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ウダヤナ大学から当センターへ5人の学生が留学しています。

On November 2007 until April 2008, 5 (fives) Indonesian students are attending Twinning Program in Center for Environmental Remote Sensing (CEReS) Chiba University. This program is cooperation between Chiba University and Udayana University (Bali-Indonesia). In this program, Indonesian students attended several classes, finished proposal of master thesis, attended seminars and also attended Japanese Language class.

千葉大学とウダヤナ大学（バリ-インドネシア）との国際交流に基づき、ウダヤナ大学から5人の学生が当センターへ留学しております。本プログラムは当センターとウダヤナ大学との学術交流協定プログラムの一環に基づいております。

これらの学生は理学部大学院前期課程の講義、修士論文の発表会、セミナーおよび日本語研修センターの講義に出席しております。留学期間は2007年11月から2008年4月までの半年間です。

本号では、5人の学生の研究テーマを紹介いたします。



Bardiyanto

The research title is "Study on Fish Catching of Indian Mackerel (*Rastrelliger kanagurta*) using Satellite Data in Java Sea (Case Study: South-East and North-West Monsoon Period)". The research aims know relation of between fish catching and fish season with the satellite image (sea surface temperature, chlorophyll-a and wind) when north-west and south-east monsoon in Java Sea, Indonesia.



Widitya Putri Fitriyanny Subagio

My thesis subject is determining coastal susceptibility concern to the pollutant existence using Environmental Sensitivity Index method (Study case in Western Coast of Banten Province in West Java Indonesia). To make an Environmental Sensitivity Index map, I would like to learn how to combine satellite data, field data and other support data using satellite image processing, Geographic Information System (GIS) and scoring method.



Teguh Prayogo

My thesis subject is study on oceanographic and climatic factors and its effect to the abundance of Small Pelagic Fishes in Natuna Sea (Indonesia) using Remote Sensing Data. The statistical model approach will be applied to identified the relationship between both factors and fish abundance. Remote sensing data and techniques utilize to obtain a multi-temporal each variables and to monitor both variables changes more easily.



Herman

The research title is "The Application Remote Sensing and GIS for Land Potential Fish Pond In Majene, West Sulawesi, Indonesia."

The research aims know wide comparison mount the land potentially to fish pond in Majene, West Sulawesi, Indonesia.



Imam Safi'i Hanafi

The research title is correlation between SST, SSH and Chlorophyll-a (Satellites data) with Fisheries data to determining tuna fishing ground in South Java Sea, Indonesia. In Chiba University I would like to learn about data processing and GIS.

研究紹介

Damage of Sunderban Mangrove by Cyclone Sidr

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Sunderban Forest, the largest continuous mangrove tract in the world lies at the mouth of the Ganges and is spread across the areas of Bangladesh and West Bengal, India. The forest covers 10,000 sq. km of which about 62% are in Bangladesh. The forest flora is characterized by the abundance of *Heritiera fomes*, *Excoecaria*

agallocha, *Ceriops decandra* and *Sonneratia apetala*.

The eastern part of this forest was severely damaged when Tropical Cyclone `Sidr` hit the Bangladesh coast on 15th November, 2007. The cyclone has devastated Sunderban, coastal islands and a vast region of the south-western regions of the country though according to the Joint Typhoon Warning Center, the Category 4 cyclone lost its strength in the hours before landfall.

The investigation conducted at CEReS used several Moderate Resolution Imaging Spectrometer (MODIS) imageries of NASA`s Terra Satellite both before and after the disaster. The images were downloaded from `MODIS Rapid Response System` website. Three-band (1, 2 and 7) post-disaster image (18th November, 2007) was visually interpreted. Two classes of vegetation on the image could be recognized: healthy forest appears in green and damaged in tan. Several training samples were collected from all these vegetation classes and the image was classified using maximum likelihood algorithm.

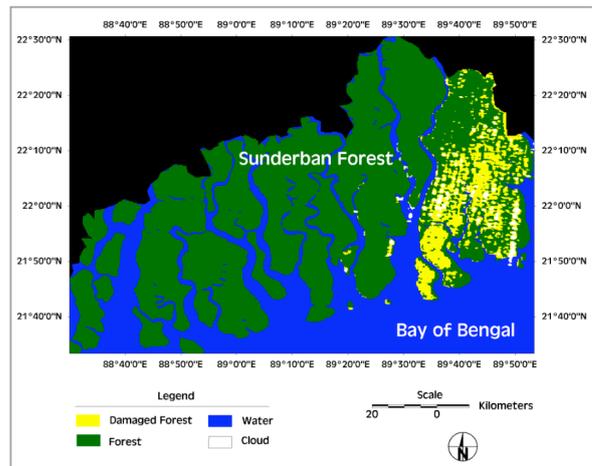


Figure. Damage map of Sunderban caused by Cyclone Sidr 2007. The map was prepared from the Terra MODIS satellite imagery of 18 November 2007 just after the cyclone hit (15 November).

The severe damaged areas of the forest are distributed in the north-eastern direction (Figure), synchronized with the tract of the cyclone after landfall. The damaged area is estimated to be 65,739 ha (657 Sq. km), which is around 16% of the total Sunderban land area of Bangladesh.

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National Aeronautics and Space Administration (NASA) for Terra MODIS satellite imageries.