



Systematic Observations Financing Facility Third Potential Funders' Forum

Agenda item 2 Rationale for SOFF and call for action

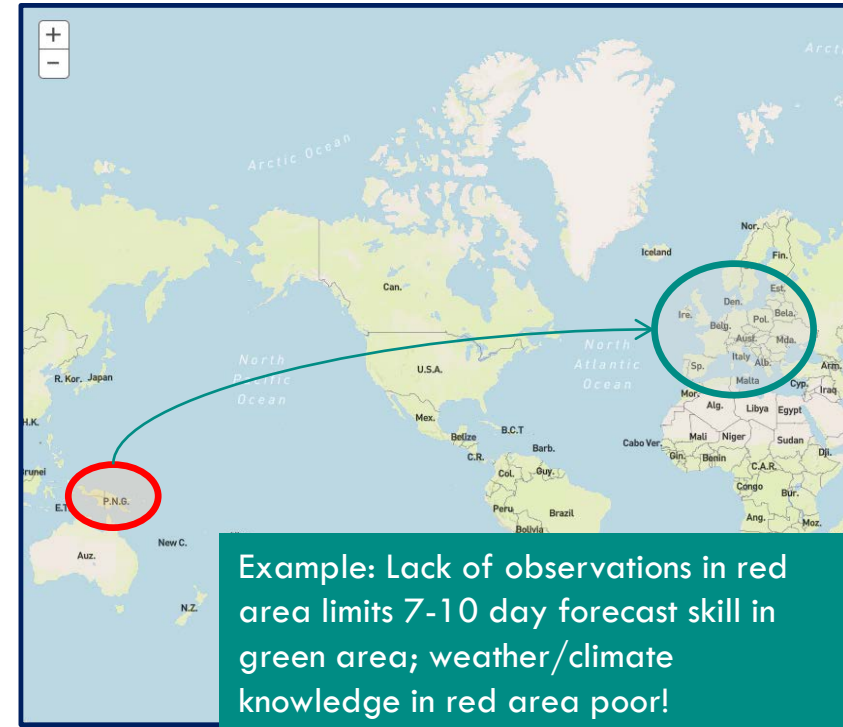
Lars Peter Riishojgaard, Director WMO Earth System Branch
Laura Tuck, SOFF Global Facilitator



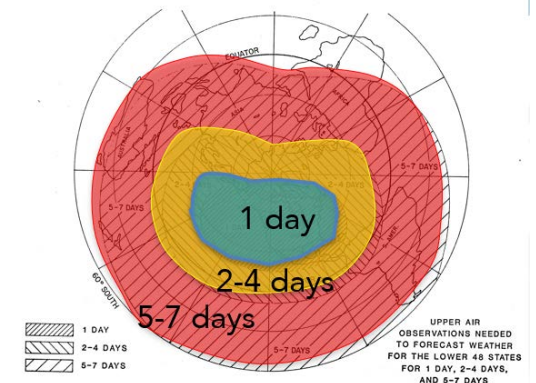
Rationale for SOFF

Weather and climate know no boundaries

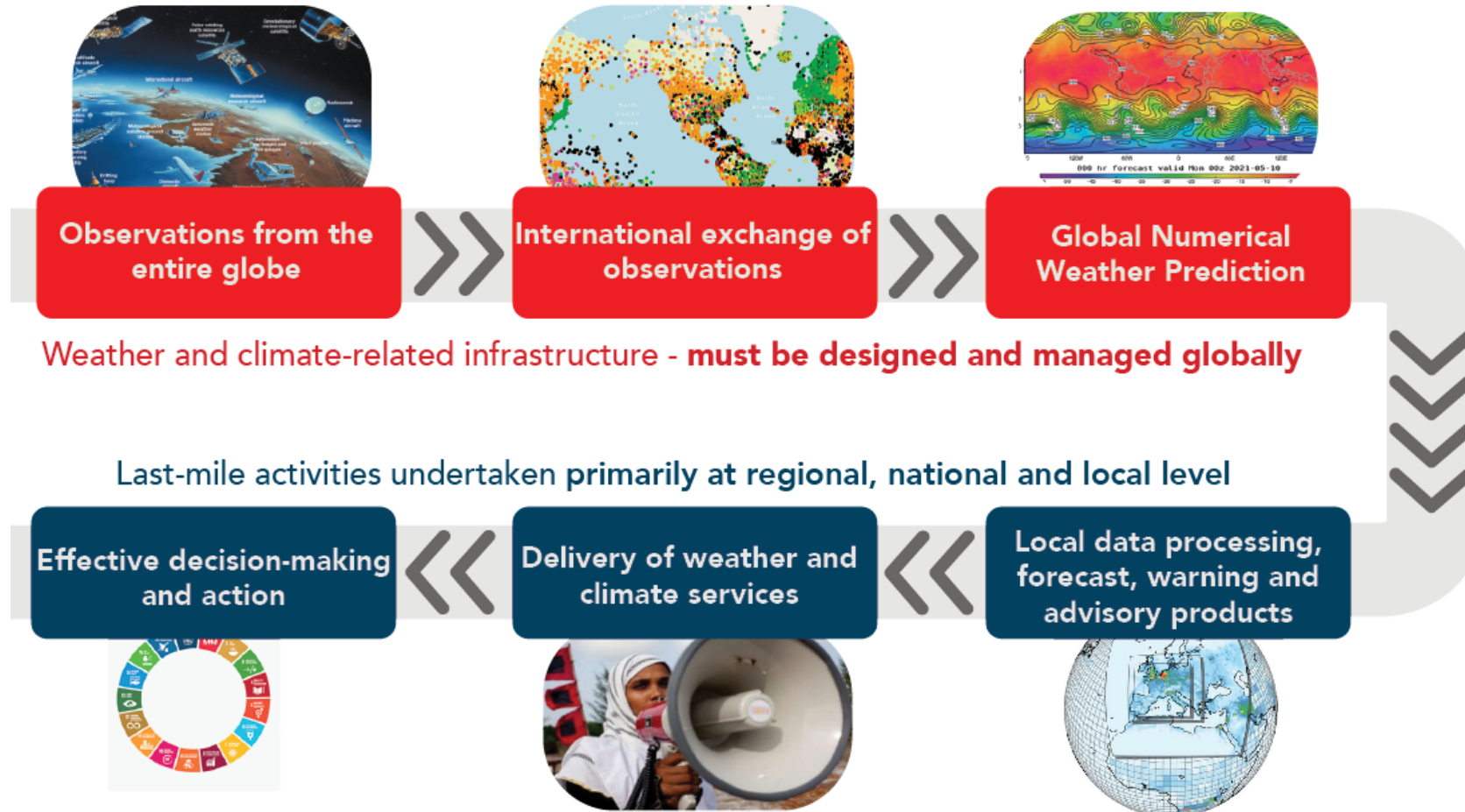
- Lack of observations limits ability to monitor, understand and predict **weather and climate, both locally and globally;**
- Weather prediction beyond 3-4 days **for any location on the globe** requires exchange of observations world-wide.
- Even at detailed local scales, **climate reanalysis and climate prediction** both depend on **global models, fed with local observations.**
- Lack of observations will initially lead to poor quality of model data locally; over time this will spread globally.



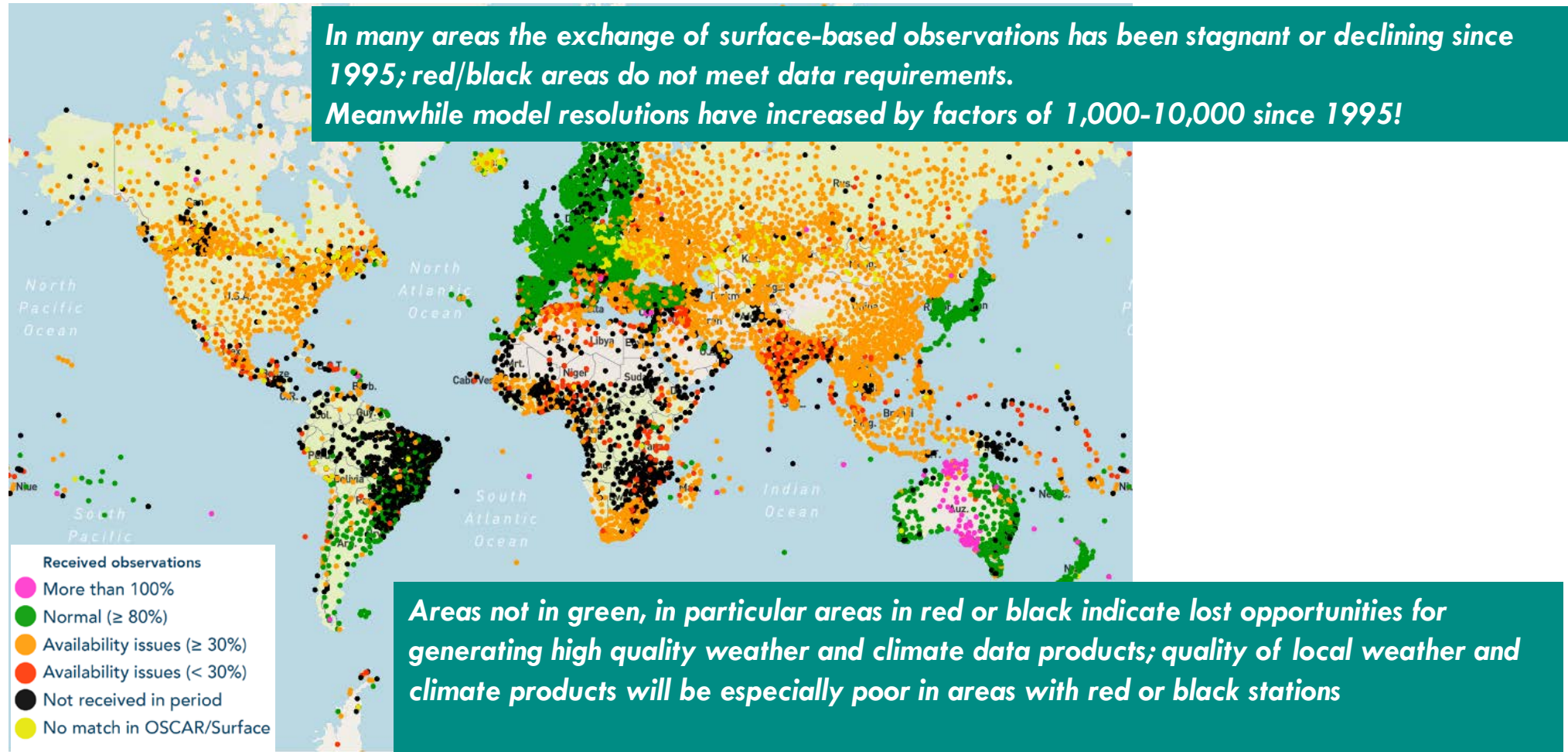
Example: Required areal coverage of observational data for weather prediction over the United States for different ranges



The meteorological value chain



Current state of international exchange of observations and why this is a problem - local and global implications

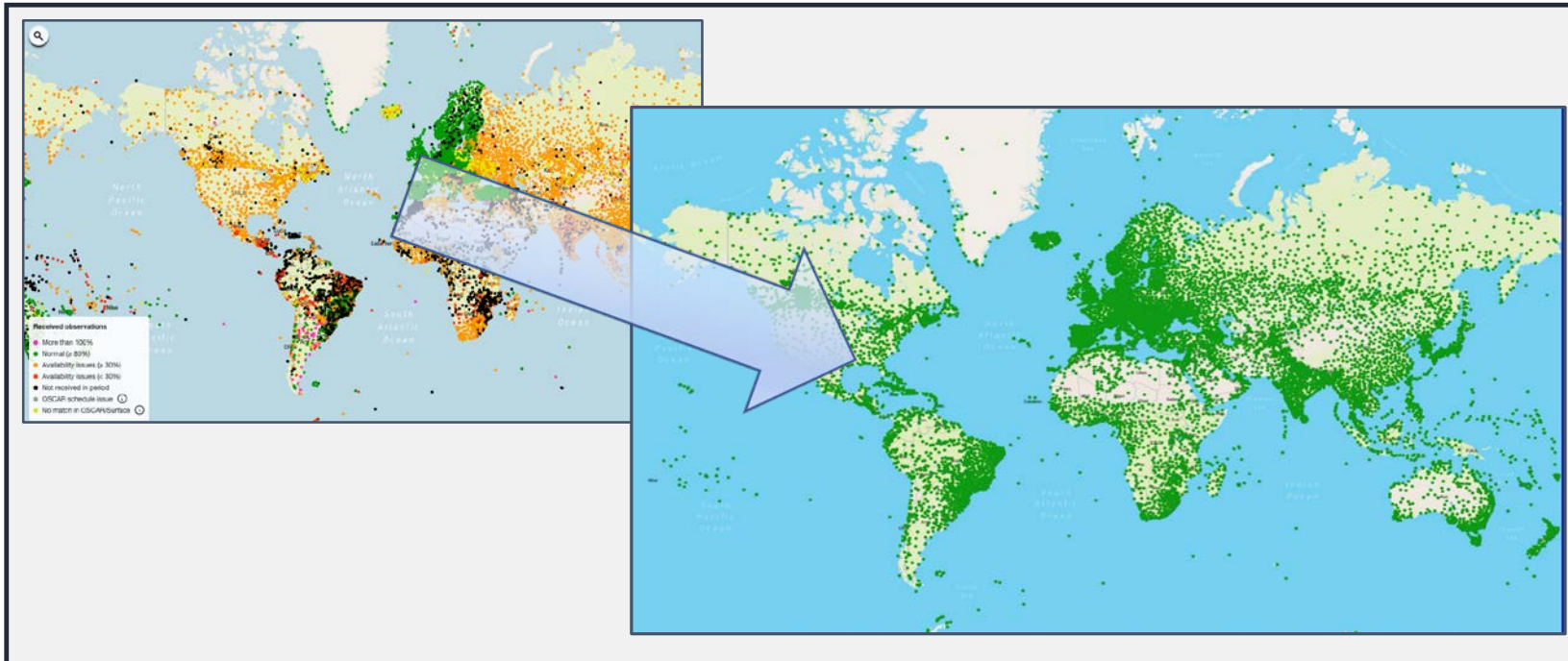


Surface pressure observations received by global NWP Centers on Sept 9 2021)

(source: [WIGOS Data Quality Monitoring System](#))

WMO response to persistent data gap

Global Basic Observing Network (GBON)*



GBON: Network based on a global design agreed between all WMO Members, to turn data coverage map green;

- **Regulations specifying obligation of countries to acquire and exchange certain observations at set minimum horizontal resolution and at set minimum frequency;**
- **Once approved, GBON regulations can be implemented immediately in many parts of the world**

Economic benefits of full GBON implementation in countries with largest data coverage gaps estimated to exceed USD 5 billion per year, due to improvements in weather prediction alone (climate-related benefits not yet assessed)

Availability of observations versus national resources

WMO Convention and Paris Agreement implicitly assume that observations is solely a national responsibility

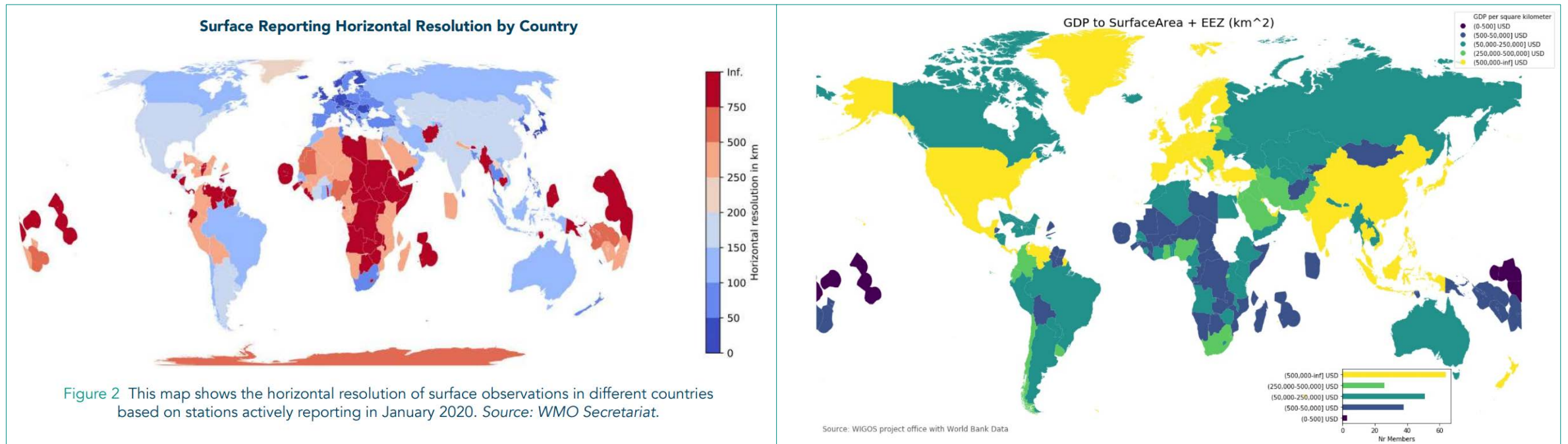


Figure 2 This map shows the horizontal resolution of surface observations in different countries based on stations actively reporting in January 2020. Source: WMO Secretariat.

- **Ability to observe (left panel):** Observing systems in countries depicted in red fail to meet minimum observations requirements for weather and climate analysis and prediction
- **Ability to pay (right panel):** Affordability of observing responsibility (GDP/km² of surface area) of countries in yellow up to ten million times higher than for countries in dark blue

The cause of missing observations in SIDS and LDCs

- Lack of a **globally coordinated approach** matching the global nature of the problem
- Lack of a clearly defined, appropriate **measure of success**
- Lack of a **long-term and systematic approach** to strengthen capacity
- Lack of a **coordinated and integrated** implementation approach
- Lack of a **realistic financing** model

Call for action

Global call for action

- SDGs
- Paris Agreement
- Sendai Framework
- UNFCCC - SBSTA

- Environmental **monitoring** and stewardship
- Strengthening scientific knowledge and capacity on **systematic observation of the climate system**
- Promoting the collection, analysis, management and use of relevant **Earth and climate observations**
- **Sustained funding to meet the essential needs for global climate observation**

Response to global call for systematic observation

- **Global Basic Observing Network (GBON)** - 193 states and territories committed to generation and international exchange of surface-based observations
- **Alliance for Hydromet Development** – 13 major climate and development finance organizations committed to the creation of SOFF
- **Beneficiary countries and global leaders** - call for the creation of SOFF

SOFF value proposition

Global approach and data exchange as measure of success

- Optimal, detailed and **agreed global design and metrics** –GBON

Innovative finance

- **Results-based, long-term finance**, incl. operations and maintenance
- **Grants-only**, recognizing a global public good

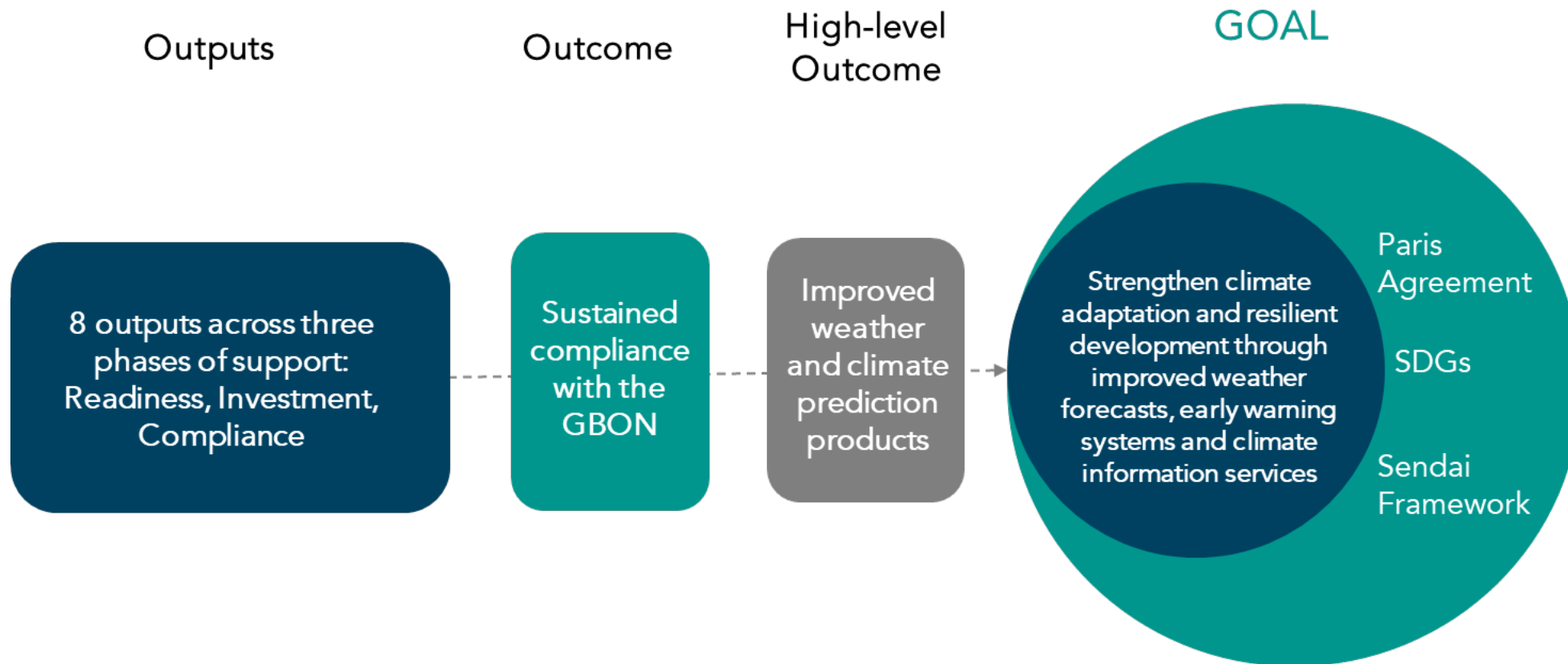
Technical competency and coordination

- **Peer-to-peer technical assistance** by advanced met offices
- **Standardized, authoritative technical advice**

Knowledge and resources leverage

- **SOFF interventions underpinning last mile** investments

SOFF theory of change





Systematic Observations Financing Facility Third Potential Funders' Forum

Agenda item 3 SOFF governance and operational approach

Markus Replik, Director WMO Development Partnerships



SOFF Governance



UN Multi-
Partner
Trust-Fund

UN coalition fund

WMO, UNDP and UNEP

Specific and complementary roles

UN MPTF Office

SOFF Trustee

Flexibility, simplicity and speed

SOFF Governance



Decision-
making

Steering Committee

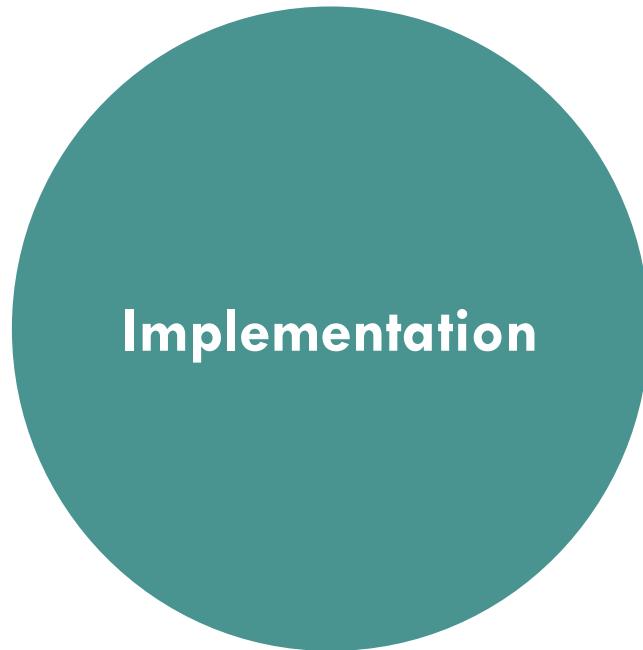
Decision makers:

- Funding partners and WMO

Other members:

- UNDP and UNEP as co-chairs Advisory Board
- UN MPTF Office as Trustee
- Head of SOFF Secretariat
- CREWS

SOFF Governance



Beneficiary countries

- National Meteorological and Hydrological Services

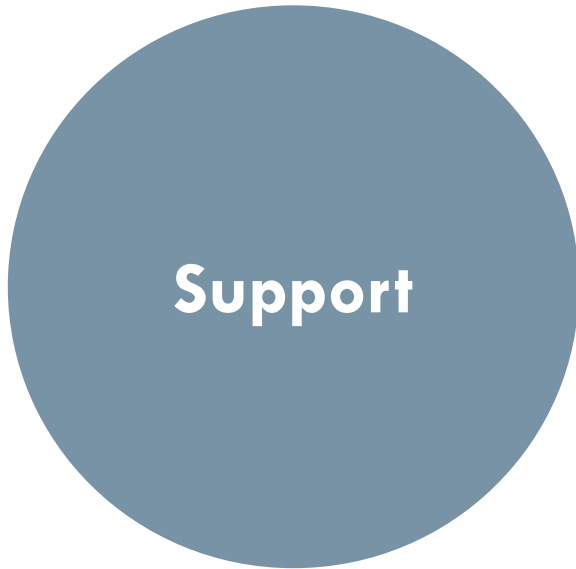
SOFF Implementing Entities

- Major multilateral development partners members of the Alliance for Hydromet Development
- Implementing Entities to partner with national and international organizations

SOFF peer advisors

- Pool of 25-30 advanced met offices

SOFF Governance



Advisory Board

- Synergies with adaptation and “last mile” action
- Multi-stakeholder composition

WMO Technical Authority

- Verify GBON gap and compliance
- Confirm GBON national contribution plan
- Endorse and support peer advisors
- Host SOFF Secretariat

SOFF Operational approach

Who benefits from SOFF?

- SIDS and LDCs benefit most from improvements in weather and climate prediction
- All countries benefit from global improvements

SOFF direct support: First Implementation Period

- Focus on SIDS and LDCs
- Other developing countries – Readiness technical advisory

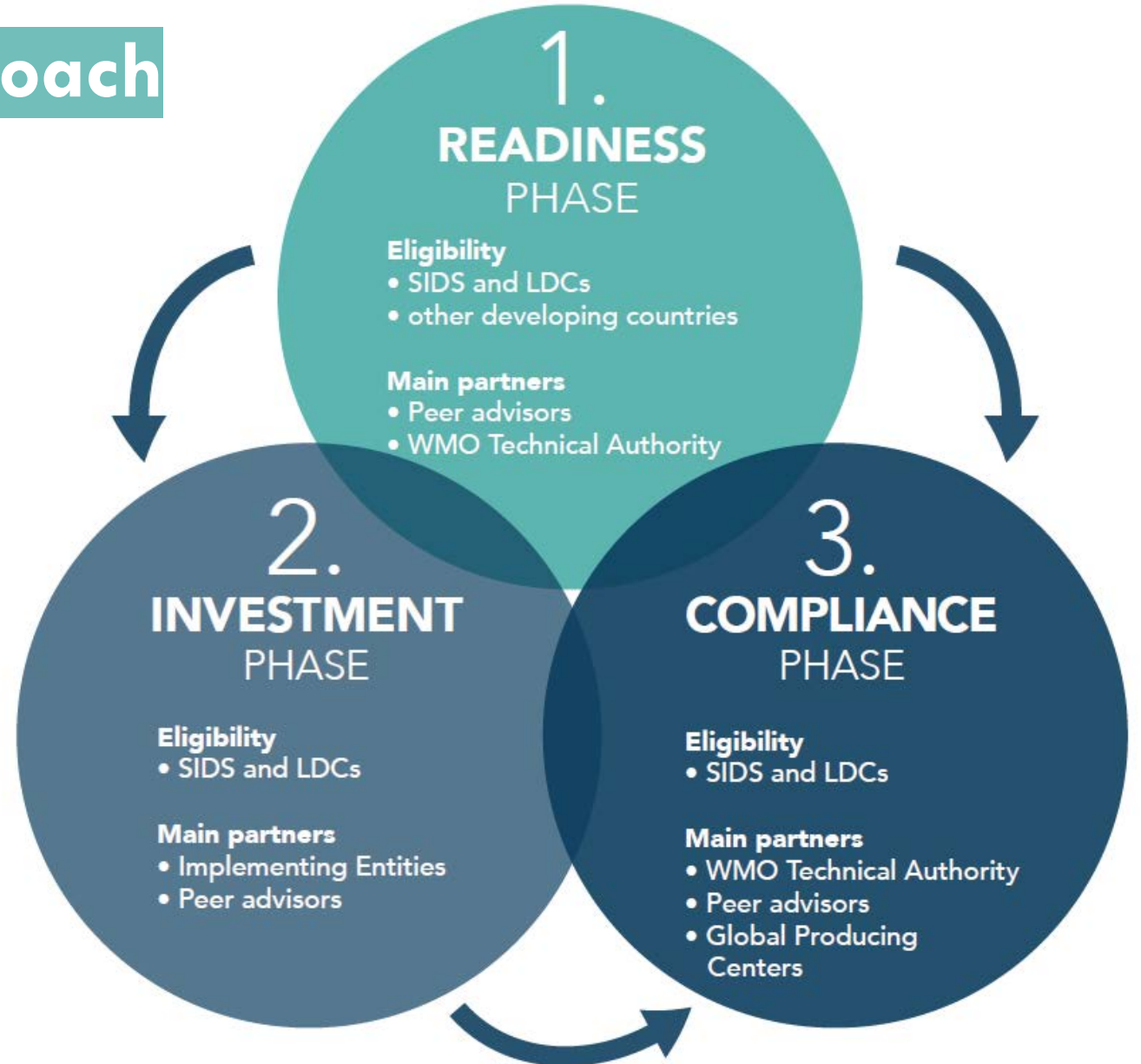
SOFF Operational approach

SOFF prioritization criteria - following a risk-based approach

- **Close the most significant data gaps:** highest impact to prediction products
- **Target “easy fixes”:** small interventions and quick wins
- **Maximize delivery capacity:** Implementing Entities and peer advisors readiness to operate
- **Create leverage:** opportunities for blended finance
- **Ensure balance:** among SIDS and LDCs, among regions, and for Fragile and Conflict-affected States

SOFF Operational approach

SOFF phases of support



SOFF Operational approach

Private sector role

SOFF beneficiary

- Improved weather and climate prediction products freely available
- Weather prediction - USD 96 billion minimum annual benefits on optimized economic production

SOFF implementation support

- Private sector engagement through different business models

SOFF Operational approach

Continuous learning

SOFF will capture and exchange information, incl. on:

- Lessons on implementation
- Innovations, incl. on private sector engagement and technology
- GBON compliance and the impact of increased observations in prediction

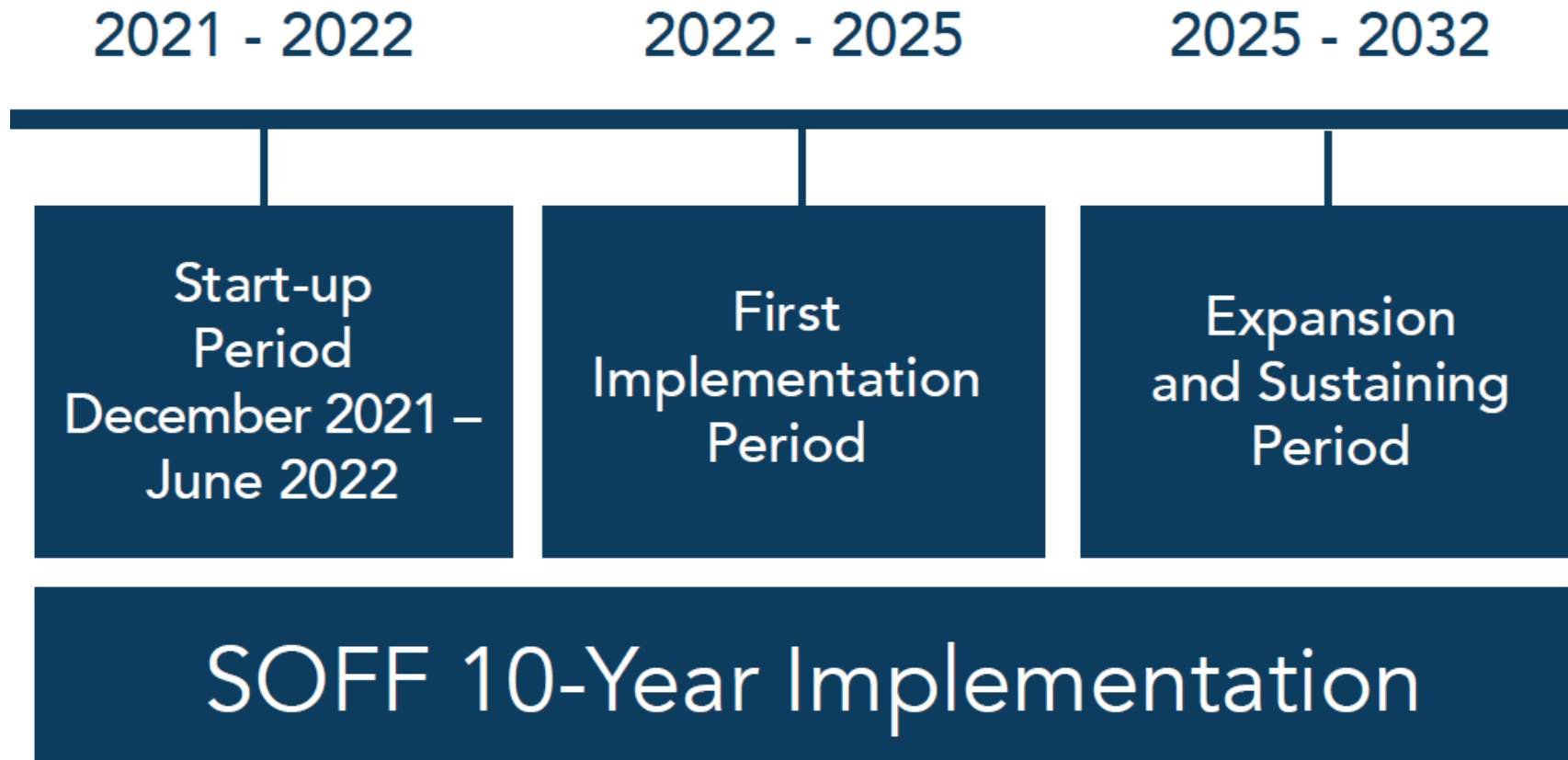


Systematic Observations Financing Facility Third Potential Funders' Forum

Agenda item 4 SOFF programmatic and funding approach

Laura Tuck, SOFF Global Facilitator

SOFF 10-year program modular implementation approach



Start-up Period

- USD 50 million minimum capitalization
- Structure SOFF Secretariat; in collaboration with UNDP and UNEP, WMO put in place interim staffing and support functions
- Fine tune governance and operational arrangements
- Continue stakeholder consultations and fundraising

First Implementation Period

- Focused Results Framework
- Readiness phase in up to 55 countries
- Investment phase initiated in up to 28 countries
- Results-based financing for about 200-400 stations
- USD 200 million funding needs

Expansion and Sustaining Period

- Achieve full and sustained GBON compliance in 75 SIDS and LDCs
- Incorporate lessons from the First Implementation Period, incl. independent evaluation
- After the 10 years, continued SOFF engagement likely needed to sustain GBON compliance in many SOFF eligible countries.

SOFF roadmap to COP 26

