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Ecological Forecasting in the Applied Sciences Program and Input to the Decadal Survey

Ecological forecasting uses knowledge of physics, ecology and physiology to predict how ecosystems will change in the future in response to environmental factors. Further, Ecological Forecasting employs observations and models to predict the effects of environmental change on ecosystems. In doing so, it applies information from the physical, biological, and social sciences and promotes a scientific synthesis across the domains of physics, geology, chemistry, biology, and psychology. The goal is reliable forecasts that allow decision makers access to science-based tools in order to project changes in living systems. The next decadal survey will direct the development Earth Observation sensors and satellites for the next ten years. It is important that these new sensors and satellites address the requirements for ecosystem models, imagery, and other data for resource management. This presentation will give examples of these model inputs and some resources needed for NASA to continue effective Ecological Forecasting.

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