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Subject: RE: Invitation to comment on ISB Draft Prospectus - Emerging Climate Research Symposium

Thank you for the opportunity to provide input on the ISB's draft prospectus for an Emerging Climate Research symposium. We are particularly interested in goal 2 of the symposium "how organizations in the region are incorporating climate change into their decision making" and the exploration of the "science to management connection" and questions 6-8 that touch on how climate projections and downscaled products as well as understanding of evolving and compounding impacts are most useful for planning and decision-support.

As you know, The Council's Delta Adapts initiative, particularly phase 2 – the development of a regional climate adaptation plan – reflects input from a deep foundation of community outreach. **The [draft plan](#), which was released today, reflects this diverse input in the proposed adaptation strategies, and is available for a 60-day public comment period, ending January 17th.** Additionally, the strategies and actions noted in this plan highlight the data and science needs for making adaptation in the region a reality. This draft plan answers the first question that ISB members have been exploring, which is how organizations currently, and hope to, use climate change in their decision-making. This information was compiled through focus groups with technical experts, meetings with the Council's former Environmental Justice Expert Group, one-on-one meetings with government and non-governmental entities, group interviews with farmers and growers, informal tribal consultations, and many more types of engagement. In the meetings with growers and farmers and community-based organizations serving EJ communities, Council staff explicitly asked about the additional information needed to further adapt.

Some examples include, but are not limited to:

- Integrate climate change considerations and socio-economic factors into **risk assessment models**, floodplain management, levee design and standards, and operations and maintenance to ensure that flood risk management strategies align

with future climate scenarios and consider the specific vulnerabilities and adaptive capacities of different communities

- Apply **integrated flood risk and emergency preparedness models** to simulate and predict the impacts of single and multiple levee failures across the Delta, including assessing scenarios of levee overtopping and flood dynamics under various climate conditions...
- **Integrate climate risks into the Delta Levees Investment Strategy (DLIS)** while also incorporating an **equity-weighted benefits evaluation**...
- Conduct an assessment to determine the **types of restoration** (intertidal, subtidal, riparian, etc.) that would provide the greatest flood reduction benefits in specific parts of the Delta...
- **Prioritize research regarding the effectiveness of nature-based solutions** to better understand how restored wetlands absorb floodwaters, and the comparative benefits of nature-based solutions to gray infrastructure, interweaving Traditional Knowledge as applicable. Use this data to advocate for land use changes when warranted.
- **Acquire and implement cutting-edge hydrologic modeling and forecasting technology in emergency response planning.** These tools can provide more accurate and timely flood predictions and early warnings for flood events. Incorporate climate projections to better understand future flood scenarios and to inform emergency planning.
- Prioritize research to **develop and apply innovative flood prediction and prevention technologies.** Identify knowledge gaps and key research needs, encouraging collaboration across various fields and expertise, to guide future investments in flood risk management research and development...
- Prioritize research regarding the effectiveness of **a transferable development rights model** to permanently protect and restore areas most appropriate for restoration while directing development to other areas.
- Support new research and on-farm studies that analyze carbon sequestration potential under different conditions, and the importance of incentives or carbon credits to motivate adoption (CDFA 2021).
- On organic soils, incentivize planting crops that require continuous flooding (e.g., rice) for subsidence-halting and -reversal benefits. Further develop regional

paludiculture (e.g., wet farming on peatlands), including improving understanding of what crops can grow and what markets are available or needed for economic viability.

- Prioritize research on rice varieties that would be more economically viable in the Delta.
- Prioritize research evaluating the opportunities, costs, and benefits of on-farm solar and on-farm carbon capture and sequestration to reduce emissions or other technologies such as gasifier technology that can turn biomass into liquid fuel and activated carbon.
- Implement regular **external reviews by the Delta Independent Science Board** to evaluate the effectiveness of current regulations at monitoring and complying with Delta water quality objectives.

We encourage you to read the draft Plan and use it to inform how you frame both the symposium’s discussion and potential products, and look forward to receiving the ISB’s comments on the draft plan as well.

Thank you again for the opportunity!

Regards,

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