

What do we mean by climate services? Example definitions

S. 2307, The Global Change Research Improvement Act of 2007

A National Climate Service will “produce and deliver authoritative, timely and usable information about climate change, climate variability, trends, and impacts on local, state, regional, tribal, national, and global scales.”

GAO Report: Climate Change: Agencies should develop guidance for addressing the effects on federal land and water resources (GAO-07-863)

“To better enable federal resource management agencies to take into account the existing and potential future effects of climate change on federal resources, we recommend that the Secretaries of Agriculture, Commerce, and the Interior—in consultation with the Director of FS; the Administrator of NOAA; and the Directors of BLM, FWS, and NPS, respectively—develop clear, written communication to resource managers that explains how managers are expected to address the effects of climate change, identifies how managers are to obtain any site-specific information that may be necessary, and reflects best practices shared among the relevant agencies, while also recognizing the unique missions, objectives, and responsibilities of each agency.”

NCDC (submitted in response to product inventory request, December 2007)

Service involves the people and their contact, the effectiveness of the access mechanism (phone, email, online system), and the product as it is perceived (human interaction, ease of obtaining the product, and the extent the product meets the users’ need). Interaction with users can result in new requirements and products (improved services). A service provides one or more products. A product can be a subset of a service. Example might be the ISD summary service (in NVDS/CDO) that has 12 products (various data summaries).

Product: the results of information, knowledge or data provided via an acknowledged NOAA delivery mechanism. A product may be a subset of a service (e.g. individual reports available within the Health of the Network such as percent completeness of COOP data received by site, region, etc.)

Miles et al. 2006

A National Climate Service is a “sustained mechanism for promoting science to support decision-relevant questions, translating new climate information into relevant decision environments, and building regional and national capacity to anticipate, plan for, and adapt to climate variability and change.”

PowerPoint: Designing regional climate services: Creating a “shared” vision for NOAA and partners

“Network of activities which maintains well-structured paths from observations, modeling, and research to usable information.”

Emphasis on regional focus:

“Engaging regional services requires coordinating existing activities AND moving beyond doing what we are already doing.

Typology of institutional partners and roles

(a) Management and decision making agencies and groups in which decisions about preparation and mitigation are taken (agriculture, water, disasters, state offices....). What questions are being asked? How are these needs documented?

(b) Knowledge systems: What research, information and mechanisms are used to understand and assess salient climate-related risks and benefits (across timescales, property at risk, and environment)

(c) Service implementing agencies/offices informing responses :

Coordinating roles

What are the relationships among RCCs, NWS Field Offices (include. RFCs), RISAs and State Climatologists? What are the relationships with other Federal agencies such as USDA, DoI? What relationships or mix of relationships are desirable?"

National Research Council 2001

Climate services is "the timely production and delivery of useful climate data, information and knowledge to decision makers." Recommend creating a "climate service that is increasingly user-centric, that reflects the value of both historical and predictive knowledge, and that promotes active stewardship of climate information."

Value of climate information to society depends upon:

- strength of the linkages between climate, weather, and human endeavors;
- nature of the uncertainties
- accessibility of credible and useful climate information to decision makers;
- ability of users and providers to identify each other's needs and limitations;
- ability of users to respond to useful information.

Chagnon 1990

"The National Climate Program (NCP) was established to "assist the Nation and the world to understand and respond to natural and man-induced climate processes and their implications." The act indicated that the NCP was to focus on three major activities (NOAA 1980, p. E-4):

- 1) **climate impact assessment**—an effort seeking to identify "procedures to evaluate climate's effects on society, the economy, and the environment, in order to develop response and strategies for dealing with climate fluctuations";
- 2) **climate system research**—attempts to "increase the knowledge of global and regional climate and its variation" by means of a range of empirical studies and analyses of the climate record, the development of climate simulations and prediction models, and the investigation of the climate system processes; and
- 3) **data, information, and services**—efforts designed to "provide accurate and timely data and information products," and to be "responsive to Government and private sector need" for climate information."