

NASA Advisory Council Recommendation

Science Mission Directorate Engagement in Climate Science 2022-02-07

Name of Committee:	Science Committee
Chair of Committee:	Dr. Ellen Williams
Date of Council Public Deliberation:	August 10, 2022
Short Title of Recommendation:	Science Mission Directorate Engagement in Climate Science

Recommendation:

The Council recommends that:

- The Science Mission Directorate (SMD) emphasize improving spatial resolution, sensitivity to chemical species and concentrations, and environmental/human variables in detecting sources of greenhouse gas emissions and make the data publicly available.
- SMD build on NASA's historical role in Science, Technology, Engineering and Math (STEM) education and inspiration to augment the climate portfolio to include a segment on utilizing behavioral/social sciences to improve the communication of the science of climate change.
- The climate portfolio overview include a nod to the climate impact NASA itself is having, and how this is being mitigated. Additionally, NASA climate goals and metrics could strengthen the renewed climate focus.

Major Reasons for the Recommendation:

- NASA's assignment of the dual role of Senior Climate Advisor and Chief Scientist provides welcome extra emphasis to NASA's commitment to the issues of Climate Change.
- NASA's collaborative work with other U.S. government agencies on the monitoring and use of climate data provides substantial opportunity to broaden the impact of its Climate Science programs. SMD should utilize such activities strategically to complement its science objectives.

Consequences of No Action on the Recommendation:

There are numerous Climate Change initiatives in other government agencies, and also related activities amongst other NASA Mission Directorates. Failure to completely coordinate such activities within NASA risks duplication of efforts and resources. Moreover, failure to reach out to seek similar or related Climate Change activities amongst other government agencies such as the Department of Defense, the National Science Foundation,

Enclosure

and the National Academies of Sciences, Engineering and Medicine, misses an opportunity to leverage the resources and ideas that could influence the success of the NASA Climate Change program.

NASA Response:

NASA concurs with this overall recommendation and has been working along these lines. These topics are addressed in the Agency's Climate Strategy which was released on March 29, 2023, and we have provided a copy to the NAC.