

# Remote sensing of flood area extent and inundation volume

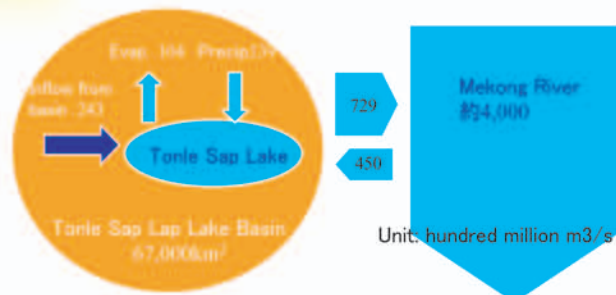
## ~At the Tonle Sap Lake & Upper Mekong Delta~

This project is a part of the Revolutionary Research Project of the Ministry of Education, Culture, Sports, Science and Technology (MEXT) entitled as "Coexistence of People, Nature and the Earth (RR2002)".

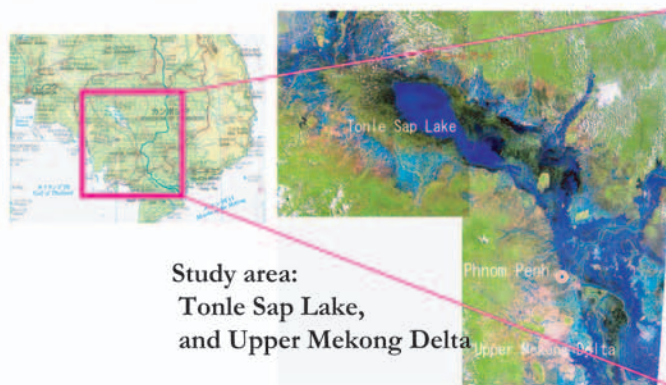
Hydrologic Engineering Research Team  
Public Works Research Institute



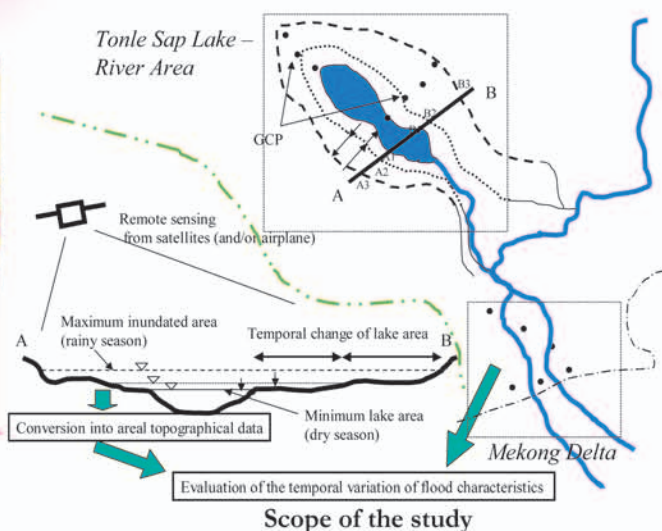
The Tonle Sap Lake and its surrounding area including the Upper Mekong Delta in Cambodia has taken a big role for the Mekong River as the flood retarding pond in rainy season and a lowflow recharge source in dry season. Their dynamic and quantitative characteristics, however, has not been clearly understood. This study is to develop a method to grasp the temporal & spatial dynamics of flood & lowflow control of the Tonle Sap Lake and its surrounding area.



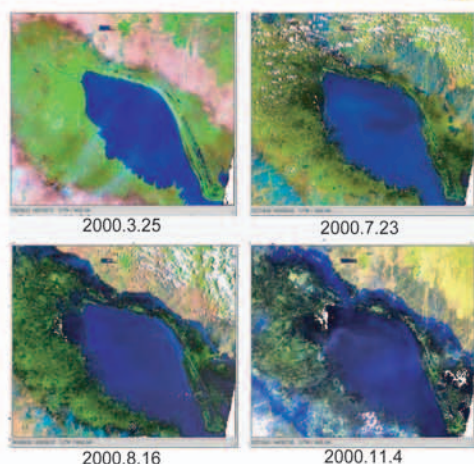
Outline of water budget between the Tonle Sap Lake and the Mekong River



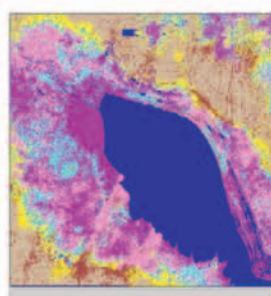
Study area:  
Tonle Sap Lake,  
and Upper Mekong Delta



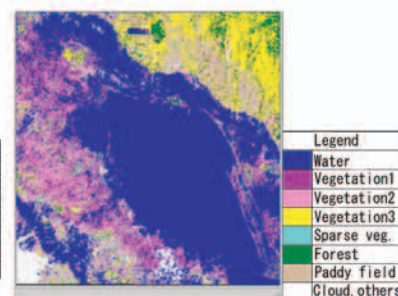
Scope of the study



LANDSAT TM/ETM+ images, Band 5 (R), Band 4 (G), and Band 2 (B)  
One image(2000.7.23) was processed and distributed by GISTDA



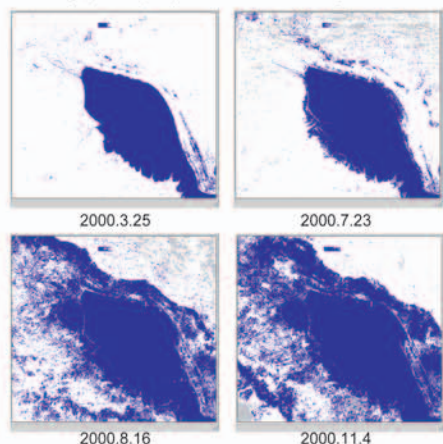
Pre-flood season



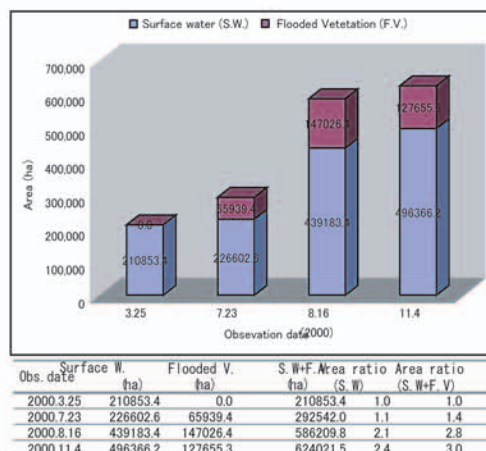
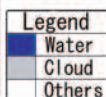
Flood season

Land cover classification :

Clustering (ISODATA method) + Maximum likelihood classifier



Surface  
water  
identification



Flood  
inundation  
extent  
estimation  
by  
Landsat  
image