Press Release

KONDISI CUACA EKSTREM DAN IKLIM TAHUN 2010-2011

BMKG

Jakarta, 12 Oktober 2010

BADAN METEOROLOGI KLIMATOLOGI DAN GEOFISIKA

3 FAKTOR PENGENDALI CURAH HUJAN WIL. INDONESIA

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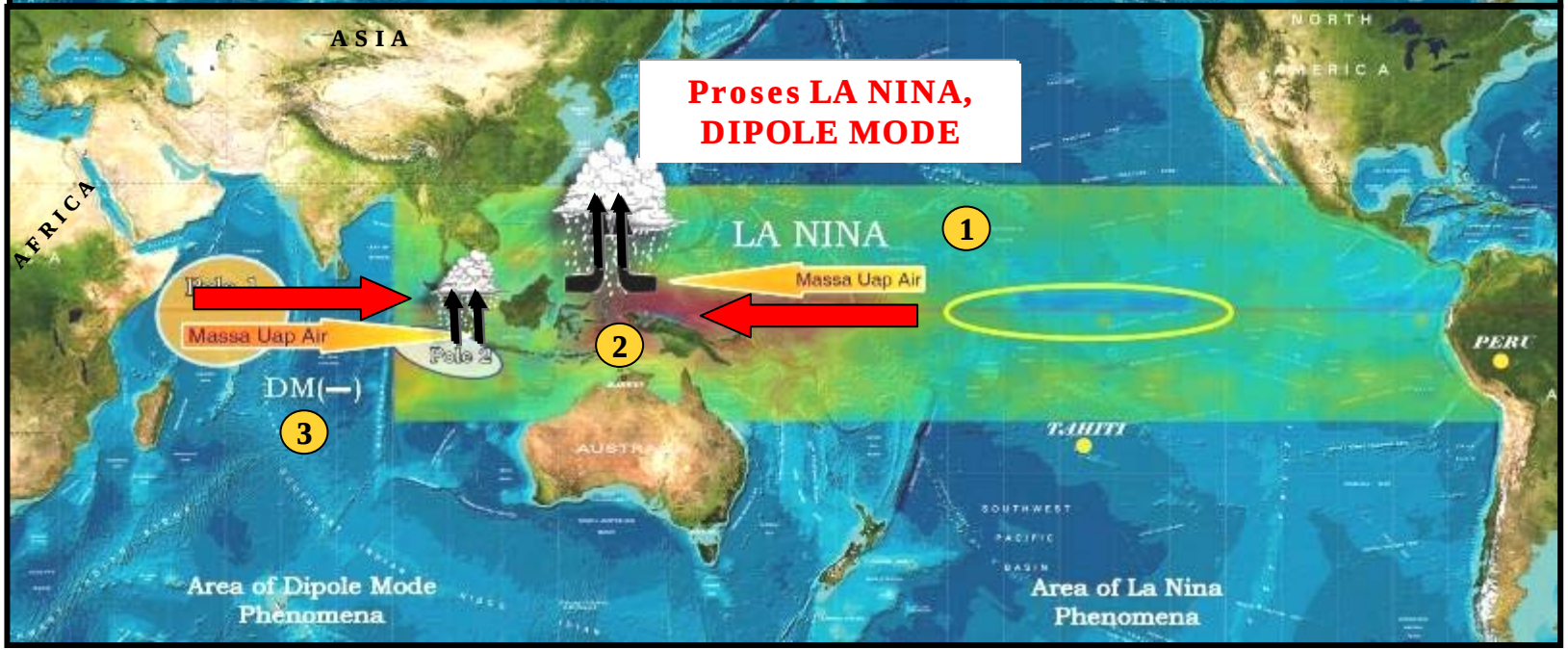

1. EL NINO / LA NINA
2. SUHU PERAIRAN INDONESIA
3. DIPOLE MODE POSITIF / DIPOLE MODE NEGATIF

El Nino	La Nina
0.5 – 1 Lemah	-1 – -0.5 Lemah
1 – 2 Moderat	-2 – -1 Moderat
> 2 Kuat	<-2 Kuat

Dipole Mode (°C)	SST Indonesia (°C)
0.4 Positif	> 0.5 Hangat
-0.4 Negatif	<-0.5 Dingin

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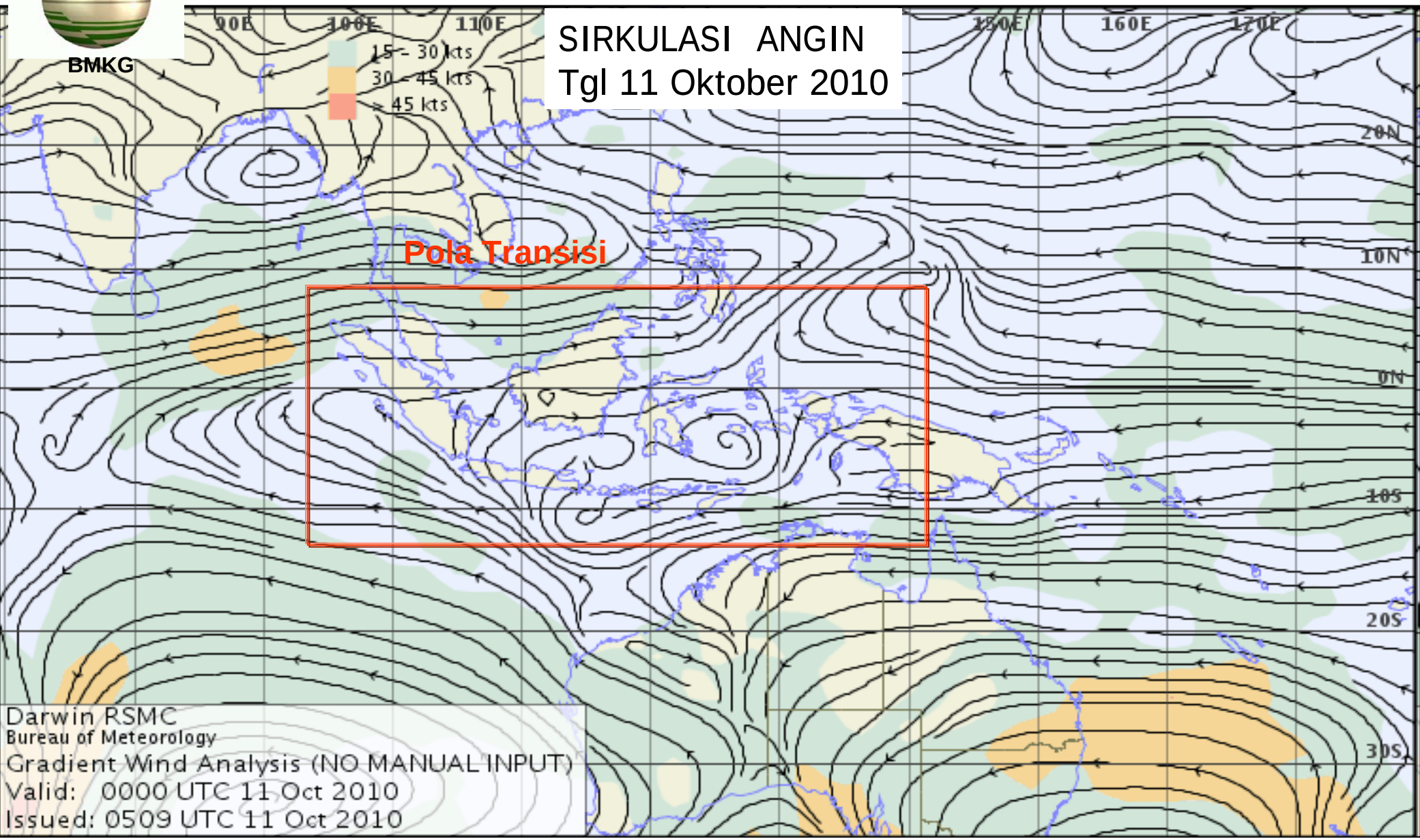
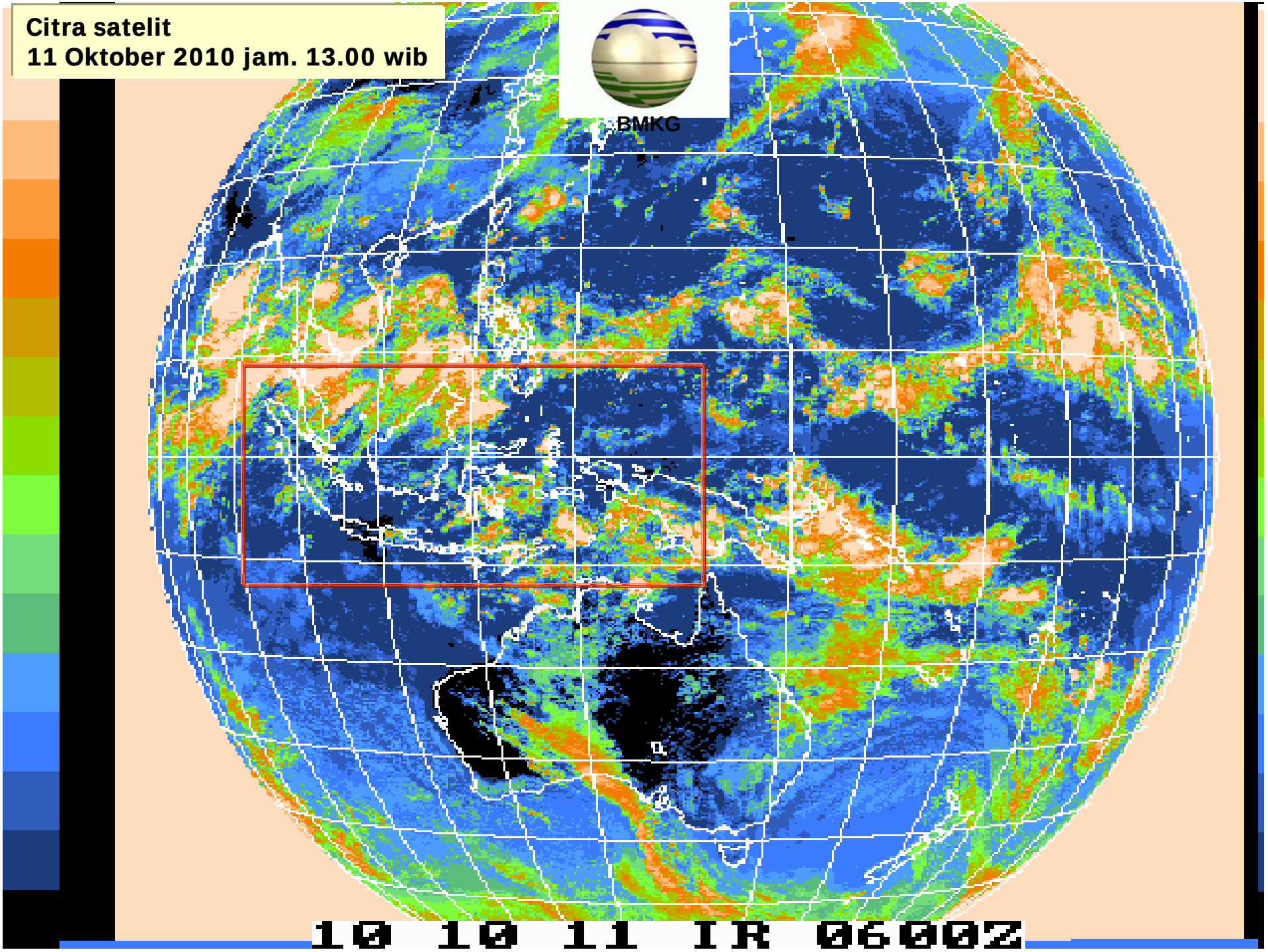
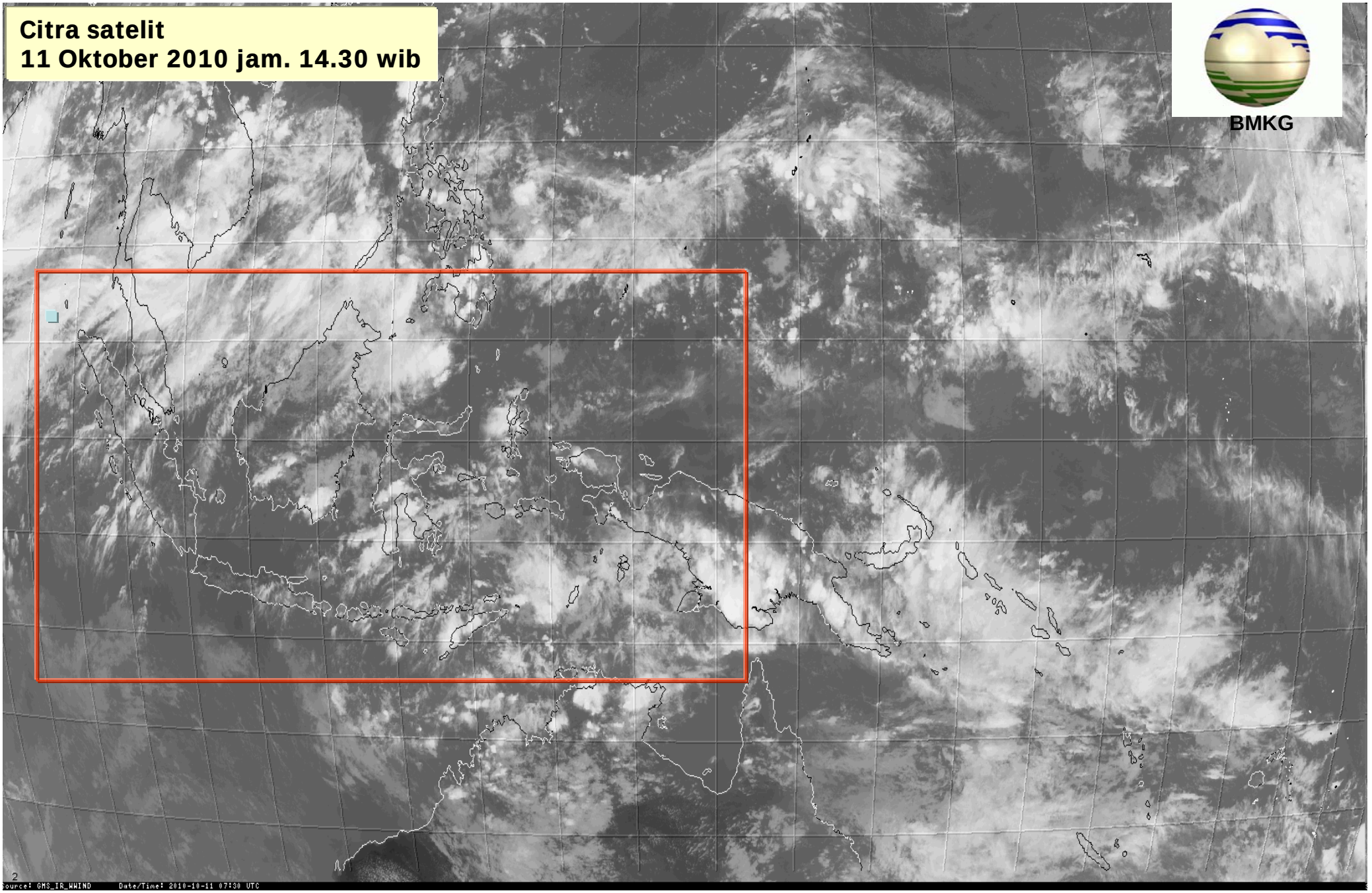
SIRKULASI ANGIN
Tgl 11 Oktober 2010




Citra satelit
11 Oktober 2010 jam. 13.00 wib
BMKG
10 10 11 IR 0600Z

Citra satelit
11 Oktober 2010 jam. 14.30 wib



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Kejadian Curah Hujan Harian Ekstrem September 2010 dan Oktober 2010 (s.d tanggal 10 Oktober 2010)

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KRITERIA INTENSITAS CURAH HUJAN DI WILAYAH INDONESIA

KATEGORI	KETERANGAN
RINGAN	**1 – 5 mm/jam;** atau ***5 - 20 mm/hari***
SEDANG	**5 – 10 mm/jam; atau** ***20 - 50 mm/hari***
LEBAT	**10 – 20 mm/jam**; atau ***50 – 100 mm/hari***
SANGAT LEBAT	**> 20 mm/jam;** atau **> 100 mm/hari**

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Frekuensi Hujan Ekstrim (> 50 mm/hari)

No	Propinsi	Frekuensi		No	Propinsi	Frekuensi	
		September 2010	Oktober I 2010			September 2010	Oktober I 2010
1	NAD	7	3	18	Nusa Tenggara Barat	2	0
2	Sumatera Utara	1	0	19	Nusa Tenggara Timur	6	3
3	Sumatera Barat	5	2	20	Kalimantan Barat	12	1
4	Riau	5	0	21	Kalimantan Tengah	4	0
5	Jambi	2	0	22	Kalimantan Selatan	7	0
6	Bengkulu	3	0	23	Kalimantan Timur	5	0
7	Sumatera Selatan	7	0	24	Sulawesi Utara	0	0
8	Kepulauan Riau	5	0	25	Gorontalo	1	1
9	Bangka Belitung	0	0	26	Sulawesi Tengah	1	0
10	Lampung	0	0	27	Sulawesi Barat	0	3
11	Banten	2	0	28	Sulawesi Selatan	5	0
12	DKI Jakarta	1	0	29	Sulawesi Tenggara	1	0
13	Jawa Barat	5	0	30	Maluku Utara	4	0
14	Jawa Tengah	3	0	31	Maluku	4	0
15	DI Yogyakarta	0	0	32	Papua Barat	3	0
16	Jawa Timur	2	0	33	Papua	10	1
17	Bali	2	0				
Catatan: RR ekstrim > 50mm/hari				Jumlah		115	14

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Frekuensi Hujan Ekstrim per dasarian (10 hari) September dan Oktober 2010 (s.d tgl 10 Oktober 2010)

No.	Bulan	Dasarian		
		I	II	III
1	September	27	34	54
2	Oktober	14	-	-

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PRAKIRAAN KONDISI CUACA
11- 18 OKTOBER 2010

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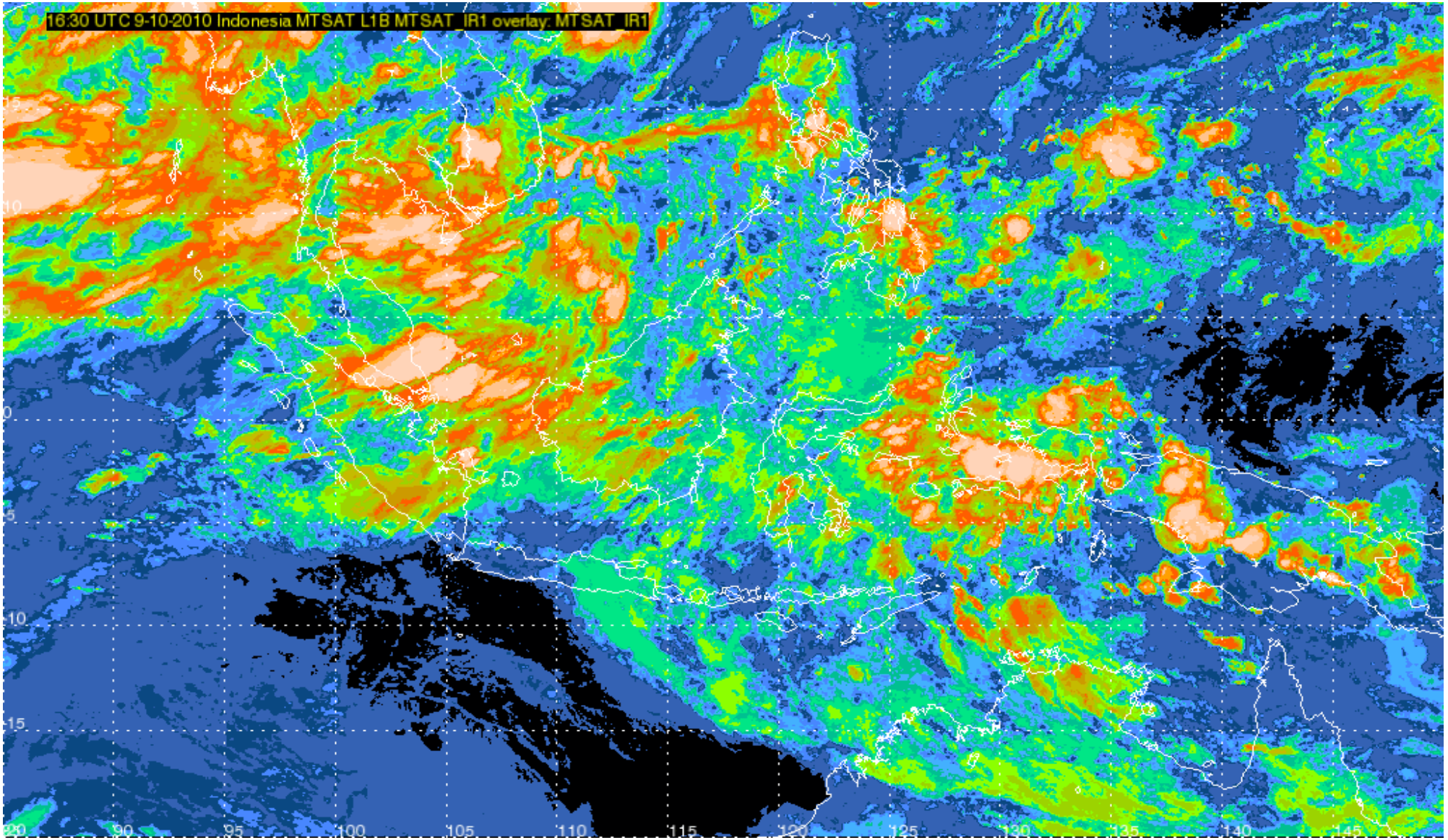
CITRA SATELIT CUACA
Tanggal 10 –11 Oktober 2010



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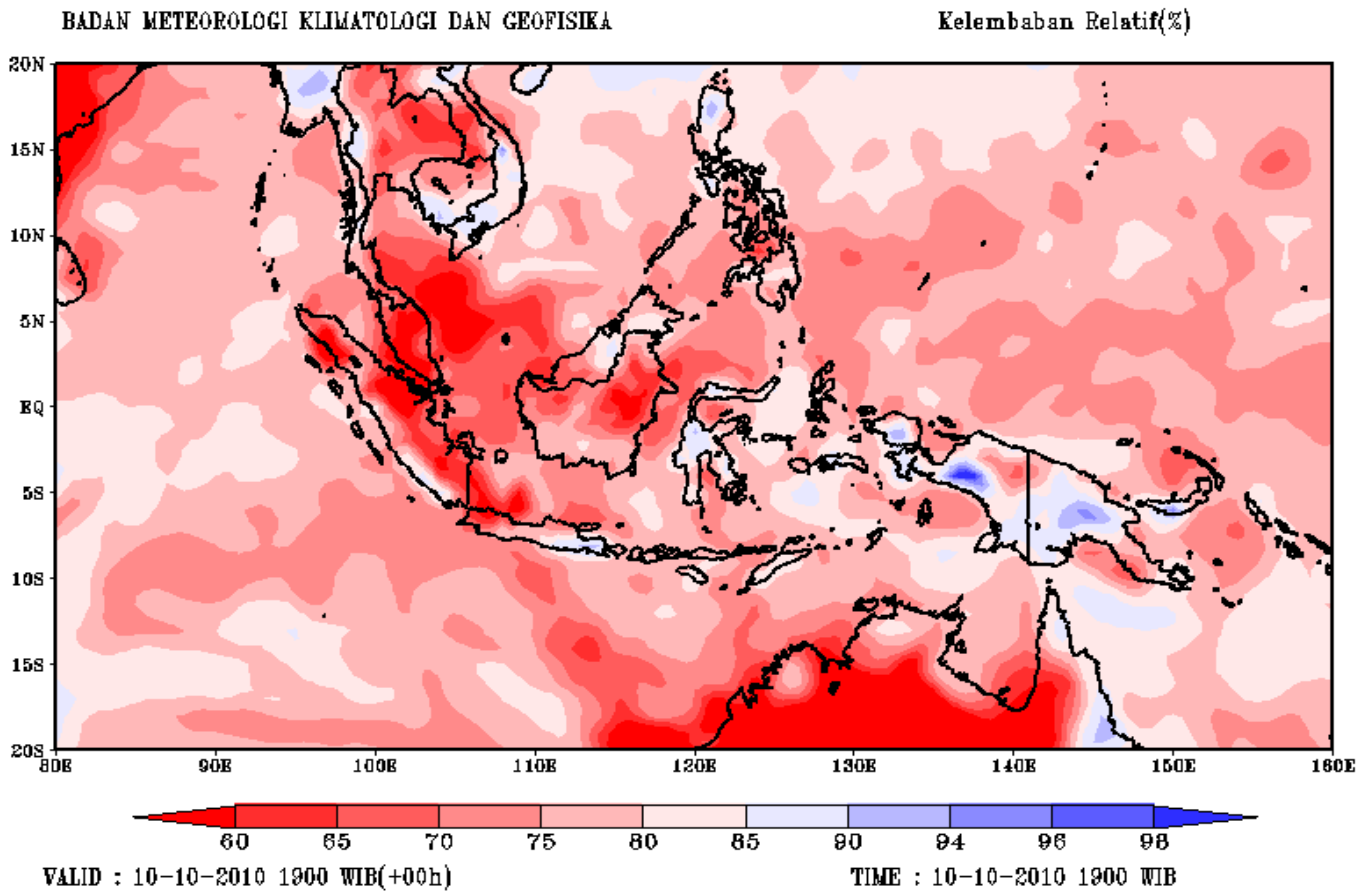
POTENSI KELEMBABAN UDARA

TANGGAL 11 – 18 Oktober 2010



Kelembaban udara > 80%:

⇩

Memberikan potensi pertumbuhan awan hujan

Di wilayah:

- Sumtera bagian Tengah dan Selatan
- Sebagian besar Kalimantan
- Sebagian besar Sulawesi
- Sebagian besar Maaluku
- Papua bagian Barat Tengah dan Selatan
- Bali dan Nusa Tenggara
- Jawa bagian Barat dan Tengah

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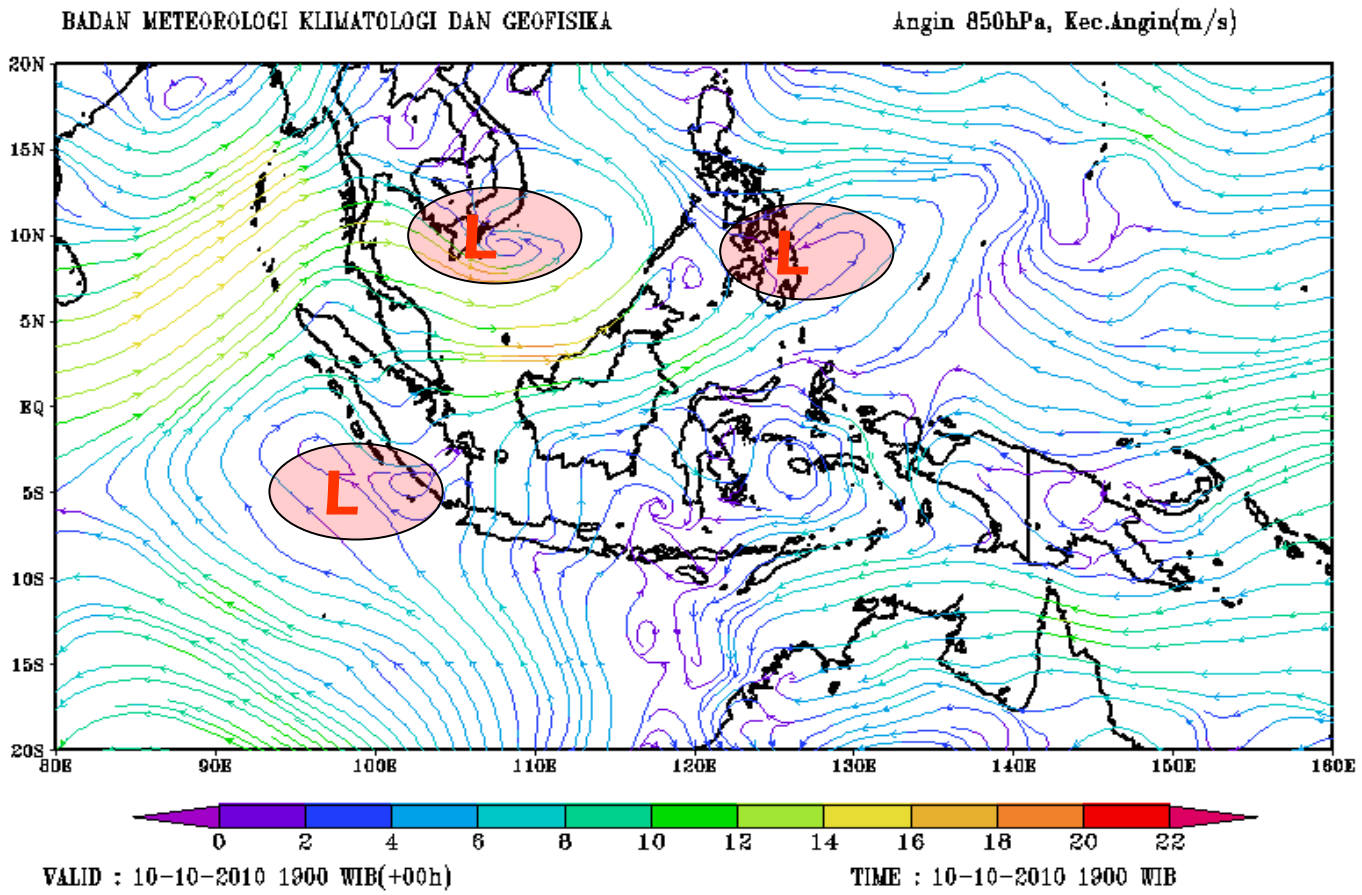
POLA ANGIN
TANGGAL 11 – 18 Oktober 2010



Pola angin:

- Konvergen/konfluent (pertemuan angin)
- Shear (belokan angin)

Di wilayah:

- Sumatera bagian Tengah dan Selatan
- Sebagian besar Kalimantan
- Sulawesi bagian Tengah, Tenggara dan Selatan
- Maluku bagian Tengah dan Tenggara
- Papua bagian Tengah dan Selatan
- Bali dan Nusa Tenggara

⇩

Memberikan potensi pertumbuhan awan hujan

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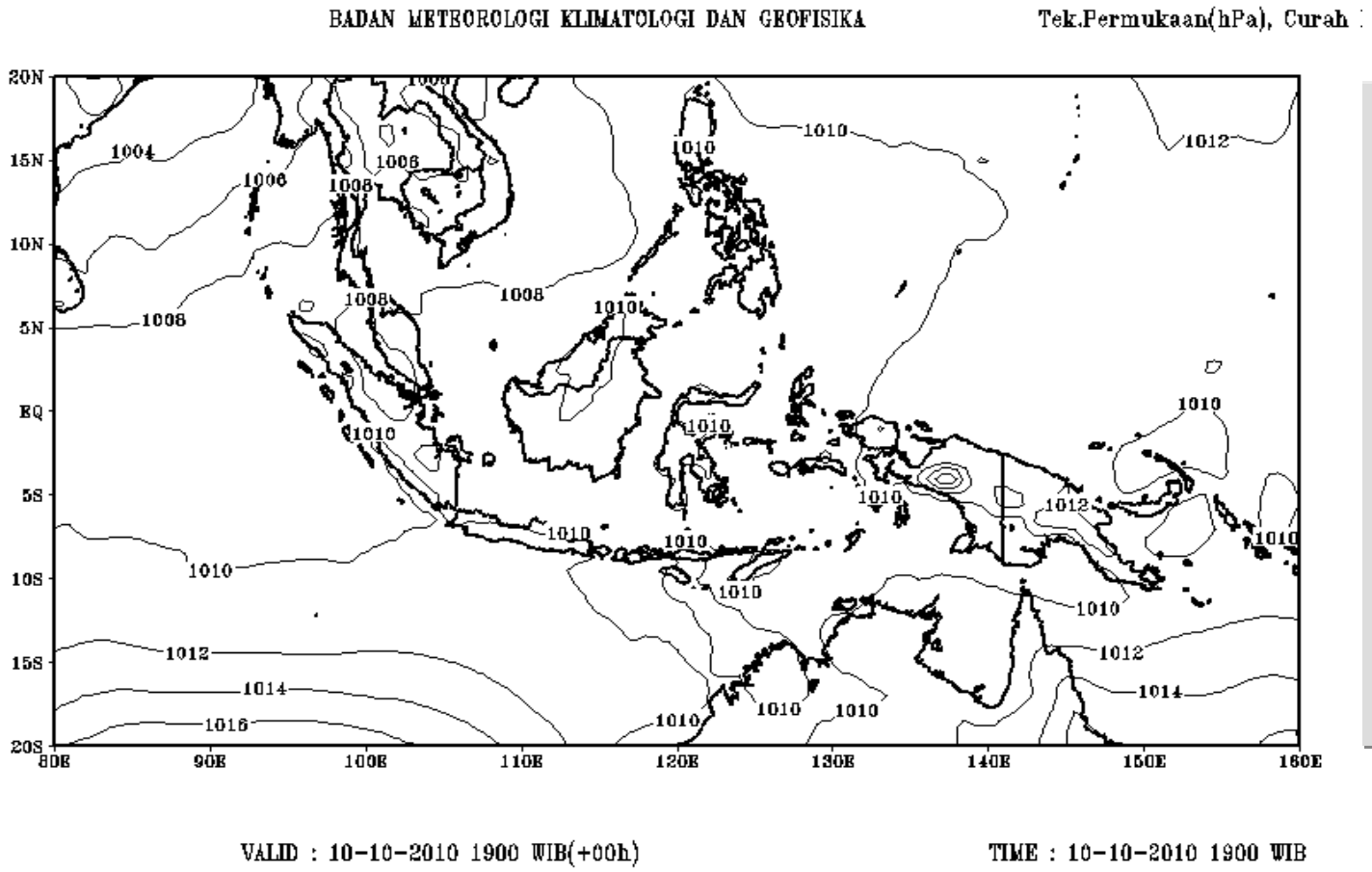
POTENSI TEKANAN UDARA
TANGGAL 11 – 18 Oktober 2010



Konsentrasi hujan:

- Sumatera bagian Tengah dan Selatan
- Sebagian besar Kalimantan
- Sebagian besar Sulawesi
- Sebagian besar Maluku
- Papua bagian Barat, Tengah dan Selatan
- Bali dan Nusa Tenggara
- Jawa bagian Barat dan Timur

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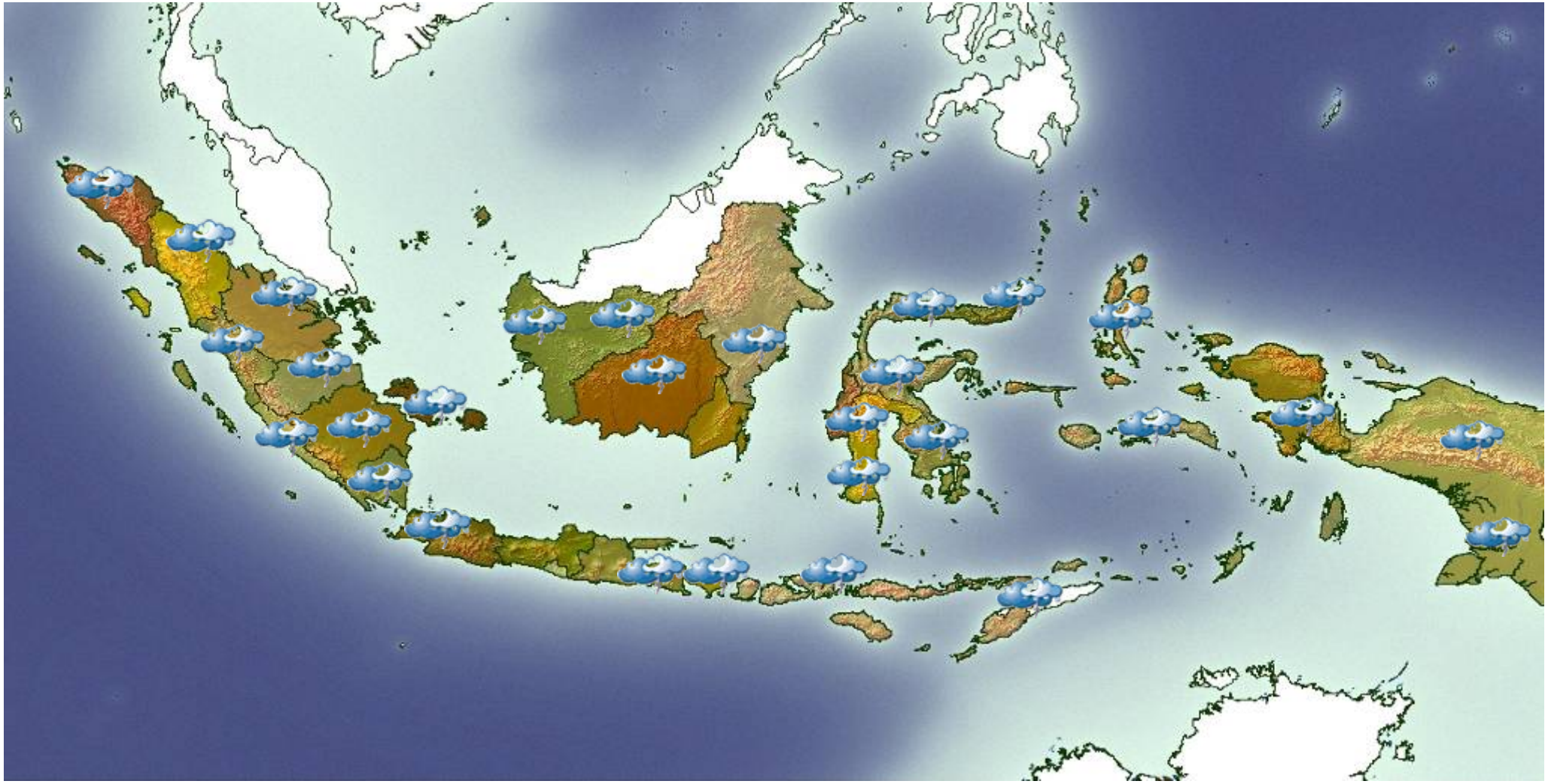
PERINGATAN DINI KONDISI CUACA TANGGAL 11 – 18 OKTOBER 2010



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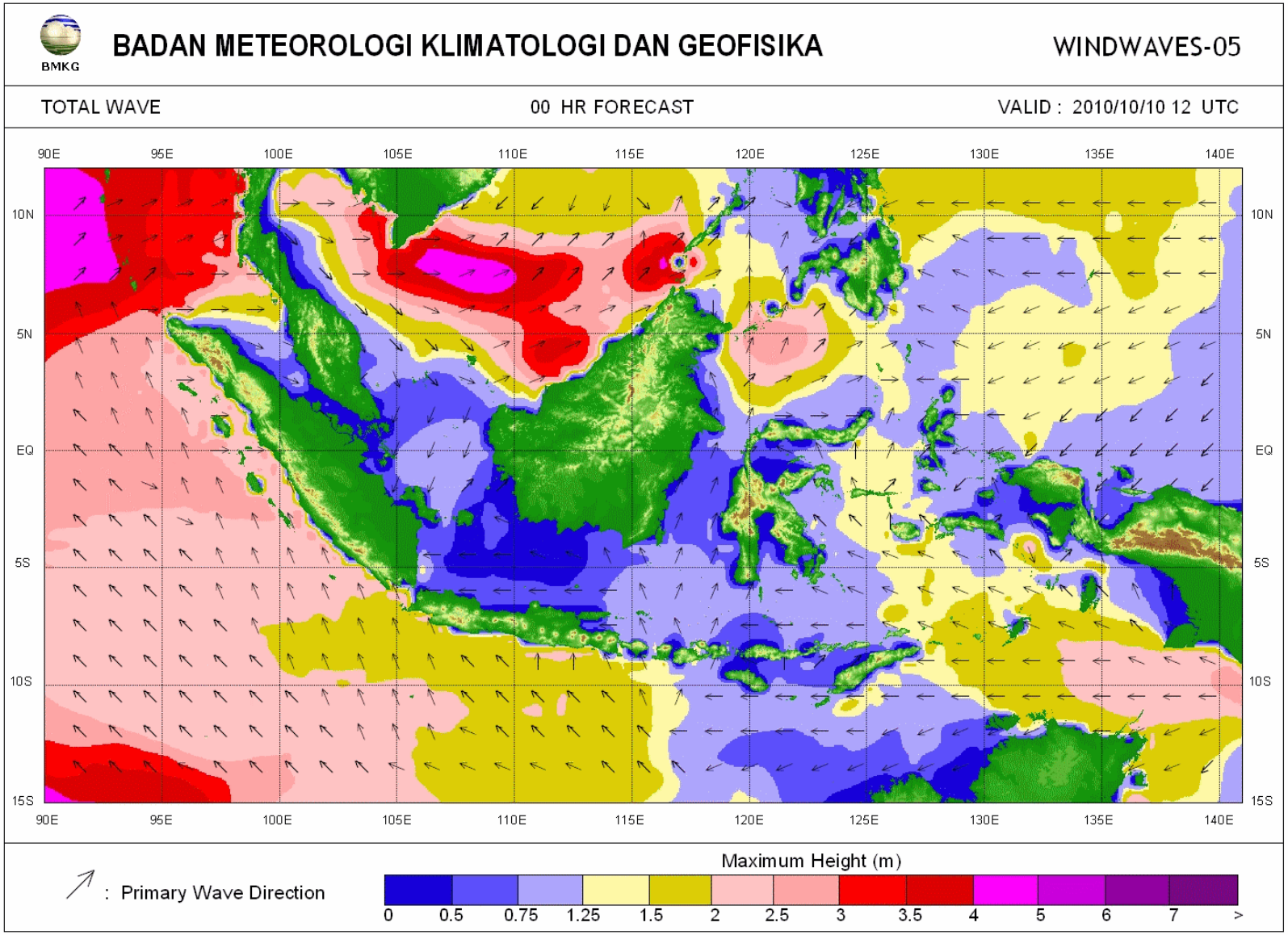
Prakiraan Tinggi Gelombang Laut
Tanggal 11 – 18 Oktober 2010



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MONITORING & PREDIKSI DINAMIKA ATMOSFER & LAUT (KLIMATOLOGI)

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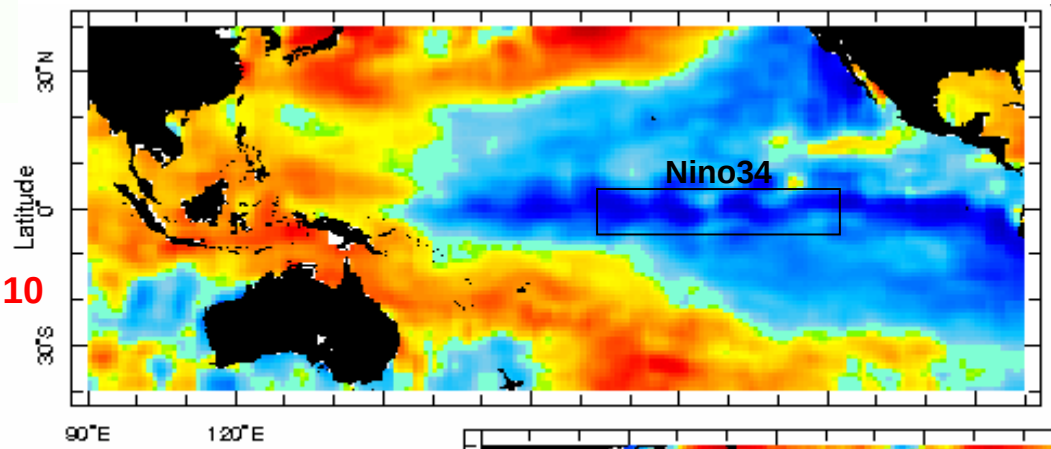
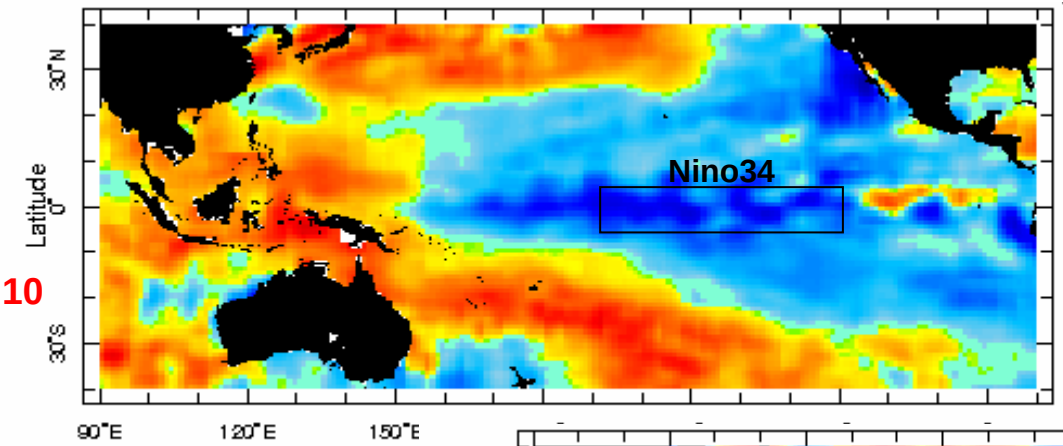
Monitoring SSTA mingguan

18 Sep 10

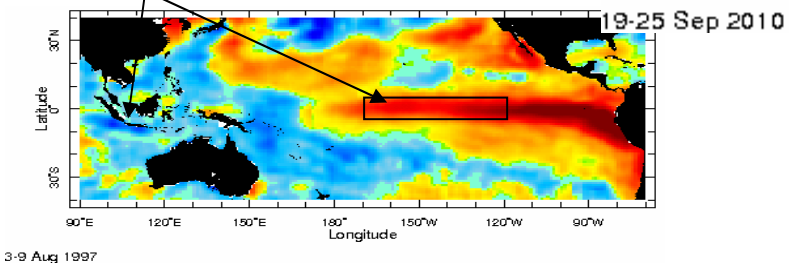


12-18 Sep 2010

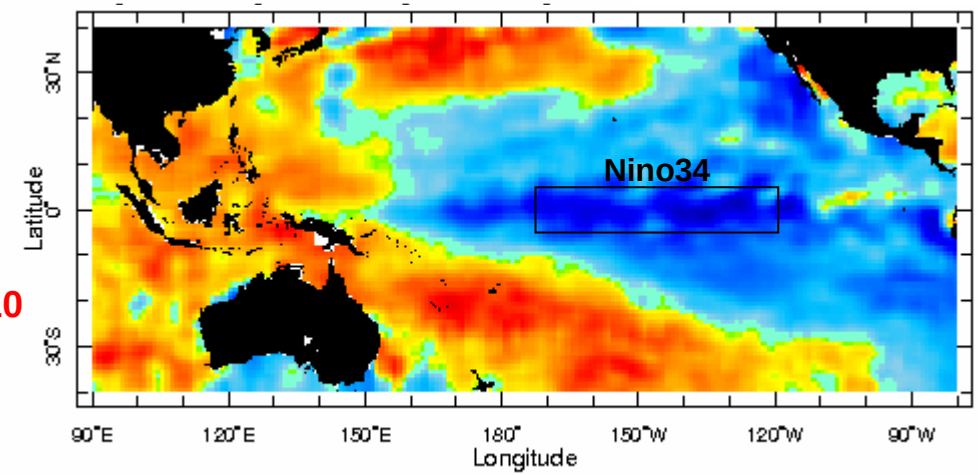
25 Sep 10



El Nino 1997



2 Okt 10



26 Sep 2010 - 2 Oct 2010

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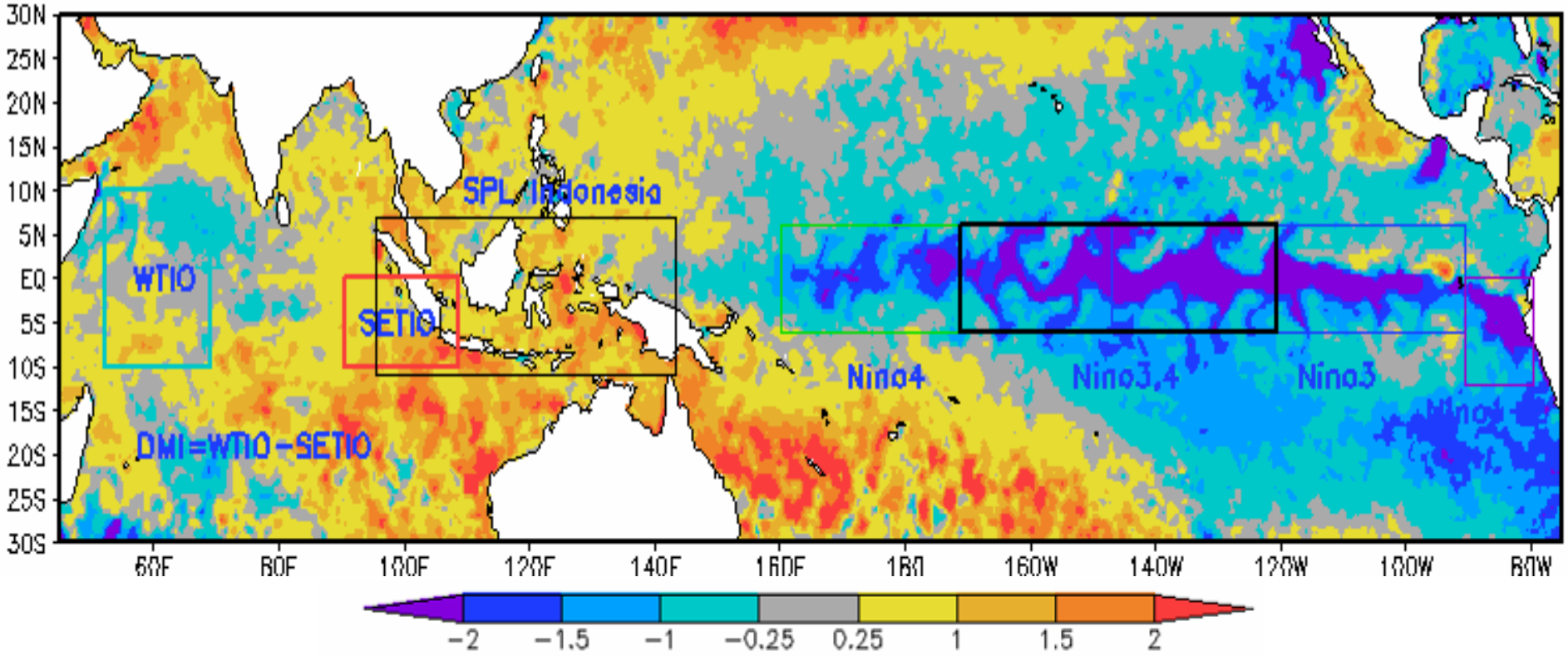
Kondisi Anomali Suhu Muka Laut dan Dipole Mode terkini

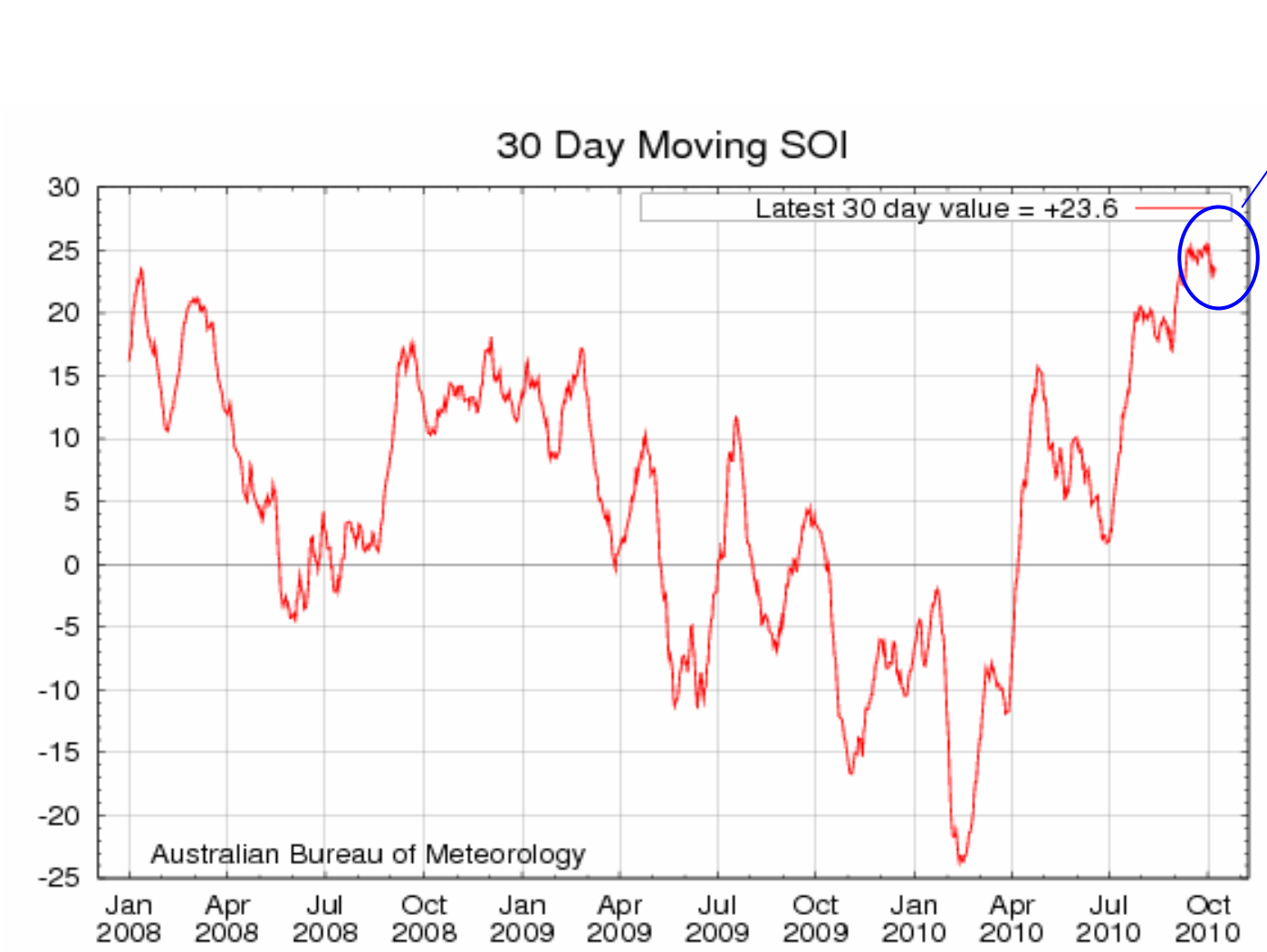
Anomaly Suhu Muka Laut tgl 20101009
(sumber : NCDC NOAA)



WTIO = Western Tropical Indian Ocean
SETIO= Southeastern Tropical Indian Ocean
DMI = Dipole Mode Index

Anomali SML Indonesia	**: +0.86ºC**
Nino3,4	**: -1.82ºC**
Dipole Mode	**: -0.83ºC**

GRAFIK SOI



SOI = + **Masa udara bergerak dari Pasifik Timur ke Pasifik Barat**

SOI = - **Masa udara bergerak dari Pasifik Barat ke Pasifik Timur**

SOI : + 23.6

Potensi curah hujan di wilayah Indonesia bagian Timur kurang

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Prediksi faktor Pengendali :
Indek La Nina, SST Indonesia, dan Dipole mode

Faktor Pengendali	Indeks Normal	Prediksi sd Feb 2011	Aliran Massa Uap Air
La Nina	-0.5 sd 0.5	Moderate sd Kuat (-1.84 sd -2.03)	Massa Uap air dari Pasifik ke Indonesia
SST Indonesia	-0.5 sd 0.5	Hangat (+0.5 sd +1.0)	Penguapan tinggi → Pembentukan Awan → Potensi Hujan
Dipole Mode	-0.4 sd 0.4	Lemah sd Netral (-0.98 sd 0.0)	Massa Uap air dari L. Hindia ke Indonesia

PREDIKSI "LA NINA" (UPDATE 11 OKTOBER 2010)

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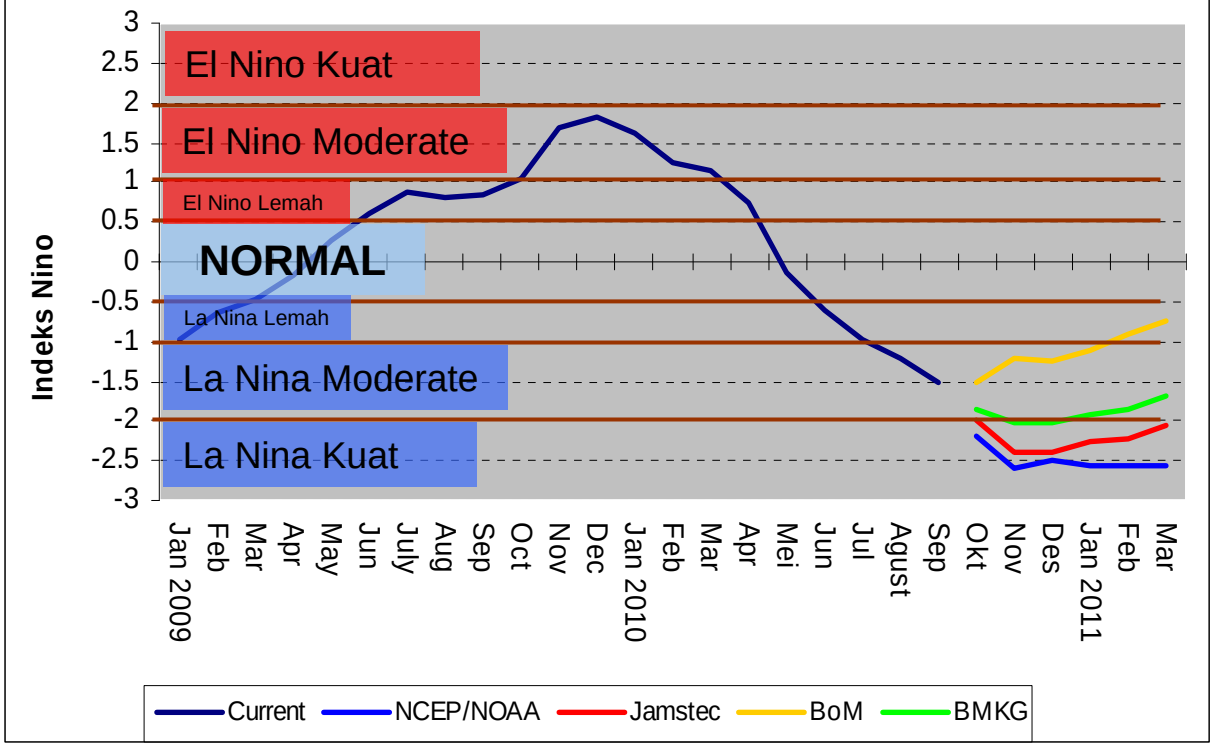
Prediksi Nino 3,4 dari Institusi Internasional dan BMKG (Update 11 Oktober 2010)



Prediksi La Nina

1. NCEP/NOAA (USA)

- Okt10-Mar11 → La Nina Kuat

2. Jamstec (Japan)

- Okt10-Mar11 → La Nina Kuat

3. BoM (Australia)

- Okt10-Jan11 → La Nina Moderate
- Feb-Mar11 → La Nina Lemah

4. BMKG (Indonesia)

- Okt10 → La Nina Moderate
- Nop-Des10 → La Nina Kuat
- Jan-Mar11 → La Nina Moderate

Institusi	Oct-10	Nov-10	Dec-10	Jan-11	Feb-11	Mar-11
NCEP/NOAA	-2.2	-2.6	-2.5	-2.55	-2.55	-2.55
Jamstec	-2	-2.4	-2.4	-2.25	-2.23	-2.05
BoM	-1.5	-1.2	-1.25	-1.1	-0.9	-0.75
BMKG	-1.87	-2.03	-2.03	-1.92	-1.84	-1.70

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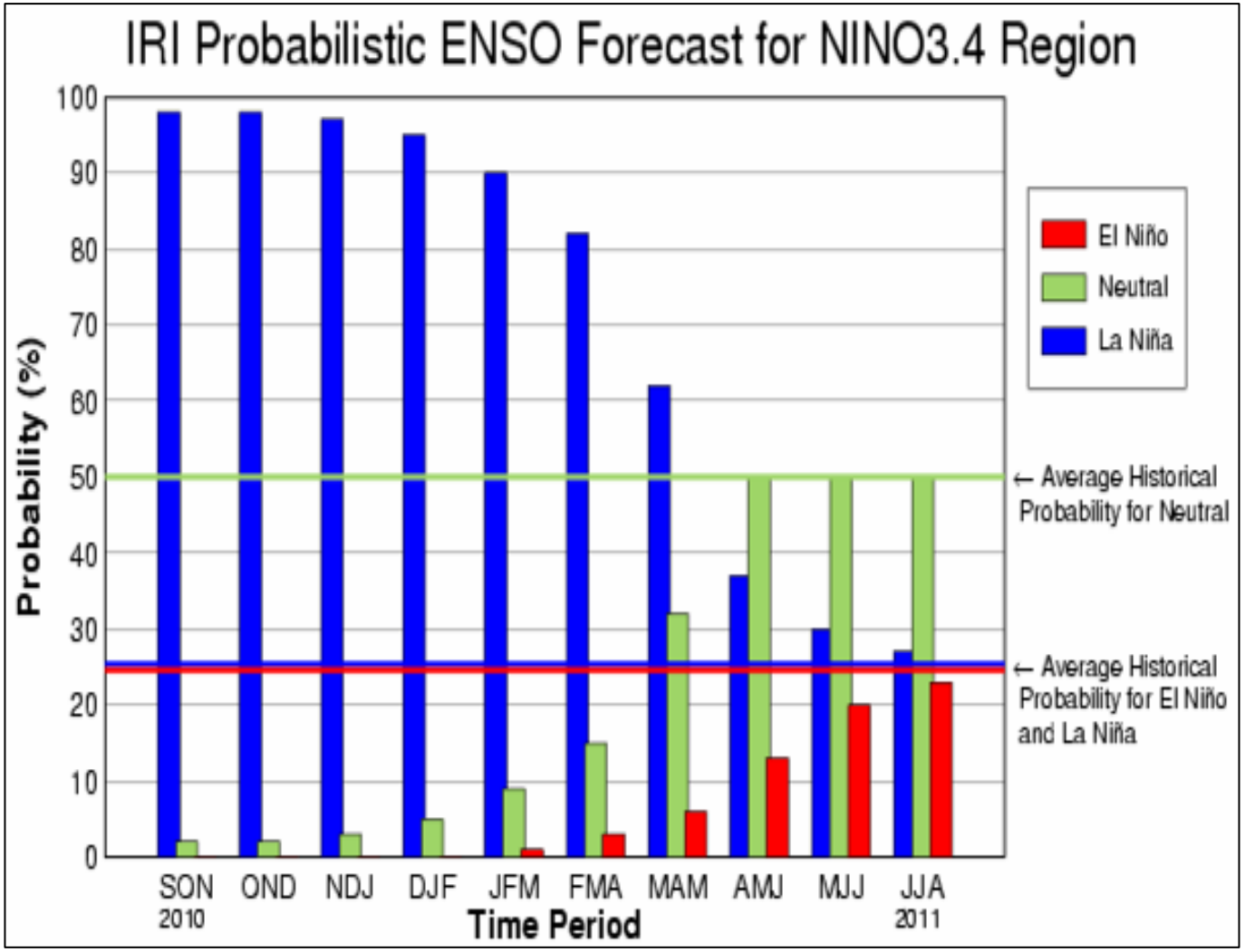
Prediksi Probabilistik Elnino/Lanina



Made in Sep 2010

Season	La Niña	Neutral	El Niño
SON 2010	98%	2%	0.1%
OND 2010	98%	2%	0.1%
NDJ 2011	97%	3%	0.2%
DJF 2011	95%	5%	0.4%
JFM 2011	90%	9%	1%
FMA 2011	82%	15%	3%
MAM 2011	62%	32%	6%
AMJ 2011	37%	50%	13%
MJJ 2011	30%	50%	20%
JJA 2011	27%	50%	23%

Kondisi La Nina diprediksi terus dominan hingga April 2011. Selanjutnya akan menuju kondisi Netral mulai Mei 2011.

Sumber IRI

PREDIKSI INDEKS DIPOLE MODE (UPDATE 11 OKTOBER 2010)

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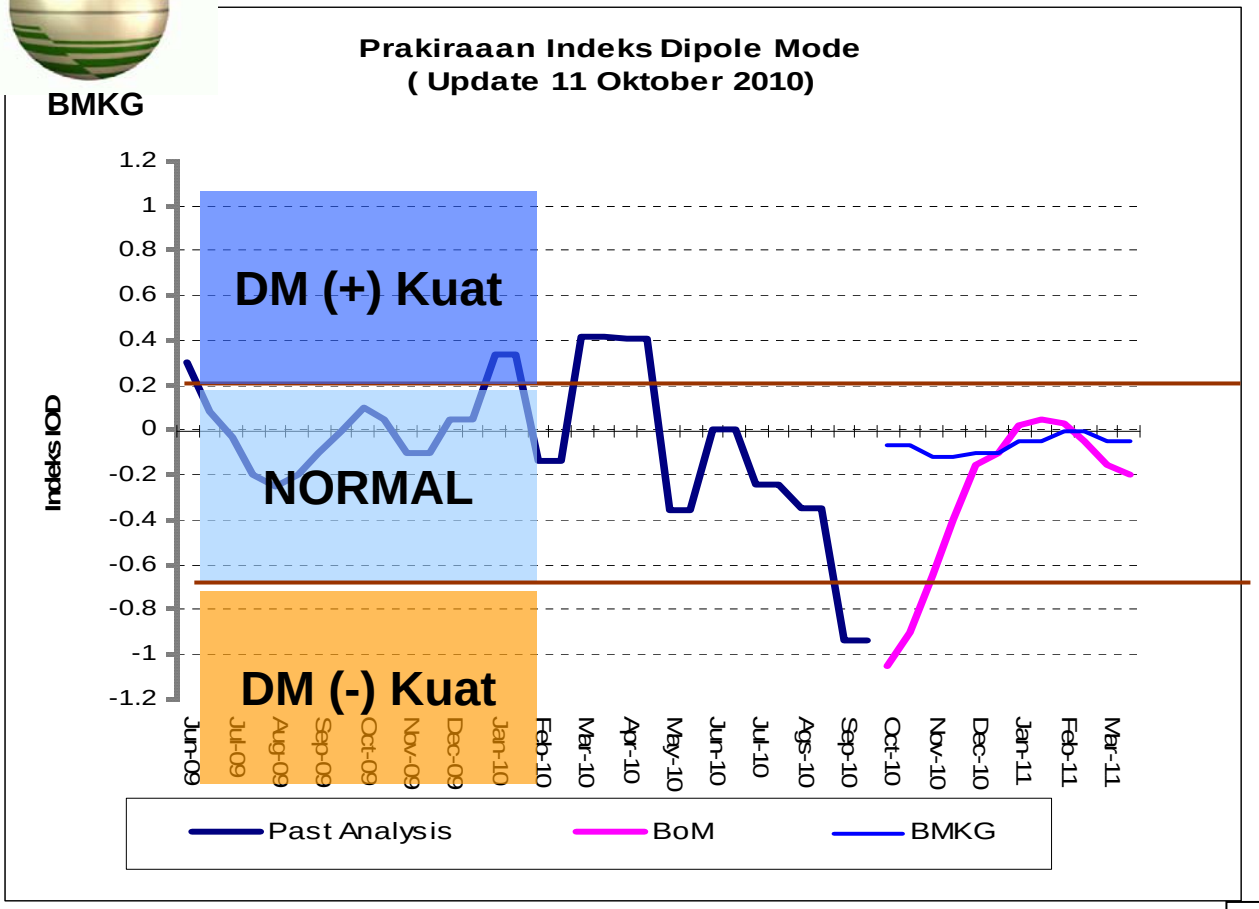
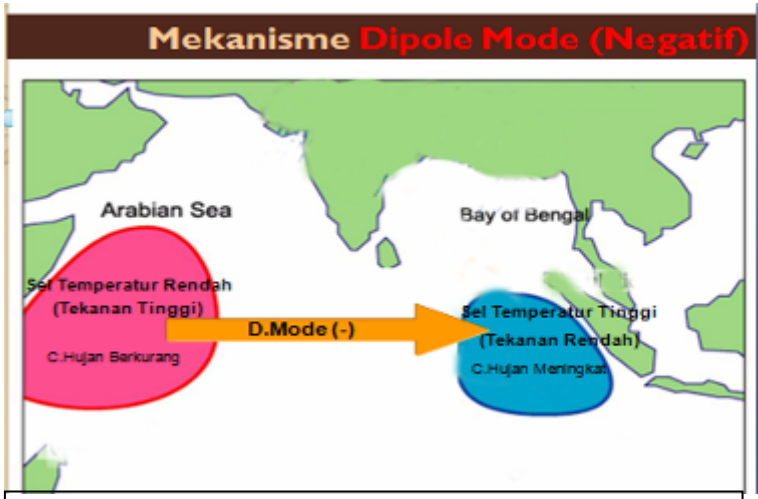




- Standar Indeks DM:

  -0.4^{0}C s/d +0,4 ^{0}C

- Prediksi (Australia – BMKG): Okt 2010 – Jan 2011:

  DM (-) → Terjadi **dorongan massa uap air** dari Samudera Hindia ke Indonesia bagian barat.

Kesimpulan: Penambahan curah hujan

Prakiraan Indeks IOD

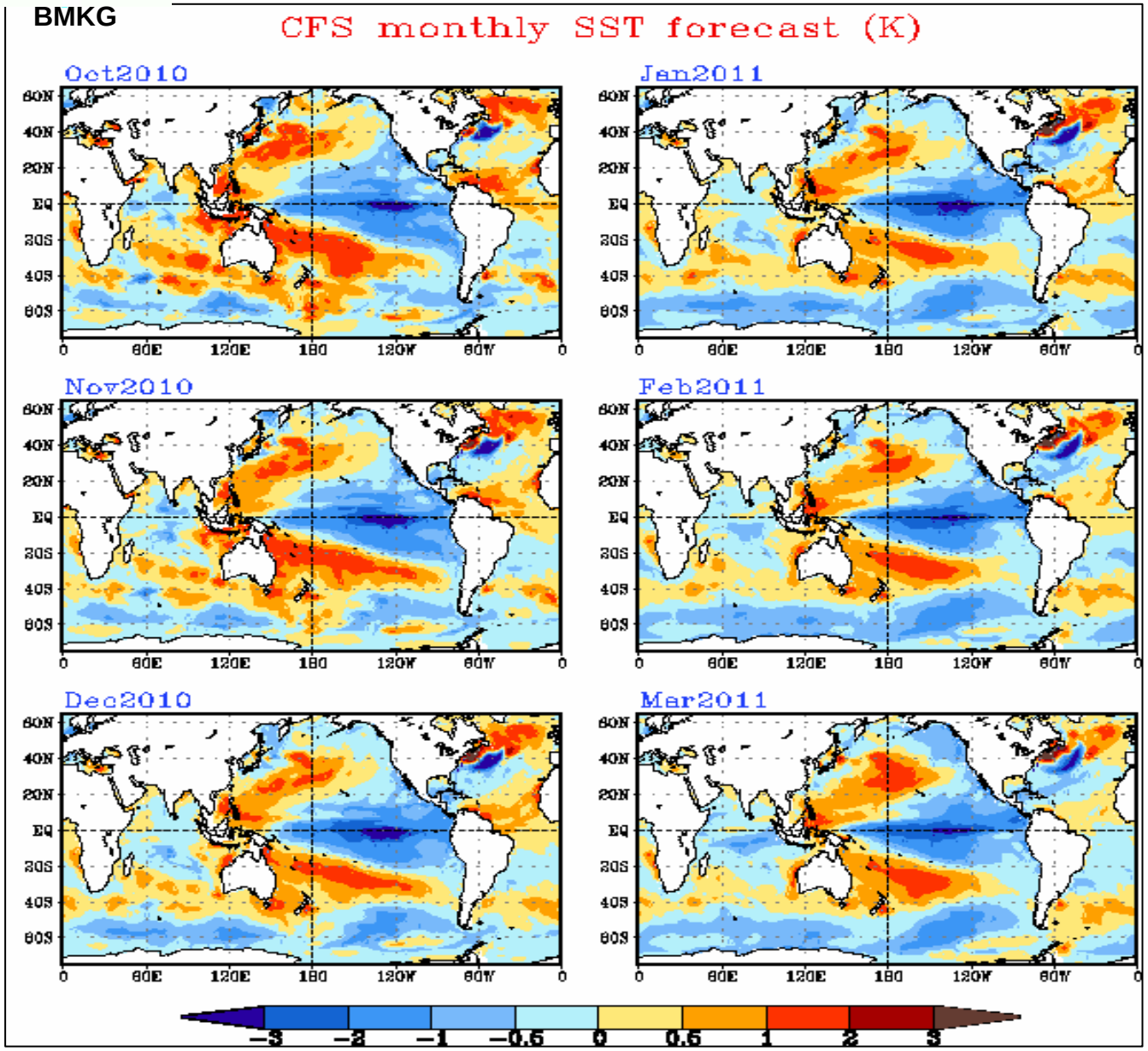
Institusi	Oct-10	Nov-10	Dec-10	Jan-11	Feb-11	Mar-11
BoM	-0.98	-0.53	-0.13	0	0	-0.18
BMKG	-0.063	-0.12	-0.1	-0.05	0	-0.05

Prediksi **Indeks Dipole Mode** (DM) menurut BoM sampai Nopember 2010 berada pada kondisi **negatif** kuat yang berpotensi **menambah** curah hujan di Indonesia bagian Barat. Sementara BMKG memprediksi kondisi **negatif** namun masih berada pada kondisi **normal.**

PREDIKSI SPASIAL ANOMALI SST oleh NCEP (USA)

(UPDATE 11 OKTOBER 2010)

BMKG



Prediksi anomali suhu muka laut (SML) di Pasifik tengah pada bulan Oktober 2010 menunjukkan **kondisi cukup dingin,** dan berlanjut hingga Maret 2011.

Sementara, anomali SML di sekitar Indonesia diprediksi **cukup hangat** hingga Februari 2011 dan mulai mendingin pada Maret 2011

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RINGKASAN

- **Prediksi Elnino/La Nina :**

  Indeks Nino34 pada September 2010 menunjukkan pada kondisi **La Nina moderate**. Selanjutnya,diprediksi indeks Nino34 hingga Februari 2011 pada kondisi **La Nina moderate** hingga **Kuat.**

- **Dampak La Nina di Indonesia :**

  Dampak La Nina sangat dipengaruhi oleh suhu perairan Indonesia.

  Kondisi anomali suhu muka laut di Nino34 yang berharga negatif (kondisi La Nina moderate) pada September 2010, sementara suhu perairan Indonesia diprediksi tetap hangat hingga desember 2010, memberikan indikasi sebagian besar wilayah Indonesia berpotensi relatif banyak hujan memasuki dan pada Musim Hujan 2010/2011.

  Perlu kewaspadaan terkait peluang curah hujan intensitas tinggi pada Musim Hujan 2010/2011 khususnya pada daerah rawan banjir dan longsor

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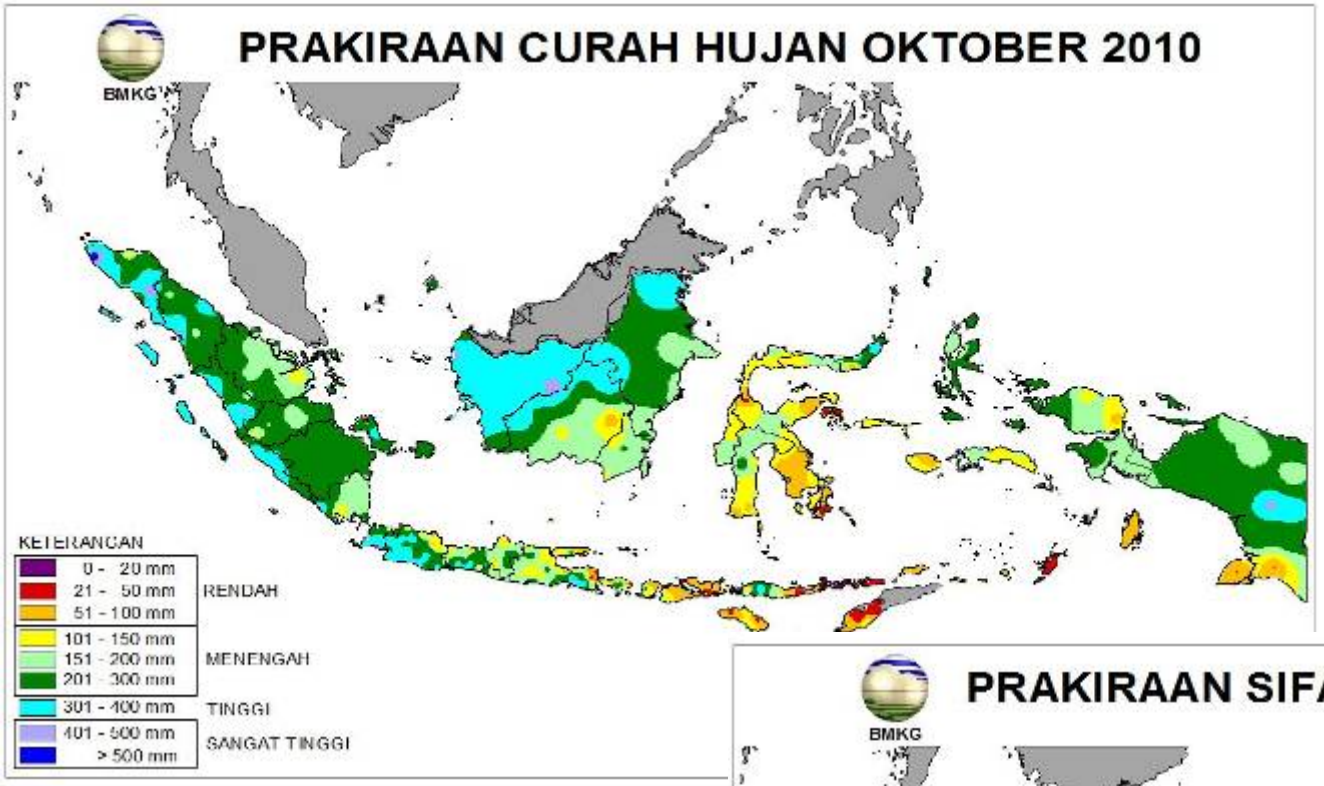
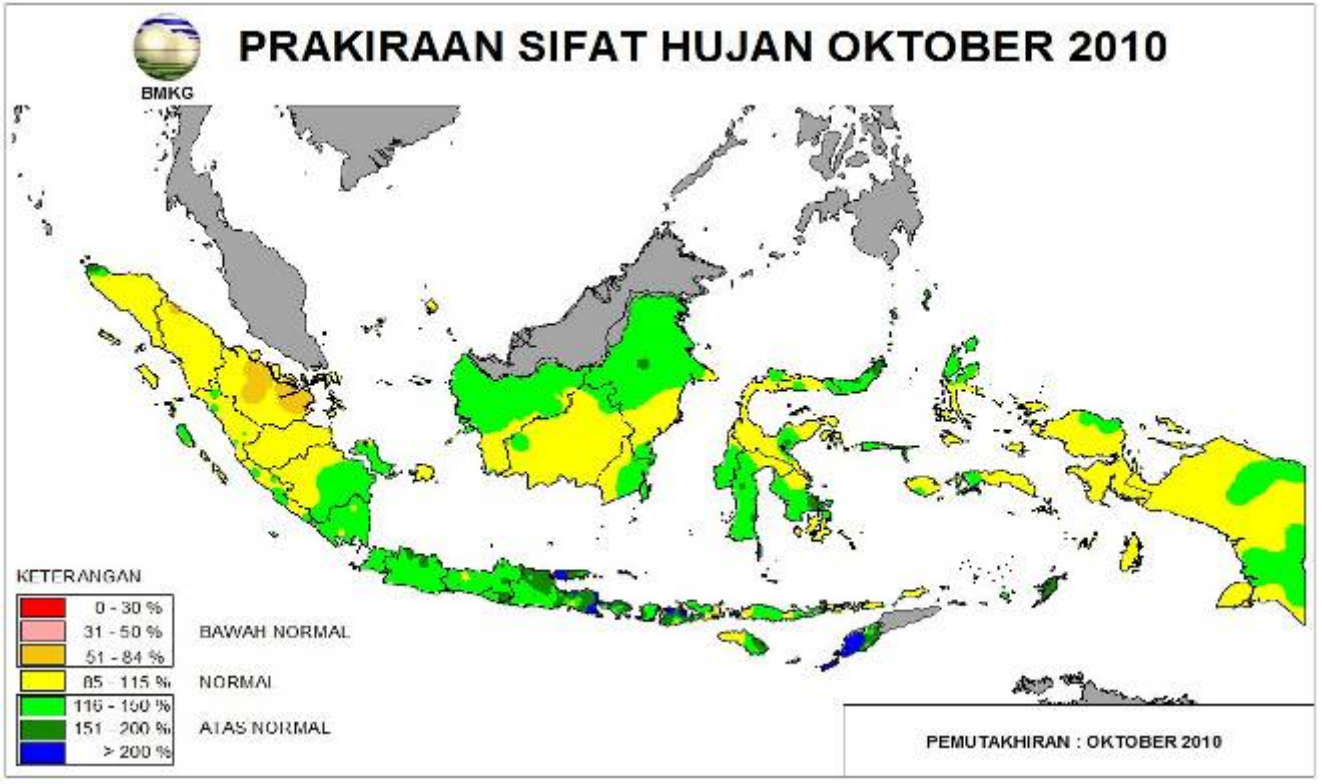
PRAKIRAAN HUJAN BULANAN OKTOBER, NOVEMBER DAN DESEMBER 2010


PRAKIRAAN CURAH HUJAN OKTOBER 2010
BMKG
KETERANGAN
0 - 20 mm
21 - 50 mm
51 - 100 mm
RENDAH
101 - 150 mm
151 - 200 mm
201 - 300 mm
MENENGAH
301 - 400 mm
TINGGI
401 - 500 mm
> 500 mm
SANGAT TINGGI

BMKG


PRAKIRAAN SIFAT HUJAN OKTOBER 2010
BMKG
KETERANGAN
0 - 30 %
31 - 50 %
51 - 84 %
BAWAH NORMAL
85 - 115 %
NORMAL
116 - 150 %
151 - 200 %
> 200 %
ATAS NORMAL
PEMUTAKHIRAN : OKTOBER 2010

PRAKIRAAN CURAH HUJAN NOVEMBER 2010
BMKG
KETERANGAN
0 - 20 mm
21 - 50 mm
51 - 100 mm
RENDAH
101 - 150 mm
151 - 200 mm
201 - 300 mm
MENENGAH
301 - 400 mm
TINGGI
401 - 500 mm
> 500 mm
SANGAT TINGGI

BMKG

PRAKIRAAN SIFAT HUJAN NOVEMBER 2010
BMKG
KETERANGAN
0 - 30 %
31 - 50 %
51 - 84 %
BAWAH NORMAL
85 - 115 %
NORMAL
116 - 150 %
151 - 200 %
> 200 %
ATAS NORMAL
PEMUTAKHIRAN : OKTOBER 2010
PEMUTAKHIRAN BERIKUTNYA : NOVEMBER 2010

PRAKIRAAN CURAH HUJAN DESEMBER 2010
BMKG
KETERANGAN
0 - 20 mm
21 - 50 mm
51 - 100 mm
RENDAH
101 - 150 mm
151 - 200 mm
201 - 300 mm
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301 - 400 mm
TINGGI
401 - 500 mm
> 500 mm
SANGAT TINGGI

BMKG

PRAKIRAAN SIFAT HUJAN DESEMBER 2010
BMKG
KETERANGAN
0 - 30 %
31 - 50 %
51 - 84 %
BAWAH NORMAL
85 - 115 %
NORMAL
116 - 150 %
151 - 200 %
> 200 %
ATAS NORMAL
PEMUTAKHIRAN : OKTOBER 2010
PEMUTAKHIRAN BERIKUTNYA : NOVEMBER 2010

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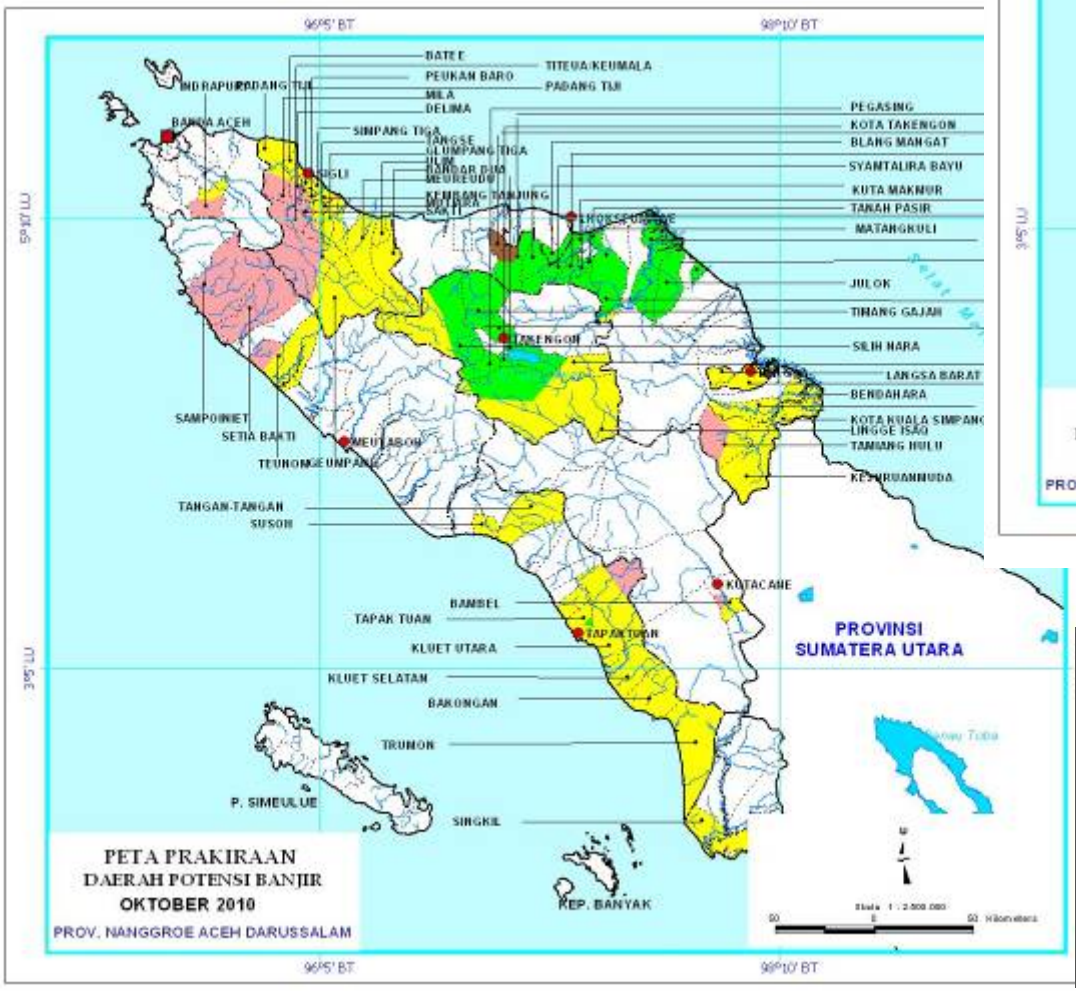
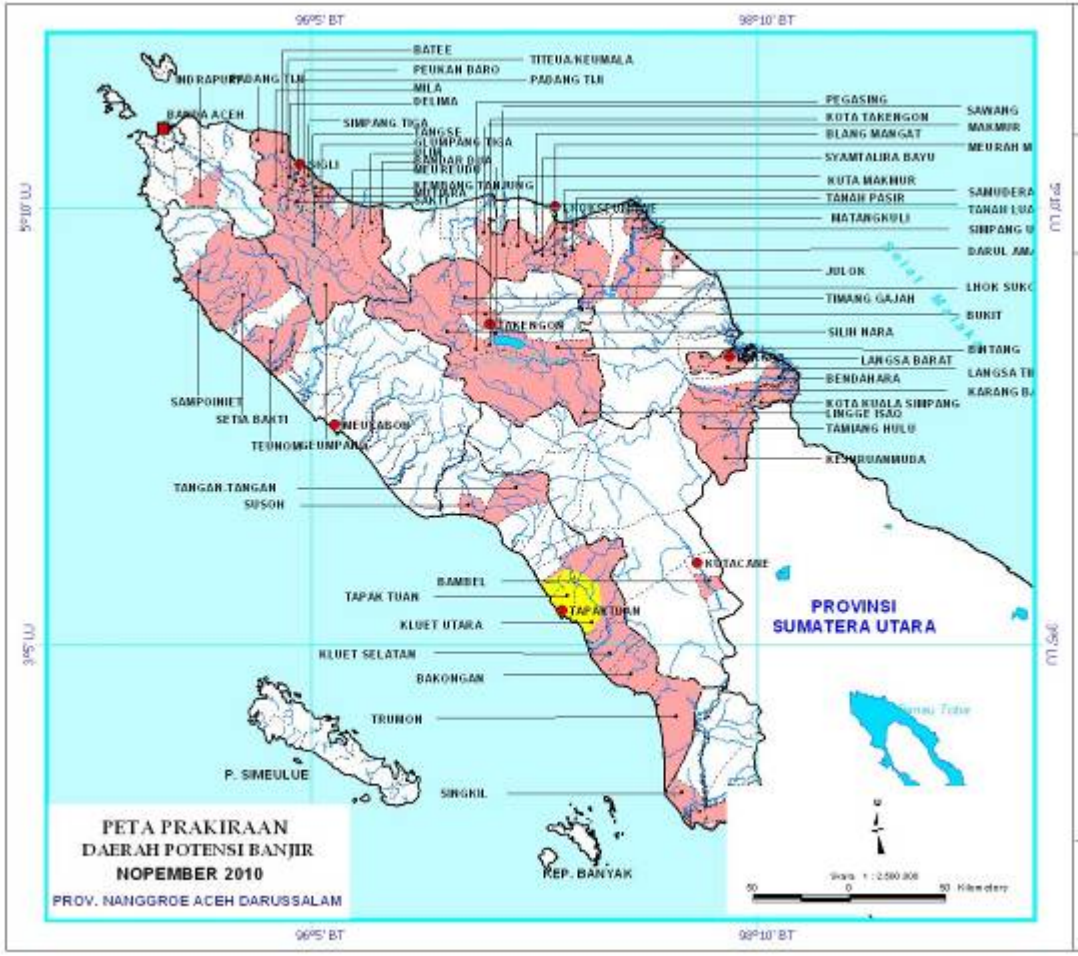
PRAKIRAAN
DAERAH POTENSI BANJIR
OKTOBER - NOPEMBER 2010

PRAKIRAAN POTENSI BANJIR WILAYAH NANGRO ACEH DARUSSALAM

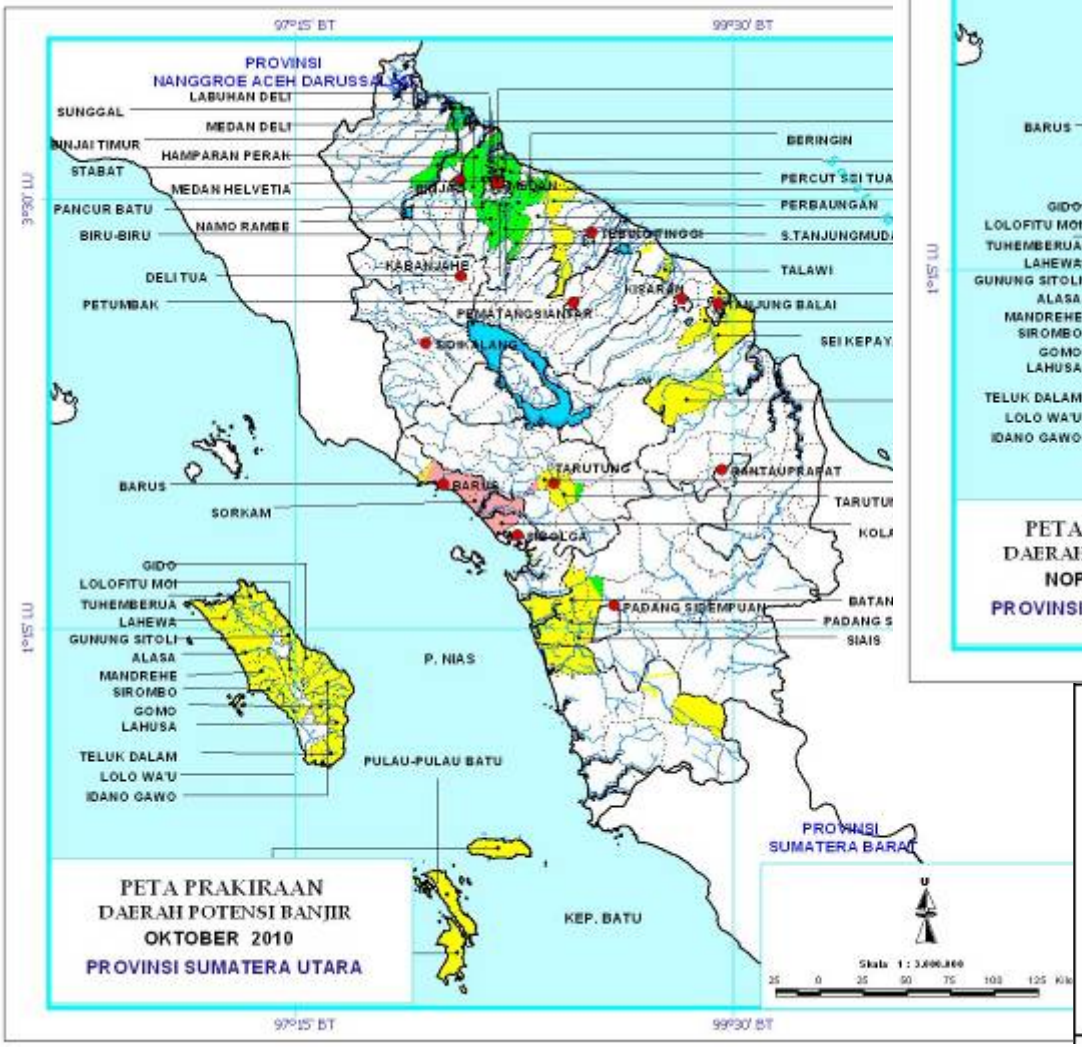


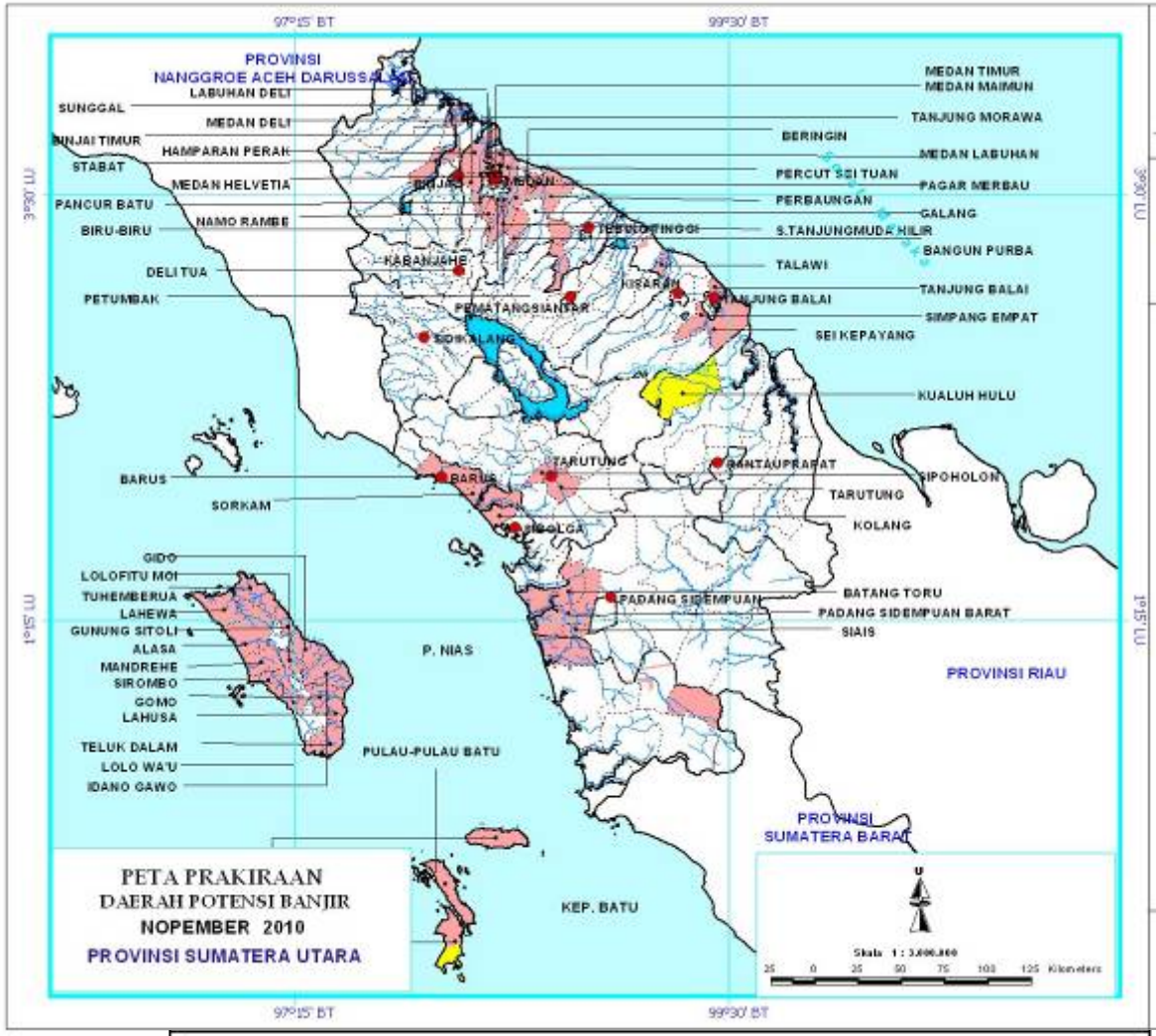


Potensi Rawan Banjir

- Tinggi
- Rendah
- Menengah
- Aman

PRAKIRAAN POTENSI BANJIR WILAYAH SUMATERA UTARA

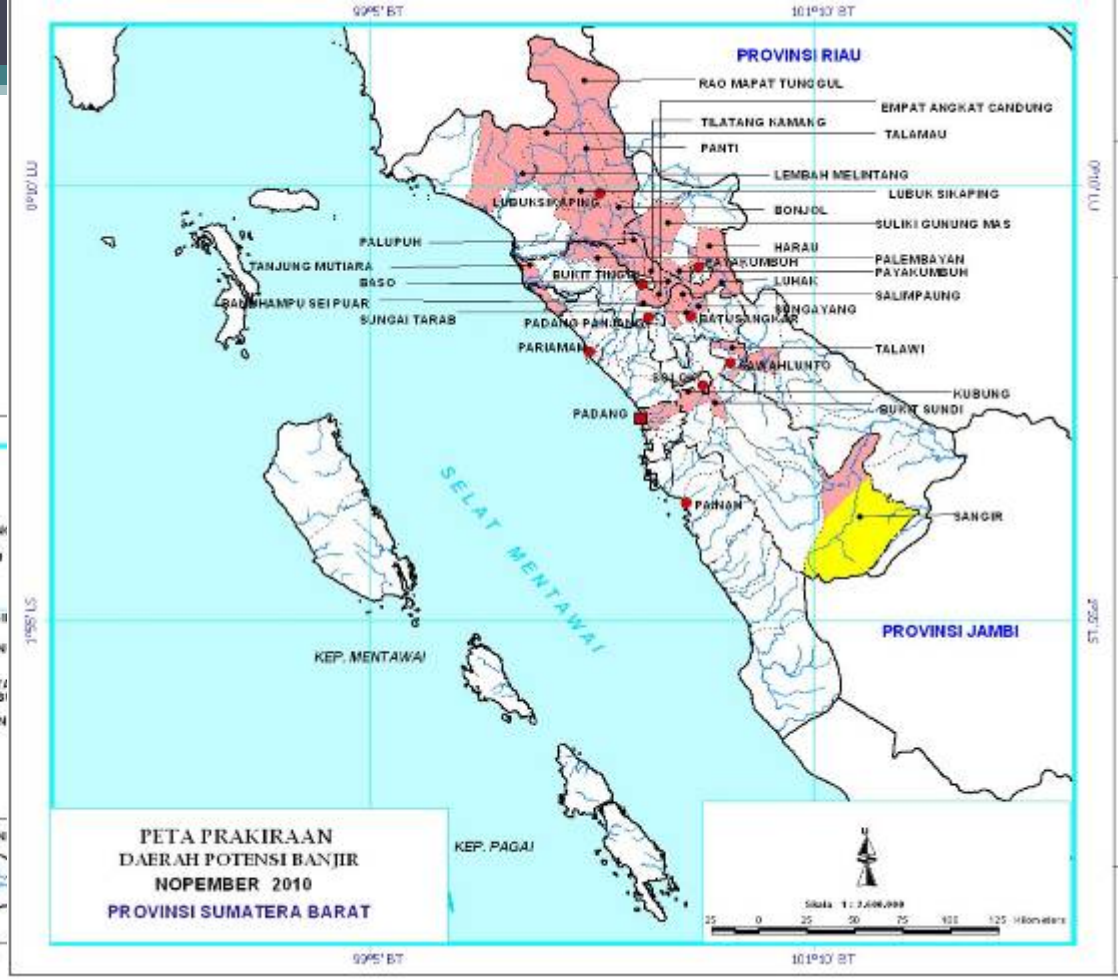


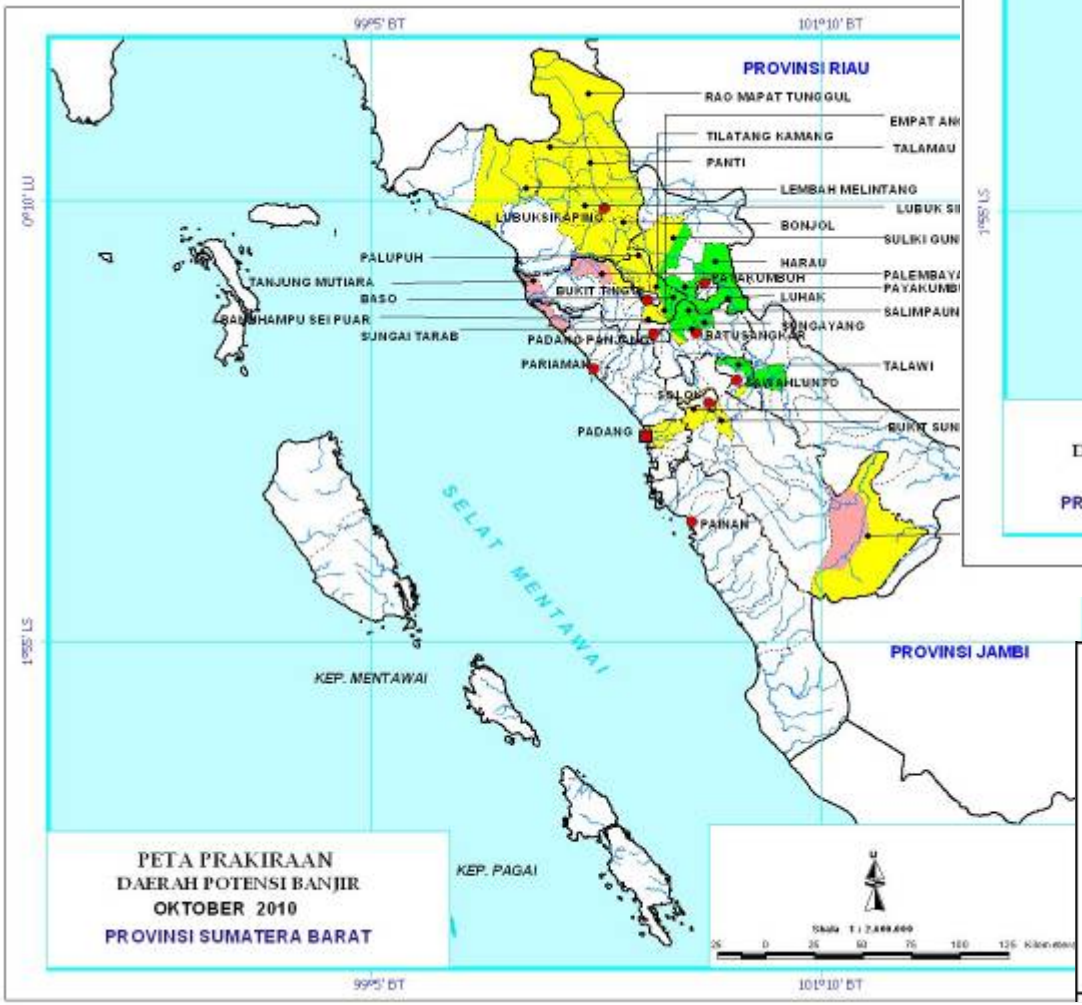


Potensi Rawan Banjir

	Tinggi		Rendah
	Menengah		Aman

PRAKIRAAN POTENSI BANJIR WILAYAH SUMATERA BARAT

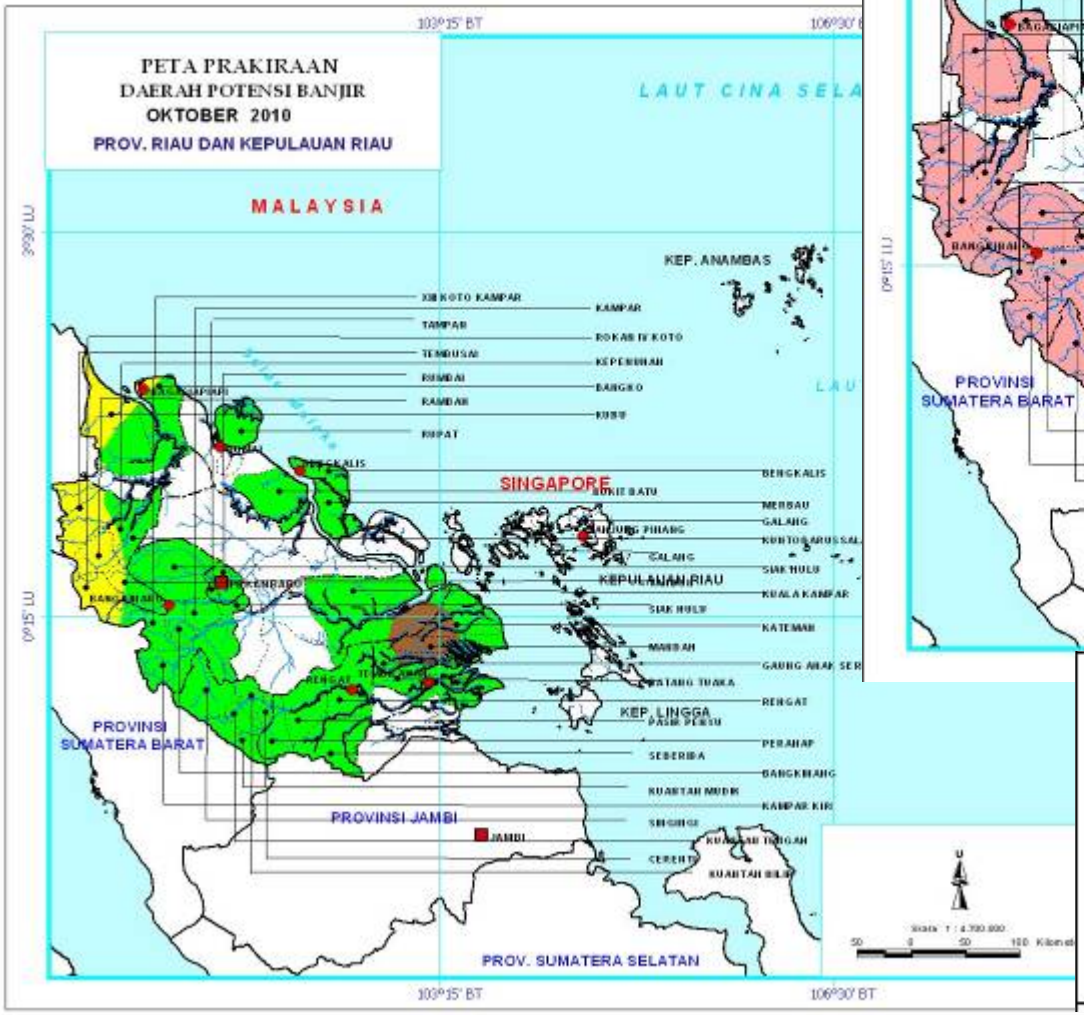


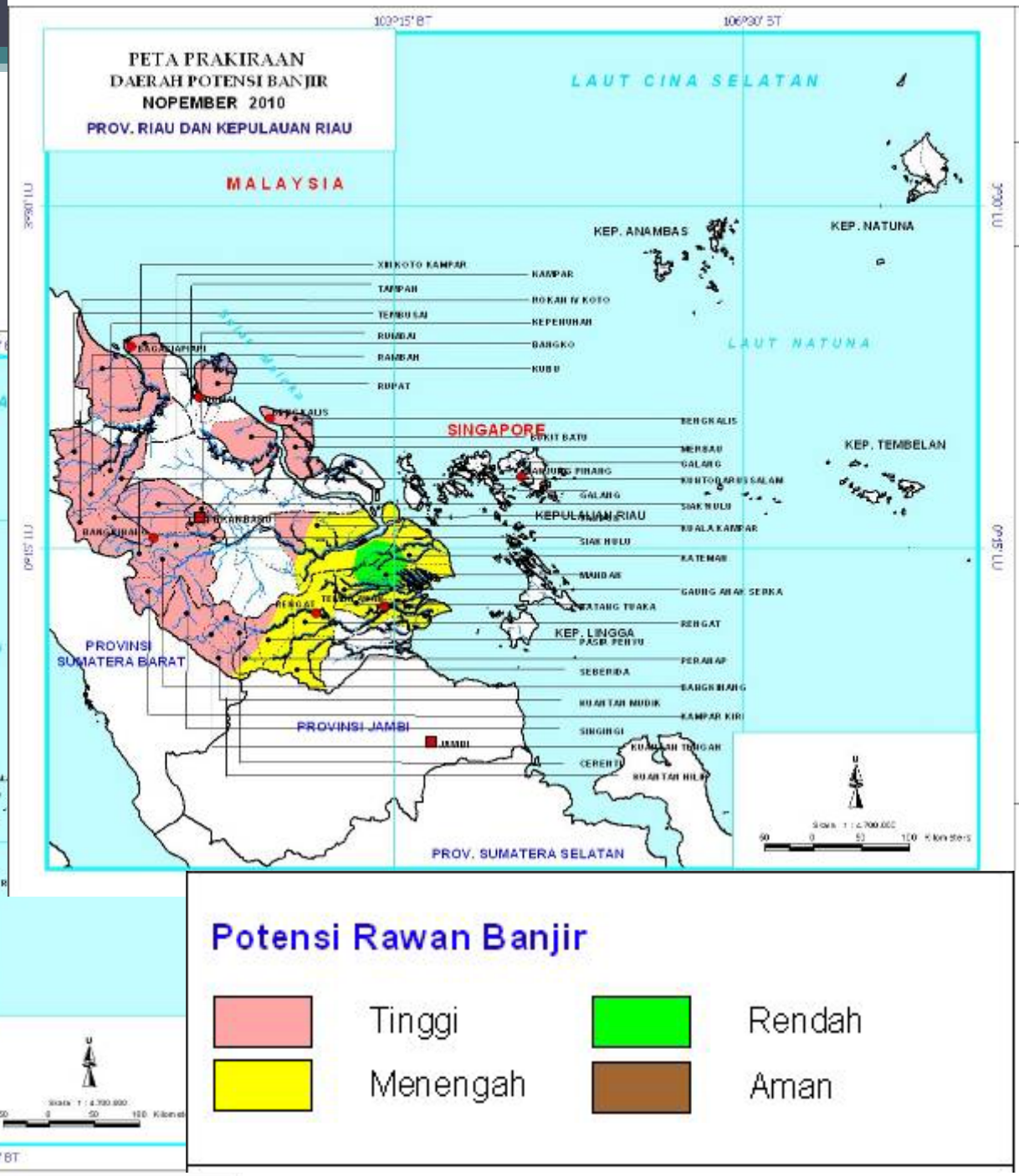


Potensi Rawan Banjir

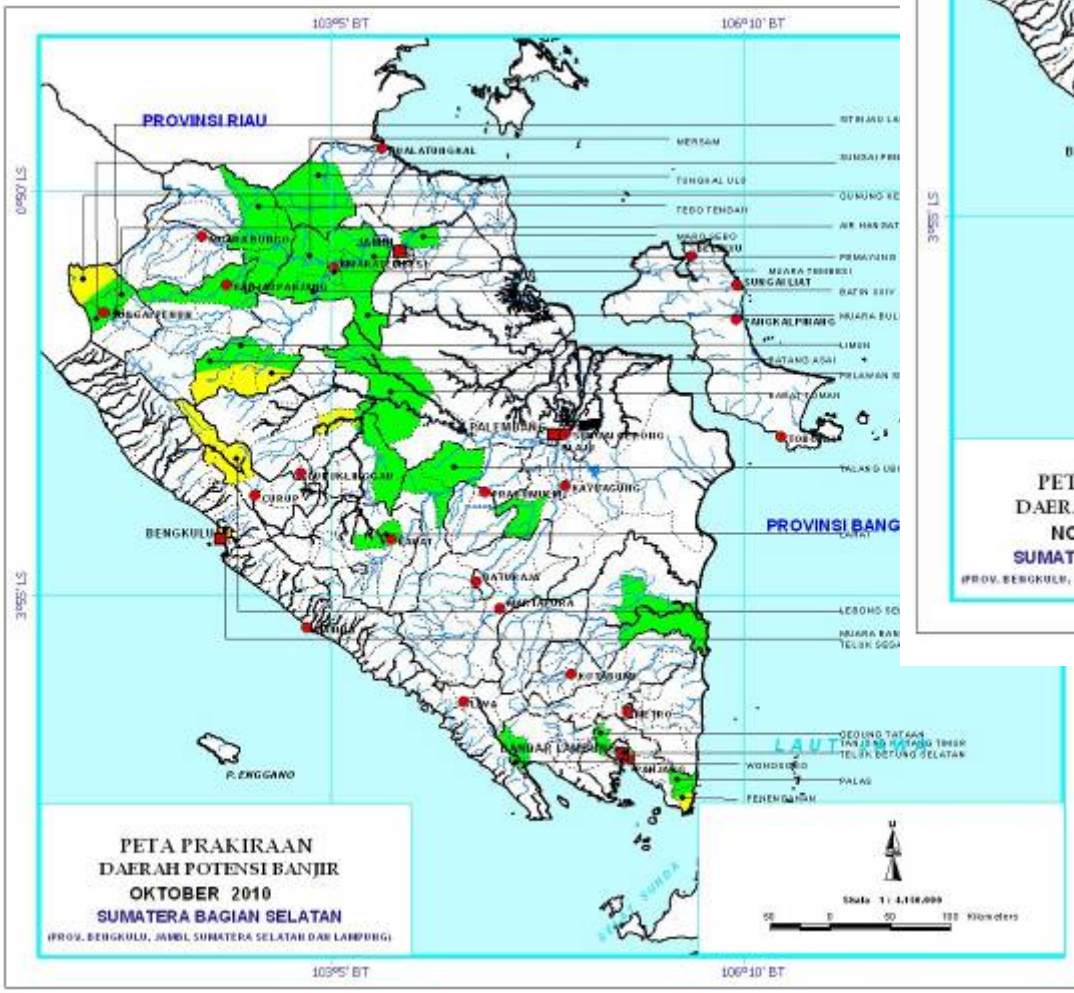
- Tinggi
- Menengah
- Rendah
- Aman

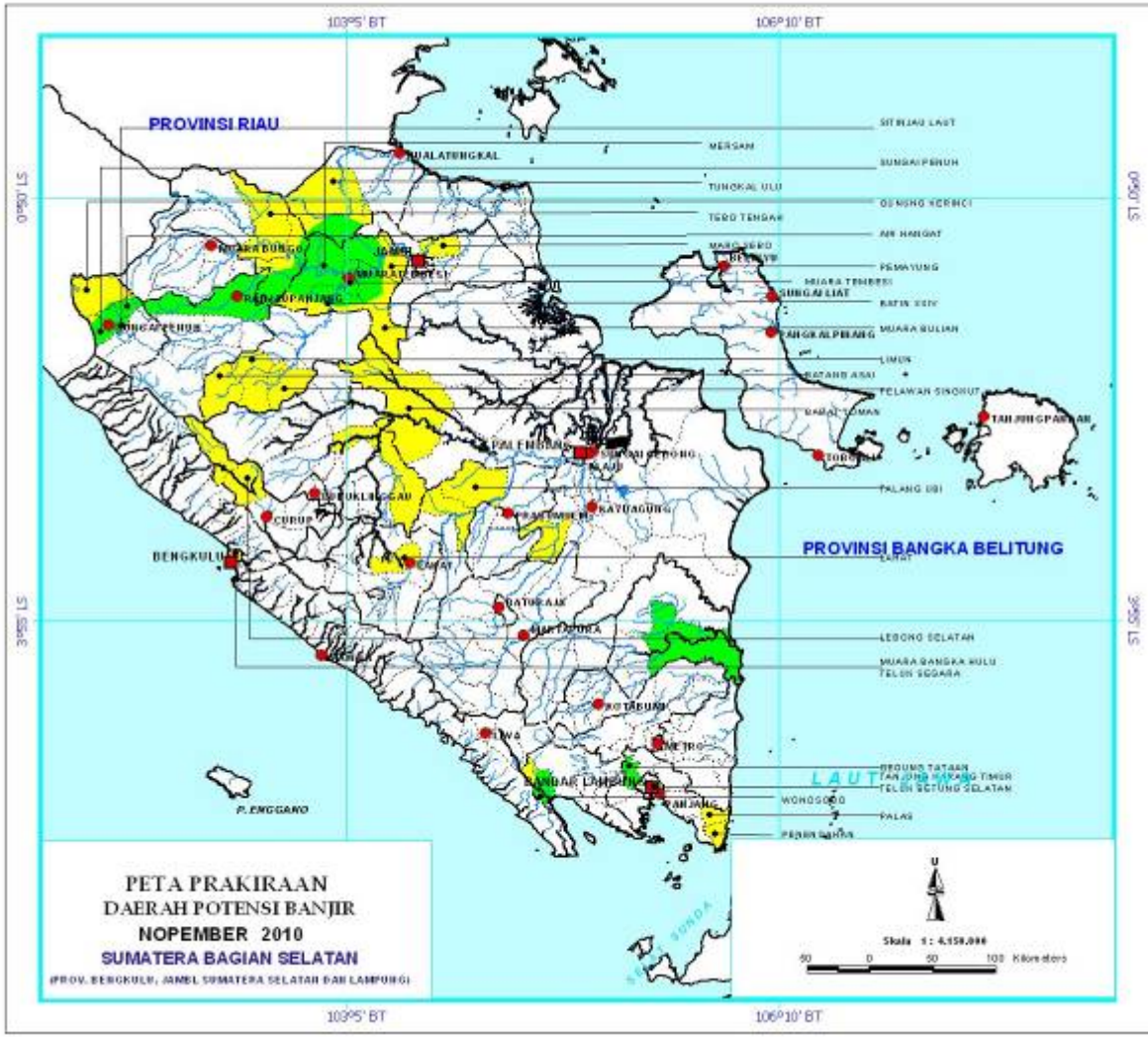
PRAKIRAAN POTENSI BANJIR WILAYAH RIAU & KEPRI





PRAKIRAAN POTENSI BANJIR WILAYAH SUMATERA BAGIAN SELATA

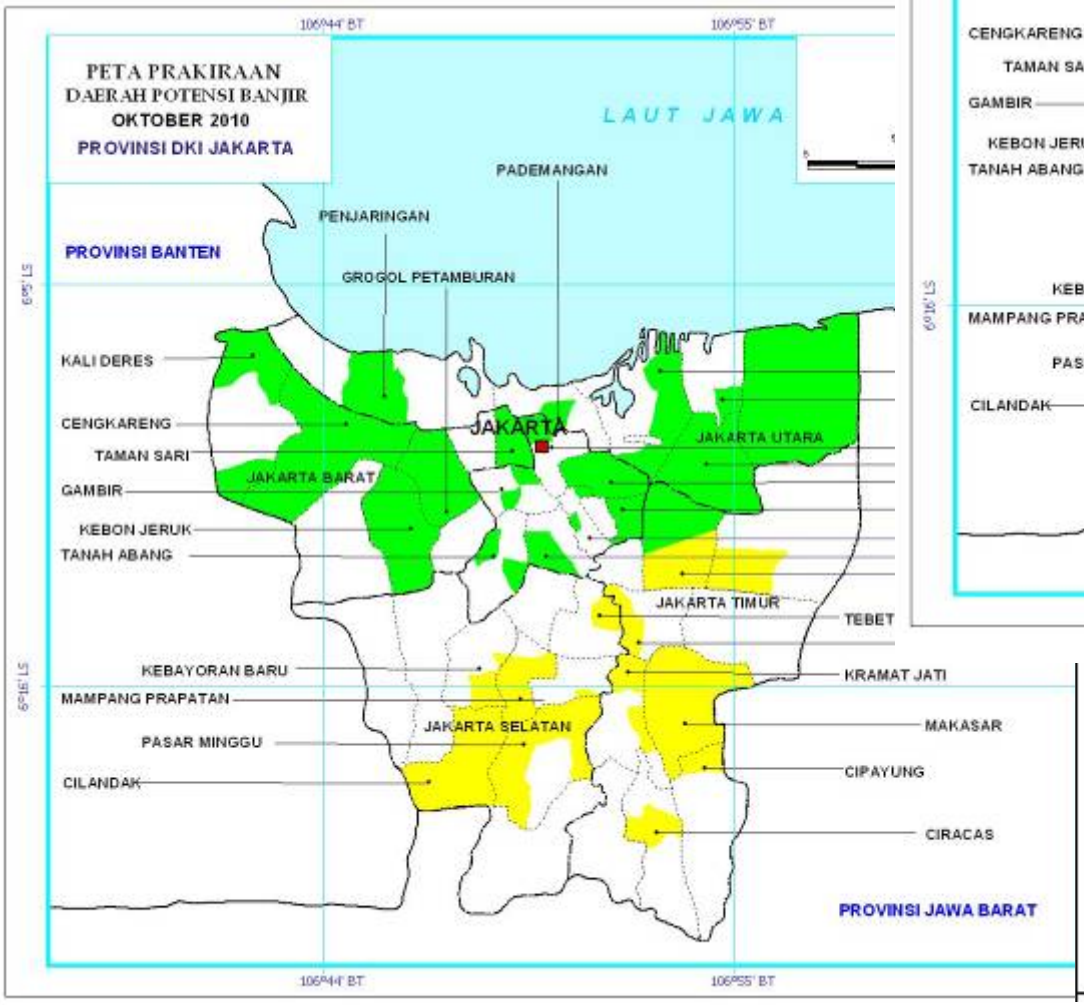


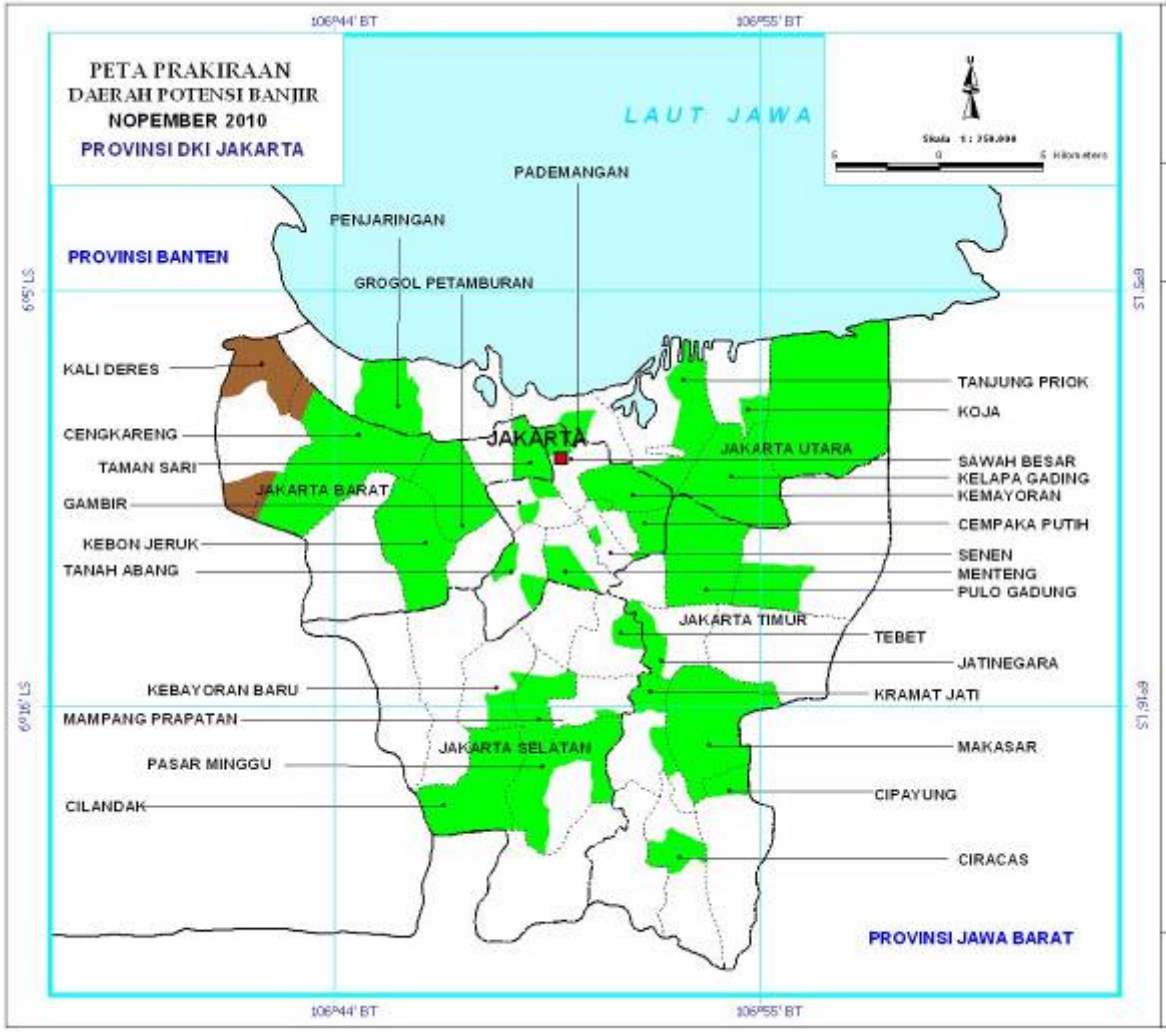


Potensi Rawan Banjir

- Tinggi
- Rendah
- Menengah
- Aman

PRAKIRAAN POTENSI BANJIR WILAYAH DKI JAKARTA





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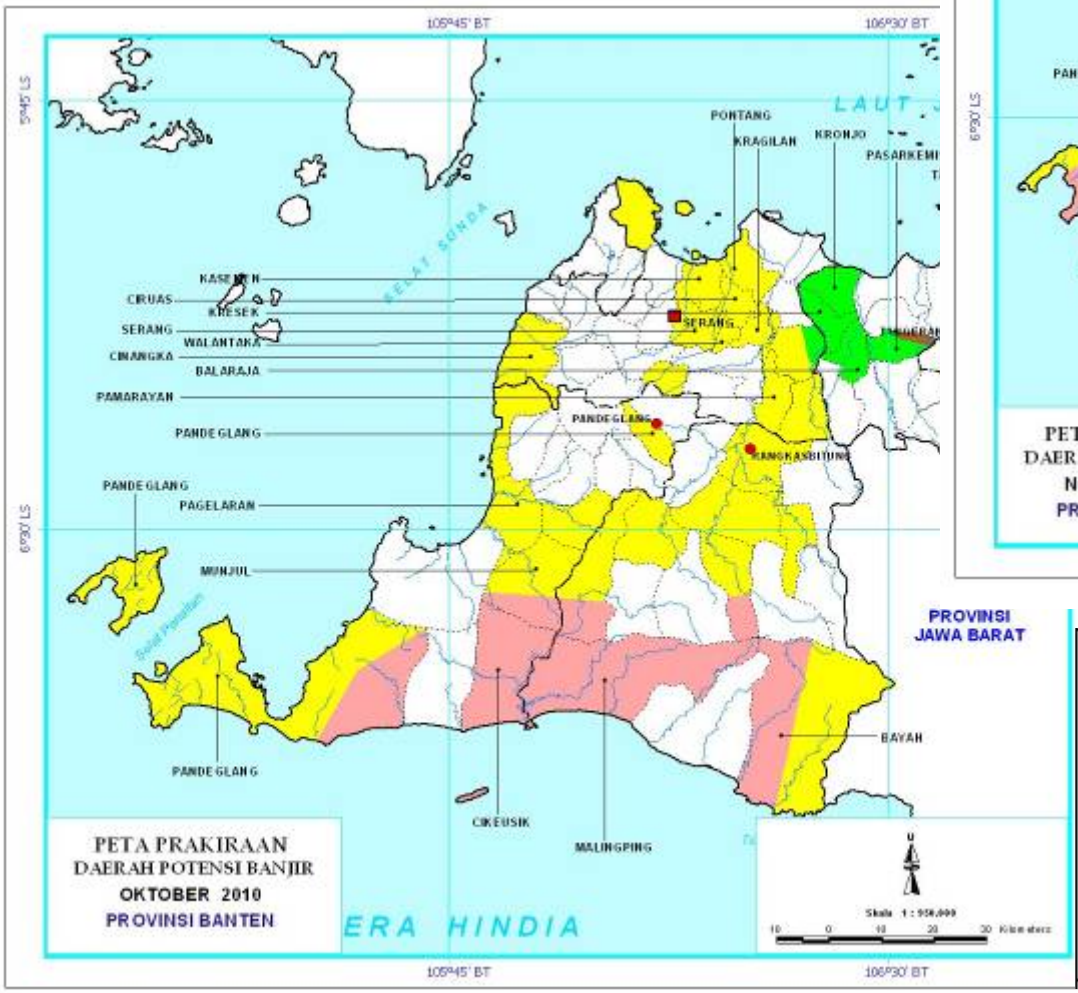
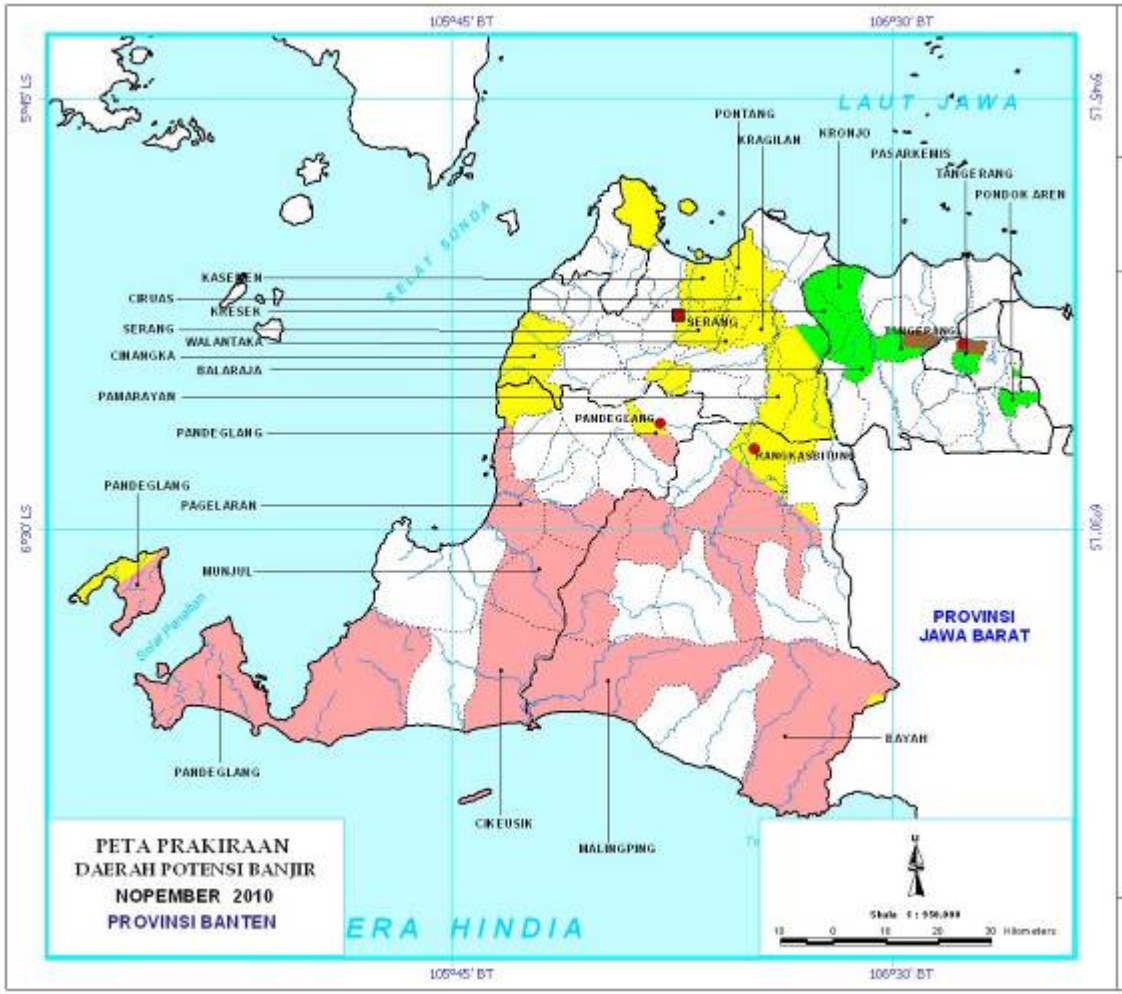
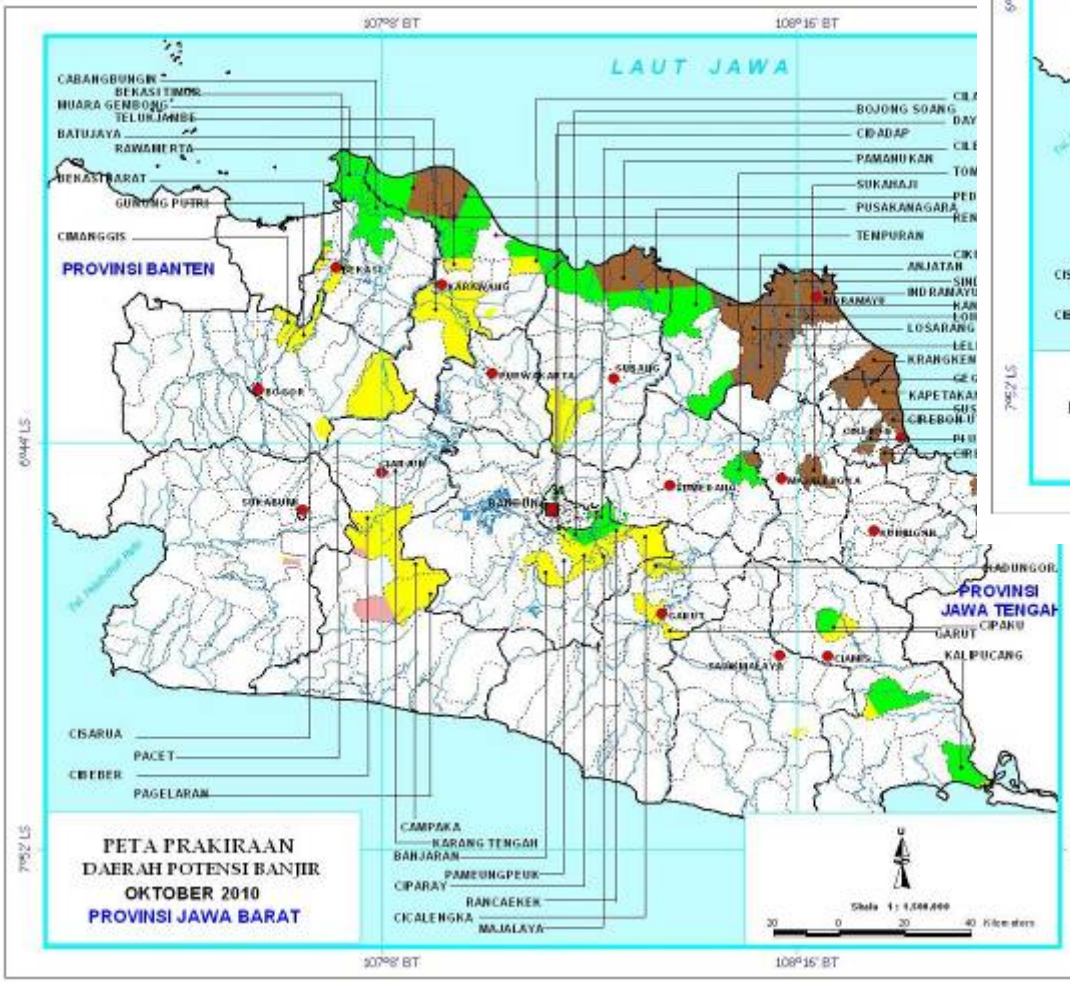


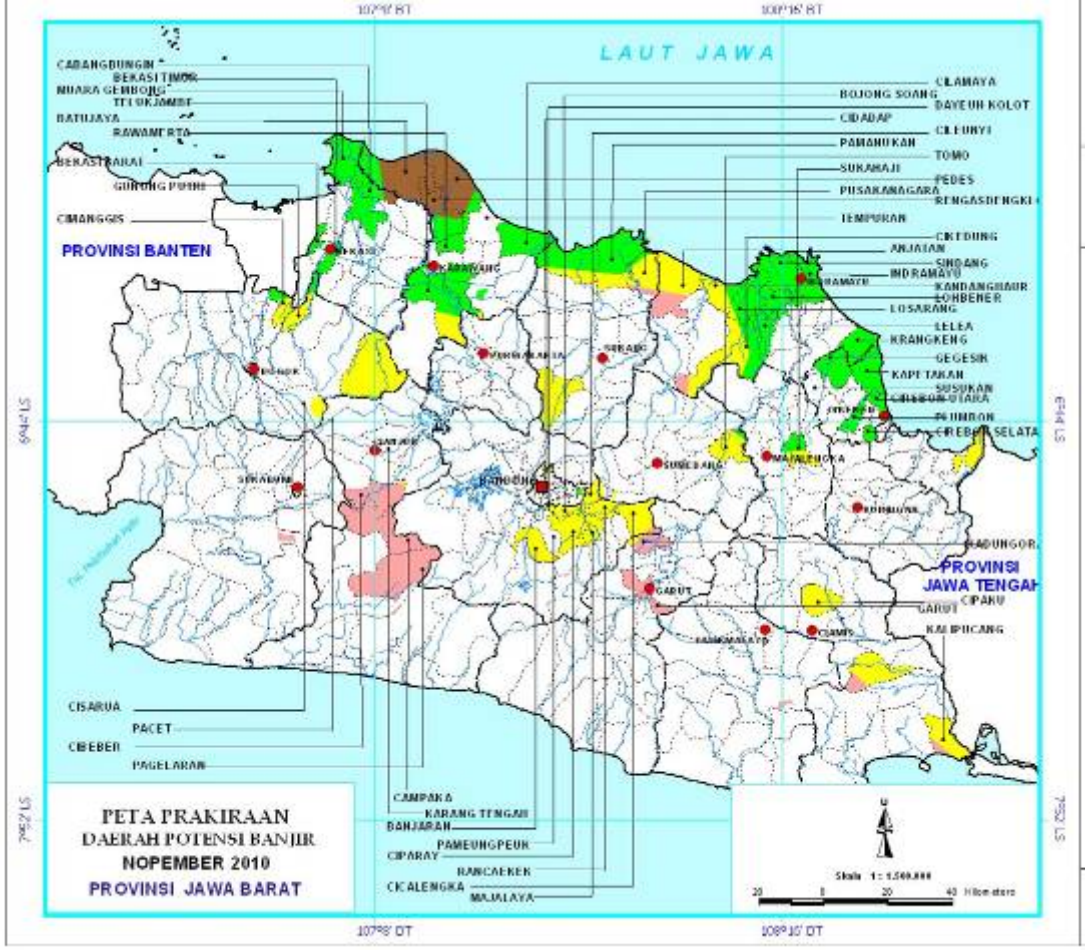


Potensi Rawan Banjir

- Tinggi
- Menengah
- Rendah
- Aman

PRAKIRAAN POTENSI BANJIR WILAYAH JAWA BARAT

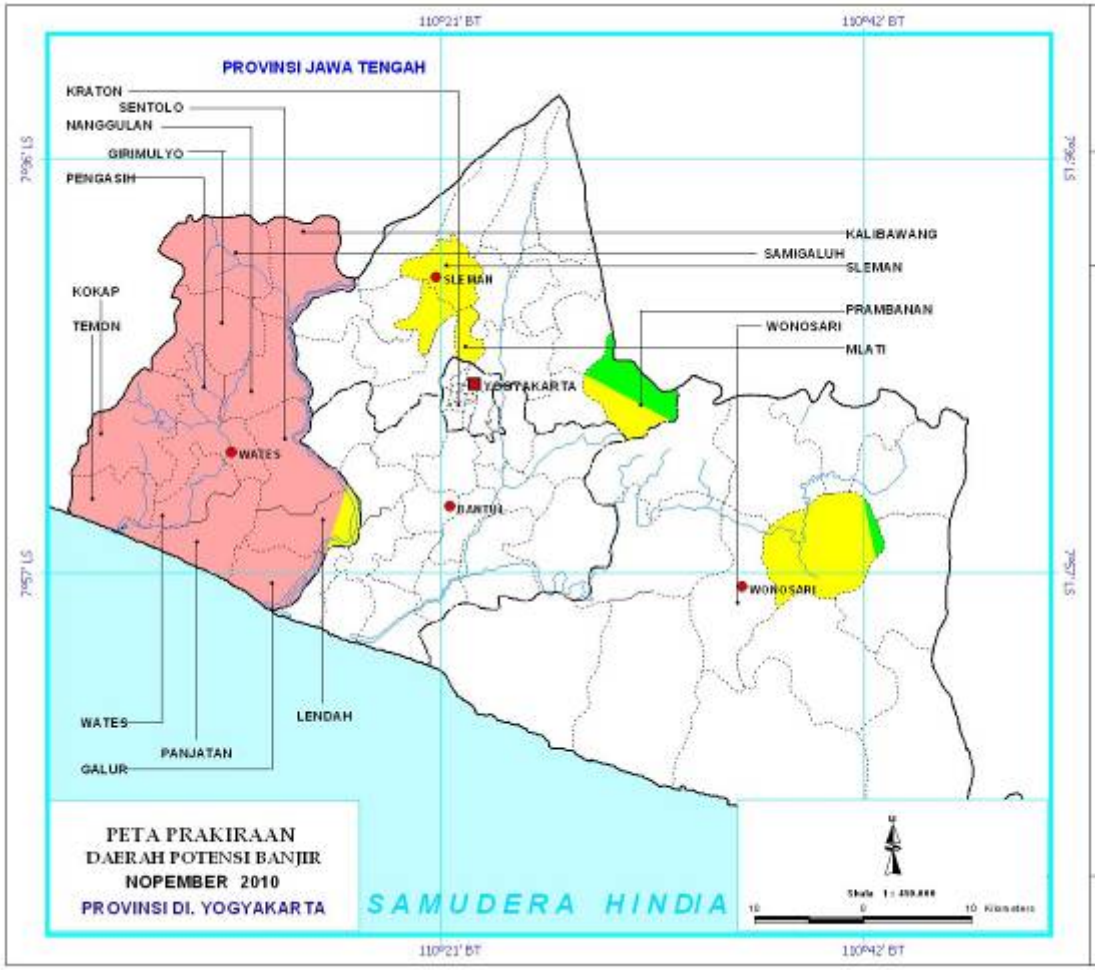


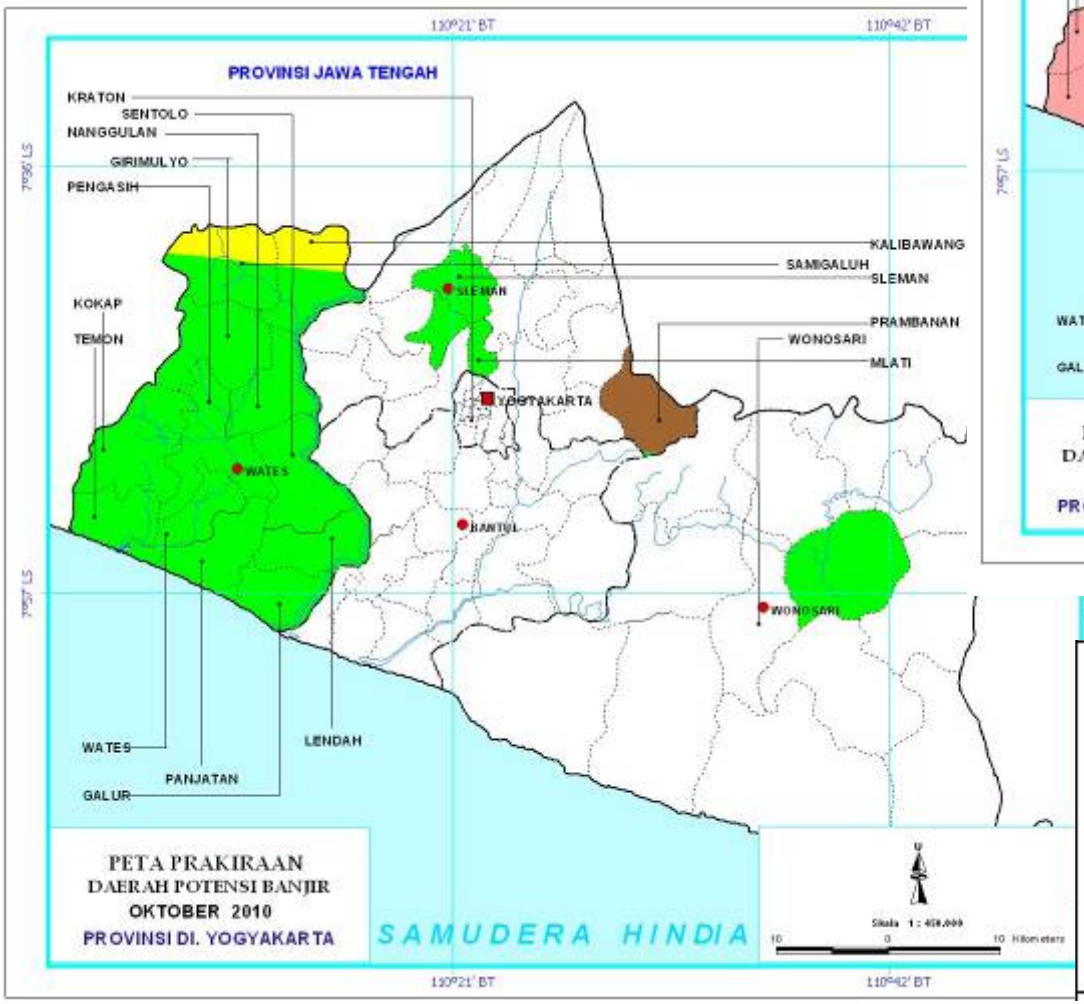


Potensi Rawan Banjir

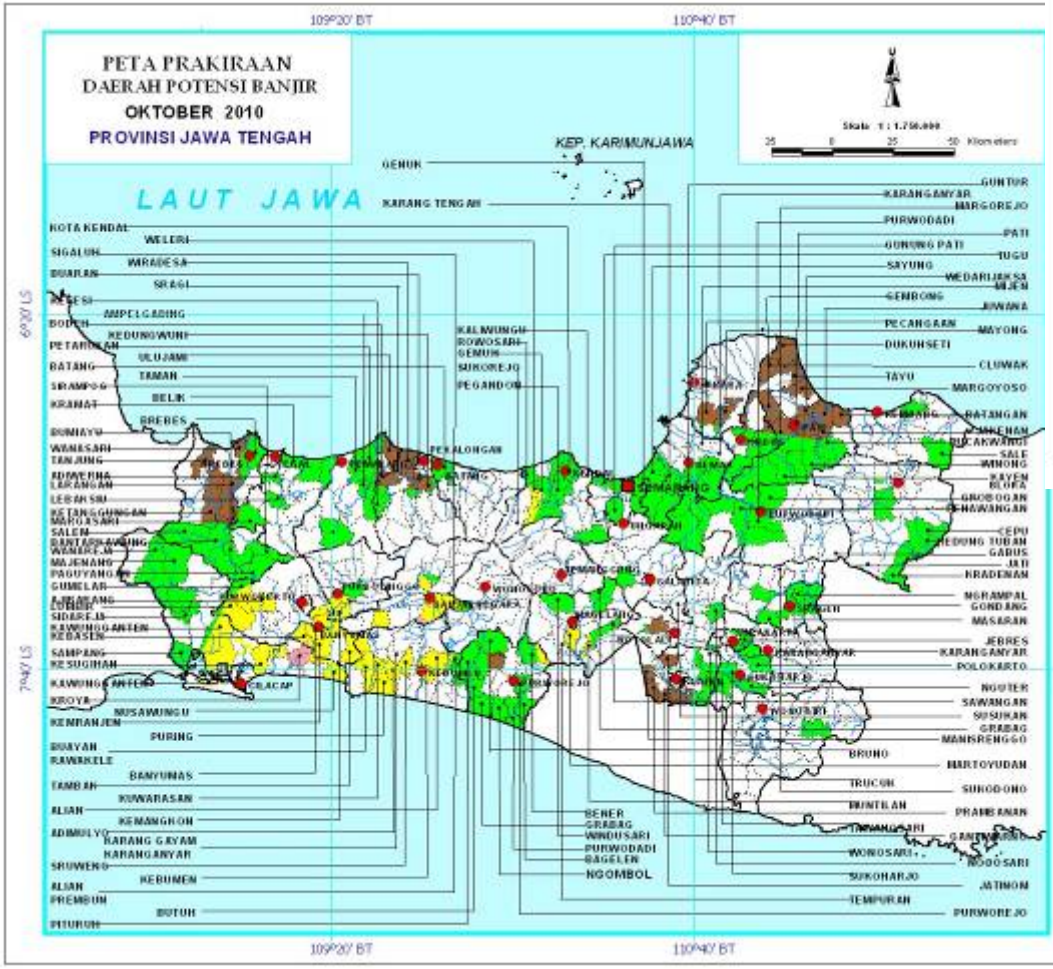
- Tinggi
- Rendah
- Menengah
- Aman

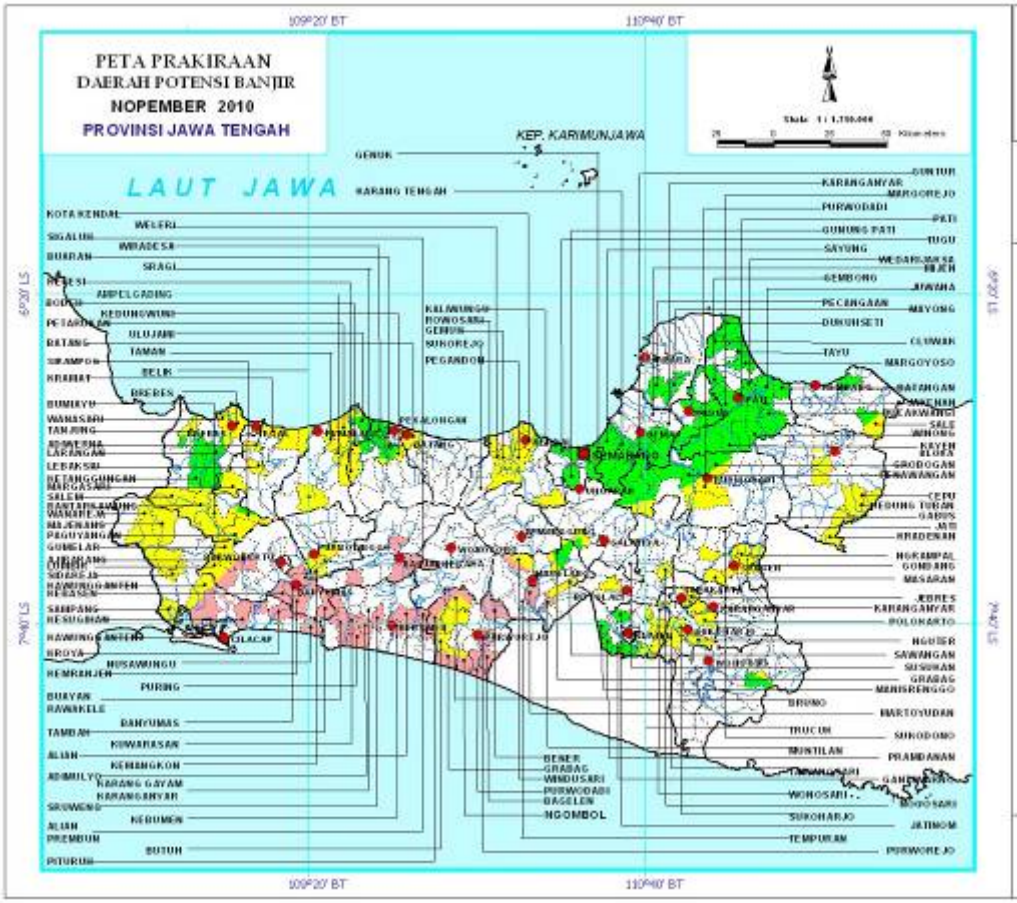
PRAKIRAAN POTENSI BANJIR WILAYAH D.I. YOGYAKARTA



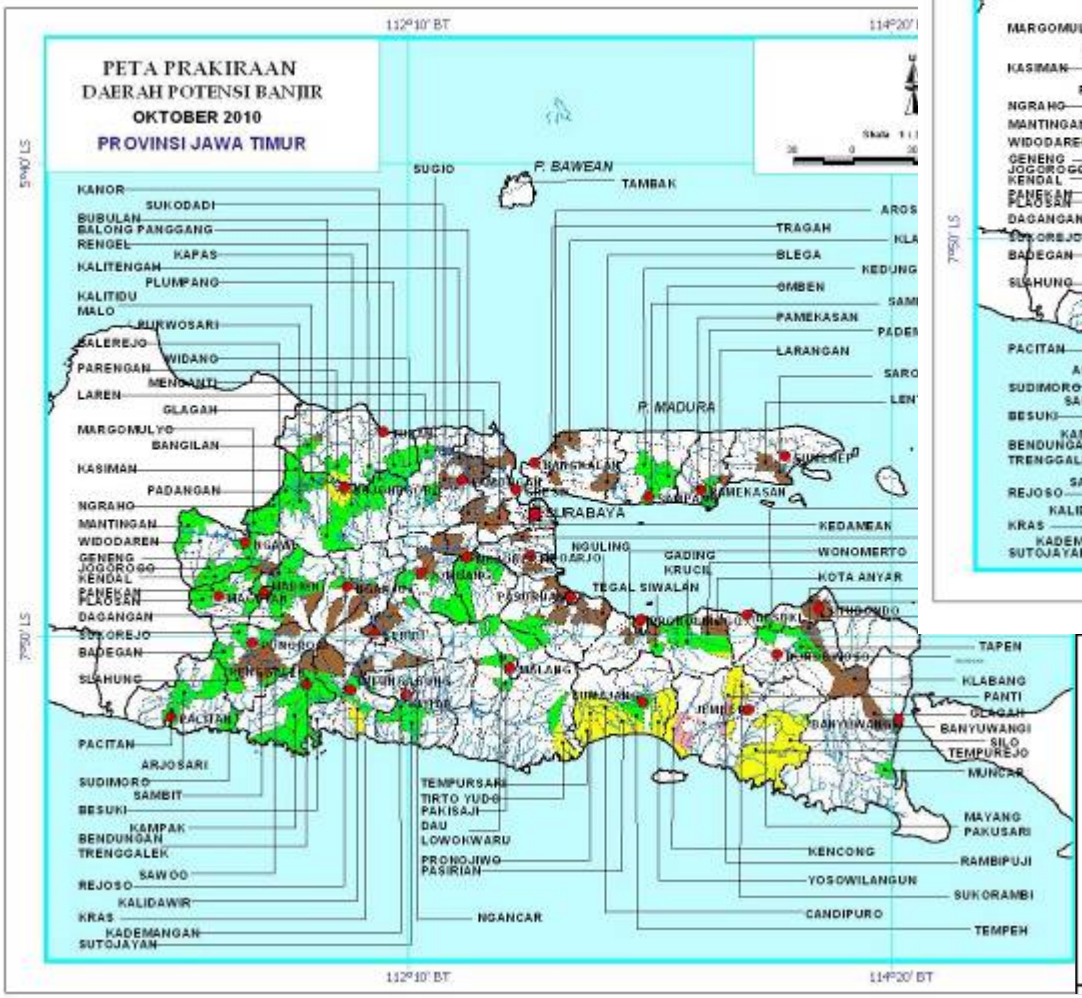


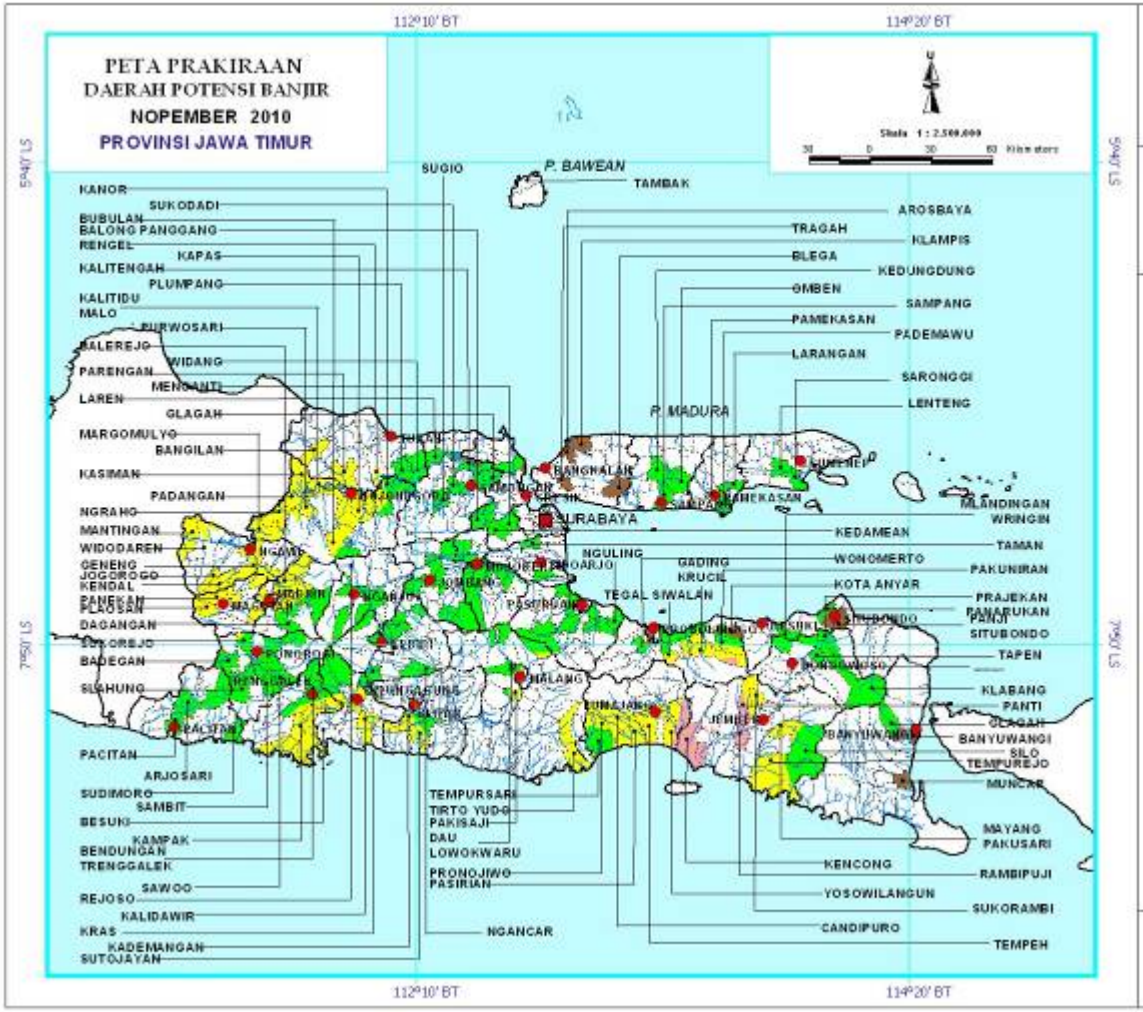
PRAKIRAAN POTENSI BANJIR WILAYAH JAWA TENGAH





PRAKIRAAN POTENSI BANJIR WILAYAH JAWA TIMUR





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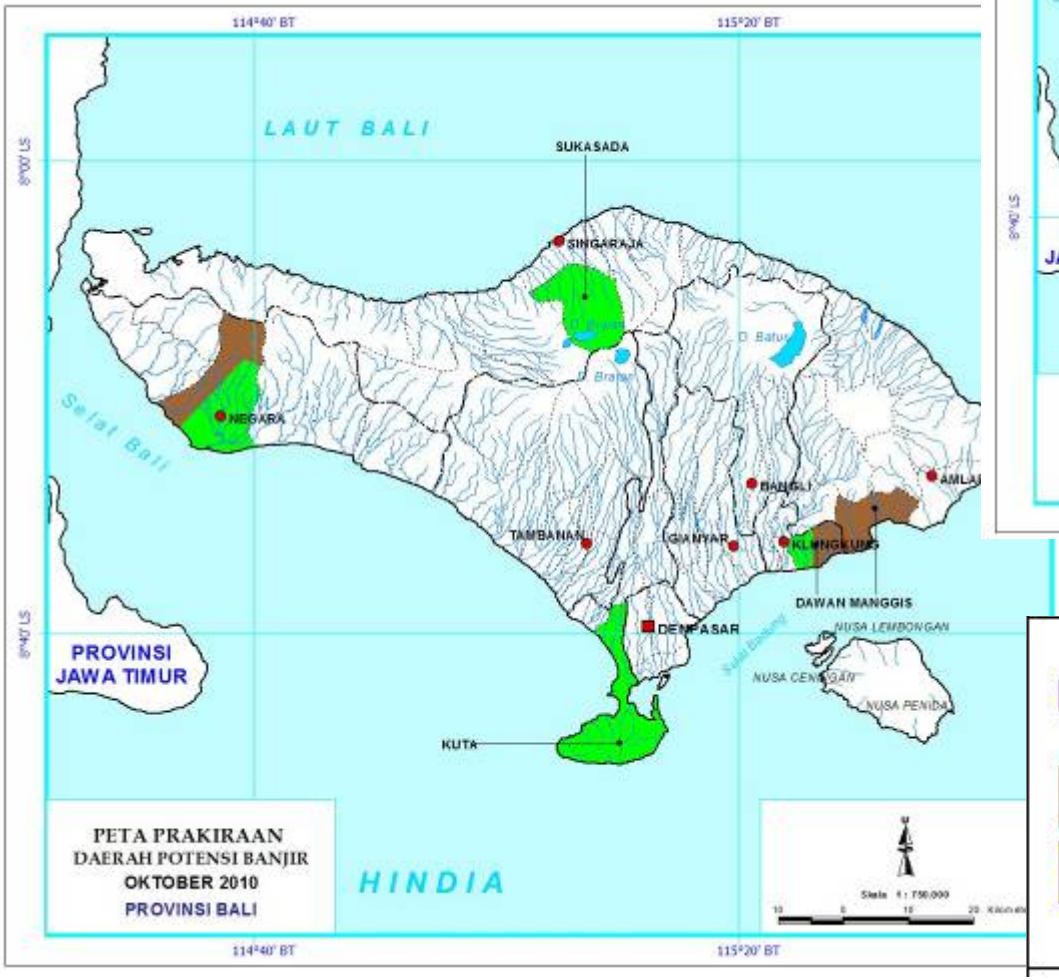
PRAKIRAAN POTENSI BANJIR WILAYAH BALI



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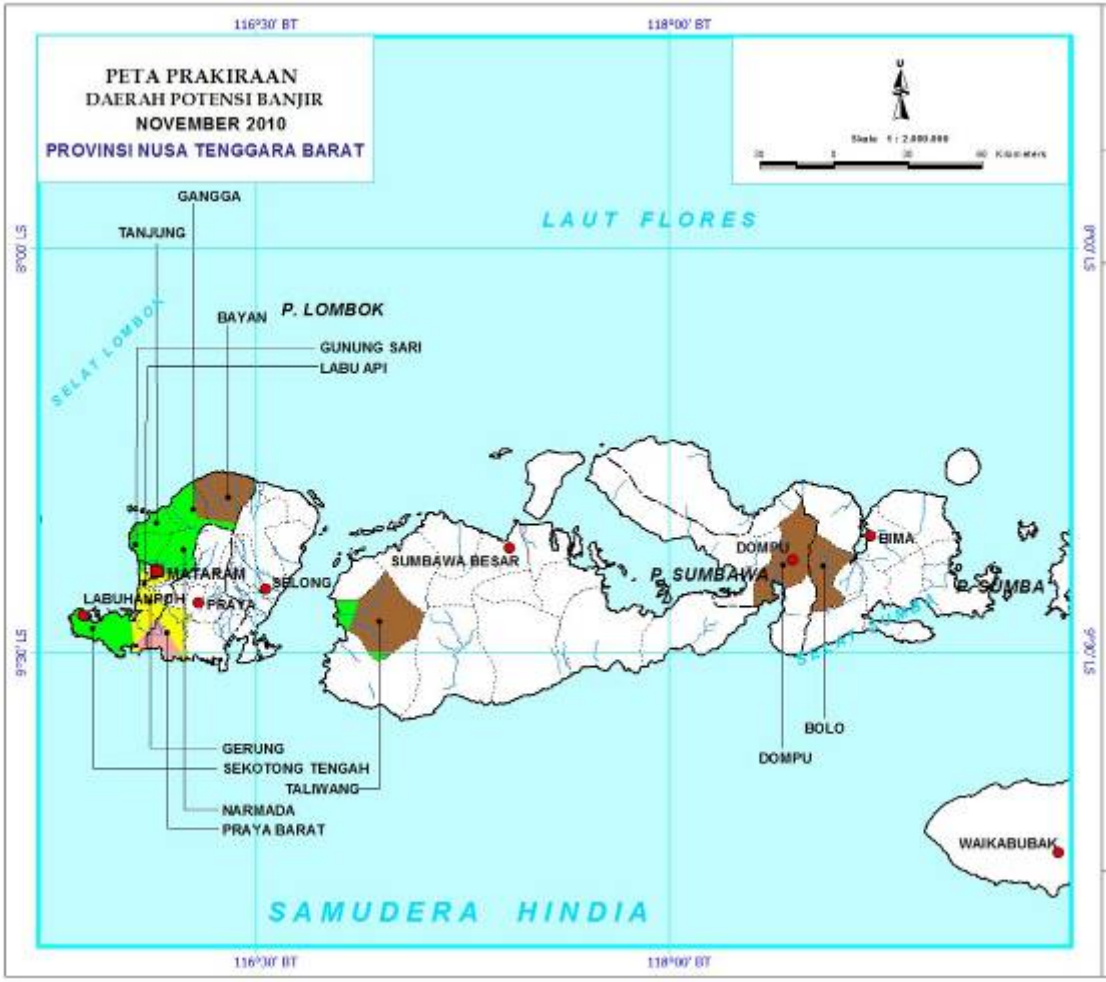
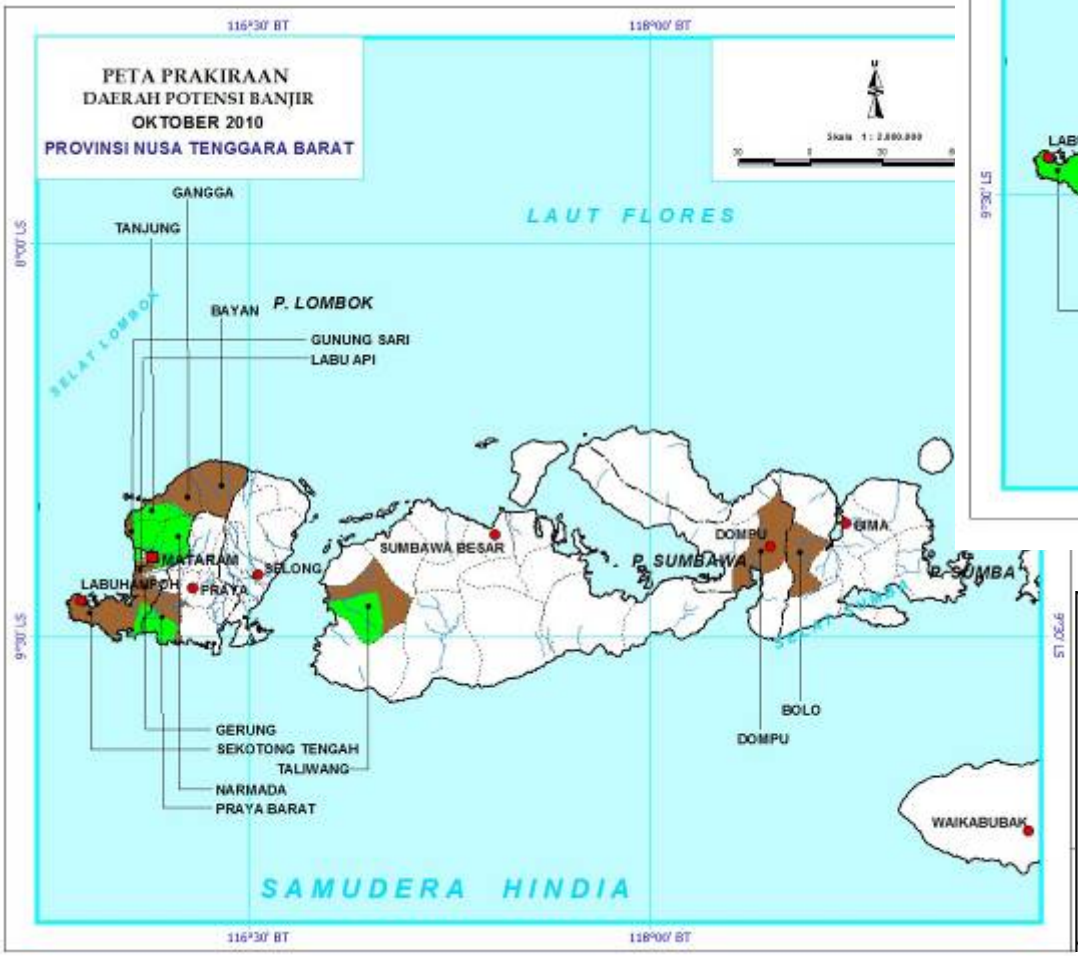
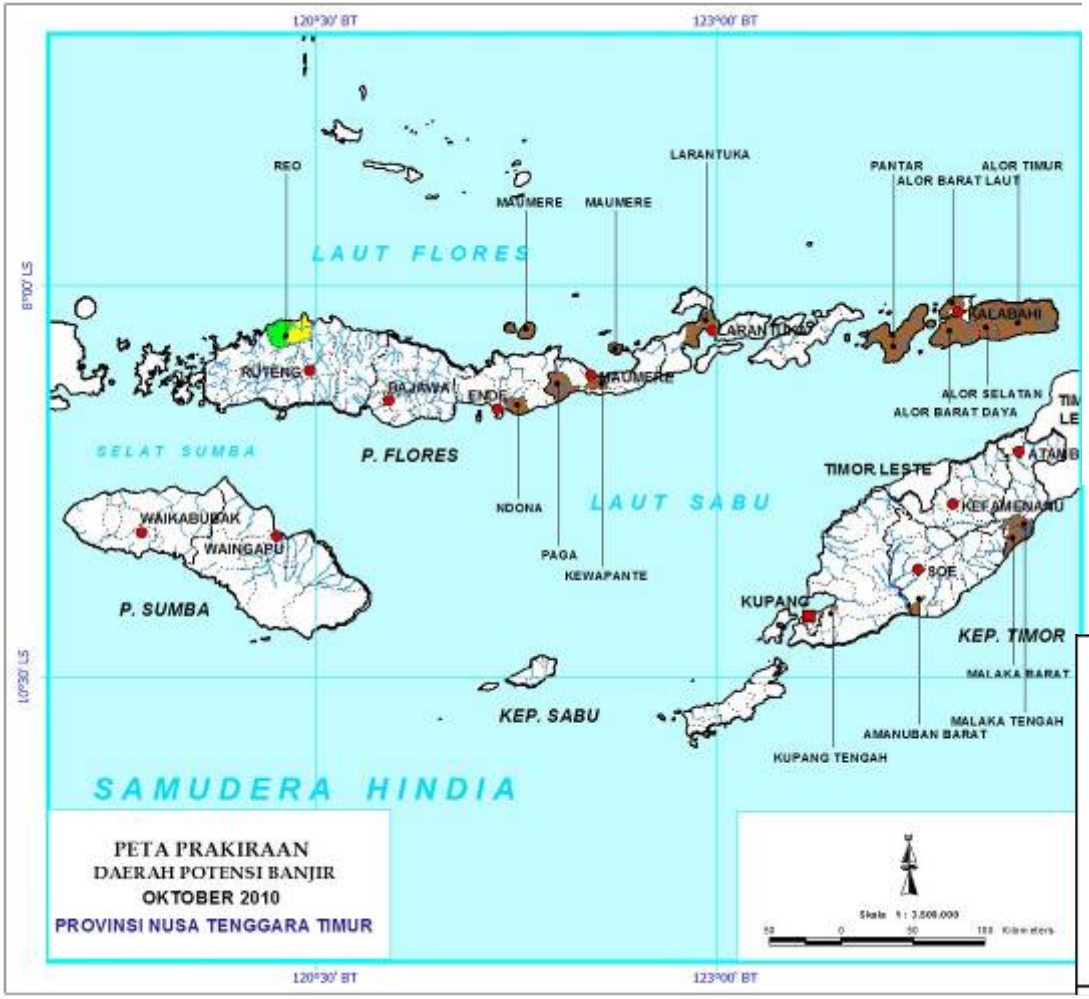
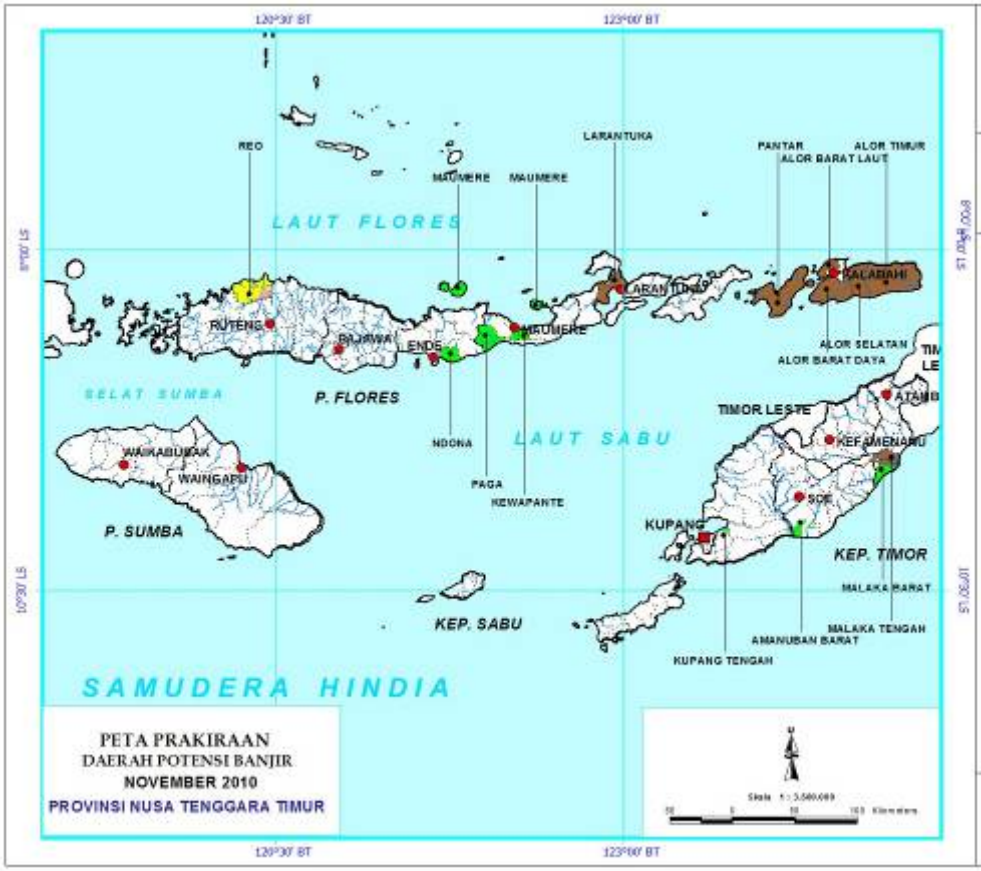




PRAKIRAAN POTENSI BANJIR
WILAYAH NUSA TENGGARA TIMUR

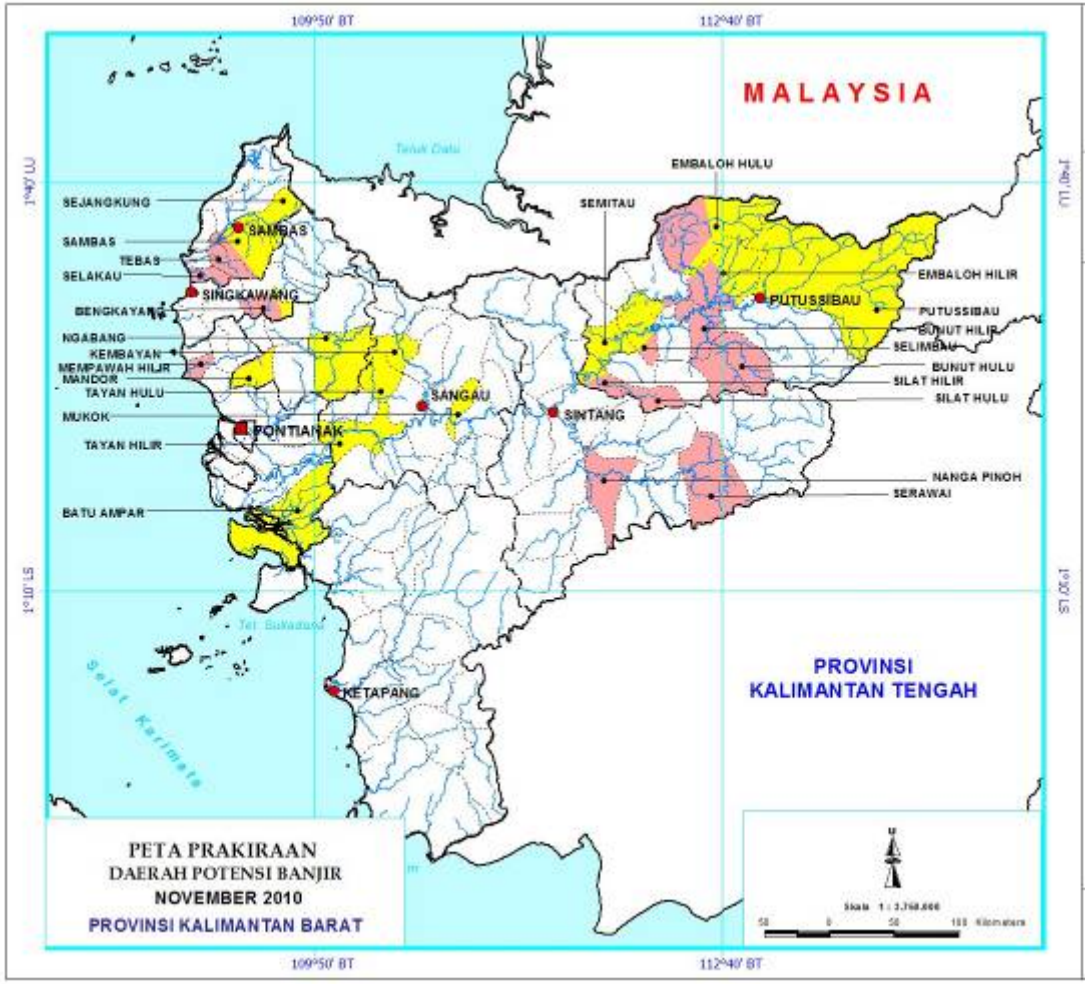


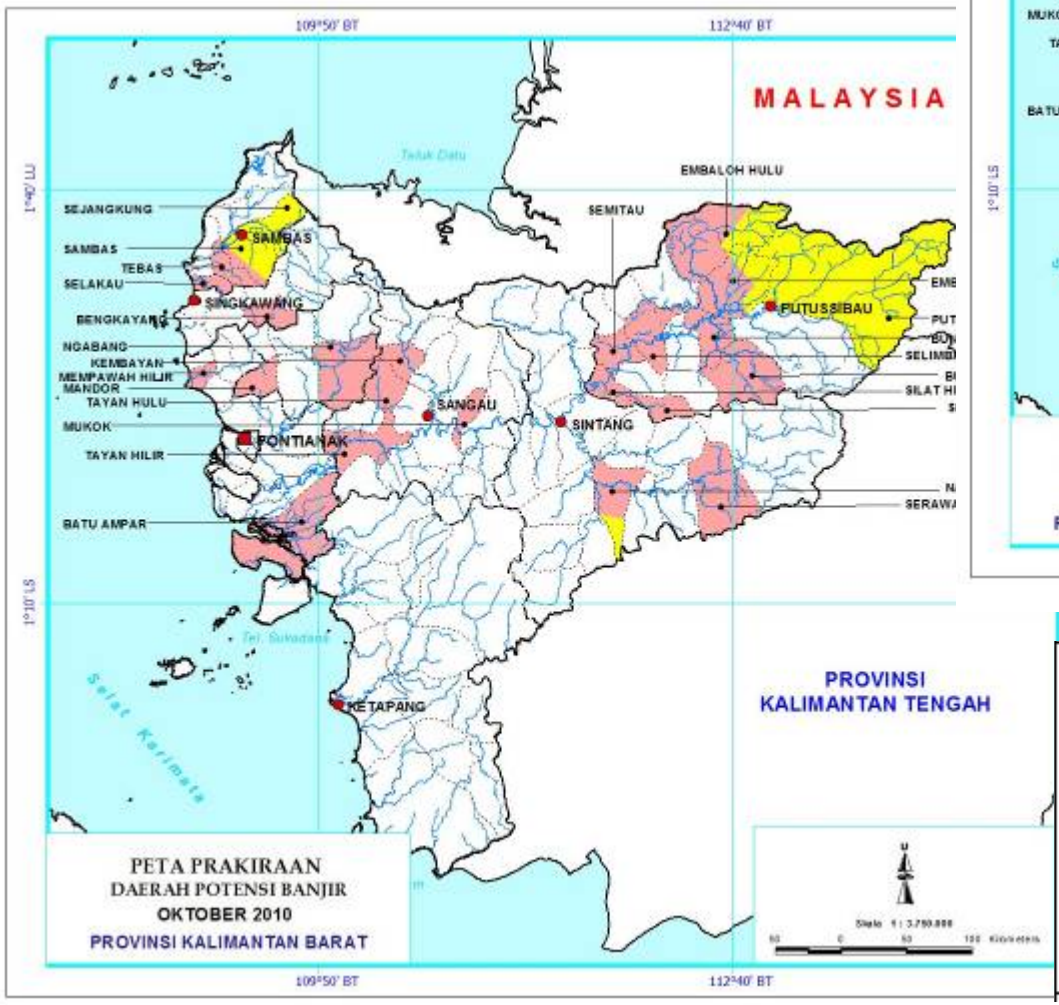


Potensi Rawan Banjir

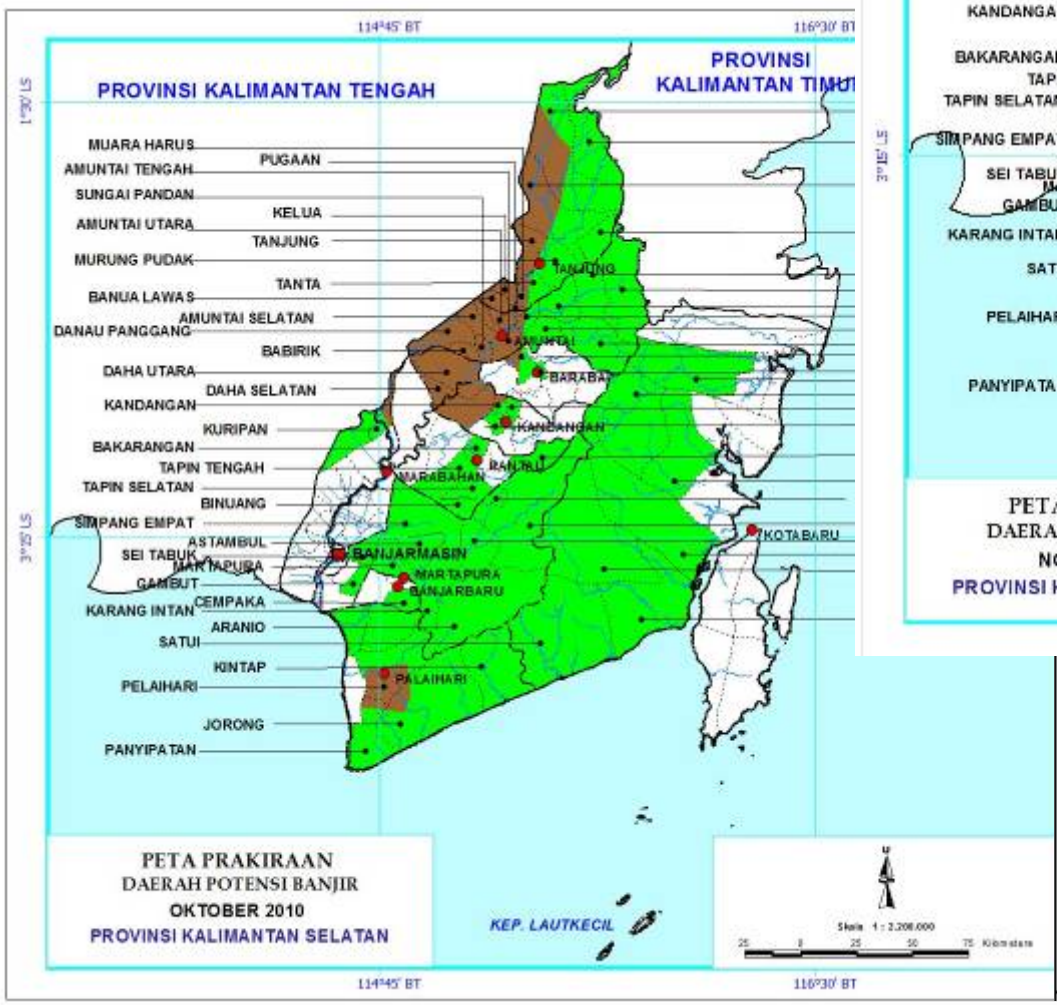
- Tinggi
- Menengah
- Rendah
- Aman

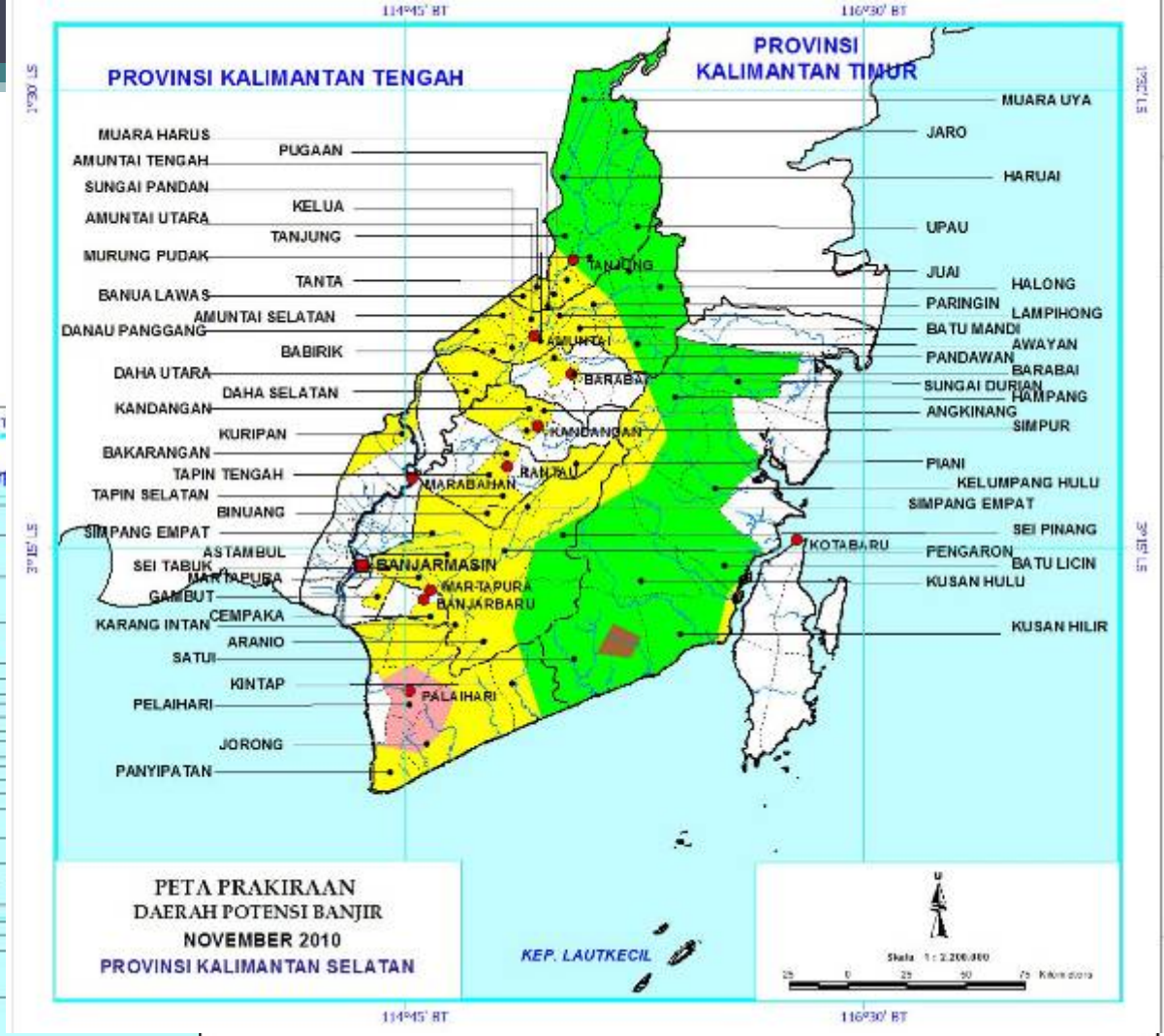
PRAKIRAAN POTENSI BANJIR WILAYAH KALIMATAN BARAT





PRAKIRAAN POTENSI BANJIR WILAYAH KALIMATAN SELATAN

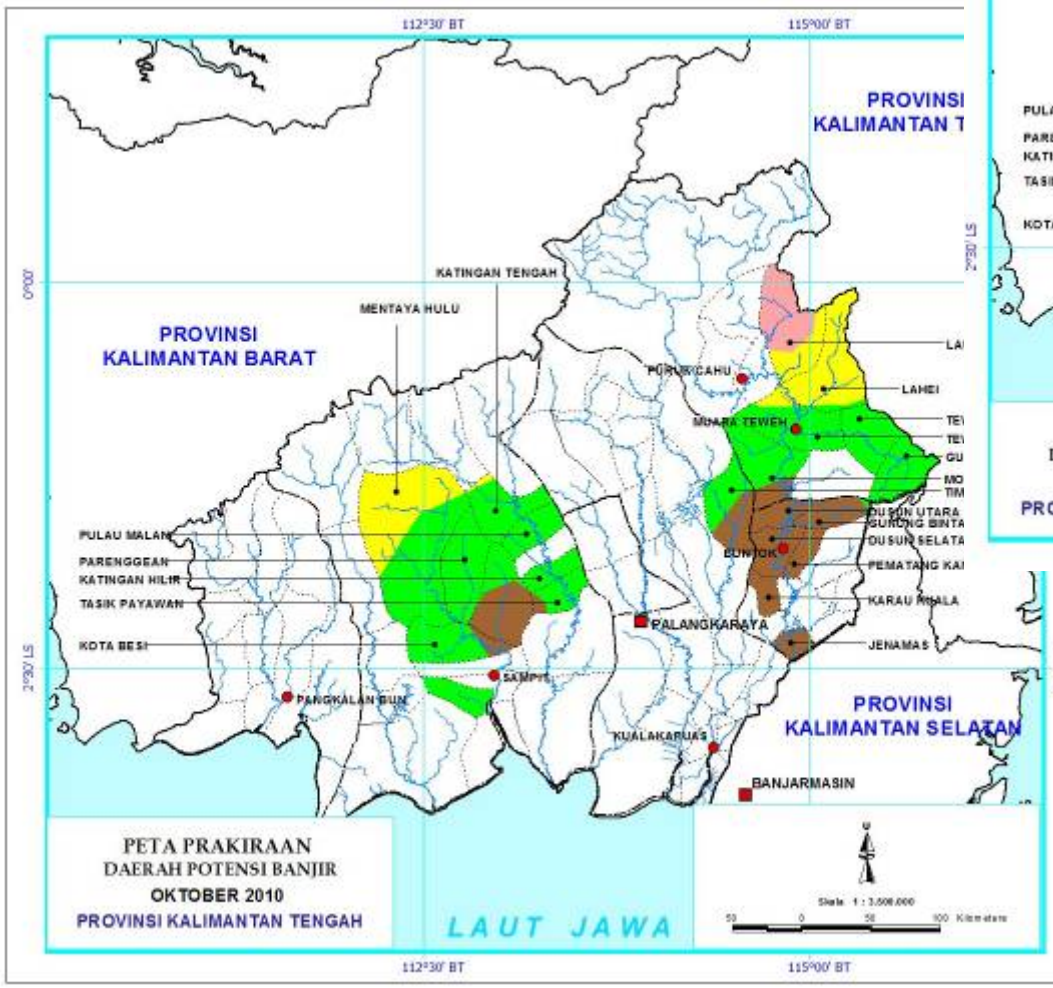


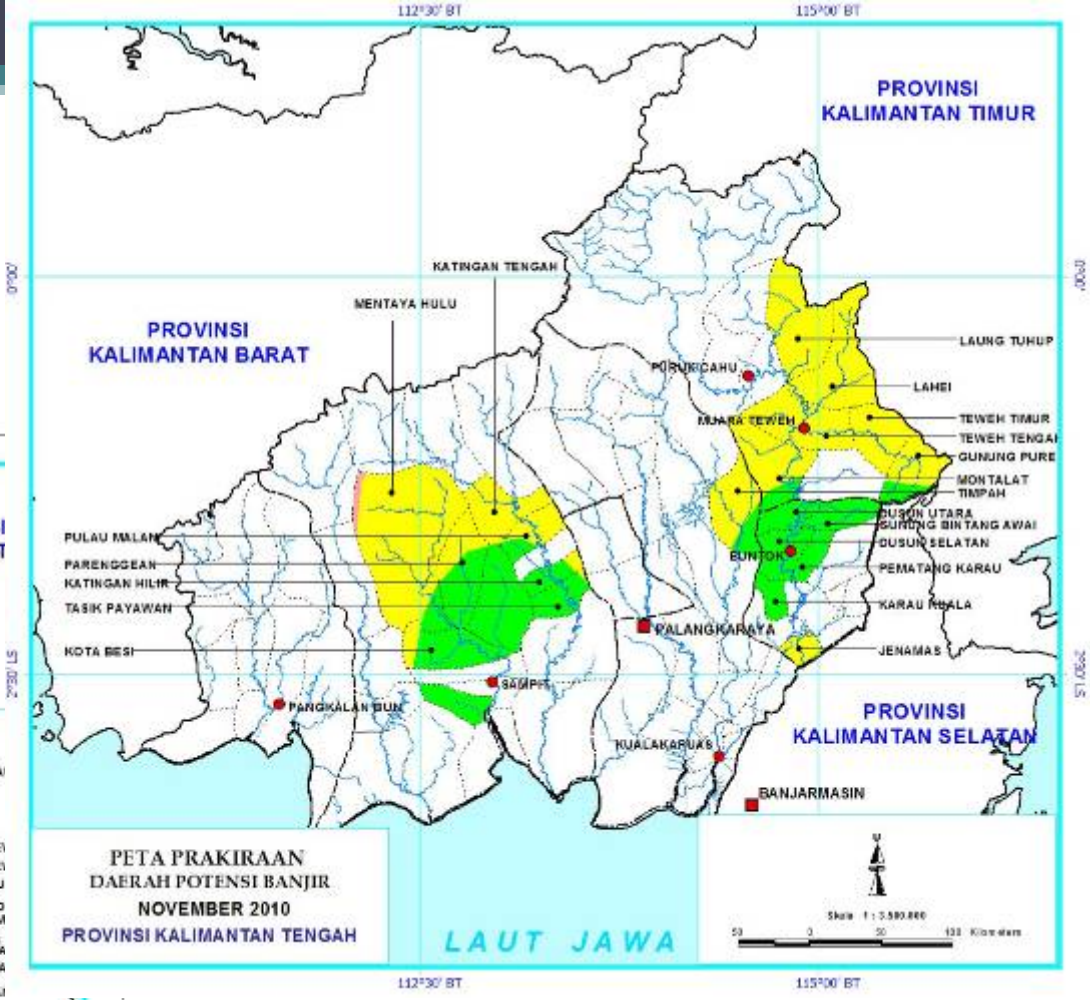


Potensi Rawan Banjir

- Tinggi
- Rendah
- Menengah
- Aman

PRAKIRAAN POTENSI BANJIR WILAYAH KALIMATAN TENGAH

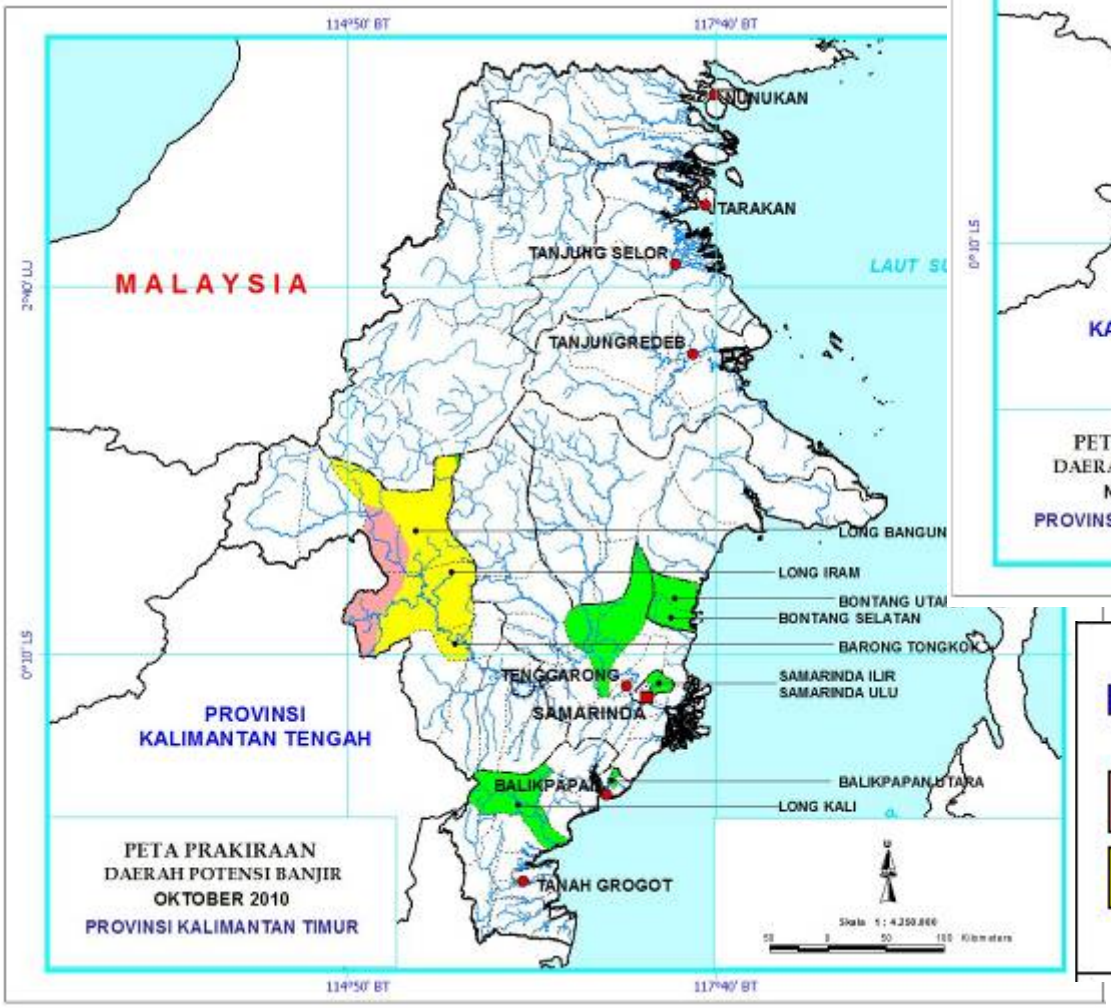


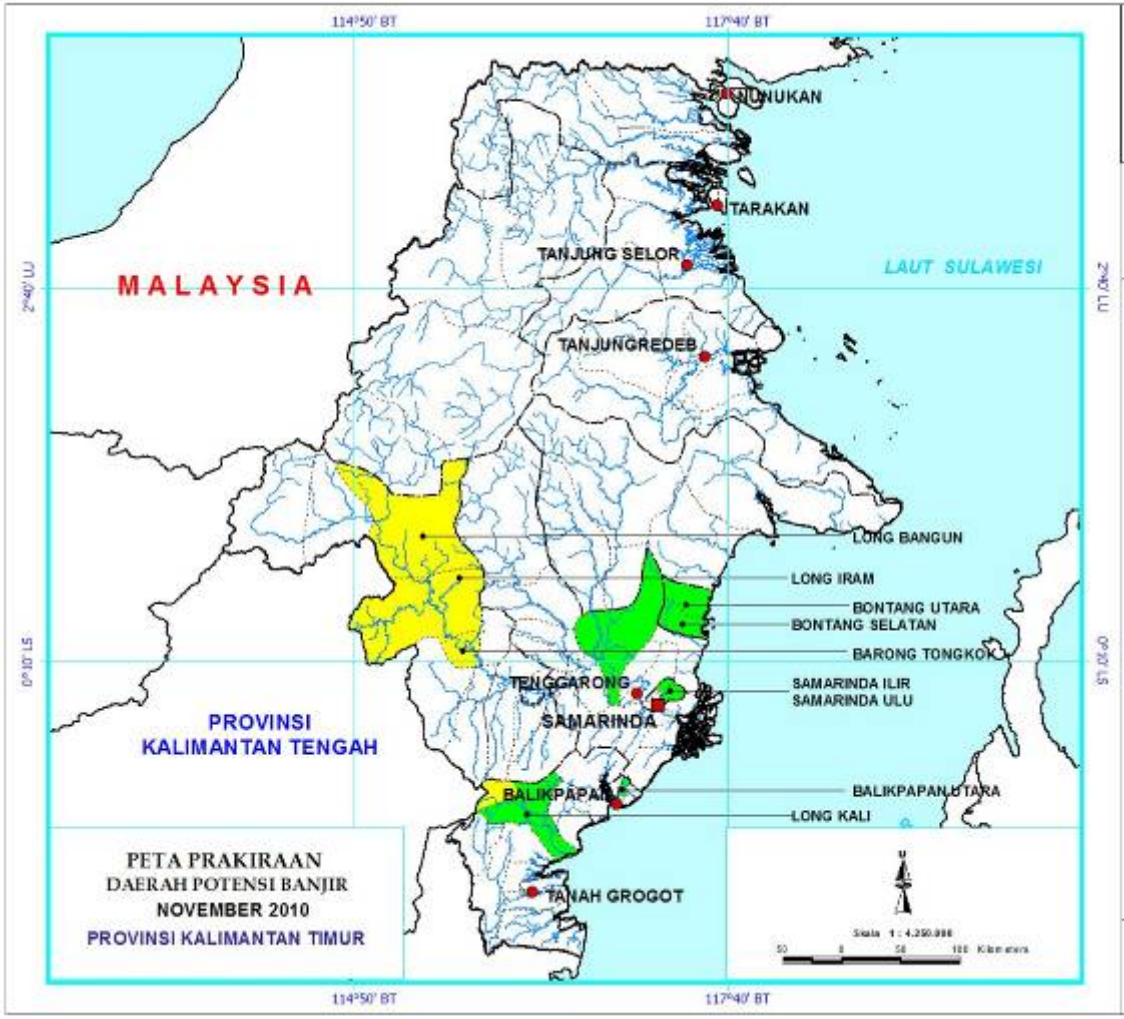


Potensi Rawan Banjir

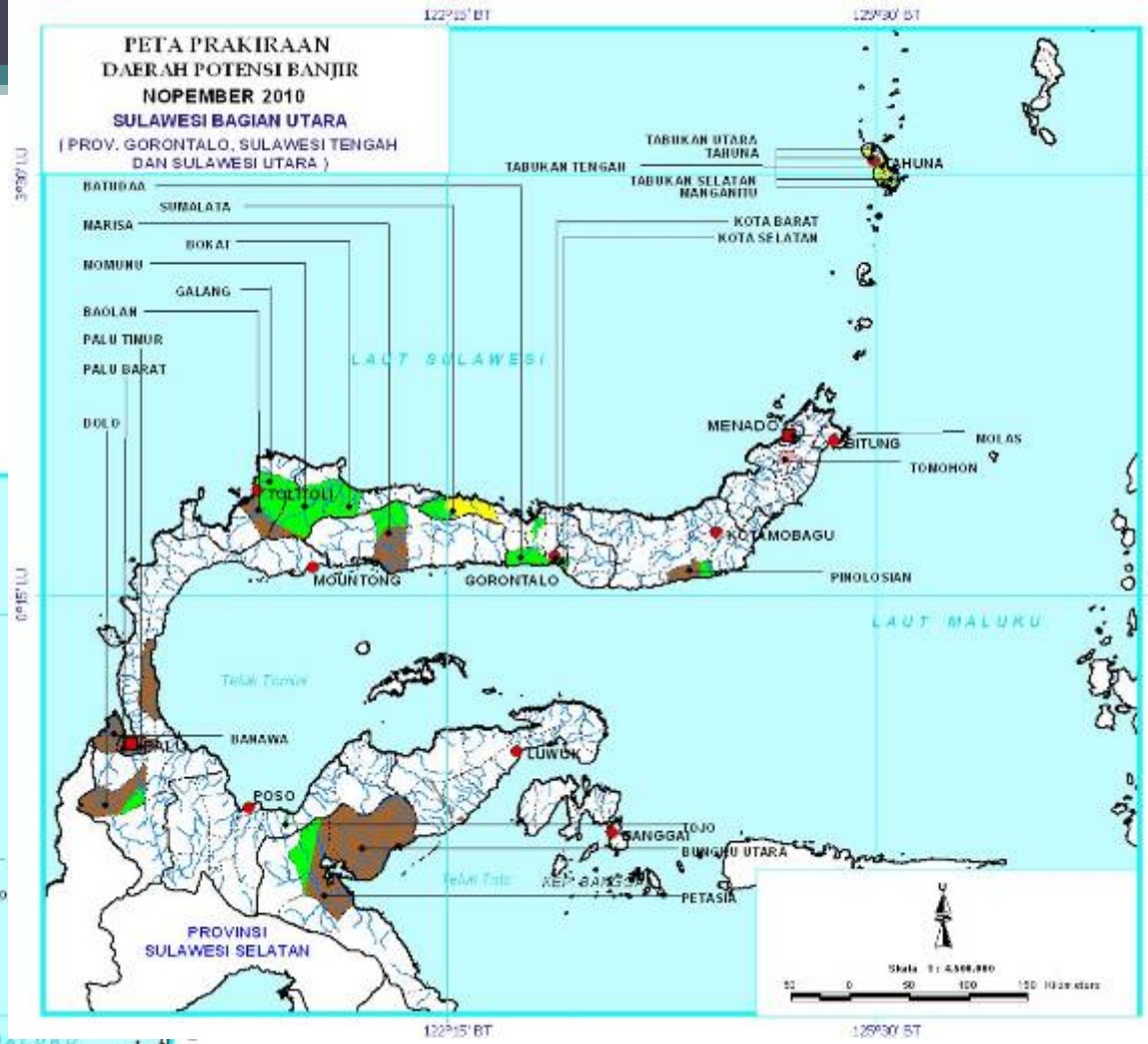
- Tinggi
- Rendah
- Menengah
- Aman

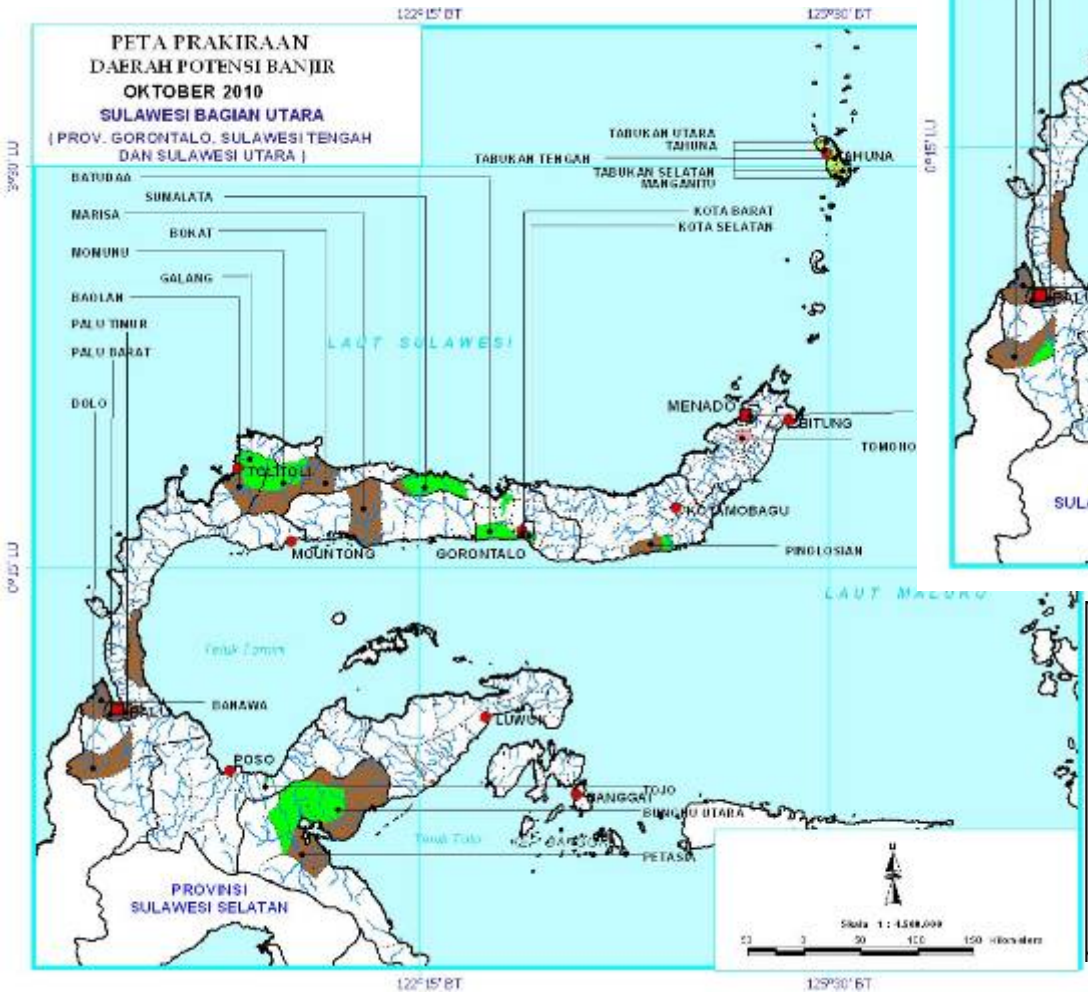
PRAKIRAAN POTENSI BANJIR WILAYAH KALIMATAN TIMUR





PRAKIRAAN POTENSI BANJIR WILAYAH SULAWESI BAGIAN UTARA

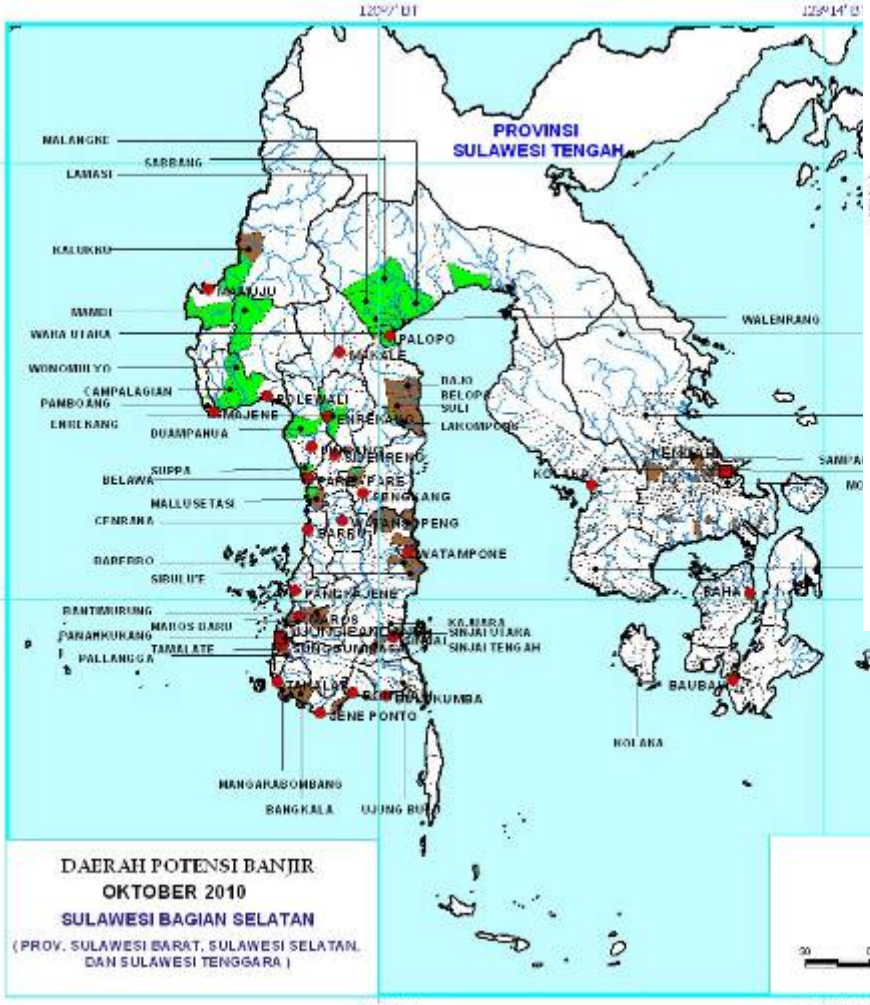


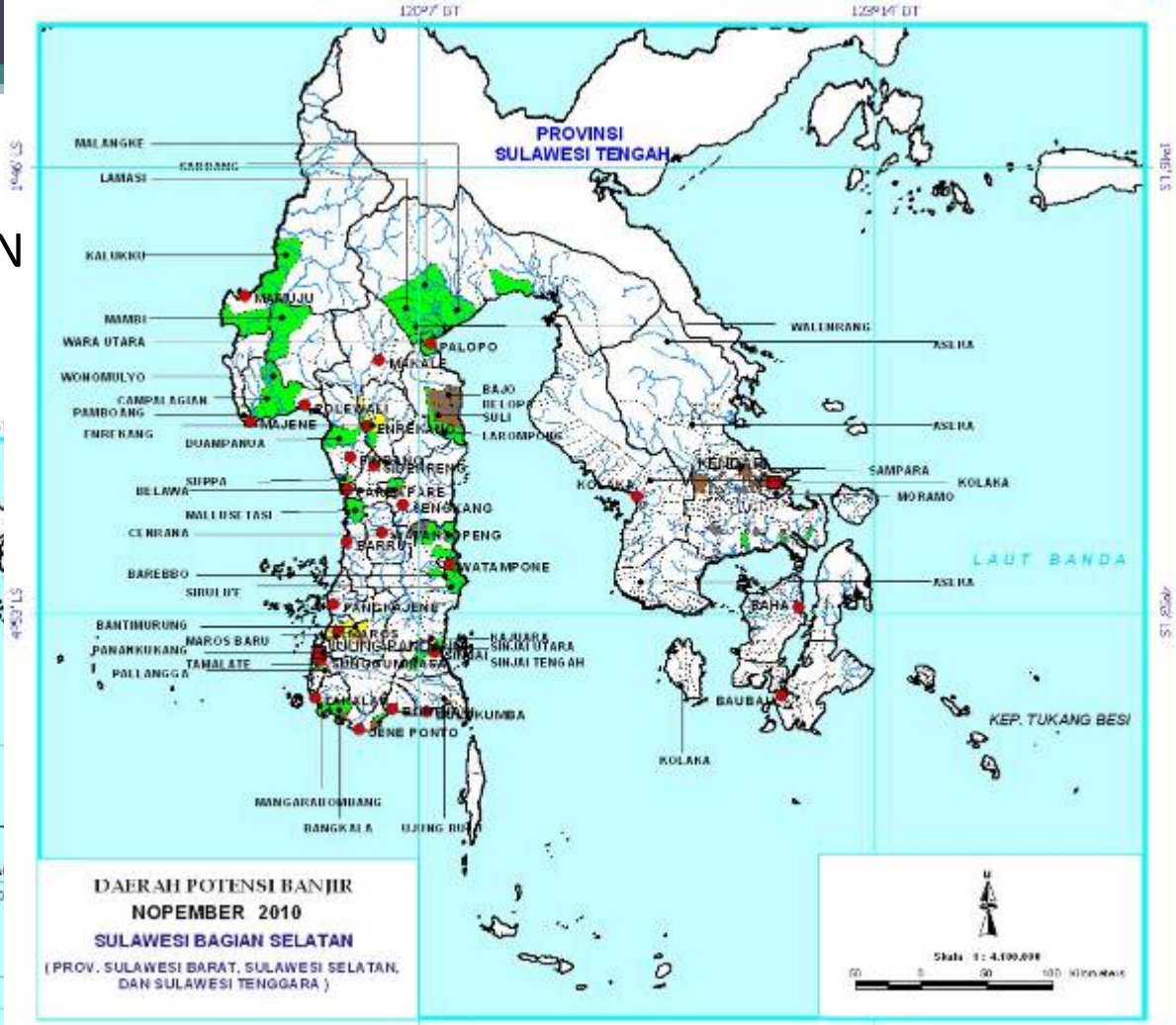


Potensi Rawan Banjir

- Tinggi
- Rendah
- Menengah
- Aman

PRAKIRAAN POTENSI BANJIR WILAYAH SULAWESI BAGIAN SELATAN

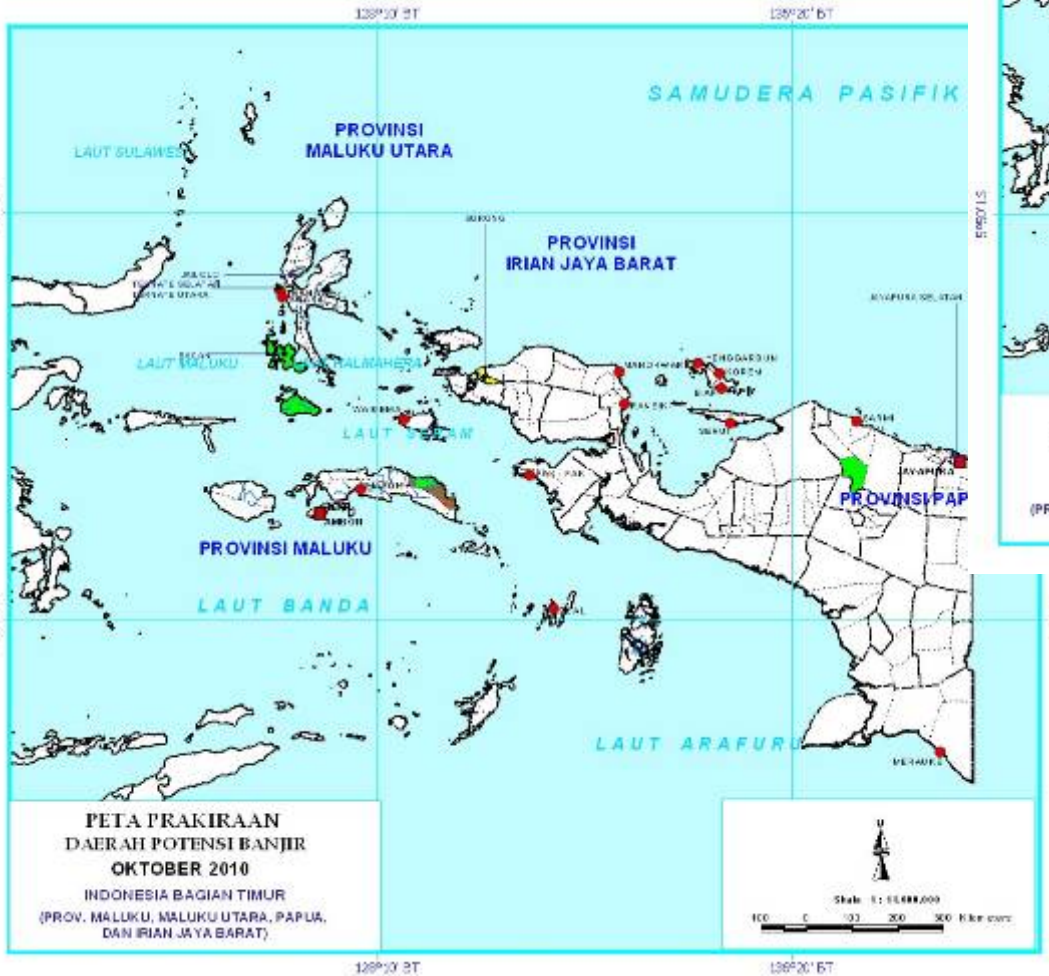




Potensi Rawan Banjir

- Tinggi
- Rendah
- Menengah
- Aman

PRAKIRAAN POTENSI BANJIR WILAYAH KEPULAUAN MALUKU DAN PAPUA



Terima Kasih . . .

BADAN METEOROLOGI KLIMATOLOGI DAN GEOFISIKA BMKG

JL. ANGKASA I NO. 2 KEMAYORAN

JAKARTA PUSAT – INDONESIA 10720

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