

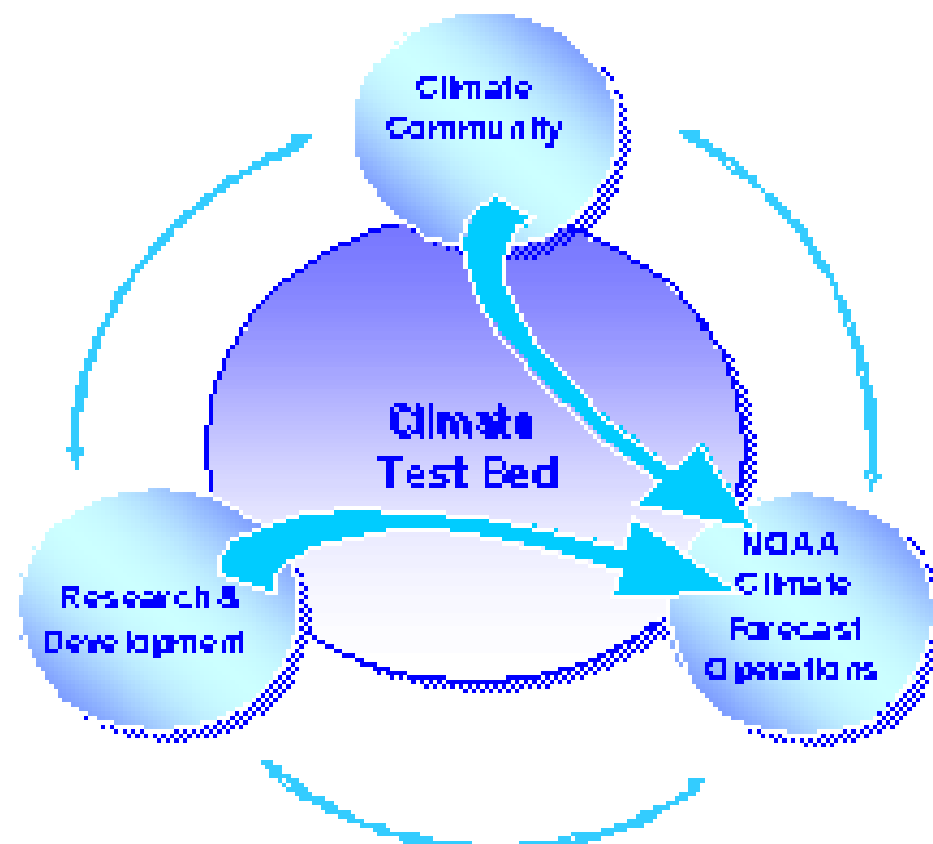
REFLECTIONS ON THE DEVELOPMENT OF CLIMATE SERVICES

(In the US and the Developing World)

Mike Harrison

Climate-Insight

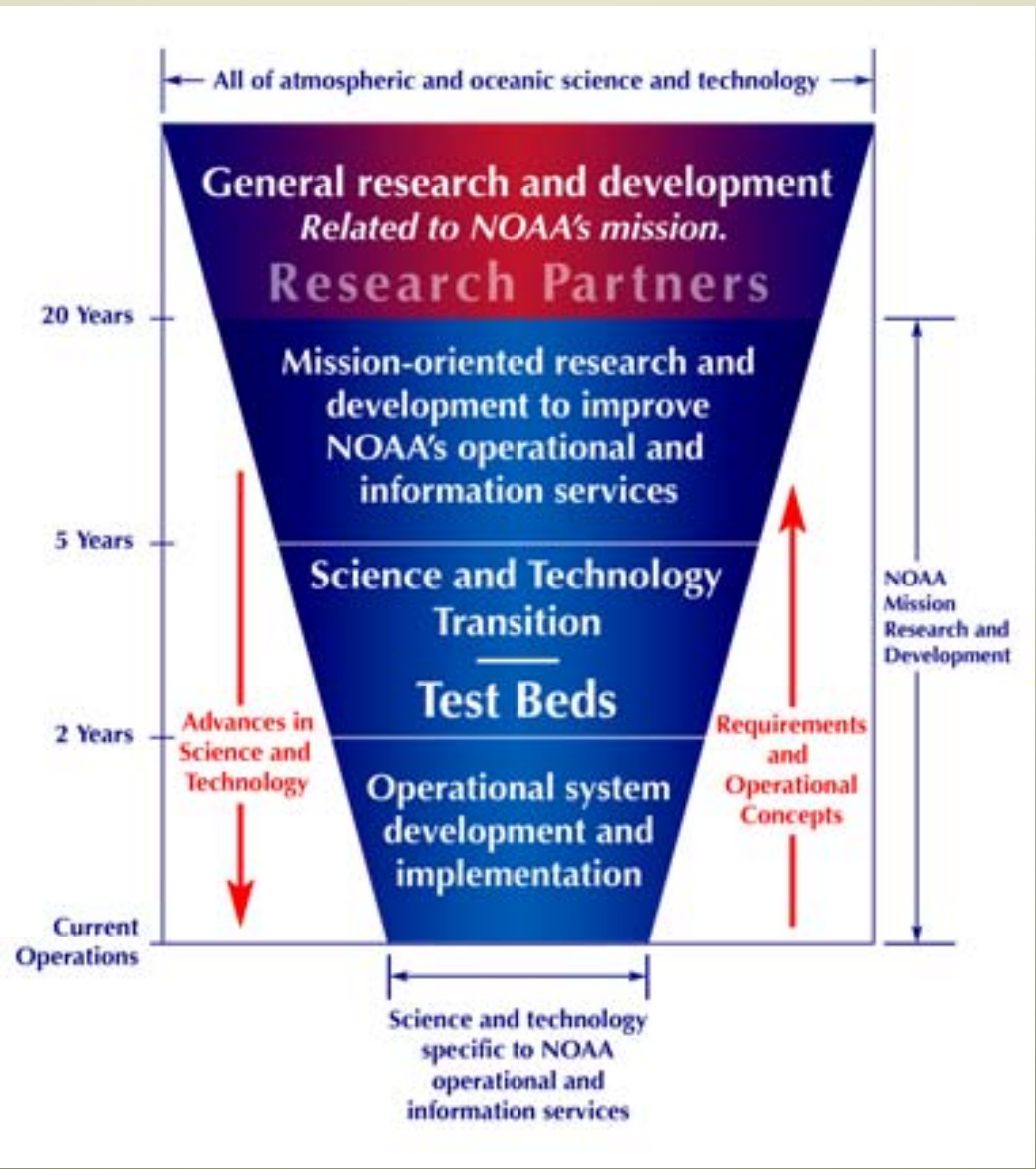
University of Oxford



Mission: to accelerate the transition of research and development into improved NOAA operational forecasts, products, and applications. Mission to accelerate the transition of research and development into improved NOAA operational forecasts, products, and applications.

community to improved NOAA climate forecast products and services.

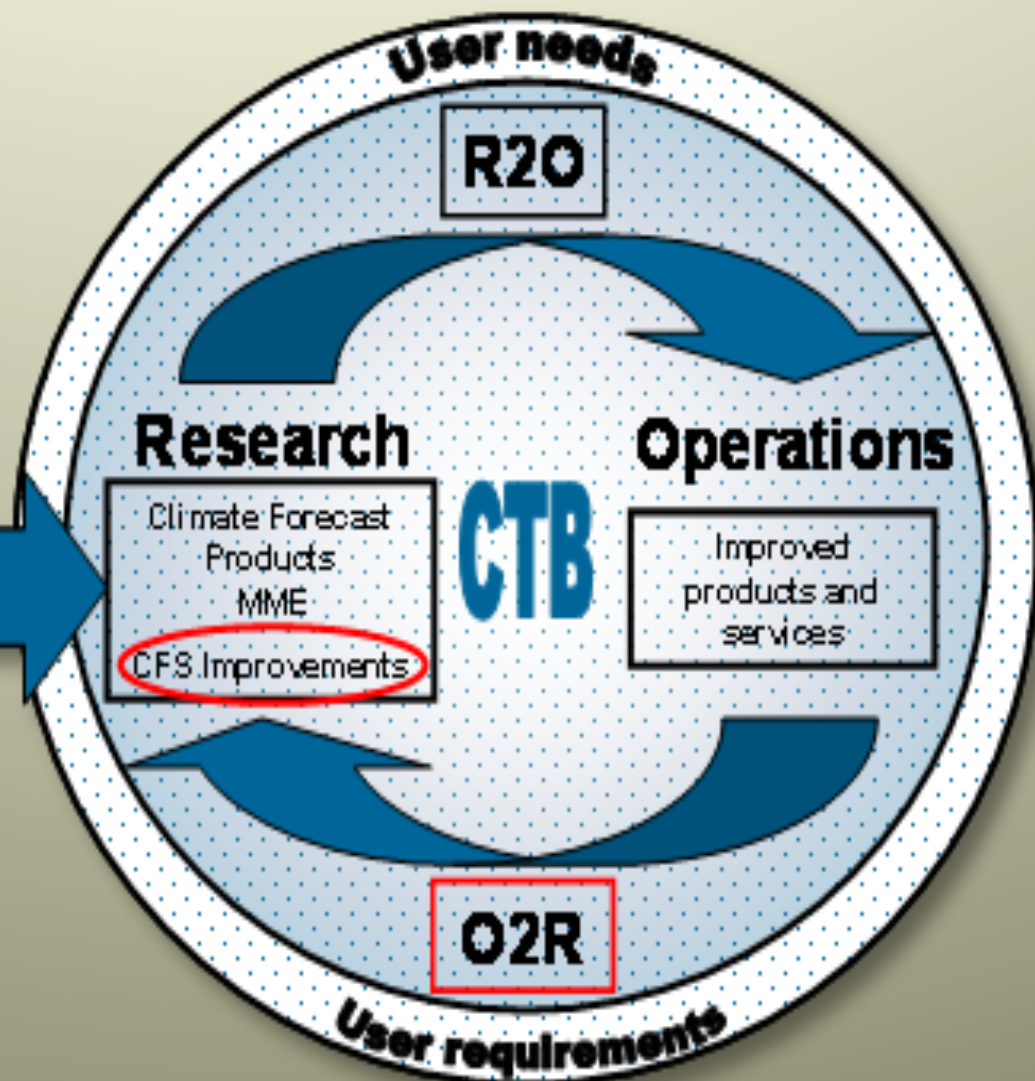
<http://www.opc.ncep.noaa.gov/products/ctb/>



AO
LOI
Proposal
NCEP Collaborator

Research Topics

- Reanalysis / Reforecasts
- Earth System Modeling
- Tropical oscillations
- Model physics
- Etc.



Chasm



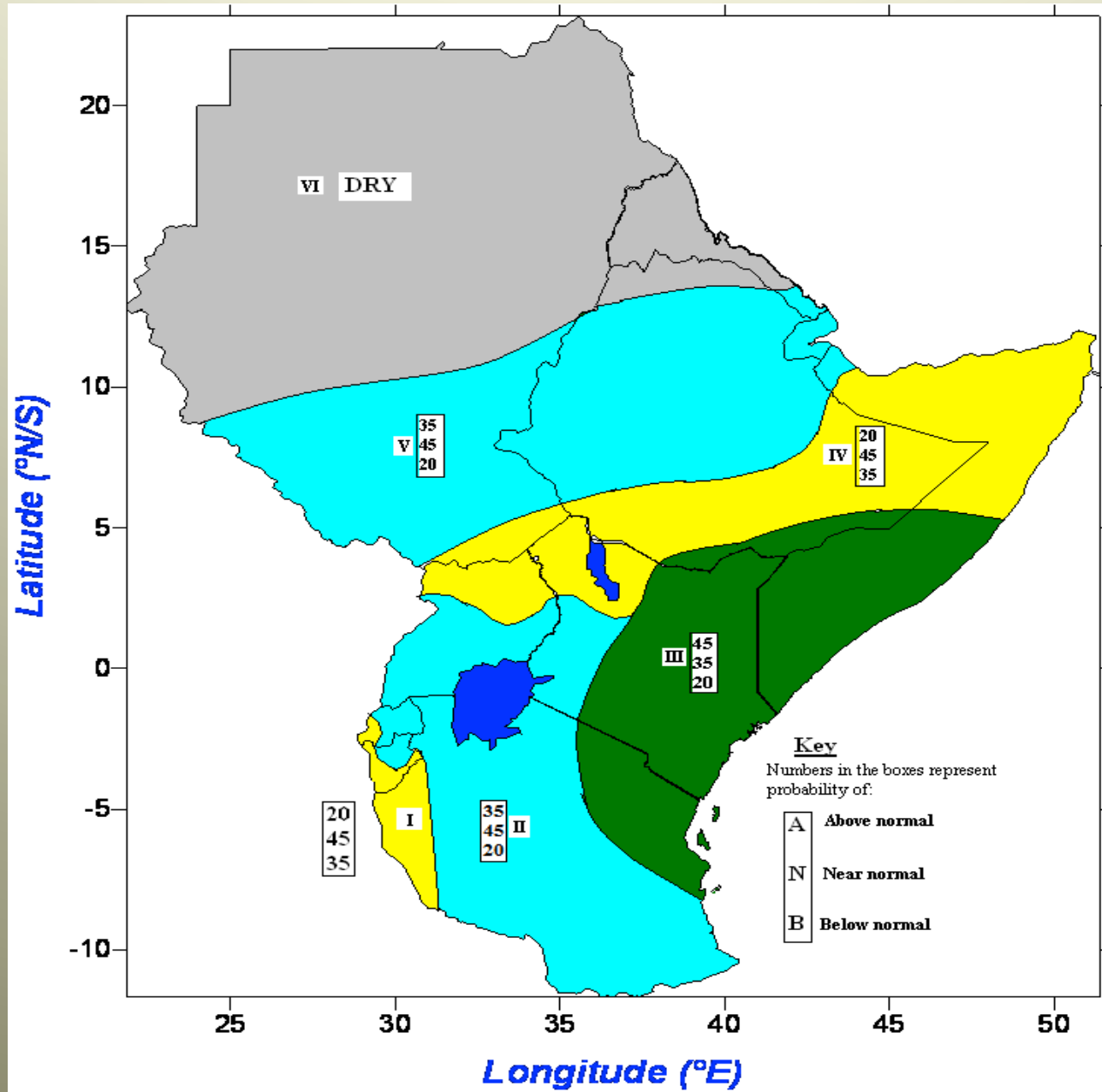
Colorado River water resources stakeholders

Mission: To understand and predict changes in the Earth's environment ... to meet our Nation's economic, social, and environmental needs





Farmers at Workshop



A CONTRIBUTION OF THE UK MET
OFFICE

**THE BARBEQUE
SUMMER**

A Chasm-istic Comment

- (1) the crude methods and limited comprehension of wx/climate science that are found in many stakeholder communities, coupled with the low scientific literacy and stagnant methods of the operational field of NOAA (WFOs, regional HQs, RFCs, HPC), where there has been limited adoption of wx/climate prediction science;
- and (2) the sophistication and broad variety of ideas, techniques, knowledge present in the research/academic/lab communities. Some of these are not useful, but others are, yet exist mostly just in the literature.
- The result is the traditional transition 'valley of death' -- no real surprises. I lump NOAA's RFCs and stakeholders on one side of the chasm, and NOAA's research groups on the other.

A Chasm-istic Comment continued

- I think that for all its ideals about advancing science for the purpose of service, NOAA has failed to empower or sufficiently resource its operational centers to participate in the laudable project. Thus, climate/weather science does advance, yet in no small ignorance of service needs and operational realities; while services now expand in quantity but not in quality or usefulness, ignoring useful scientific advances as well as failing to inform scientific inquiry.
- The knowledge present in each end of the organization doesn't filter to the opposite end.

So.....

- Within the context that the service isn't complete until the full information transfer has been delivered and decisions made
- And that that is not necessarily an individual responsibility but is an institutional responsibility

Main Issues

- Building of climate information services along CBS lines, i.e. following the same process as per short-range forecasts
- Stratification of research activities along disciplinary lines (e.g. WCRP/IGBP/IHDP/DIVERSITAS)
- Data access (WMO Resolution 40)
- Political (e.g.s in US the positioning of climate; in the developing world the role of climate in development)

What might be done?

- Improve focus and processes re information delivery, especially concentrating on value from that information, and ensure that new research as frequently as possible possesses a user legacy component
- Transfer focus from a seamless forecast system to a seamless decision making system
- If plans for RCCs and the GFCS proceed, then ensure they provide user legacy