

# Towards (Draft) on Blue Carbon Policy 2014/2015

*Managing Coastal Ecosystems For Climate Mitigation  
Durban, South Africa, 07 –Dec-2011*

By: AMFRD Blue carbon Team



**Agency for Marine & Fisheries Research & Development  
Ministry of Marine Affairs & Fisheries  
Republic of Indonesia**

Dr.-Ing. Widodo S. Pranowo  
Head of R & D Programme

**Research & Development Center for Marine & Coastal Resources**  
Agency for Marine & Fisheries Research & Development  
Ministry of Marine Affairs & Fisheries of the Republic of Indonesia  
Email: [widodo.pranowo@kkp.go.id](mailto:widodo.pranowo@kkp.go.id)



# Outline

- Campaign
- Mitigation on Marine & Fisheries Sector
- Research Activities to Supporting the National Action Plan on the GHG's emission reduction

**Dr.-Ing. Widodo S. Pranowo**  
Head of R & D Programme

**Research & Development Center for Marine & Coastal Resources**  
Agency for Marine & Fisheries Research & Development  
Ministry of Marine Affairs & Fisheries of the Republic of Indonesia  
Email: [widodo.pranowo@kkp.go.id](mailto:widodo.pranowo@kkp.go.id)





**Dr.-Ing. Widodo S. Pranowo**

Head of R & D Programme

**Research & Development Center for Marine & Coastal Resources**

Agency for Marine & Fisheries Research & Development

Ministry of Marine Affairs & Fisheries of the Republic of Indonesia

Email: [widodo.pranowo@kkp.go.id](mailto:widodo.pranowo@kkp.go.id)

# Outline

- **Campaign**
- Mitigation on Marine & Fisheries Sector
- Research Activities to Supporting the National Action Plan on the GHG's emission reduction

*President Yudhoyono*

- Initiating of the **Coral Triangle Initiative**, a cooperation among Indonesia, Malaysia, Philipina, Papua New Guinea, Solomon islands, Timor Leste & Brunei Darussalam, to protecting coral reef ecosystems & its biodiversities.
- Initiating of the **Forest - 11 (F-11)**, a group of tropical forest countries.
- Received the **UNEP Award Leadership in Marine and Ocean Management**, on The 11th Special Session of The Governing Council/Global Ministerial Enviromental Forum on February 2010 in Bali.

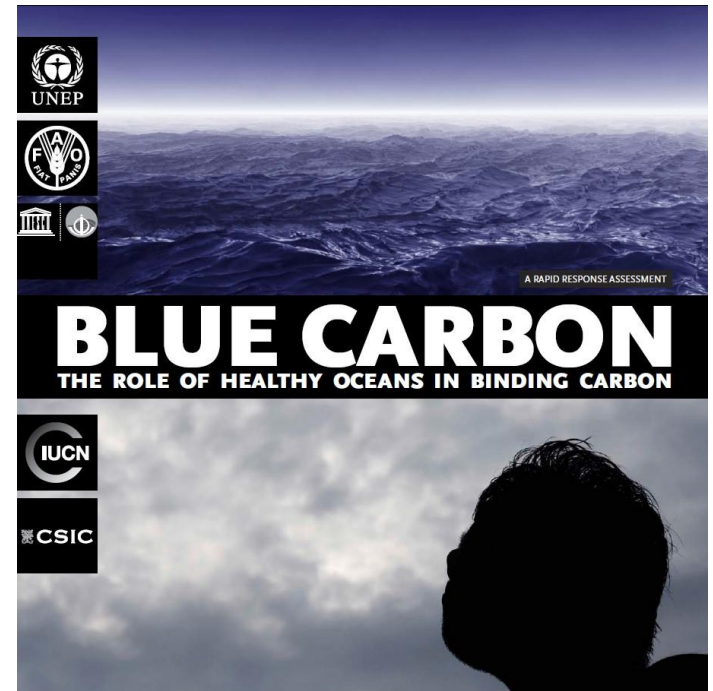


Dr.-Ing. Widodo S. Pranowo  
Head of R & D Programme

**Research & Development Center for Marine & Coastal Resources**  
Agency for Marine & Fisheries Research & Development  
Ministry of Marine Affairs & Fisheries of the Republic of Indonesia  
Email: [widodo.pranowo@kkp.go.id](mailto:widodo.pranowo@kkp.go.id)




**Minister of  
Marine Affairs & Fisheries  
(former Minister: Dr. Fadel Muhammad)  
11 May 2011**



**Dr.-Ing. Widodo S. Pranowo**  
Head of R & D Programme  
**Research & Development Center for Marine & Coastal Resources**  
Agency for Marine & Fisheries Research & Development  
Ministry of Marine Affairs & Fisheries of the Republic of Indonesia  
Email: [widodo.pranowo@kkp.go.id](mailto:widodo.pranowo@kkp.go.id)





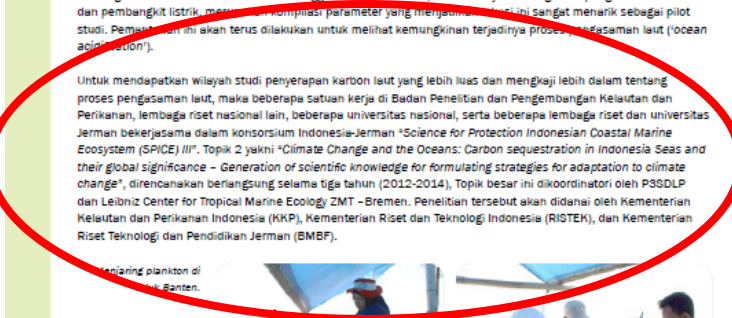
## Memahami Lebih Baik Melalui Penelitian

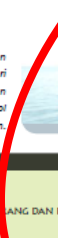
### Memperkuat Dukungan untuk Program Nasional Adaptasi Perubahan Iklim


Berbagai kegiatan penelitian dan pengembangan terkait perubahan iklim dilakukan Pusat Penelitian dan Pengembangan Sumberdaya Laut dan Pesisir (PSSDLP) sejak tahun 2008. Pada tahun 2009, dua unit pelayanan teknis memperkuat dukungannya terhadap program nasional adaptasi perubahan iklim. Balai Riset dan Observasi Kelautan (BROK) meneliti dinamika interaksi laut-atmosfer dan memproduksi peta prediksi daerah penangkapan ikan untuk mendukung program ketahanan pangan. Sedangkan sumberdaya tumpuan perekonomian masyarakat pesisir yang rentan terhadap bencana perubahan iklim diteliti dalam rangka perencanaan mitigasi, oleh Loka Riset Kerentanan Pesisir dan Laut (LRKPL).

Satuan kerja PSSDLP di Jakarta, 2008-2010 melakukan pemantauan variabilitas fluks karbon laut di Teluk Banten. Dasar perairan Teluk Banten menyimpan sisa karbon hasil letusan Gunung Krakatau 1883, hidrodinamikanya dipengaruhi oleh kopling sistem monsun dengan Laut Jawa, geomorfologinya pesisir yang dinamis, tempat bermuara beberapa daerah aliran sungai (DAS) yang kemungkinan membawa limbah rumah tangga dari permukiman, serta adanya kemungkinan pengaruh dari industri dan pembangkit listrik, maka kombinasi parameter yang terdapat di sini sangat menarik sebagai pilot studi. Pemantauan ini akan terus dilakukan untuk melihat kemungkinan terjadinya proses pengasaman laut ('ocean acidification').


Untuk mendapatkan wilayah studi penyerapan karbon laut yang lebih luas dan mengkaji lebih dalam tentang proses pengasaman laut, maka beberapa satuan kerja di Badan Penelitian dan Pengembangan Kelautan dan Perikanan, lembaga riset nasional lain, beberapa universitas nasional, serta beberapa lembaga riset dan universitas Jerman bekerjasama dalam konsorsium Indonesia-Jerman "Science for Protection Indonesian Coastal Marine Ecosystem (SPICE) III". Topik 2 yakni "Climate Change and the Oceans: Carbon sequestration in Indonesia Seas and their global significance - Generation of scientific knowledge for formulating strategies for adaptation to climate change", direncanakan berlangsung selama tiga tahun (2012-2014). Topik besar ini dikoordinasi oleh PSSDLP dan Leibniz Center for Tropical Marine Ecology ZMT - Bremen. Penelitian tersebut akan didanai oleh Kementerian Kelautan dan Perikanan Indonesia (KKP), Kementerian Riset dan Teknologi Indonesia (RISTEK), dan Kementerian Riset Teknologi dan Pendidikan Jerman (BMBF).









Pengambilan sampel air dari beberapa kedalaman menggunakan botol nansen di Teluk Banten.



Kalibrasi alat multi-parameter.





222 TERUMBU KARANG DAN PERUBAHAN IKLIM

## Book:

Terumbu Karang & Perubahan Iklim:  
Panduan Pendidikan &  
Pembangunan Kesadartahuan

## Contributor @ 2011:

Badan Litbang Kelautan & Perikanan

## Launched by:

Minister of Marine Affairs &  
Fisheries

11 May 2011

## Translation of Book:

**Coral Reefs & Climate Change:  
The Guide for Education &  
Awareness.**

2009, ISBN 978-06-465-23-60-6

## Authors:

Craig Reid, Coral Watch Organization,  
Justin Marshall, Dave Logan, Univ.  
Queensland, Diana Kleine.

**Marine & coastal Carbon  
Research 2012-2014**



**Dr.-Ing. Widodo S. Pranowo**

Head of R & D Programme

**Research & Development Center for Marine & Coastal Resources**

Agency for Marine & Fisheries Research & Development

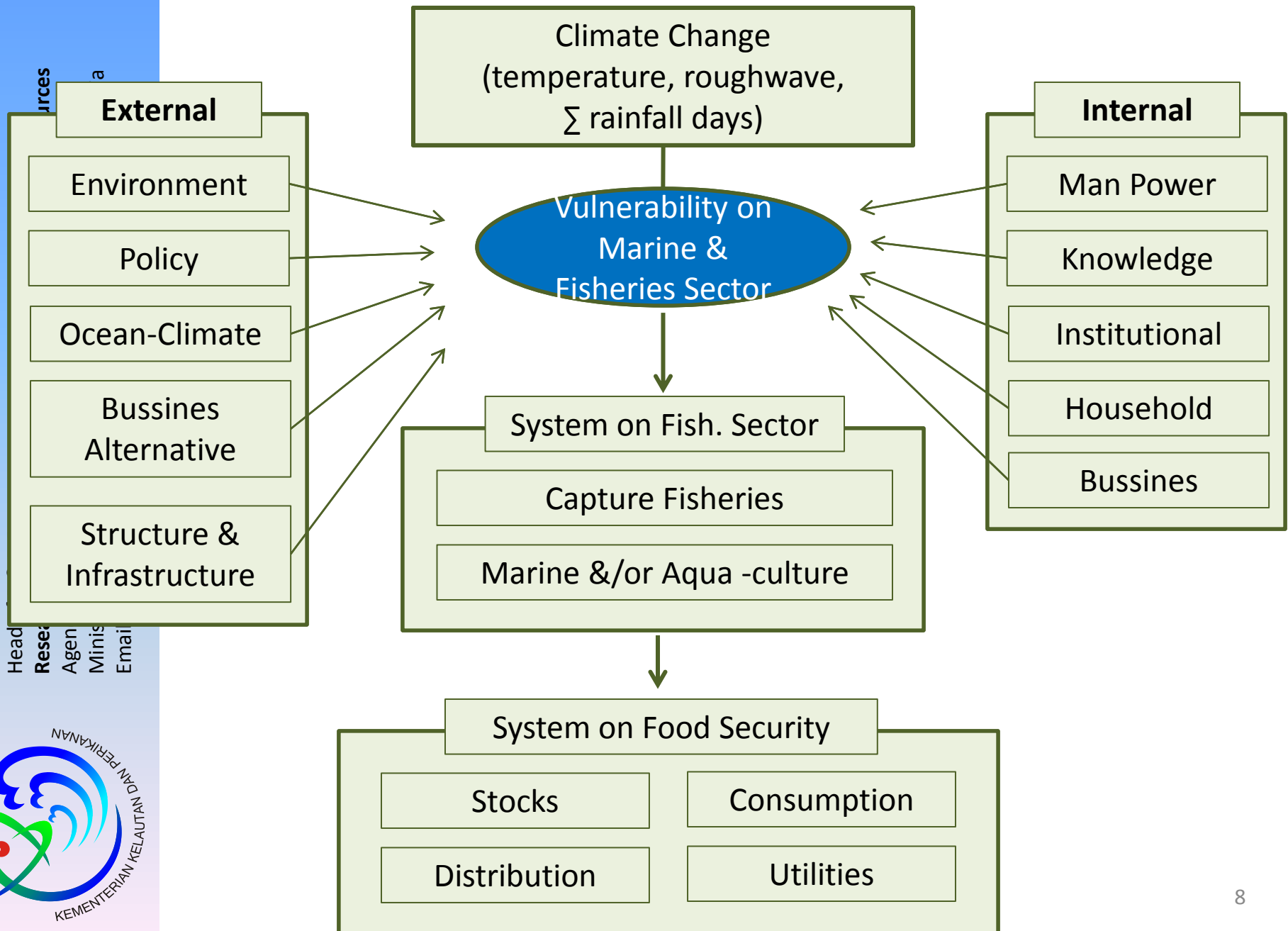
Ministry of Marine Affairs & Fisheries of the Republic of Indonesia

Email: [widodo.pranowo@kkp.go.id](mailto:widodo.pranowo@kkp.go.id)

# Outline

- Campaign
- **Mitigation on Marine & Fisheries Sector**
- Research Activities to Supporting the National Action Plan on the GHG's emission reduction

# Model of Vulnerability of on Marine & Fisheries Sector to Climate Change by AMFRD



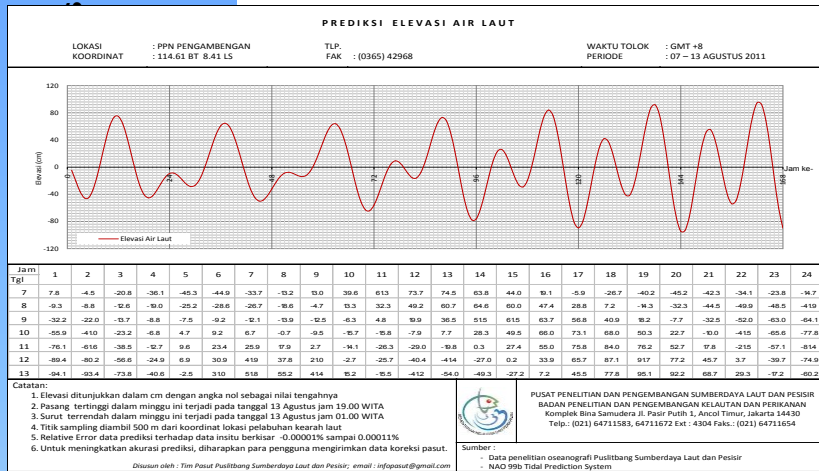
Dr.-Ing. Widodo S. Pranowo

Head  
Reser  
Agen  
Minis  
Email





# INAGOOS: Indonesian Global Ocean Observing System

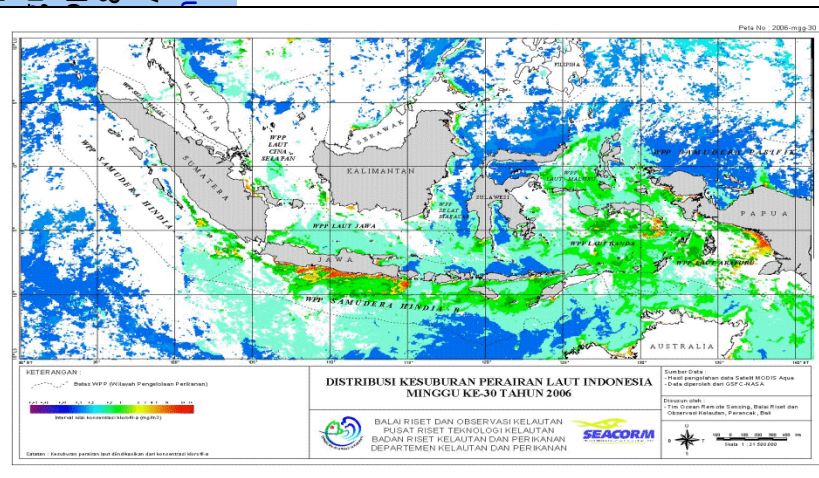


Tidal Prediction (weekly bases) information

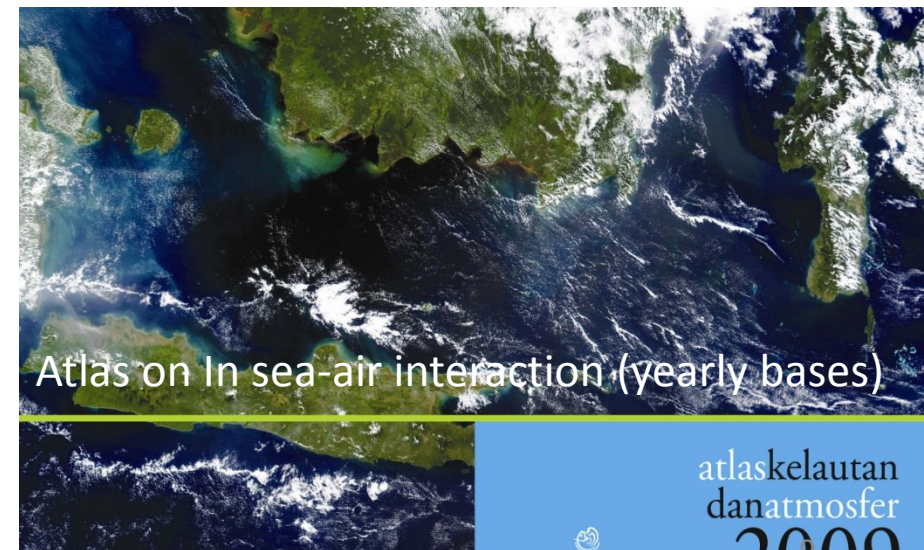


Fishing Ground Forecast (3 days bases) information

Prar  
 ram  
 pme  
 & Fi  
 Affa  
 HOWC



Marine Primary Productivities (weekly bases)



KEM

# INAGOOS: Indonesian Global Ocean Observing System

Dr.-Ing. Widodo S. Pranowo

Head of R & D Programme

Research & Development Center for Marine & Coastal Resources

Agency for Marine & Fisheries Research & Development

Ministry of Marine Affairs & Fisheries of the Republic of Indonesia

Email: [widodo.pranowo@kkp.go.id](mailto:widodo.pranowo@kkp.go.id)

DATA & INFORMATION for FISHERMANS:

1. Fishing Ground Forecast
2. Tidal Prediction
3. Marine Primary Productivities



1. Saving Fuel
2. Efficient



Low Carbon in Fostering on  
The Economic Development



# Outline

- Campaign
- Mitigation on Marine & Fisheries Sector
- **Research Activities to Supporting the National Action Plan on the GHG's emission reduction**

Dr.-Ing. Widodo S. Pranowo  
Head of R & D Programme

**Research & Development Center for Marine & Coastal Resources**  
Agency for Marine & Fisheries Research & Development  
Ministry of Marine Affairs & Fisheries of the Republic of Indonesia  
Email: [widodo.pranowo@kkp.go.id](mailto:widodo.pranowo@kkp.go.id)



# National Action Plan for the GHG's reduction (RAN-GRK)

4 Research Activities of AMFRD  
are mentioned being supporting activities in the  
**Presidential Regulation No. 61/2011 on RAN GRK**  
signed at 20 September 2011

No.	Action Plan	Activity/Target	Period	Location
1	Marine Research Carbon in Indonesia	5 Research Packages	2010 - 2014	Indonesian coastal zone & Coral Triangle Initiative area
2	Study Marine Hazard Response to Climate Change in Southeast Asia Region	2 Research Packages	2010 - 2014	South China sea & Karimata strait
3	Implementation of the Indonesia Global Ocean Observing System (INAGOOS)	2 Research Packages	2010 - 2014	Jakarta, Bali & Indonesian seas
4	Implementation of the Indo-China Ocean & Climate Research Centre	3 Research Packages	2010 - 2014	Sunda strait, Indian Ocean, & Karimata strait

**Dr.-Ing. Widodo S. Pranowo**  
Head of R & D Programme

**Research & Development Center for Marine & Coastal Resources**  
Agency for Marine & Fisheries Research & Development  
Ministry of Marine Affairs & Fisheries of the Republic of Indonesia  
Email: [widodo.pranowo@kkp.go.id](mailto:widodo.pranowo@kkp.go.id)



## Strategic Plan on Marine Carbon Research in Indonesia Seas

**(ISBN 978-602-9086-18-8)**

### Contents:

- Historical of Marine Carbon research 2005 – 2010 by national institutions.
- Optimization of potential research networking (national, regional, international).
- Planning of the Grand Topic 2 Future Indonesia-Germany on SPICE III (2012-2014).
- Planning of Coastal Carbon Indonesia-China (2012-2014).
- Planning of Coastal Carbon Indonesia-Japan (2012-2014).



**Dr.-Ing. Widodo S. Pranowo**

Head of R & D Programme

**Research & Development Center for Marine & Coastal Resources**

Agency for Marine & Fisheries Research & Development

Ministry of Marine Affairs & Fisheries of the Republic of Indonesia

Email: [widodo.pranowo@kkp.go.id](mailto:widodo.pranowo@kkp.go.id)

Study of Coastal '**Blue Carbon**' in Indonesian Waters  
(**Ecosystems: Peat-Estuary, Mangrove, Seagrass, Coral Reef**)



*Scientific Findings  
on Blue Carbon Quantification*



***Coastal Blue Carbon Policy***

# Location for the marine carbon research proposed on the Fisheries Management Area

Dr.-Ing. Widodo S. Pranowo

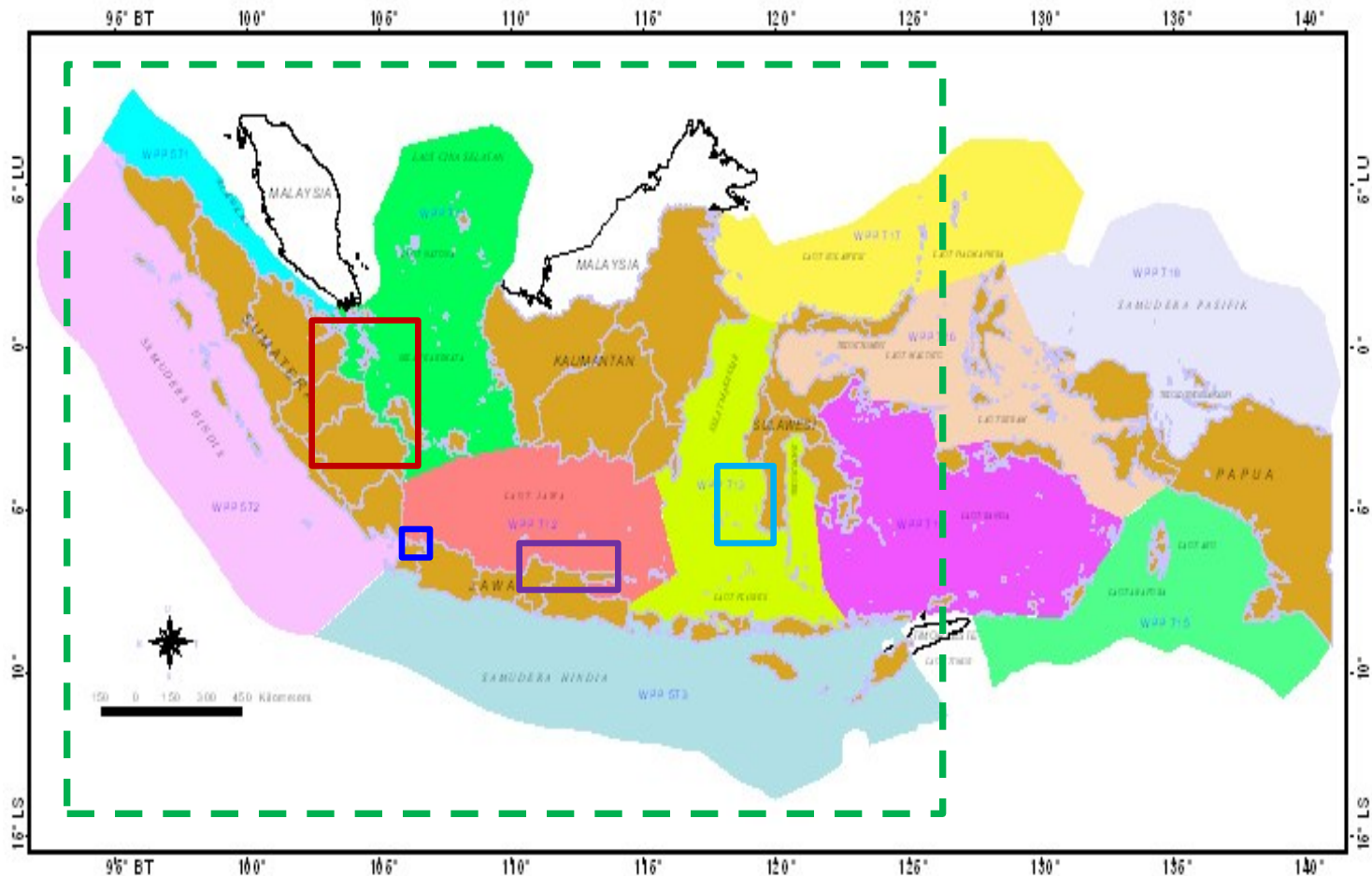
Head of R & D Programme

Research & Development Center for Marine & Coastal Resources

Agency for Marine & Fisheries Research & Development

Ministry of Marine Affairs & Fisheries of the Republic of Indonesia

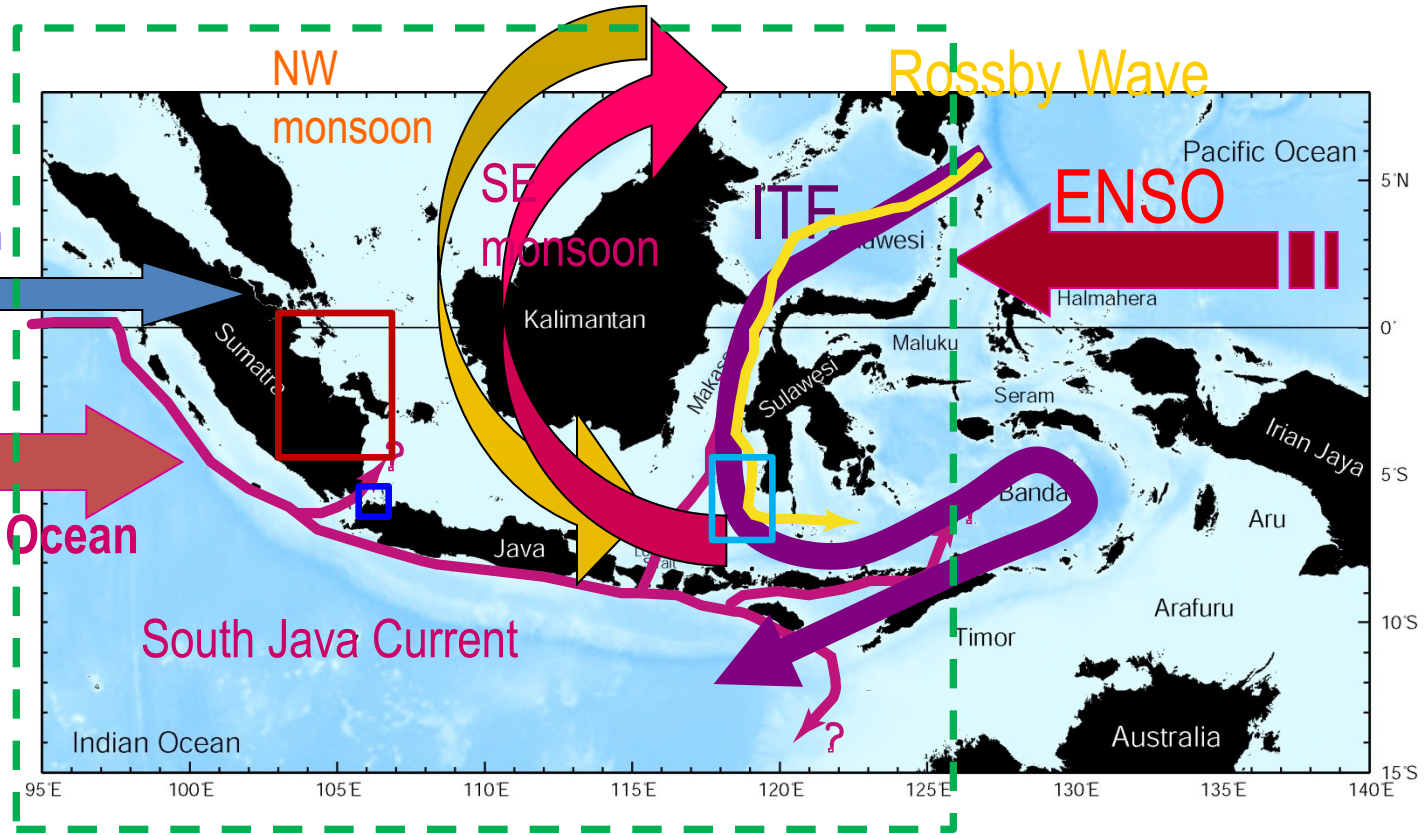
Email: [widodo.pranowo@kkp.go.id](mailto:widodo.pranowo@kkp.go.id)



- The Indonesian key areas during 2012-2014 activities all projects will jointly within the areas,
- The additional data will be collected between the areas in order to get comprehensive overview for the main target area (Karimata strait, Java Sea & Makassar strait).



# Coupled hydrodynamics & Carbon (cycle/transport) modeling



- Coarse study domain (hydrodynamics): Karimata strait, Java Sea & Makassar strait
- Finer study domain (hydrodynamics & Carbon cycle transport, verification): Eastern Sumatra, Banten bay, Spermonde archipelago

Dr.-Ing. Widodo S. Pranowo  
Head of R & D Programme

Research & Development Center for Marine & Coastal Resources  
Agency for Marine & Fisheries Research & Development  
Ministry of Marine Affairs & Fisheries of the Republic of Indonesia  
Email: [widodo.pranowo@kpp.p.go.id](mailto:widodo.pranowo@kpp.p.go.id)



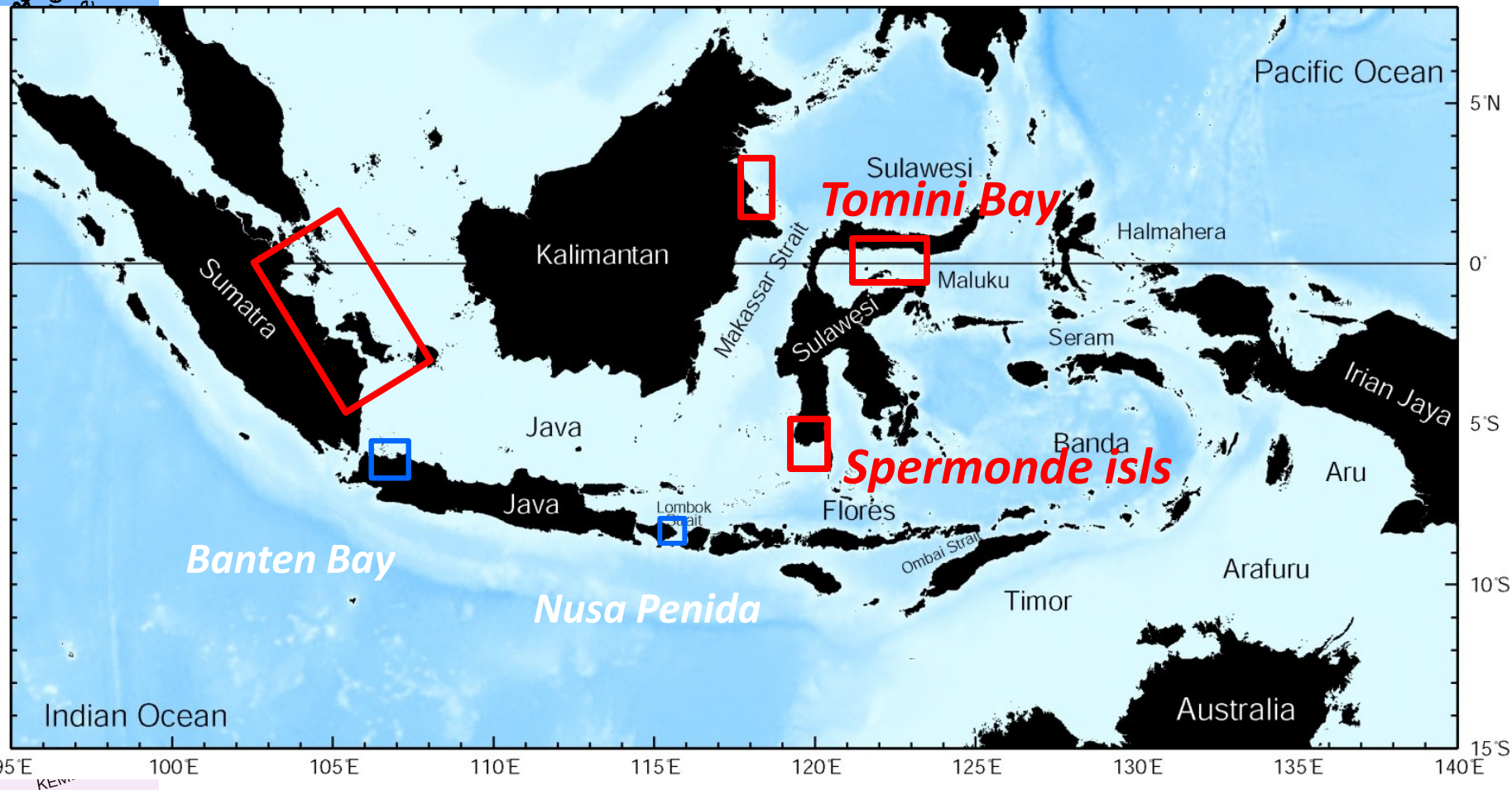


# Future Study Sites for Blue Carbon Research Project (2012-2014)

Coastal Resources  
Development  
Republic of Indonesia

 **Current Sites**  
(since 2008 & 2010)

 **Future Sites**



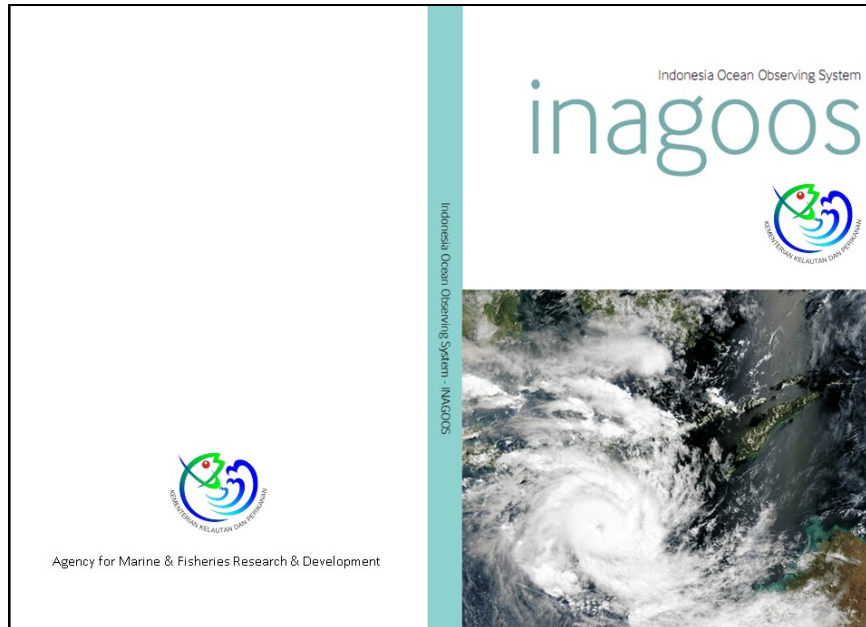
Dr.-Ing. Widodo S. Pranowo  
Head of R. & D. Programme



# Planning for Strategic Policy Documents (2014/2015)

- INAGOOS Strategic (Science) Plan
- Updating on Strategic Plan on Blue Carbon Research in Indonesia
- Strategic Plan on the Coastal Vulnerability
- Concept on “Blue Economy”
- White Paper on “Ocean Policy”

ranowo  
amme  
ment Center for Marine & Coastal Resource  
Fisheries Research & Development  
ffairs & Fisheries of the Republic of Indone  
wo@kkp.go.id



**INVITING TO BLUE CARBON EXPERT  
TO GIVE INPUT/SUGGESTION  
AND/OR  
TO JOINT ON FUTURE COLLABORATION**

**Dr.-Ing. Widodo S. Pranowo**

Head of R & D Programme

**Research & Development Center for Marine & Coastal Resources**

Agency for Marine & Fisheries Research & Development

Ministry of Marine Affairs & Fisheries of the Republic of Indonesia

Email: [widodo.pranowo@kkp.go.id](mailto:widodo.pranowo@kkp.go.id)





**Dr.-Ing. Widodo S. Pranowo**

Head of R & D Programme

**Research & Development Center for Marine & Coastal Resources**

Agency for Marine & Fisheries Research & Development

Ministry of Marine Affairs & Fisheries of the Republic of Indonesia

Email: [widodo.pranowo@kkp.go.id](mailto:widodo.pranowo@kkp.go.id)

**Terima Kasih  
Thank You**

