

Theme A: Prediction and diagnosis of imminent global climate change
Representative: Masahide Kimoto
Vice Director/Professor, AORI, the University of Tokyo

Research Subject (i) Understanding mechanisms of climate variability and change		
Sub-Research Subject		Institutes & Representatives
a	Studies on prediction and predictability of climate variability from interannual to decadal time scales	AORI Associate Professor Masahiro Watanabe *
b-①	Towards reducing uncertainty in model-based estimation of climate sensitivity	NIES Senior Researcher Tomoo Ogura *
b-②	Reduction of uncertainty in climate models relevant to climate sensitivity	JAMSTEC Senior Scientist Masaki Sato *
Research Subject (ii) Development of an integrated prediction system for global climate studies		
Sub-Research Subject		Institutes & Representatives
a	Development of a seamless prediction system for seasonal-to-decadal time scales	MRI Senior Researcher Masayoshi Ishii *
b	Development of data assimilation technology for optimizing initial and boundary conditions	JAMSTEC Research Unit Leader Hiroaki Tatebe *

Theme B: Climate change projection contributing to stabilization target setting
Representative: Michio Kawamiya
Director, Project Team for Risk Information on Climate Change, Strategic Research and Development Area, JAMSTEC

Research Subject (i) Long-term global change projection based on diverse scenarios		
Sub-Research Subject		Institutes & Representatives
a	Development of an earth system model dealing with variations of greenhouse gasses, land use change, etc.	JAMSTEC Research Unit Leader Shingo Watanabe *
b	Information gathering and examination on socio-economic scenarios toward stabilization target setting	JAMSTEC Deputy Research Unit Leader Kaoru Tachiiri *
c	Integrated assessment on climate projection experiments and socio-economic scenarios	CRIEPI, Environmental Science Research Laboratory Deputy Associate Vice President Jyunichi Tutui *
Research Subject (ii) Obtaining scientific perceptions on large-scale variations and modifications of climate		
Sub-Research Subject		Institutes & Representatives
a	Development of technologies for numerical investigations on tipping elements and irreversibility of environmental changes (ice sheet collapse, etc.)	JAMSTEC Director Michio Kawamiya *
b	Development of technologies for numerical investigations on geoengineering (stratospheric aerosol injection, etc.)	JAMSTEC Director Michio Kawamiya *

Theme C: Development of basic technology for risk information on climate change
 Representative: Izuru Takayabu
 Director, Atmospheric Environment and Applied Meteorology Research Department, Meteorological Research Institute

Research Subject (i) Probabilistic climate projection for risk assessment		
Sub-Research Subject		Institutes & Representatives
a	Efficient approach for climate ensemble experiment	NIED Senior Researcher Koji Dairaku *
b	Development of statistical methodology of ensemble data on climate change	ISM Associate Professor Genta Ueno *
c	Improvement in cost-efficiency of dynamical downscaling for ensemble data	AORI Associate Professor Kei Yoshimura *
Research Subject (ii) Producing a standard climate scenario by using super high resolution models		
Sub-Research Subject		Institutes & Representatives
a	Development of quantification method for reliability and uncertainty of climate change information	Tsukuba Univ. Professor Hiroaki Ueda *
b	Downscaling of the change in future weather extremes by using high-resolution models	MRI Director Izuru Takayabu *
c	Development of a coupled ocean-atmosphere non-hydrostatic model for typhoon research	ISEE CIDAS Professor Kazuhiro Tsuboki *

Theme D: Precise impact assessments on climate change
 Representative: Eiichi Nakakita
 Vice Director/Professor, DPRI, Kyoto University

Research Subject (i) Climate change impacts on natural hazards		
Sub-Research Subject		Institutes & Representatives
a	Risk assessment of meteorological disasters under climate change	DPRI, Kyoto Univ. Associate Professor Tetsuya Takemi *
b	Risk assessment of water-related disasters under climate change	Kyoto Univ. Professor Yasuto Tachikawa *
c	Risk assessment of coastal disasters under climate change	DPRI, Kyoto Univ. Associate Professor Nobuhito Mori *
d	Measuring socio-economic impacts of climate change and effectiveness of adaptation strategies	DPRI-Kyoto Univ. Professor Hirokazu Tatano *
e	Development of risk assessment and adaptation strategies for water-related disaster in Asia	ICHARM Deputy Director Katsuhito Miyake *
Research Subject (ii) Climate change impacts on water resources		
Sub-Research Subject		Institutes & Representatives
a	Assessment of socio-economic impacts on water resources and their uncertainties under changing climate	DPRI, Kyoto Univ. Associate Professor Kenji Tanaka *
b	Assessment of climate change impacts on the social-ecological systems of water resources and hydrological cycles	IIS Professor Taikan Oki *
		Institute of Engineering Innovation, School of Innovation, Univ. of Tokyo S. A. Assist. Prof. Satoshi Watanabe
		Graduate School of Information Science and Engineering, TITEC Associate Professor Shinjiro Kanae
		NARO Chief Researcher Takao Masumoto
Research Subject (iii) Climate change impacts on ecosystem and biodiversity		
Sub-Research Subject		Institutes & Representatives
a	Assessment of climatic impacts on ecosystem and biodiversity	Graduate School of Life Science, Tohoku Univ. Professor Toru Nakashizuka *
		Field Science Center for Northern Biosphere, Hokkaido Univ. Professor Hideaki Shibata
b	Economic evaluation of ecosystem science	Graduate School of Life Science, Tohoku Univ. Professor Toru Nakashizuka *
c	Eco-climate system in Northeastern Eurasia and Southeastern Asian tropics: Impacts of global climate change	ISEE Associate Professor Tomo'omi Kumagai *
d	Assessment of multiple effects of climate change on coastal marine ecosystem	Hokkaido Univ. Graduate School of Environmental Science Professor Yasuhiro Yamanaka *
		NIES, Center for Environmental Biology and Ecosystem Studies Senior Researcher Hiroya Yamano

* : Representative of Sub-Research Subject