

Report 93: Remotely-Sensed and GIS data

Convener: Balbus

Brief History: Information on land cover, land use, airborne pollutants, and other environmental parameters is often not available from ground monitors and observations and is obtained from satellite-based instruments. Applications of this remotely-sensed environmental data to the study, modeling and prediction of diseases and health outcomes are growing. At present, most of these applications are conducted and funded by agencies other than NIEHS/NIH, including NASA, NOAA and NSF. There is a need to determine the value-added of these sources of data for NIEHS science and the role of NIEHS in the national and international activities surrounding remotely sensed data.

In addition, there is growing interest and technological developments in the collection and analysis of geospatially organized data. There is currently no central expertise or program in the analysis of geospatial data at NIEHS, but such institutional capability may be desirable.

Discussion Highlights:

- NASA and NOAA are eager to engage with NIEHS and the public health community on the types of data they collect with their satellite and monitoring instruments
- There is a separate operational discussion as to what activities NIEHS might undertake using those data
- A group combining satellite science and public health experts from Johns Hopkins led by Bill Pan has recently moved from Johns Hopkins to Duke. This group might provide expertise to consult with NIEHS on potential use of remotely-sensed data within the Institute.
- Other experts to consult include Alan Strahler of BU, Rita Colwell, John Haynes (NASA), and Jan Ming Xiao (OK U)
- New technologies like use of Ipads to complete questionnaires with geospatial information automatically recorded will greatly expand geospatial analyses and studies

Recommendations:

- Analyze the NIEHS portfolio for research that might have added value from incorporation of remotely-sensed data
- Hold a workshop bringing together experts in remotely-sensed data and NIEHS scientists to explore applications; focus on what the capabilities of satellites and other remote sensors for health studies
- Convene a group within NIEHS with potential interest, including DIR/Epi branch, GEI – biosensors, and population studies branch of DERT.

Discussion Participants: John Balbus, Julia Gohlke, Josh Rosenthal, Bill Schrader, Ellen Silbergeld, Wendy Thomas.