

Submit the details of your project

Thank you for taking the time to fill in this form. The data you submit will be used by the SOLAS SSC to establish whether your project is suitable for endorsement. If your project is endorsed, the details of your project will be published on this website.

Required Fields *

SUMMARY	
Title of research project:*	Carbon cycling in China Seas - budget, controls and ocean acidification (CHOICE-C)
Status:*	Funded (2009-2013)
Is your project part of a larger national/regional programme? If yes please give details.	the National Basic Research Program of China (“973” program)
Detail any relation to other IGBP, SCOR, WCRP or CACGP projects:	may also be relevant to IMBER and GCP
Contact Information	
Principal Investigator: *, Institution (include address)	Other Investigators (indicate institution in brackets):
Prof. Minhan Dai State Key Lab of Marine Environmental Science, Xiamen University 422 Siming Nanlu, 361005 Xiamen, China Phone:* 86-592-2182132 Fax: 86-592-2184101 Email:* mdai@xmu.edu.cn	Delu Pan (the Second Institute of Oceanography, State Oceanic Administration); Pinghe Cai (Xiamen University); Xuchen Wang (Institute of Oceanology, Chinese Academy of Sciences); Li Li/Xiaogang Guo (the Third Institute of Oceanography, State Oceanic Administration); Gangjian Wei (Guangzhou Institute of Geochemistry, Chinese Academy of Sciences); Kunshan Gao (Xiamen University); Jianping Gan (Hong Kong University of Science and Technology)
Details of Project	
Summary/ Abstract of Project:* CHOICE-C focuses on the carbon budget, controls, ecological responses and future changes in coastal ocean systems. The focal area includes, but not limited to, the continental shelves of both the South and East China Seas. Through an integrated study of the carbon cycling using field observations, remote	

sensing, as well as numerical modeling in China Seas with a contrast/comparison strategy, CHOICE-C aims to determine the source and sink terms of atmospheric CO₂ and their associated controlling processes. What follows concentrates on the ecological response of the uptake of anthropogenic CO₂, primarily on the ocean acidification during the past 100-200 hundred years. Core themes of CHOICE-C are: 1) assessment of the variability of carbon sources and sinks in China Seas at seasonal and inter-annual scales; 2) processes and mechanisms that control the carbon budget, 3) determination of ocean acidification; 4) future trends of the carbon budget and ocean acidification in response to the global climate change.

Eight subprojects are designed for the CHOICE-C program:

- 1) Air-sea CO₂ flux and its temporal and spatial variability, PI: Minhan Dai, Xiamen University
- 2) Primary productivity and carbon inventory, PI: Delu Pan, The 2nd Institute of Oceanology, SOA
- 3) Recycling, export, and burial of carbon, PI: Pinghe Cai, Xiamen University
- 4) Terrestrial carbon input and its impact on the carbon cycling in the coastal ocean, PI: Xuchen Wang, Institute of Oceanology, CAS
- 5) Carbon exchanges between the continental shelf and the open ocean, PI: Li Li Xiaogang Guo, the 3rd Institute of Oceanology, SOA
- 6) Ocean acidification-reconstruction and current status, Gangjian Wei, PI: Guangzhou Institute of Geochemistry, CAS
- 7) Ecological response to ocean acidification, PI: Kunshan Gao, Xiamen University
- 8) Simulations and predictions of future carbon budget, PI: Jianping Gan, Hong Kong University of Science and Technology

Key words of project:*

Air-sea CO₂ flux, carbon budget, ocean acidification

Relevant SOLAS Activities:

FOCUS 1		FOCUS 2		FOCUS 3		CROSS CUTTING ACTIVITIES	
1.1 Marine Particle Emissions		2.1 Air-Sea Interface	Y	3.1 Air-Sea CO ₂ Fluxes	Y	Modeling	Y
1.2 Trace Gas Emissions		2.2 Oceanic Boundary Layer	Y	3.2 Surface Layer Carbon	Y	Remote Sensing	Y
1.3 Dimethylsulphide and Climate		2.3 Atmospheric Boundary Layer		3.3 Air-Sea Flux of N ₂ O and CH ₄	Y	Time Series	

1.4 Iron and Marine Productivity							
1.5 Cycling of Nitrogen							
Data							
Will new data be collected as part of this project?:*				<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
Where will this data be reported/archived?:* Please list expected locations for data submission				China National Data Center (the ministry of Science and Technology)			
When will your data be submitted?:*				Dec., 2010			
Budget							
Total funding secured to date:*				34.50 million RMB			
Total proposed funding:*				34.50 million RMB			
Sources of funding:*				Please list in order of size of funding: Ministry of Science and Technology			
Submission							
Please indicate whether you have contacted your national rep:						Yes (Minhan Dai is a SOLAS SSC member)	
If No, are you happy for us to send the details that you submit to your national representative?						Yes	
If not, please clarify why:							