



BMKG Climate Change Adaptation Programs and Activities

Prof. Dr. Edvin Aldrian
Director of Center for
Research and Development
BMKG
IPCC AR5 WG1 Lead Author

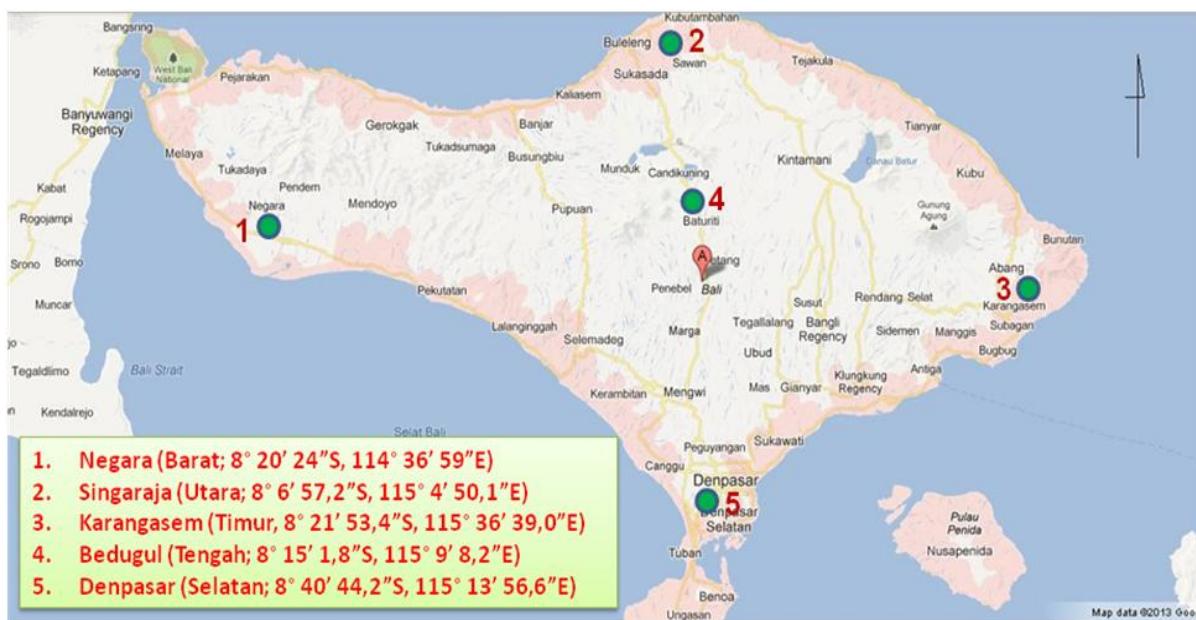


BMKG

OUTLINE

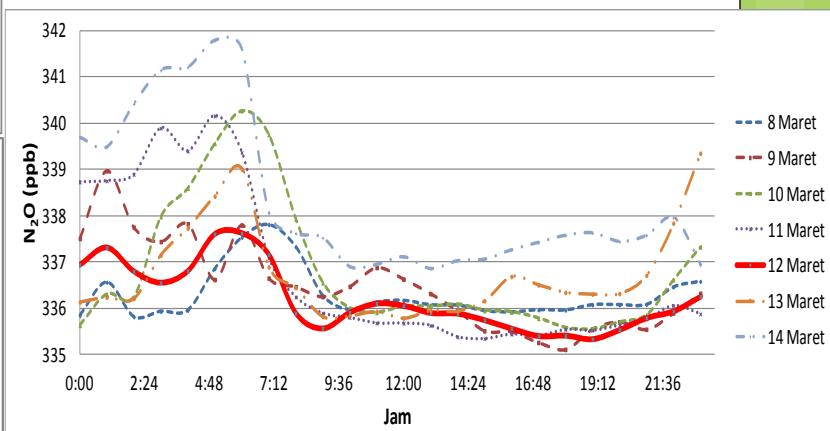
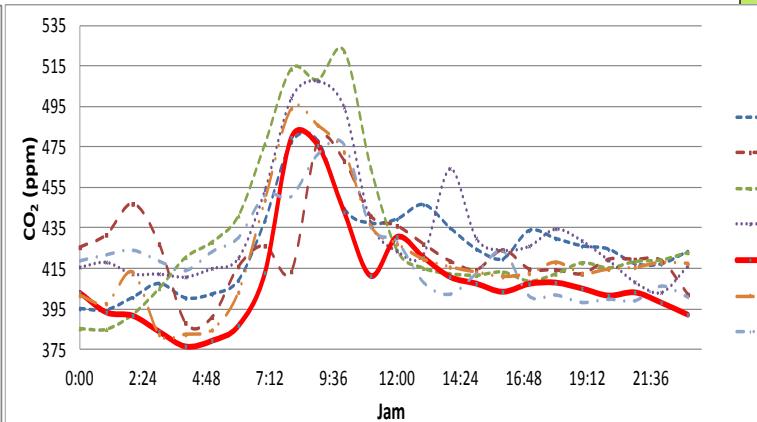
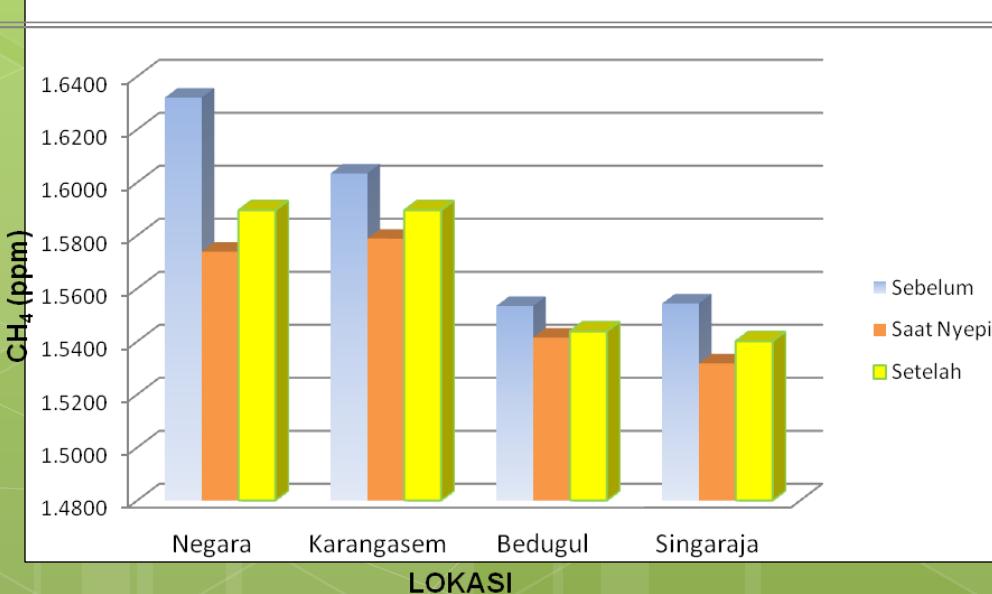
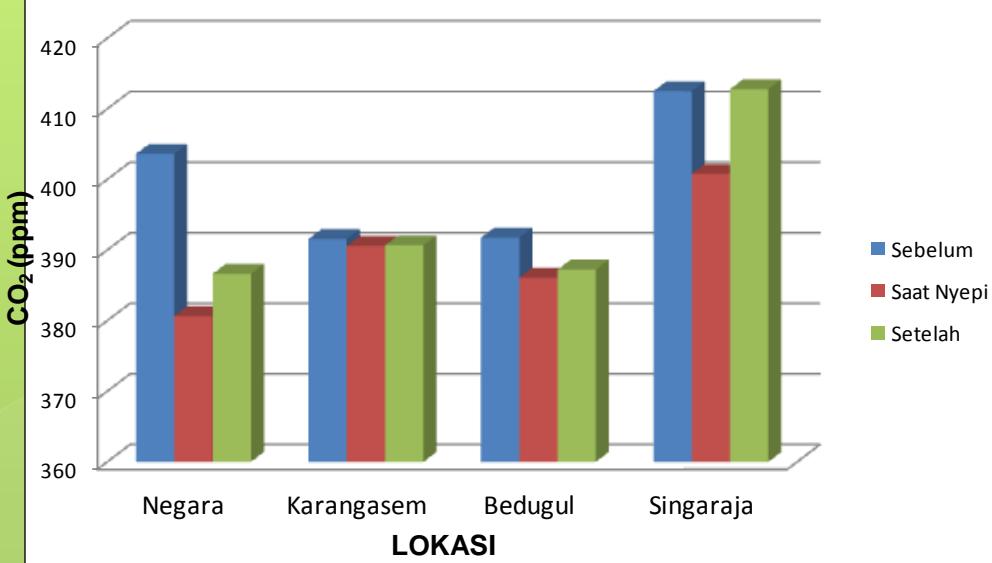
- Human activity and climate change
- Vulnerability map of paddy in Bali
- *Climate Field School*
- Sectoral impact assessment
- Public awareness
- *Conclusions*

Reduction of GHG concentration during Nyepi Hindu day



Nama Lokasi :	Negara	Singaraja	Karangase m	Bedugul	Denpasar
Koordinat	: $8^{\circ} 20' 24"S, 114^{\circ} 36' 59"E$: $8^{\circ} 6' 57,2"S, 115^{\circ} 4' 50,1"E$: $8^{\circ} 21' 53,4"S, 115^{\circ} 36' 39,0"E$: $8^{\circ} 15' 1,8"S, 115^{\circ} 9' 8,2"E$: $8^{\circ} 40' 44,2"S, 115^{\circ} 13' 56,6"E$
Metode & Frekuensi Data		: Indirect Measurement (Sampling); Daily Data (14.00 WITA)			: Direct Measurement; Continuous Monitoring; (Data tiap 5 menit)
Alat	: Flask Sampler	: Flask Sampler	: Flask Sampler	: Flask Sampler	: WolfPack® & IRIS 4600
Data GRK	: CO ₂ , CH ₄	: CO ₂ , CH ₄	: CO ₂ , CH ₄	: CO ₂ , CH ₄	: CO ₂ , N ₂ O

Reduction of GHG concentration during Nyepi Hindu day

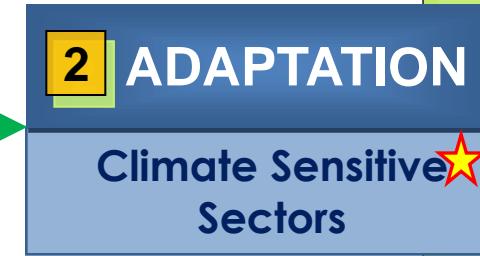
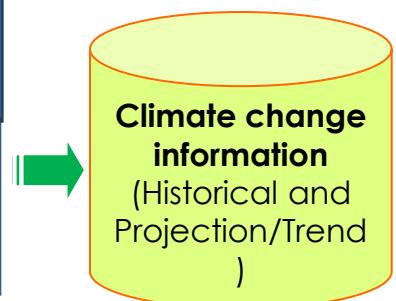


Average reduction 33%



Role of “Scientific Actions” on the Application of Adaptation & Mitigation Measures

BMKG



“Adaptation is managing the unavoidable”
“Mitigation is avoiding the unmanageable”



- Observation - Data Collection
- Research & Modeling
- Capacity Building
- Dissemination of Climate Information



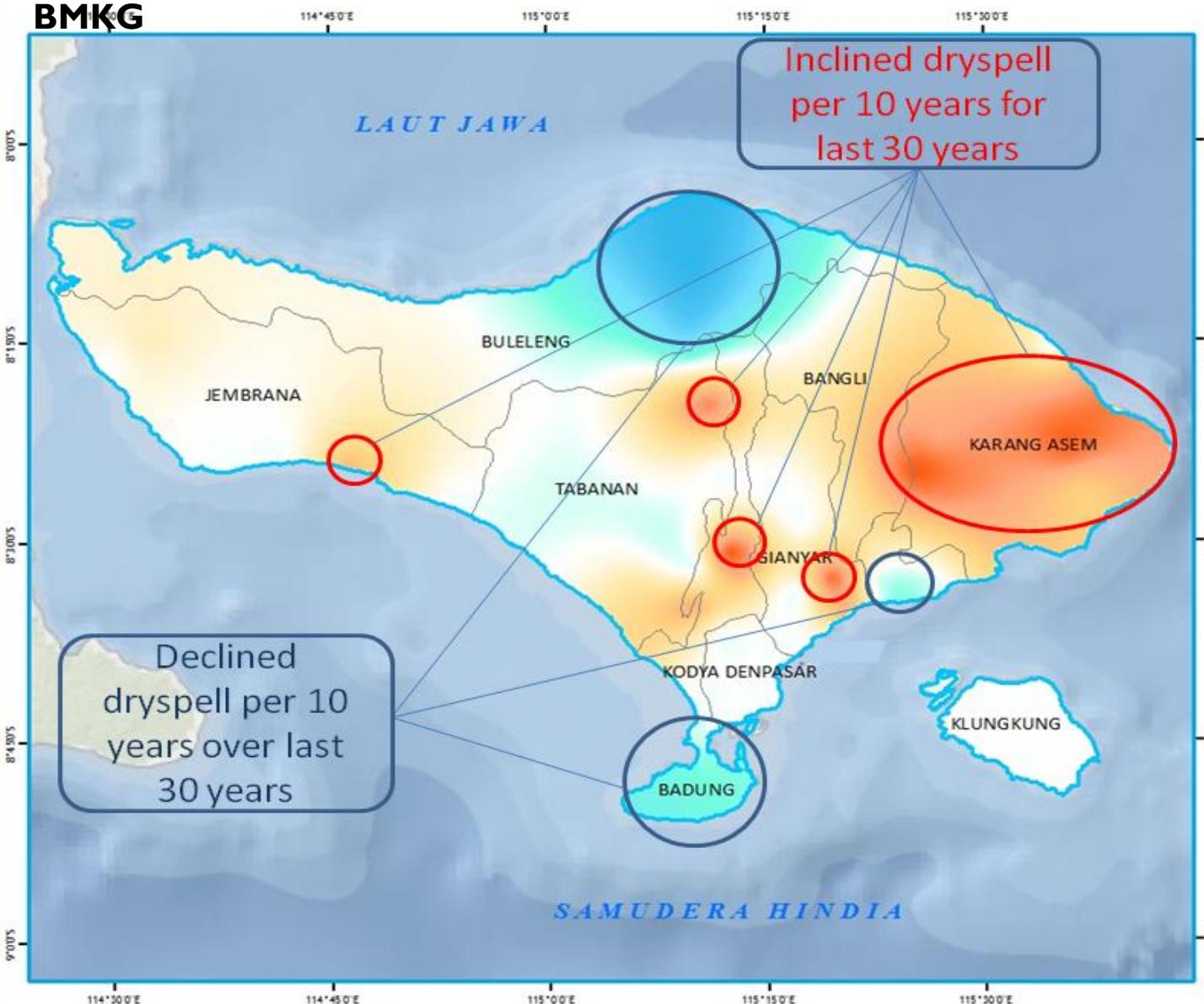
Dep.Finance
Nat'l Dev.Planning Agency
Nat'l Council of C.Change





CLIMATE CHANGE VULNERABILITY MAP in BALI

BMKG

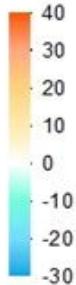


DRY SPELL
TREND



0 4 8 16 24 32 Km

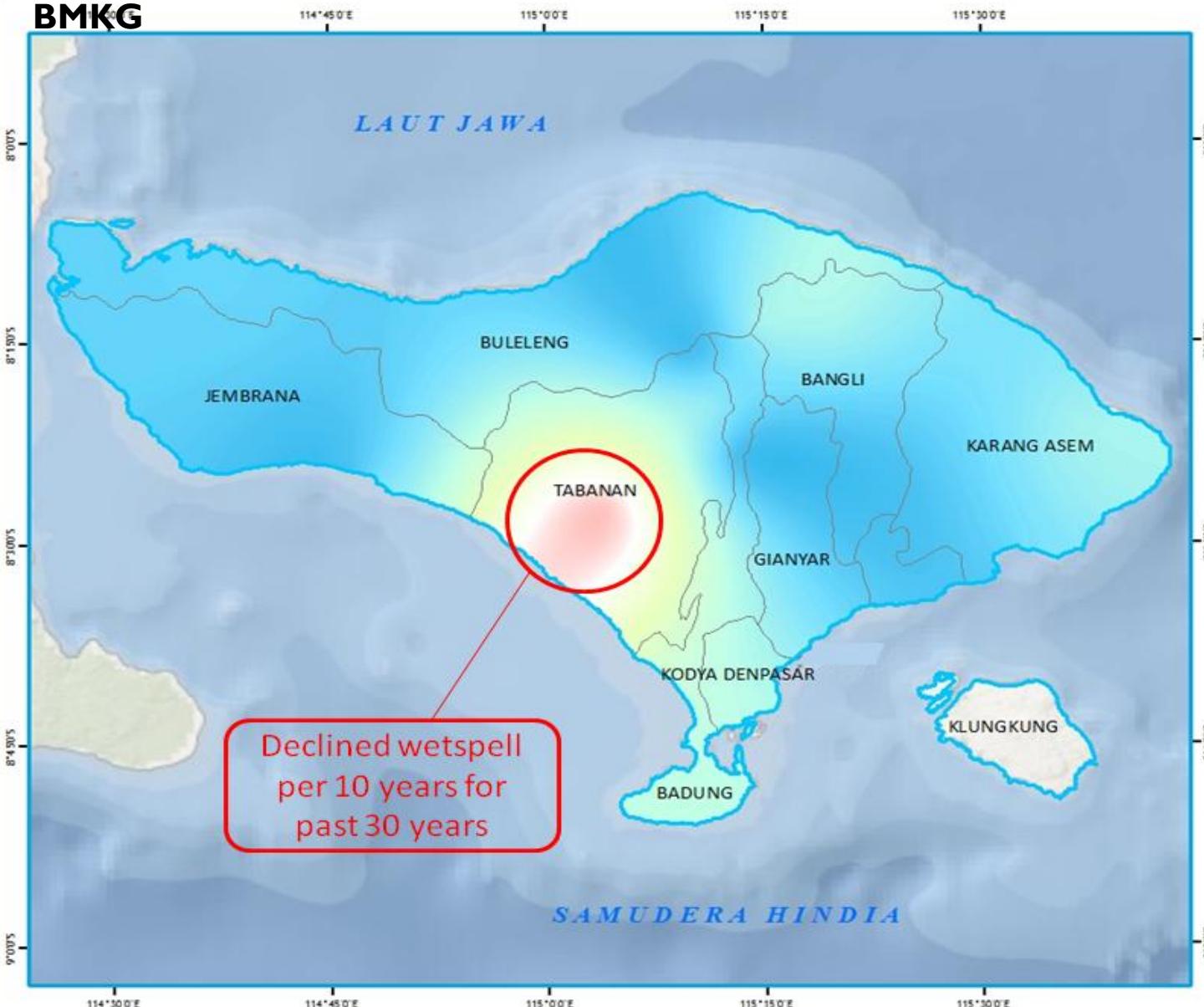
LEGENDA :
(Hari/10 Tahun)





CLIMATE CHANGE VULNERABILITY MAP in BALI

BMKG



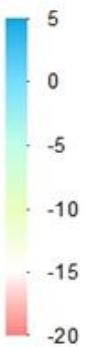
MAP in BALI

WETSPELL TREND



0 4 8 16 24 32 Km

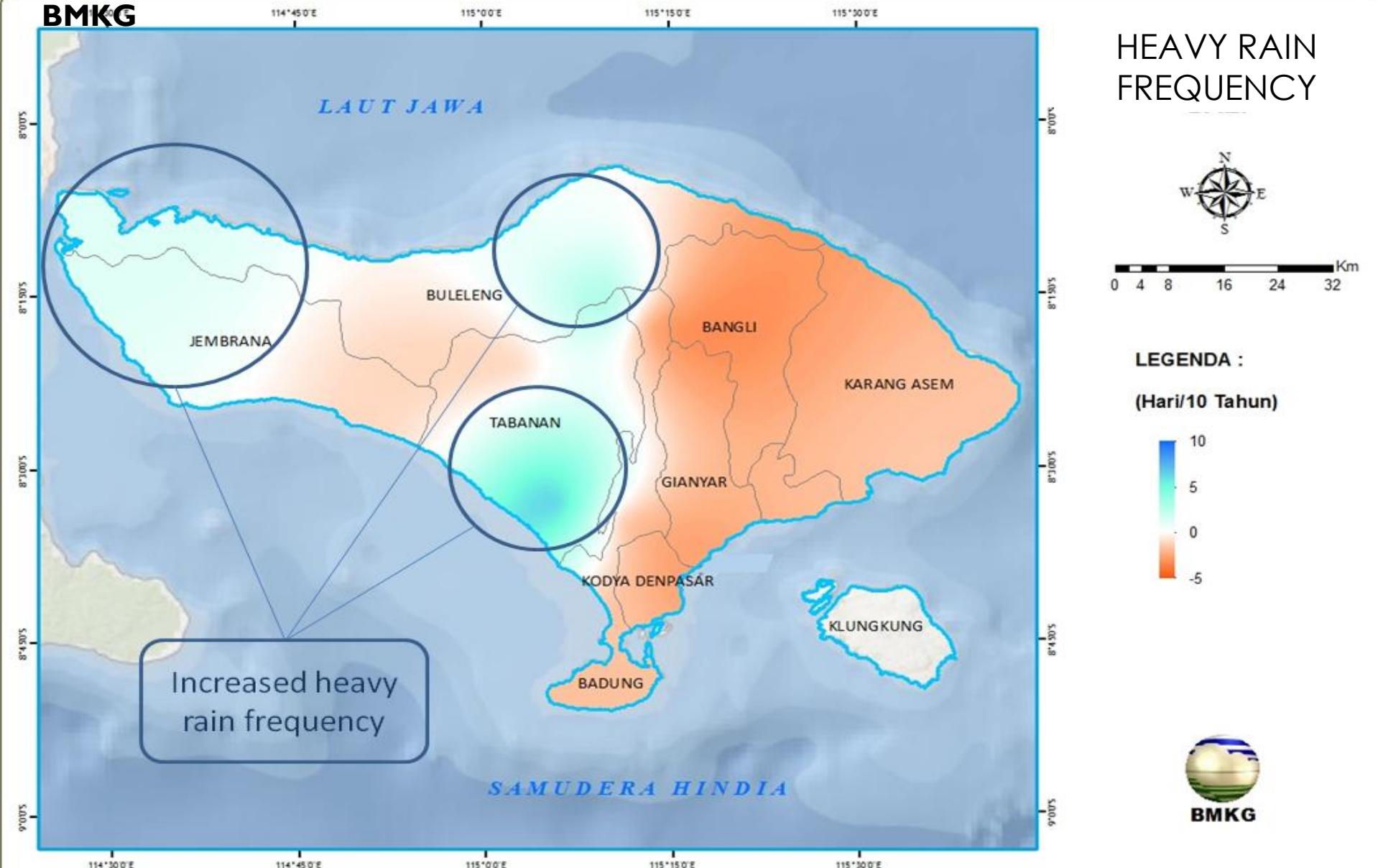
LEGENDA :
(Hari/10 Tahun)





CLIMATE CHANGE VULNERABILITY MAP in BALI

BMKG

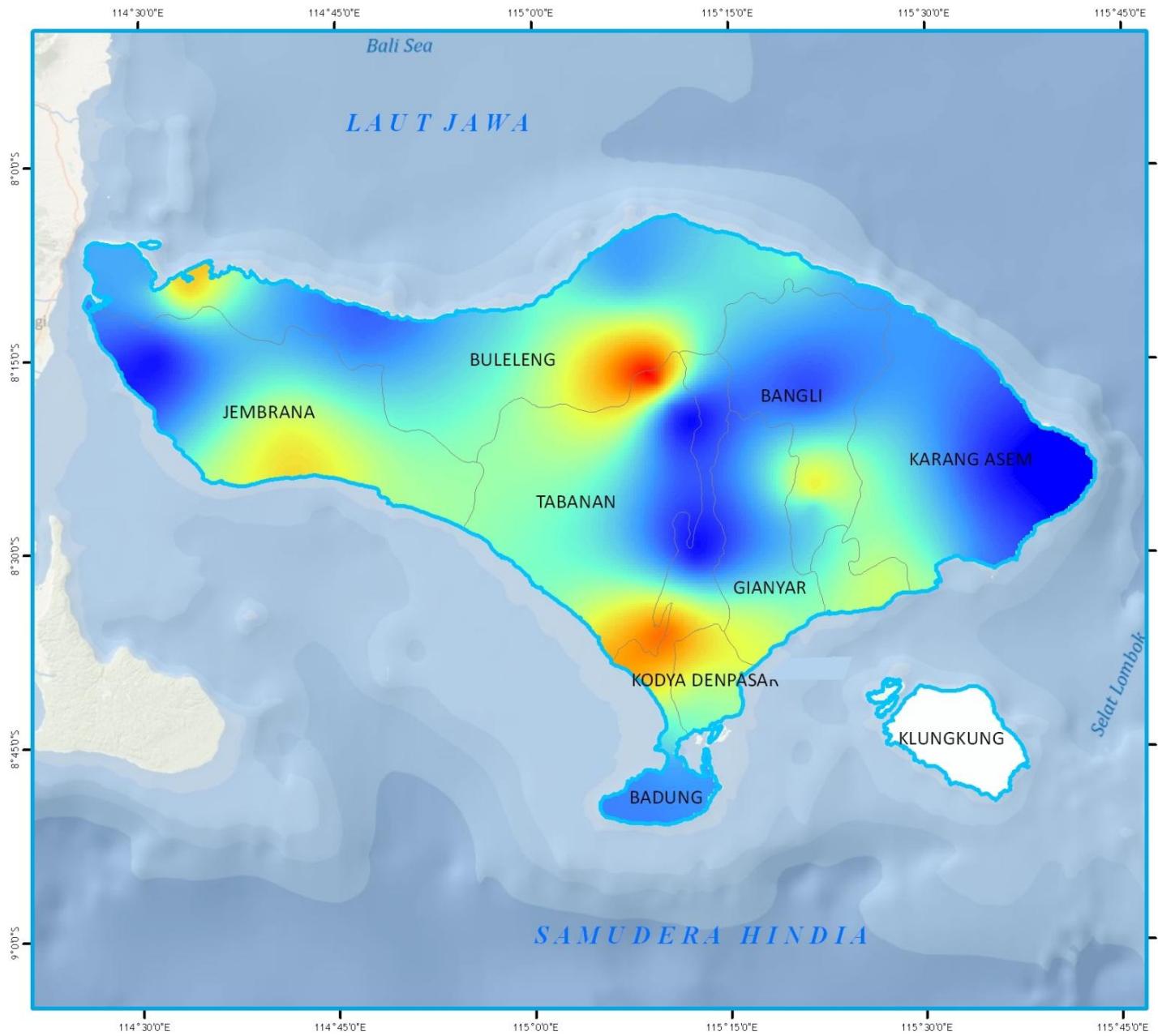
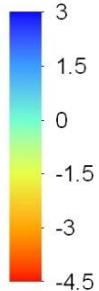


Climate Exposure Index



0 4.5 9 18 27 36 Km

LEGENDA :
(Nilai Index)



CLIMATE FIELD SCHOOL in INDONESIA

Objectives :

CFS activity encompasses three purposes as follows

- Improving farmers knowledge on climate and their ability to anticipate extreme climate events in their farming activities;
- assisting farmers in observing climatic parameters and their use for applications in their farming activities and strategy; and
- assisting farmers to translate and understand the climate (forecast) information for supporting farming activities, especially for planting decision and cropping strategy

Climate Field Schools for Farmers: Methodology



Stage I: Training of trainers

Participant :

- Local Agricultural Service, trained by NMHS staffs

Stage II: Training of trainers with simulation in classroom

Participant :

- Agriculture extension worker, trained by Local Agr'l Service & NMHS at the provinces (supervised by NMHS)

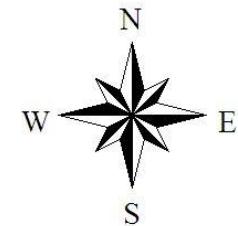
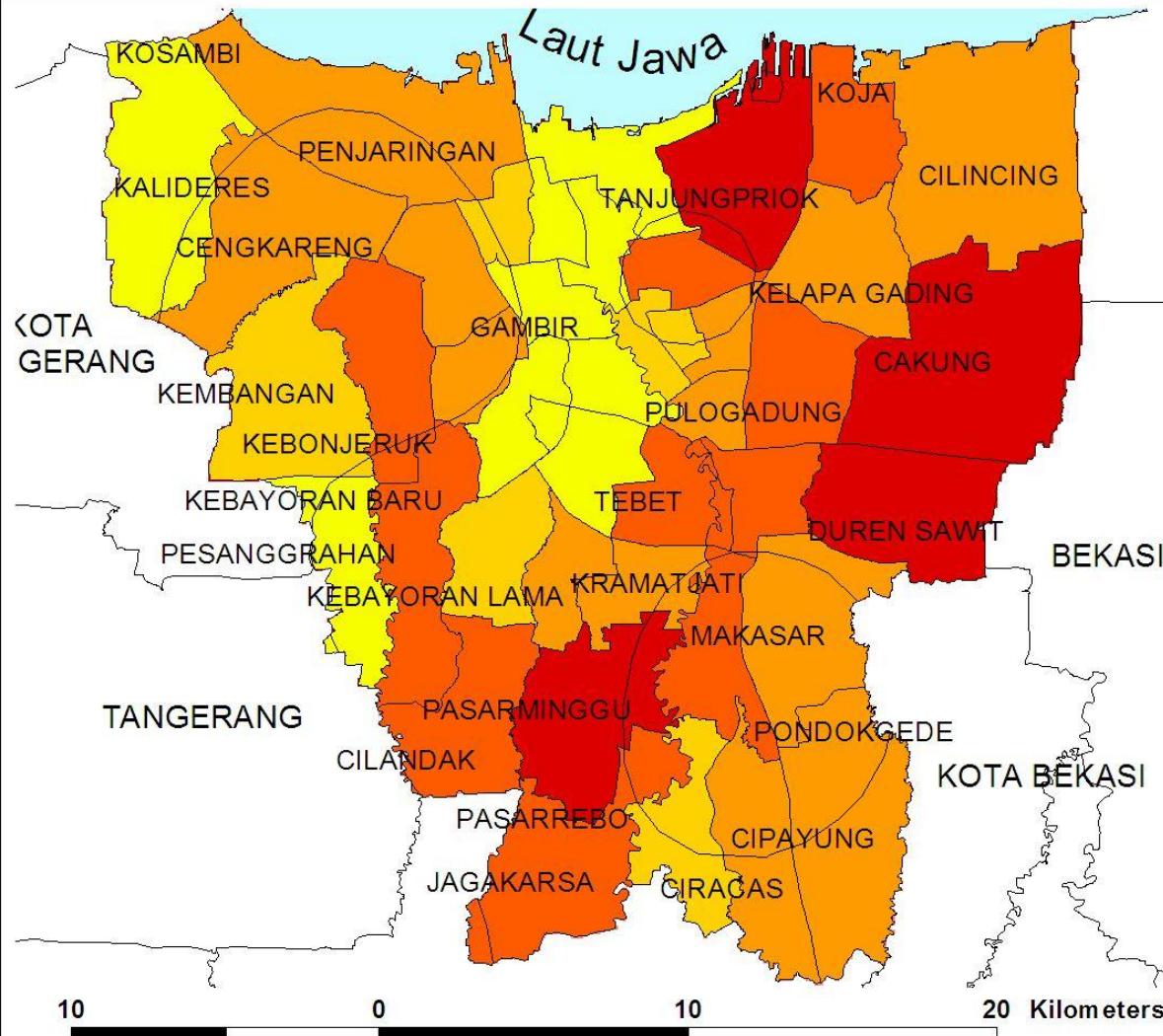
Stage III: Training for farmers

- Groups of farmers, trained by agriculture extension workers (supervised by NMHS)

The Benefits of Climate Field School

- Farmers get a better understanding of climate information and use the climate information for their farming activities
- Perform strong groups of farmers who have high motivation to run their farming activities which climate information is used as an input for their strategy and decision making.

CLIMATE CHANGE IMPACT TO DENGUE



POTENSI KERENTANAN DBD :

- Sangat Rendah
- Rendah
- Menengah
- Tinggi
- Sangat Tinggi

Batas Kecamatan

Batas Provinsi

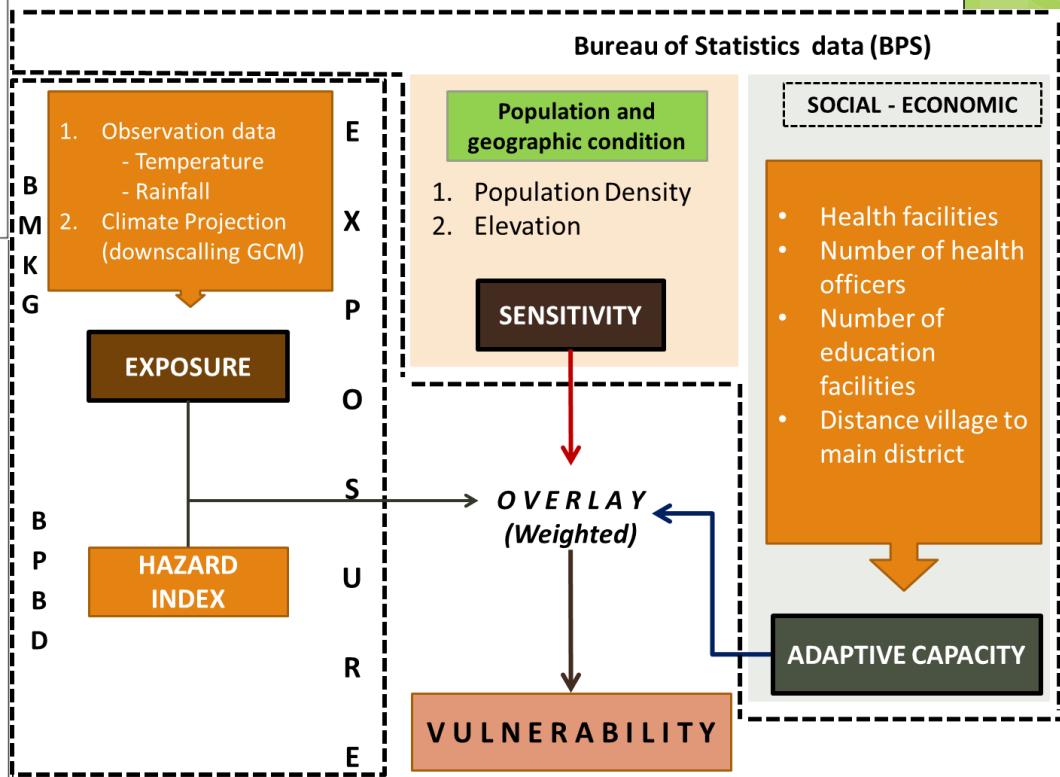
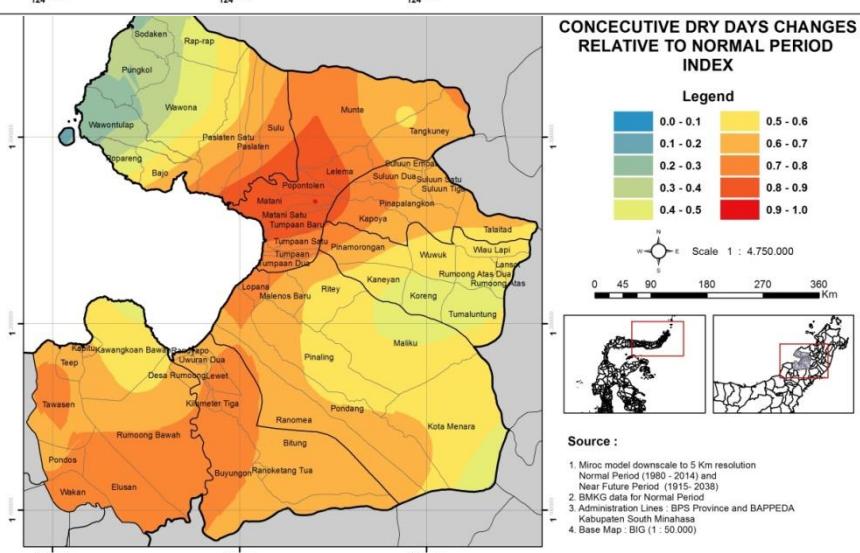
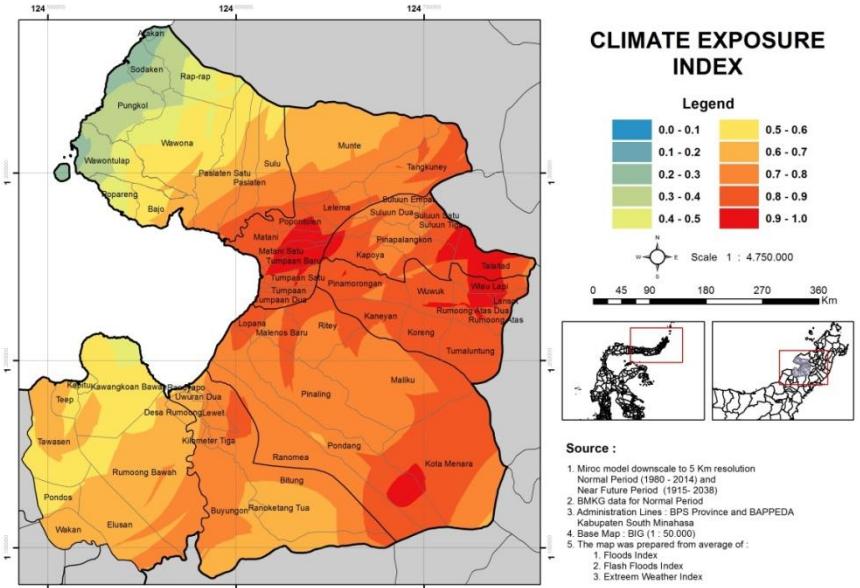
SUMBER DATA :

Peta Potensi Kerentanan ini disusun berdasarkan parameter-parameter fungsi Kerentanan yang dimodelkan dengan ordinal regresi logistik



BADAN METEOROLOGI KLIMATOLOGI & GEOFISIKA

COASTAL AND MARINE RESOURCES MANAGEMENT IN THE CORAL TRIANGLE: SOUTHEAST ASIA (RETA 7813)



Ma fa

eds
rs

JENIS INFORMASI	LOKASI
Sea Level Rise	Kawasan pesisir Indonesia
Curah Hujan	Seluruh Indonesia
Gelombang Laut	Kawasan pesisir Indonesia
Kelembaban Udara	Kawasan pesisir Indonesia
Evaporasi	Kawasan pesisir Indonesia
Kimia Air Hujan	Seluruh Indonesia



BADAN METEOROLOGI, KLIMATOLOGI, DAN GEOFISIKA
DEPUTI BIDANG KLIMATOLOGI
PUSAT PERUBAHAN IKLIM DAN KUALITAS UDARA
2014





PUBLIC AWARENESS



Information for Climate Change Public Awareness

- Modul for Agriculture
- Modul for Fisheries
- Climate Change Animation
- TV and Radio Program
- Books and Comics



BMKG

MODUL of ToT AGRICULTURE and ToT FISHERIES

DRAFT (TIDAK UNTUK DIRUTUP)
MODUL TRAINING OF TRAINERS

Modul 1 : Pengenalan Unsur Cuaca, Iklim, dan Perubahan Iklim

BMKG

ICCTF

KEMPTAN

BADAN METEOROLOGI KLIMATOLOGI DAN GEOFISIKA

INDONESIAN CLIMATE CHANGE TRUST FUND

KEMENTERIAN PERTANIAN

2011

MODUL

PELATIHAN BAGI PELATIH (TOT)
PENYULUH KELAUTAN DAN PERIKANAN
DALAM KEGIATAN SOSIALISASI PERUBAHAN IKLIM
SERTA UPAYA ADAPTASI MITIGASI
BAGI PETANI, NELAYAN, DAN MASYARAKAT UMUM

DRAFT
TIDAK UNTUK DIRUJUK

BMKG

ICCTF



BMKG

CLIMATE CHANGE ANIMATION



ANIMATION
LIBRARY

Diagram Alur Proses Perubahan Iklim

Siklus Air

Efek Rumah Kaca

Kesetimbangan Radiasi

Konsentrasi GRK

Perubahan Suhu Global

Penyimpanan Suhu Muka Laut

Peningkatan Suhu Jakarta

Proyeksi Peningkatan Suhu

Proyeksi Kenaikan Tinggi Muka Laut

Dampak Pemanasan Global

Dampak Perubahan Iklim

MENU

QUIT play all

Pusat Perubahan Iklim dan Kualitas Udara
Kedepan Klimatologi BMKG

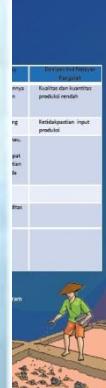


Sistem Informasi BMKG

Layanan informasi BMKG melalui POS dapat memperoleh hasil analisis di bawah ini:
• Perbaikan Data Meteorologis (Diklif) BMKG
• Analisa I. Nili terpercaya, Jakarta posisi terdepan dalam pengembangan teknologi

Pos

Pengertian
Perubahan Iklim
untuk Nelayan:





BMKG

TV & RADIO PROGRAM



- Dokumentery Film 2 roles
- Serial Kid Television (Teropong Si Bolang)
- TVRI Talkshow (IptekTalk Programme, 3 serial)
- Radio Public Advertising

RADIO Community



Tim LIPI

Sosialisasi di 5 wilayah 5 bulan
Program on dan off air temu wicara





BMKG

Books



Pocket Book



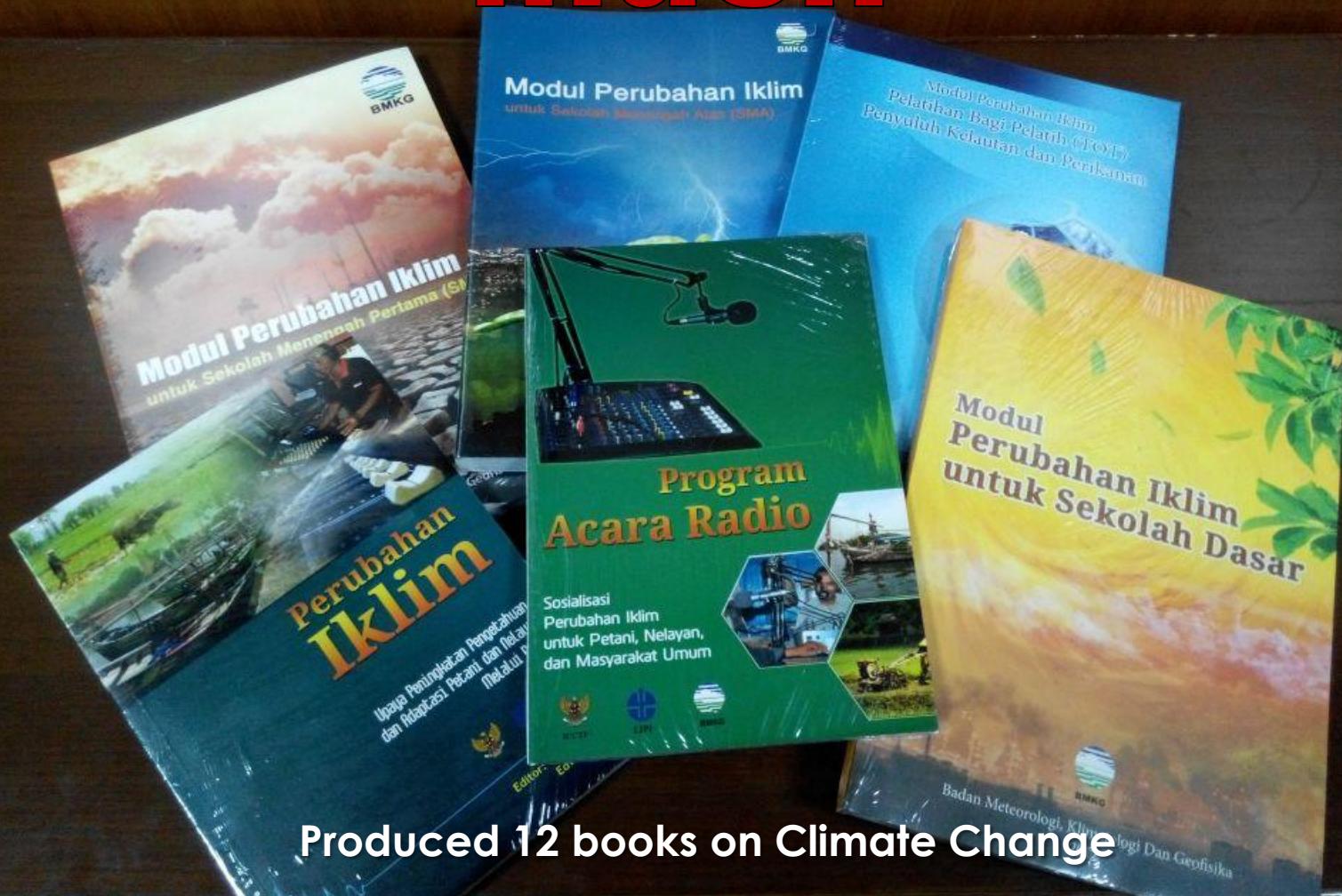
Komik Perubahan Iklim

Produced 12 books on Climate Change

Conclusions

- Human impact on climate change is very clear
- BMKG supply climate exposure data and information for vulnerability assessment
- BMKG feed the upstream data and information
- BMKG produces books of sectoral adaptation as guidance for climate information needs and gaps

Thank You very much



Produced 12 books on Climate Change