OPEN DATA & OPEN KNOWLEDGE Workshop

Humanitarian Data Cube

Valentin Pesendorfer

UN World Food Programme

GEO | GROUP ON EARTH OBSERVATIONS

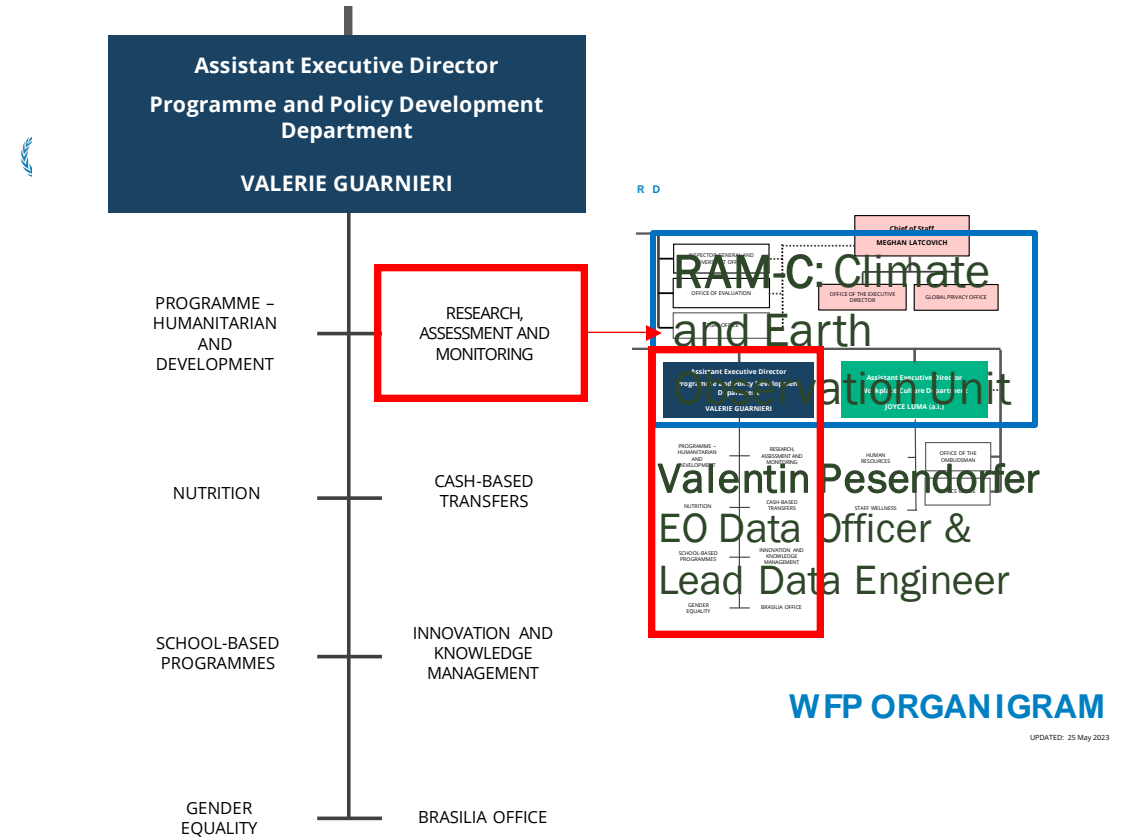# Who we are

WFP — **World Food Programme**

WFP is the **world's largest Humanitarian Organization**, assisting 160 million people in 120+ countries

160 MILLION PEOPLE
Received assistance from WFP in 2022

5.6K TRUCKS
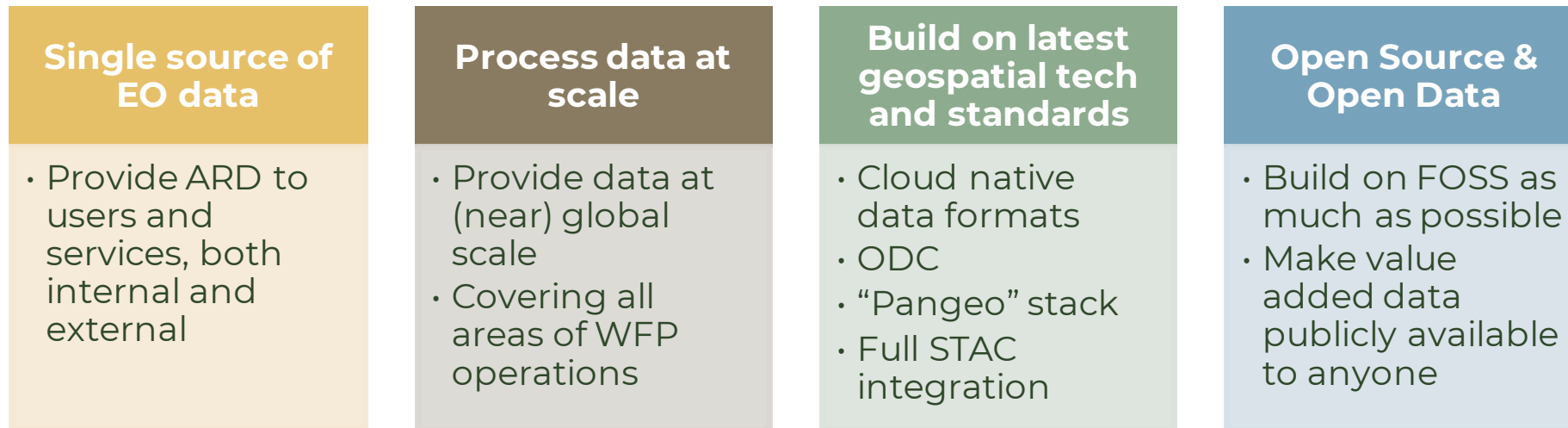100 aircraft and 30 ships are on the go on any given day

20 Million children
Received nutritious meals, school snacks or take-home rations

WFP Organigram

Assistant Executive Director
Programme and Policy Development Department
VALERIE GUARNIERI

PROGRAMME – HUMANITARIAN AND DEVELOPMENT

RESEARCH, ASSESSMENT AND MONITORING

NUTRITION

CASH-BASED TRANSFERS

SCHOOL-BASED PROGRAMMES

INNOVATION AND KNOWLEDGE MANAGEMENT

GENDER EQUALITY

BRASILIA OFFICE

RAM-C: Climate and Earth Observation Unit

Valentin Pesendorfer
EO Data Officer & Lead Data Engineer

WFP ORGANIGRAM
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The **H**umanitarian **D**ata **C**ube

⚠ Growing volume of EO data required change in approach and **move from on-prem to cloud infrastructure**

🎯 **Goal**: *leverage cloud services, horizontal scalability* and *serverless infrastructure* to create a **single system** serving all of WFP's EO data needs
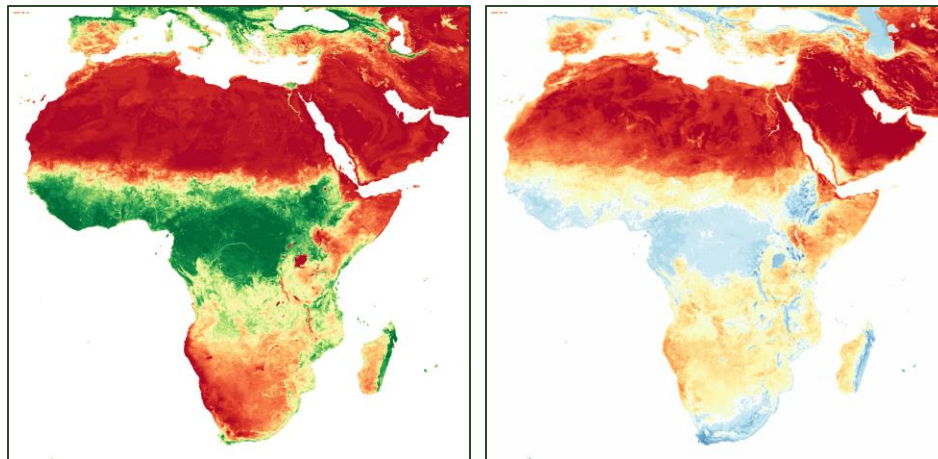
Single source of EO data	**Process data at scale**	**Build on latest geospatial tech and standards**	**Open Source & Open Data**
• Provide ARD to users and services, both internal and external	• Provide data at (near) global scale • Covering all areas of WFP operations	• Cloud native data formats • ODC • "Pangeo" stack • Full STAC integration	• Build on FOSS as much as possible • Make value added data publicly available to anyone

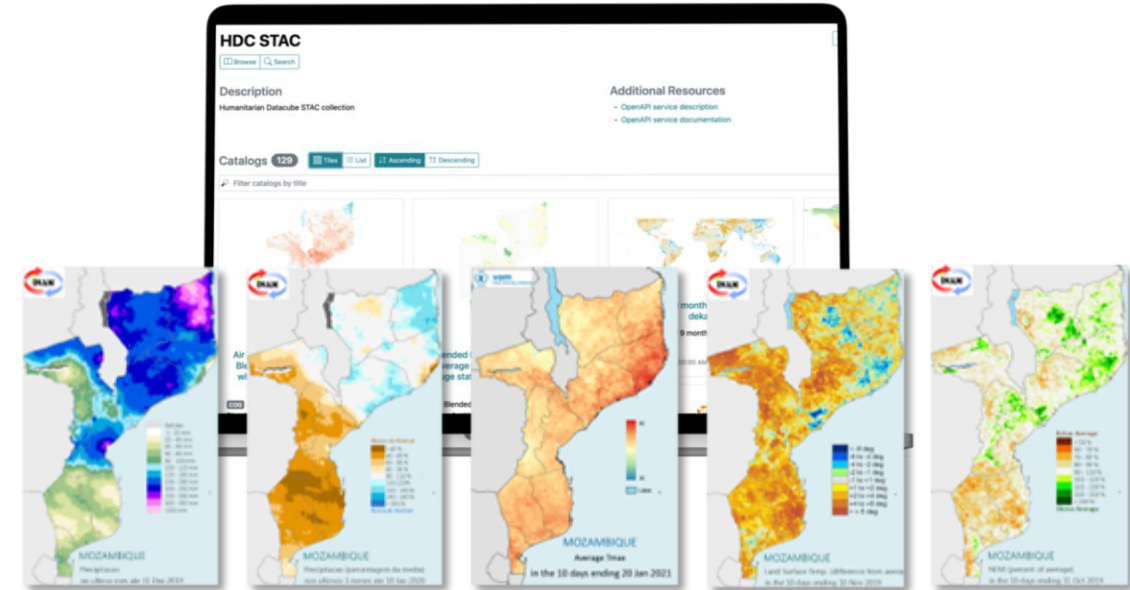# The **H**umanitarian **D**ata **C**ube

➡️ Fully fledged deployment on AWS

➡️ Currently around **100 data products**

- Mainly in **climate domain**, containing **unique data products**
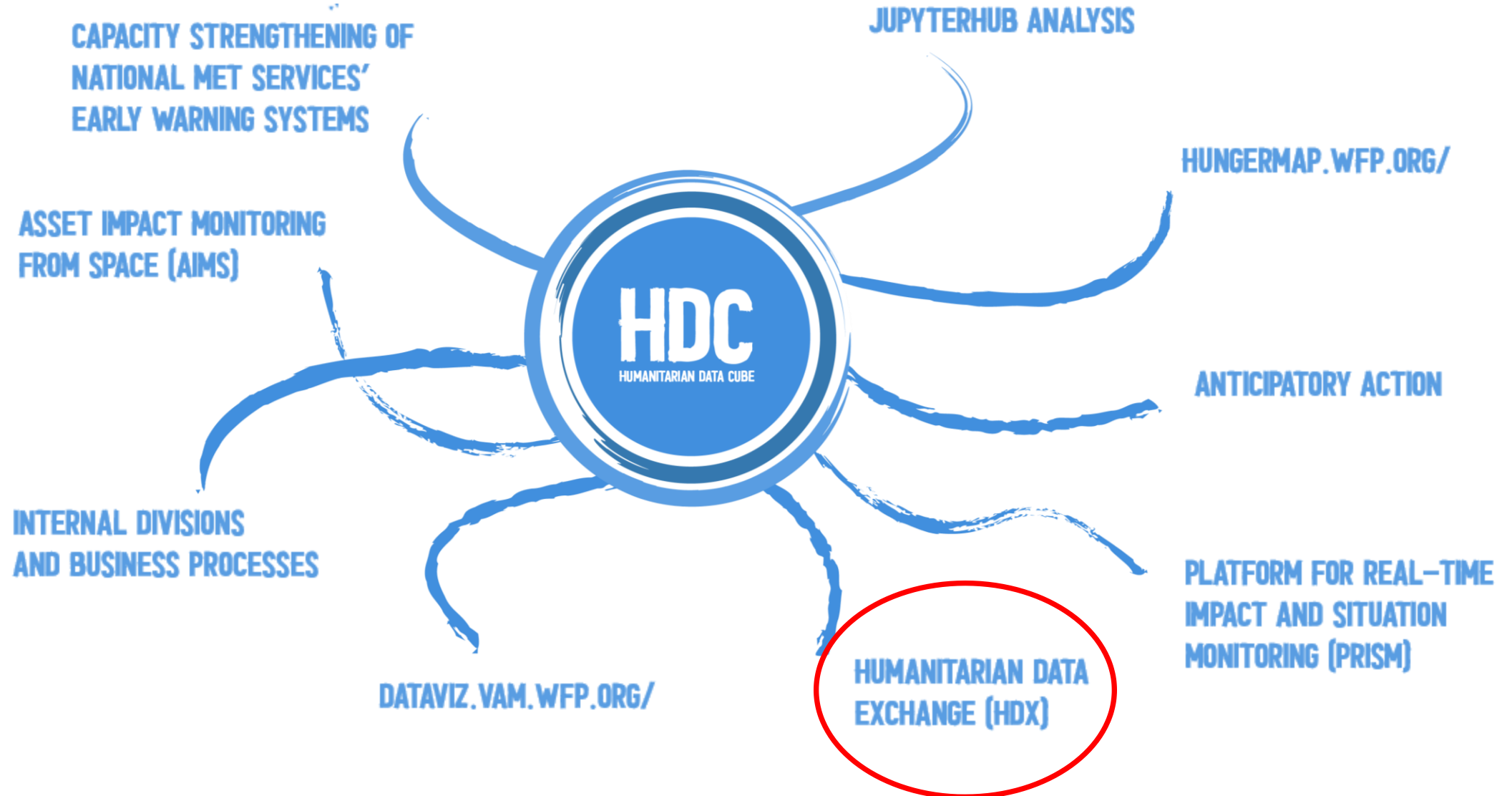- Assimilating **full archives of ECMWF ERA5** and **seasonal forecast data**

NDVI & LST Day
2020-08-01 to 2021-07-30

🎯 **OBJECTIVES**

- Establish HDC as **single source of truth for EO data** in WFP
- Continuously add **new data products** and **higher res data**
- Facilitate and increase **sharing of data** and **software** to wider community
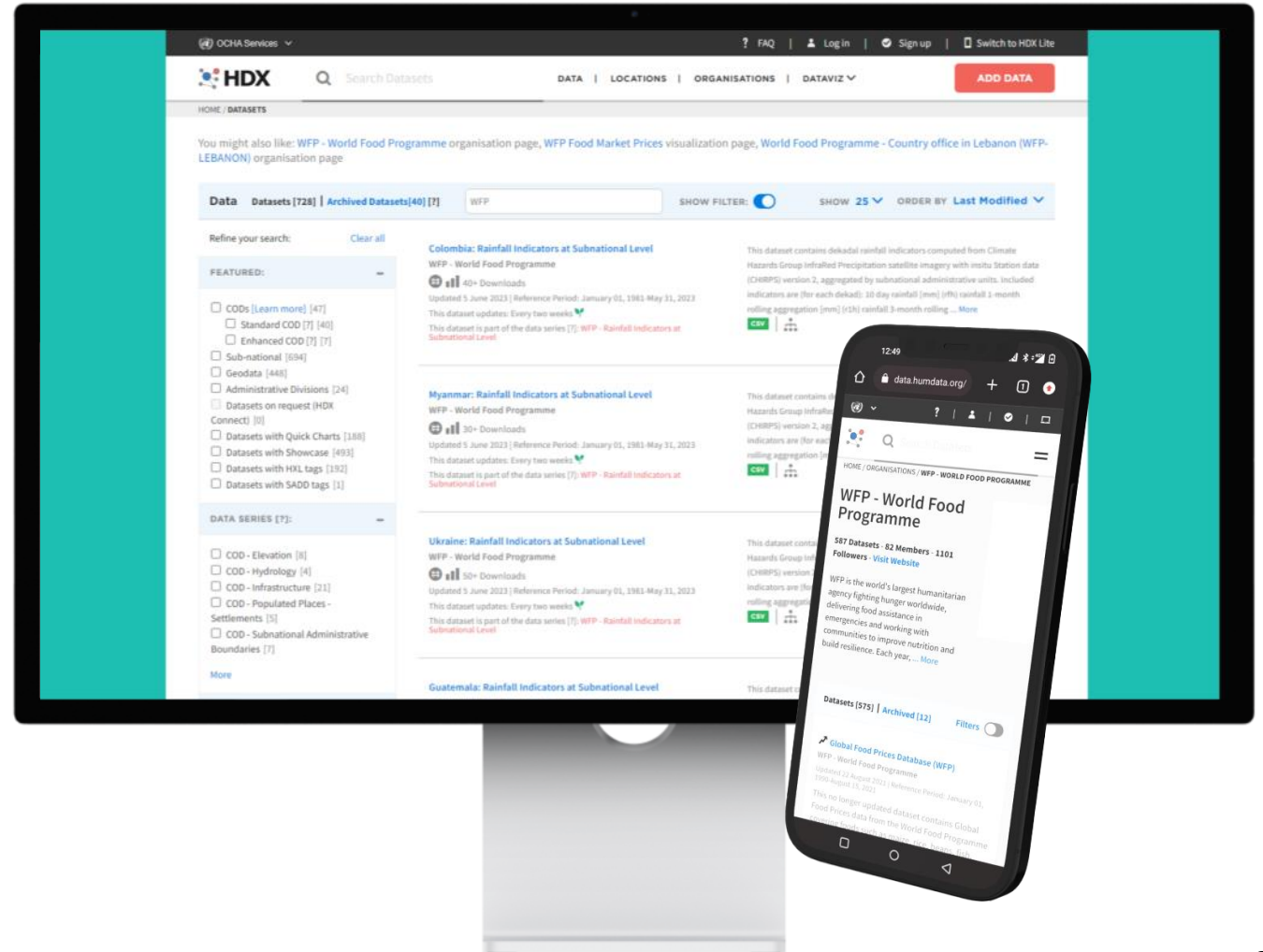
HDC – serving WFP and beyond

HDC x HDX

🤝 Collaboration with UN OCHA to publish first-of-a-kind climate data on the Humanitarian Data Exchange (HDX)

🔗 Filling a crucial data gap on HDX

📍 Bespoke datasets for humanitarian use at subnational level

➡️ SOON Soon more indicators, countries and all admin levels

CONTACT DETAILS

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