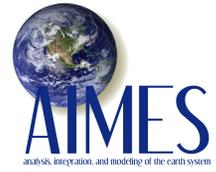


# *Analysis, Integration and Modeling of the Earth System*

## *AIMES Activity Endorsement*



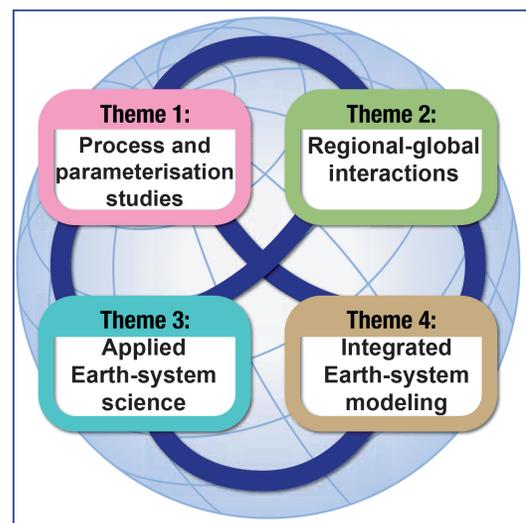
### **Background**

Theories, models and observations contribute to an understanding of both the natural Earth-system dynamics on which anthropogenic perturbations are superimposed and of the complex response of the system to drivers of change. AIMES aspires to achieve a deeper more quantitative scientific understanding of the role of human interactions with the biogeochemical cycles and their role in altering the integrated socio-environmental system in the past, present, and future. The project seeks to better describe and quantify the interactions and feedbacks between the biogeochemical and climate systems, the consequences of human activities and decisions for these systems and the implications of the resulting global environmental changes for humanity.

AIMES is therefore also charged with representing human activities in Earth-System models. AIMES will contribute to this need through interdisciplinary workshops and promote the coordination and integration of socio-economic and other Earth-system modelling activities. The goal of such cooperative activities will be to gain a basic understanding of how humans interact with environmental systems, and also to promote the analysis and solutions of environmental problems. To further this discussion, AIMES will stimulate activities that engage social scientists, historians and other scholars of the human enterprise. Including human-environment interactions into the discussion of integrated Earth system science will accelerate both the development of basic human dimensions of science and applied Earth-system science, leading to new and innovative approaches for global environmental change programs and projects.

AIMES' steering committee includes representatives of diverse natural and social science communities that interact and collaborate across four integrative themes:

- Process and parameterization studies (translating specific aspects of Earth-system processes and function to global models);
- Regional-global integration (understanding global Earth-system context to regionally based analyses);
- Applied Earth-system science (end-to-end research to meet decision makers' needs for integrated information);
- Integrated Earth-system modeling (development of increasingly complex coupled models of climate, biogeochemistry, ecology and society).



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### ***Expectations for AIMES Activities***

- The proposed research activities should address a recognized gap in earth system modeling, require coordination across different disciplines and national boundaries, and/or initiate new research questions that are aligned with the mission and goals of AIMES;
- Define dedicated leaders of the activity, ideally 2-3 co-leaders;
- Define goals and a timeline to achieve these goals, including an end date of the activity;
- Progress towards these goals will be revisited annually and failure to make progress will result in the cessation of AIMES' support of the activity;
- Participants involved should meet on a regular basis, either in person or virtually;
- Be inclusive and encourage participation from a wide community with active strategies for engaging early career scientists and scientists from emerging countries;
- Communicate frequently with AIMES Executive Officer and SSC;
- Exchange information and be aware of other AIMES activities and related global research projects to avoid overlap and enhance collaborations;
- Establish funding as needed to fulfill the goals of the activity;
- Produce concrete outcomes (publications, data products, special issues, conference sessions, workshops);
- Acknowledge AIMES contributions in research products and activities (e.g. in acknowledgements in scientific papers and reports);
- Make data collected and model outputs generated within the project available to the wider community through the AIMES IPO.

### ***Process for Proposing an AIMES Activity***

1. Reach out to the AIMES Executive Officer and/or an AIMES SSC member to discuss the proposed activity.
2. Submit proposal using a provided template for the activity to the AIMES Executive Officer.
3. The AIMES SSC will review the proposal for the new activity on a rolling basis.
4. If the AIMES SSC approves the proposal, and depending on the nature of the activity, it will be given up to 2 years to fully develop, and a liaison from the AIMES SSC will be assigned to help foster the activity.
5. AIMES will continue to review the activity on an annual basis, until the activity is deemed complete, to ensure it is meeting the expectations and requirements of AIMES.

# *Analysis, Integration and Modeling of the Earth System AIMES Activity Endorsement*



To propose an activity for AIMES endorsement, please fill in and send the following form to the AIMES Executive Officer at: [hl3147@columbia.edu](mailto:hl3147@columbia.edu). Activity endorsement will be considered on a rolling basis by the AIMES Scientific Steering Committee.

**1. Title of Activity:**

**2. Leads and Committee (please provide name, institution, country and contact info for each participant and indicate main contact(s))**

**3. Short summary of activity (1-3 sentences)**

**4. Background/motivation of activity (250-500 words)**

**5. Goals & Objectives (workshops, conferences, white papers, webinars, summer schools, etc.) (~200-300 words)**

**6. Timeline for main activities and deliverables**

**7. Funding**