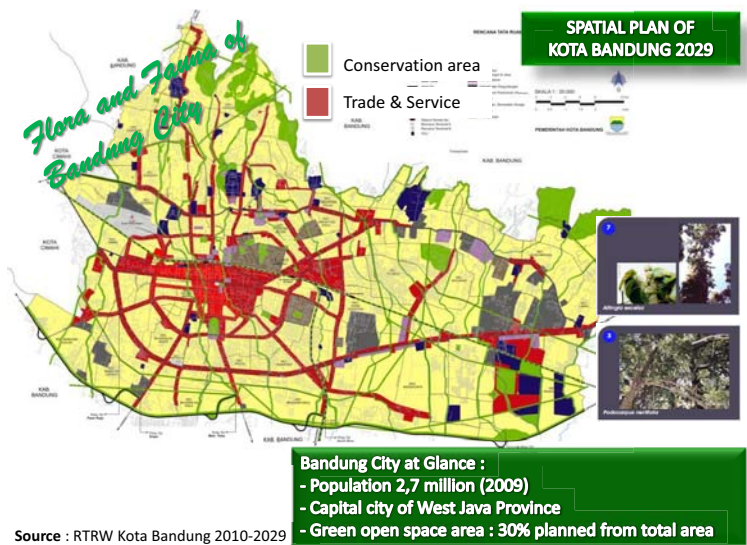
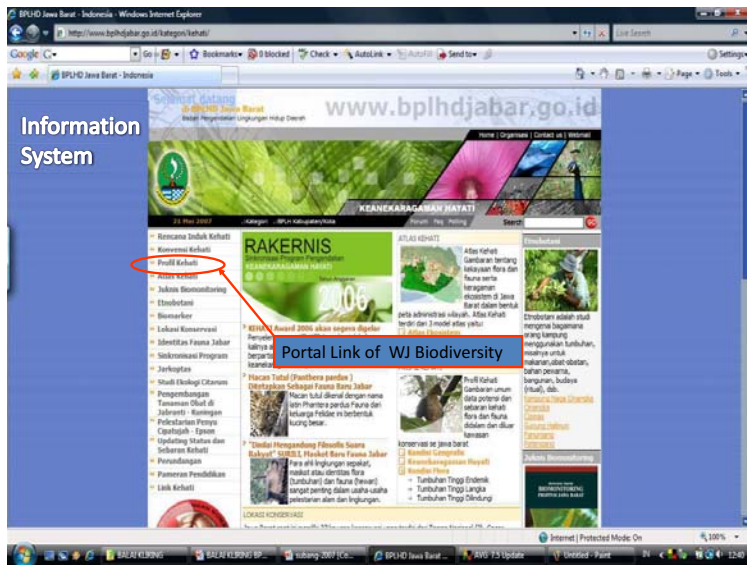
Millennium Ecosystem Assessment 2003 Report "People and Ecosystems : A Framework for Assessment."

## Program for Biodiversity in West Java



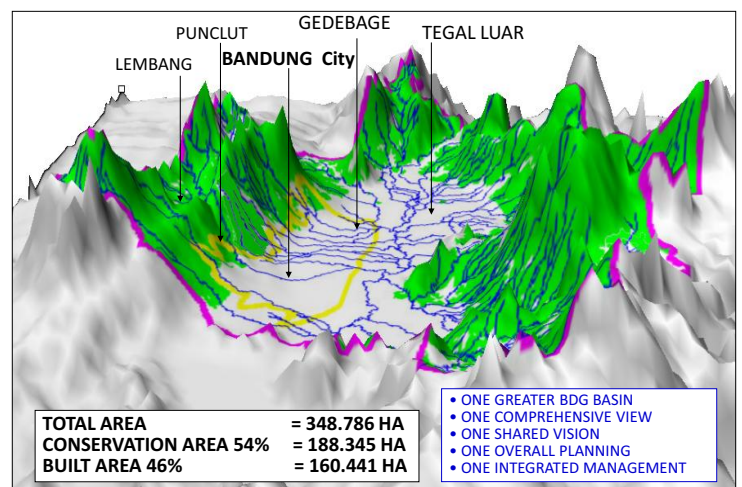
Source: BPLHD Jabar, 2007





Source : RTRW Kota Bandung 2010-2029

## BANDUNG BASIN AREA



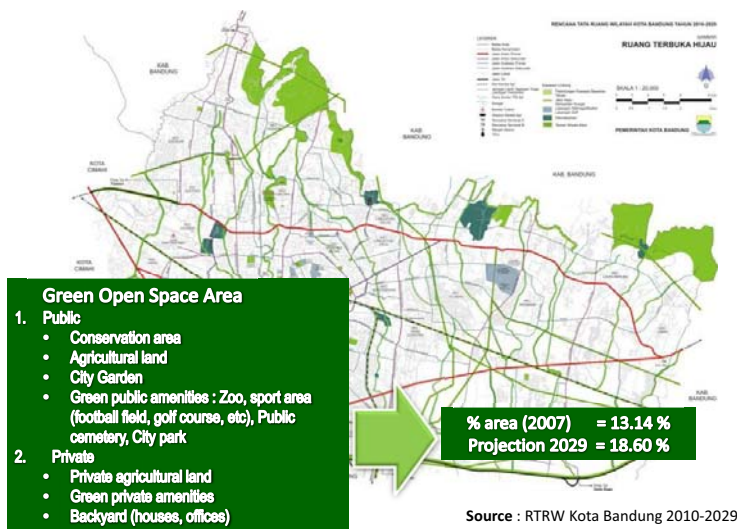
SUMBER 3D: BOBBY WIBOWO/ ITB/ 2004/ DATA: BAPEDA JABAR/ 2004/ DADAT/ 2004/TEKS SOBRIN/ DPKLTS/ 2004

## Public Green Open Space Area

### TAMAN TEGALEGA



### TAMAN LANJUT USIA (LANJIA)



## Public Green Open Space Area



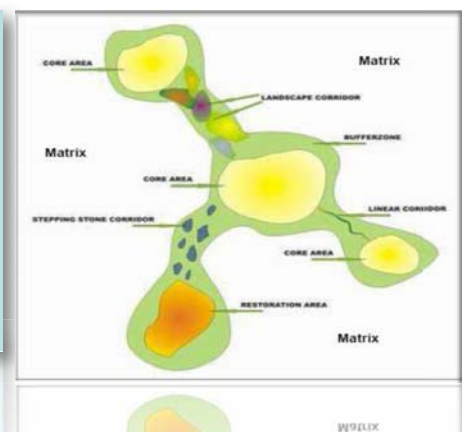
## How ?

## Adopting Ecological Network Approach

### Components of a functioning ecological network...

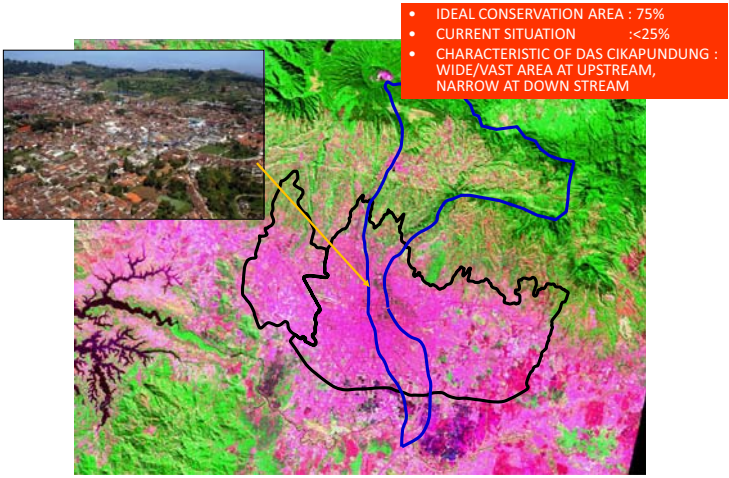
- A **wide vegetation corridor** along major watercourses
- Several large natural areas known as **core areas**
- Connectivity** for movement of species among the core habitat areas, either through wide, continuous corridors or a series of 'stepping stones'
- A **diverse mixture of natural areas** throughout the developed parts of the city that can serve as wildlife habitat or connect other, larger natural areas

Source: Forman, 1995, Land Mosaics





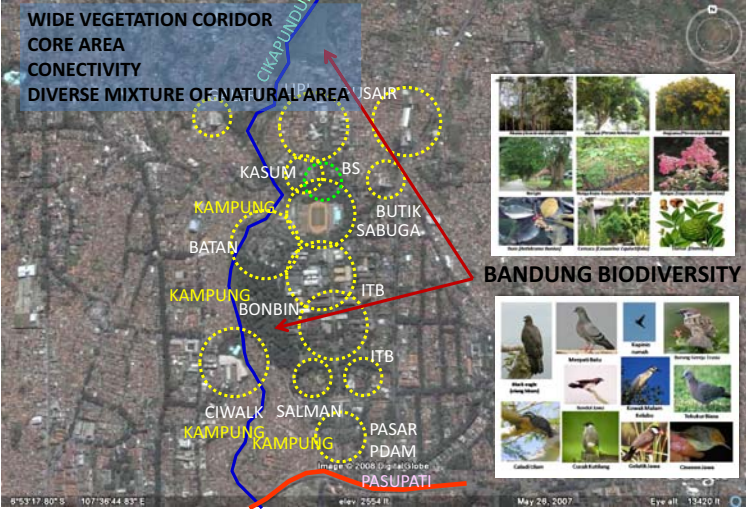
CIKAPUNDUNG SUB WATERSHED



- IDEAL CONSERVATION AREA : 75%
- CURRENT SITUATION : <25%
- CHARACTERISTIC OF DAS CIKAPUNDUNG : WIDE/VAST AREA AT UPSTREAM, NARROW AT DOWN STREAM

CITRA ASTER (2003)/ MILIK: LIPI/ INTERPRETASI BAND 231 VNIR: SOBIRIN/ SEJARAH BANJIR: SOEWARNO/ DUDI EFFENDI/ DPKLTS/ FOTO: DINAS SDAIR

Adopting Ecological Network Approach



OUR BANDUNG

CONSERVATION & SUITABLE LANDUSE FOR CIKAPUNDUNG VALLEY

- GREEN OPEN SPACE
- PUBLIC SPACE
- CITY FOREST
- RUSUNAMI (VERTICAL HOUSING)
- RUSUNAWA
- RIVERFRONT HOUSING
- RIVER AMENITY
- CAMPUS
- ART MARKET

SOB 2008

CIKAPUNDUNG EDUCATIONAL AND CULTURAL VALLEY

Plan: Vertical development



Source : RTRW Kota Bandung 2010-2029

WATERSHED-BASED PLANNING : SUB-DAS CIKAPUNDUNG

## Plan: Vertical development



Source : RTRW Kota Bandung 2010-2029

## “One Village One Playground”



## Challenges and Lessons Learnt

Challenges	Lessons Learnt
<ul style="list-style-type: none"> <li>• Difficult to obtain private owned-land</li> <li>• Requires commitment and resources in socializing and implementing the concept</li> <li>• Requires multi-sectors &amp; multi-stakeholders cooperation</li> </ul>	<ul style="list-style-type: none"> <li>• Creative approach, rather than Technical approach is more successful in reaching “the mind and the heart” of local people</li> <li>• Land obtained through CSR scheme is still owned by corporation (albeit should be committed as green open space). Thus it can still be counted as company’s assets</li> </ul>





## Urban agriculture, Urban forestry



Source : RTRW Kota Bandung 2010-2029



## URBAN AGRICULTURE

### EXOTIC CHILI OF BANDUNG CITY



SUMBER: WWW.DOTYAHOO.COM



## URBAN AGRICULTURE

### EXOTIC TOMATO OF BANDUNG CITY



SUMBER: WWW.DOTYAHOO.COM

## URBAN AGRICULTURE

### EXOTIC STRAWBERRY OF BANDUNG CITY



SUMBER: WWW.DOTYAHOO.COM



HOME AGRICULTURE WITH OWN ORGANIC FERTILISER



GARBAGE→SEPARATION→COMPOSTING→HOME AGRICULTURE→ZERO WASTE  
(HOUSEHOLD WASTE)

SOBIRIN DPKLTS/ ALFA 92 BDG/ 2006

*Thank You...*