



WMO

World Meteorological Organization

Working together in weather, climate and water

The WMO Information System (WIS)

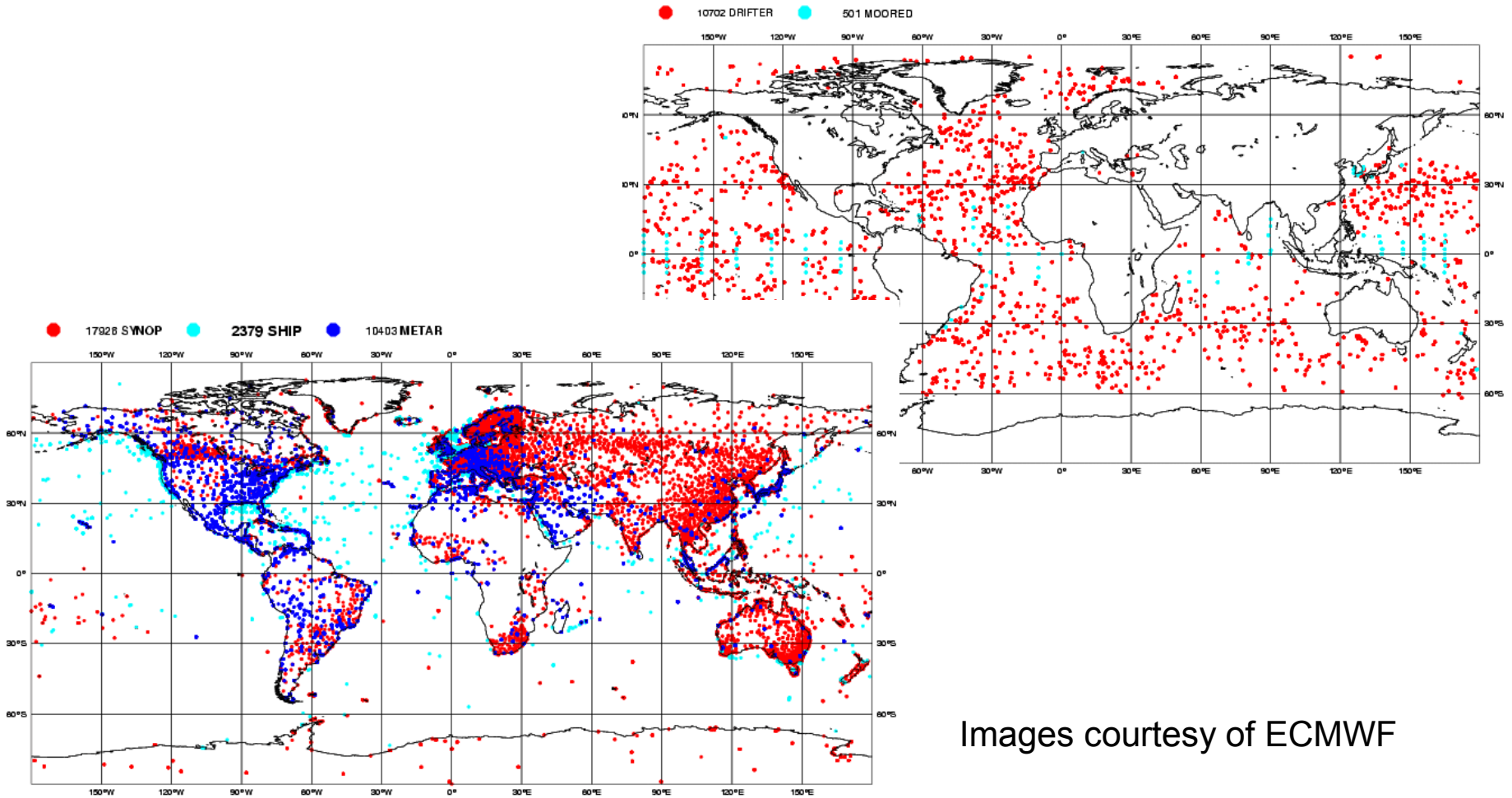
What can WIS do for the GRUAN community?

Timo Pröschoidt (WIS-PO)

Payerne / Switzerland , 3 March 2010



WMO: Observations, Models, Data and Information



Images courtesy of ECMWF



What is WIS?

- A catalogue of available products
 - discovery, access and retrieval (DAR) of information about products across all WMO programmes
 - Products can be anything: forecast models, radio-sonde data etc.
- A network to exchange products
 - Exchange of operational critical and time critical information as well as less critical and high volume data
- WIS is open to all WMO programs
 - Other research organizations, UN organizations and other partners can participate



Virtual Structure of WIS

- National Centres (NC)
 - Collect and/or produce national information
- Data Collection or Production Centres (DCPC)
 - Collect and/or produce regional or thematic information or are a communications hub
- Global Information System Centres (GISC)
 - Hold WMO metadata catalogue, 24hr cache of WMO data “intended for global distribution”, and act as core comm’s hub
- Data communication network
 - GTS, internet, satellite two way and dist systems, etc



WMO Information System (WIS)

International Organizations
(IAEA, CTBTO, UNEP, FAO...)

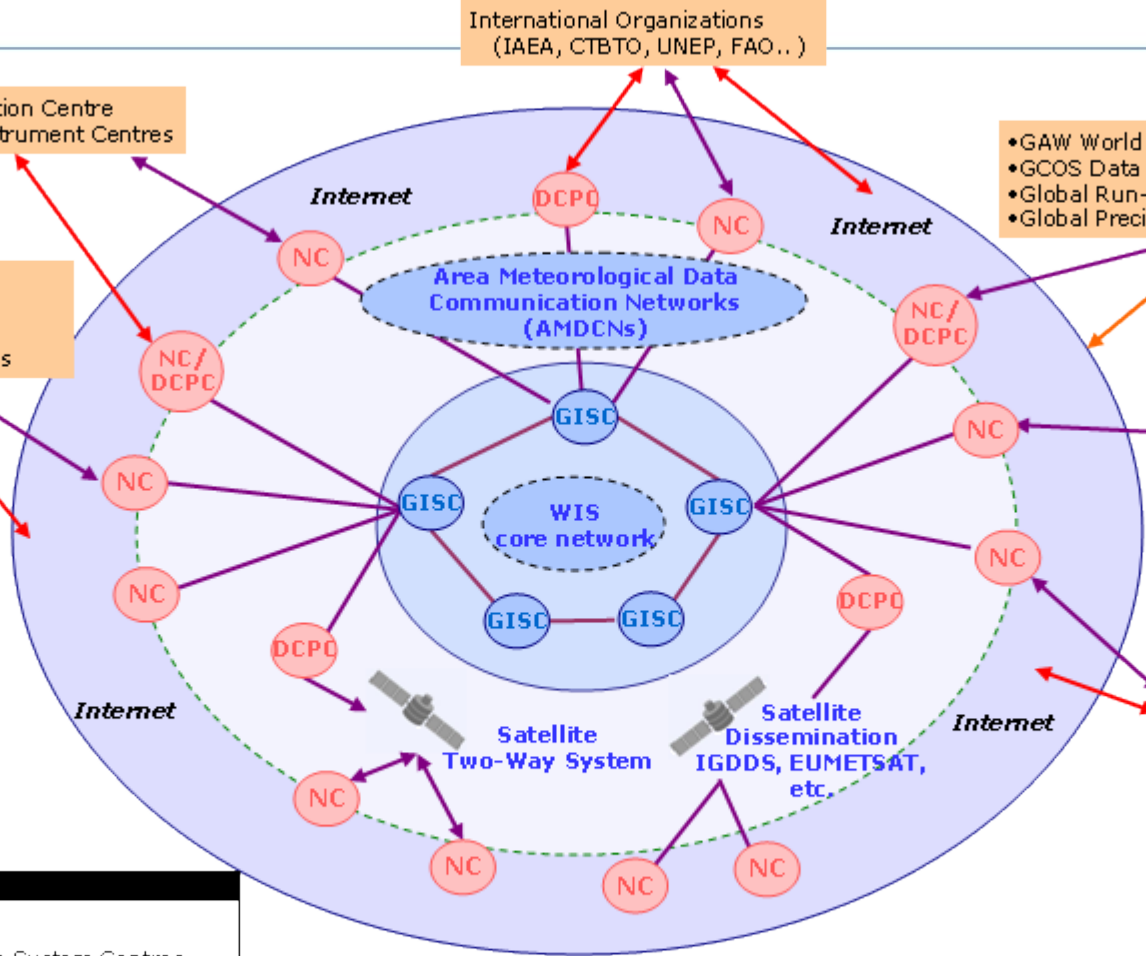
• World Radiation Centre
• Regional Instrument Centres

• GAW World Data Centres
• GCOS Data Centres
• Global Run-off Data Centre
• Global Precip Climatology Centre

• IRI and other climate research institutes
• Universities
• Regional Climate Centres

Commercial Service Providers

WMO World Data Centres
International projects (eg GMES HALO)



KEY:
 NC = National Centres
 GISC = Global Information System Centres
 DCPC = Data Collection or Production Centres
 ↔ Real-time "push"
 ↔ On-demand "pull"



How can you use WIS?

- For product dissemination
 - Within GRUAN (from observation stations to lead center?)
 - To a wider public
- For product discovery
 - Upload Metadata to DAR catalogue so that your products can be found
 - But you retain ownership of the products (stay on your servers)



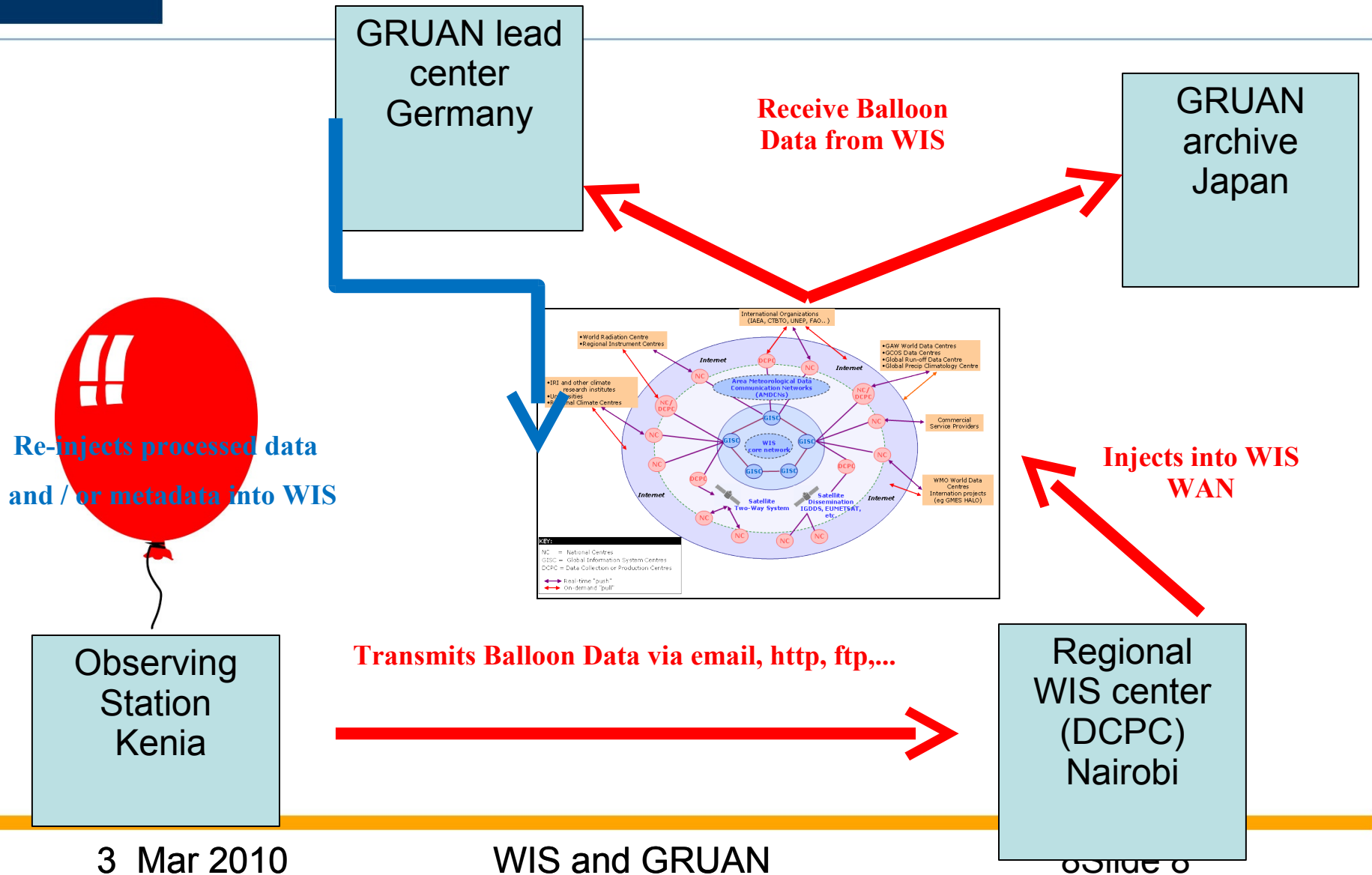
WIS for dissemination

Two options

- Use the WIS WAN to transfer products from observing stations to lead center
 - observing stations have to be connected to a NC or DCPC
 - Lead centers (and others) receive products from WIS
- Use other means to get the products to the lead center
 - then inject the products into the WIS WAN from there



Product dissemination in WIS



3 Mar 2010

WIS and GRUAN

03/03/10



WIS for data discovery

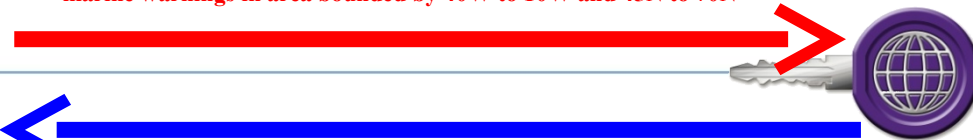
For data discovery you have to

- describe your products with metadata
 - Use ISO 19115 / ISO 19139 (XML)
- upload the metadata to WIS
 - Need to establish contact with a DCPC to inject your metadata into WIS
 - Alternatively provide ISO 23959 Search interface
- make your products available
 - provide access to your products e.g. via the internet
 - You control access to the products



Search Request

marine warnings in area bounded by 40W to 10W and 45N to 70N



Search Results



User searches for metadata then retrieves information from data custodian

Information request to custodian
<http://weather.gmdss.org/I.html>

Retrieve information



Centre publishes metadata to GISC DAR catalogue



Security/authentication/authorization and even charging is managed by each service provider



Product discovery in WIS



Questions?

You can

- Ask now
- Use our WIS jump start offer / flyer later
- Go to the WIS website <http://www.wmo.int/wis>

Thanks!