The Global Weather Enterprise supporting Sustainable Development

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Outline

- The Drivers
- What is the Global Weather Enterprise?
- Changes affecting the GWE
Weather risks are the top economic risks

World Economic Forum, Davos - Global Risk Landscape 2018

Sendai Framework, Paris Agreement, UN Agenda 2030: Focus on Resilience, Adaptation and Early Warning

Drivers for the Global Weather Enterprise

Agenda 2030 for sustainable development

- 17 Sustainable Development Goals (SDG)
- Three main dimensions: social, economic and environmental
- Five keywords to transform our world: “people, planet, prosperity, peace, partnerships”
- Universal validity: all countries should contribute to their realization, according to their abilities
- Engagement of non-state actors

WMO Members contribute to the achievement of 10 of the 17 SDGs
Global Weather Enterprise

- Research and Development
- Education and Training
- Public and commercial services

- Commercial Weather/Climate and Hydro services
- Instrument manufacturers
- Insurance services
- Observing systems and services

- NMHSs – public and commercial services
- Research and development
- Global Data Processing and Forecasting Services
- Observing systems and services
GWE must grow to meet the SDGs

10 x 10 growth
10 times bigger in 10 years

Now

2025 +
Changes affecting the GWE

Societal need for weather information
Population growth – more people living in increasingly marginal places (climate change)
Effective use of forecasts and warnings can reduce exposure and build resilience
More accurate, reliable and specific information is needed to meet SDGs

Science and Technology innovation
Satellite miniaturization
Next-gen computer architecture
Science to model the system with much greater detail – local to individuals
Close to predicting global weather at close to the human scale (1 km or less)

Public support for fundamental research
Rate-limiting step for the GWE

Structure of international financing
Shift towards joint financing of public and private sectors
In Interests of all for more collaboration between public, private and academic sectors
Changes affecting the GWE

Roles of public and private sectors
Funding pressures on public sector may lead to protectionism. Need to reexamine role of NMHSs and relationship with private sector
Level playing field
Avoid undermining different sectors’ contribution to the GWE

Growth of service based approach
Shift from capital-based infrastructure to service-based approach (e.g., data services)
Data ownership

Weather information and standards
Quality/standards, ownership, and access principles need updating
As wide as possible access and exchange are needed for both public and private sources of data (what is essential data in the current era? Need for international regulation for clarity and simplification?)
Risk of weakening the global observing system

Support for low and middle income countries
Poor people die because they have access to only low quality information or none at all
Implications for GWE

Current Situation
- Little or no regulation
- International agreements dominated by public sector within WMO
- Absent rules, public and private sector cooperation/competition is unconstrained – little or no trust
- No independent audit of services (except aviation)
- International commercial providers “untaxed” at point of delivery of services
- Current investment in NMHSs per capita of national population
  - Developed countries = US$3.50
  - Least developed countries = US$0.25 (in many, it is close to zero)
- Public weather services unsustainable in many low income countries despite high need for actionable information

Possible Future
- WMO acts on behalf of entire enterprise (it is already within its mandate) – mutual trust
- Introduces an international regulatory framework that guides national policies
- Growth in commercial services from both private and public sectors
- Auditing and certification improves quality of services
- A rule based system increases potential for national taxation of services, which in turn could help underwrite public good warning services
- More opportunities for joint ventures between public and private sectors
- More sustainable information services

Benefits
Current activities of GWE partners

To support the growth of the GWE to meeting development objectives:

WMO, WB-GFDRR, HMEI (private sector), IAMAS (academia) are coordinating a GWE Forum of forward looking individual experts from the public, private, and academic sectors to provide guidance to the GWE community on all aspects of the enterprise.

The coordinating group hosts semi annual meetings of GWE Forum and GWE institutional partners.

The next major event will be in Singapore – March 25-29, 2019.
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Thank You!