TWC-SCUP

Project achievements – report to NoR

Ralph D. Humberg
Managing Director
Tama Group GmbH

TAMA GROUP

TWC-SCUP

- Objectives of the TWC-SCUP project
- Description how tools and data within a cloud environment helped us to achieve our goals
- Highlights and benefits to society derived from our project

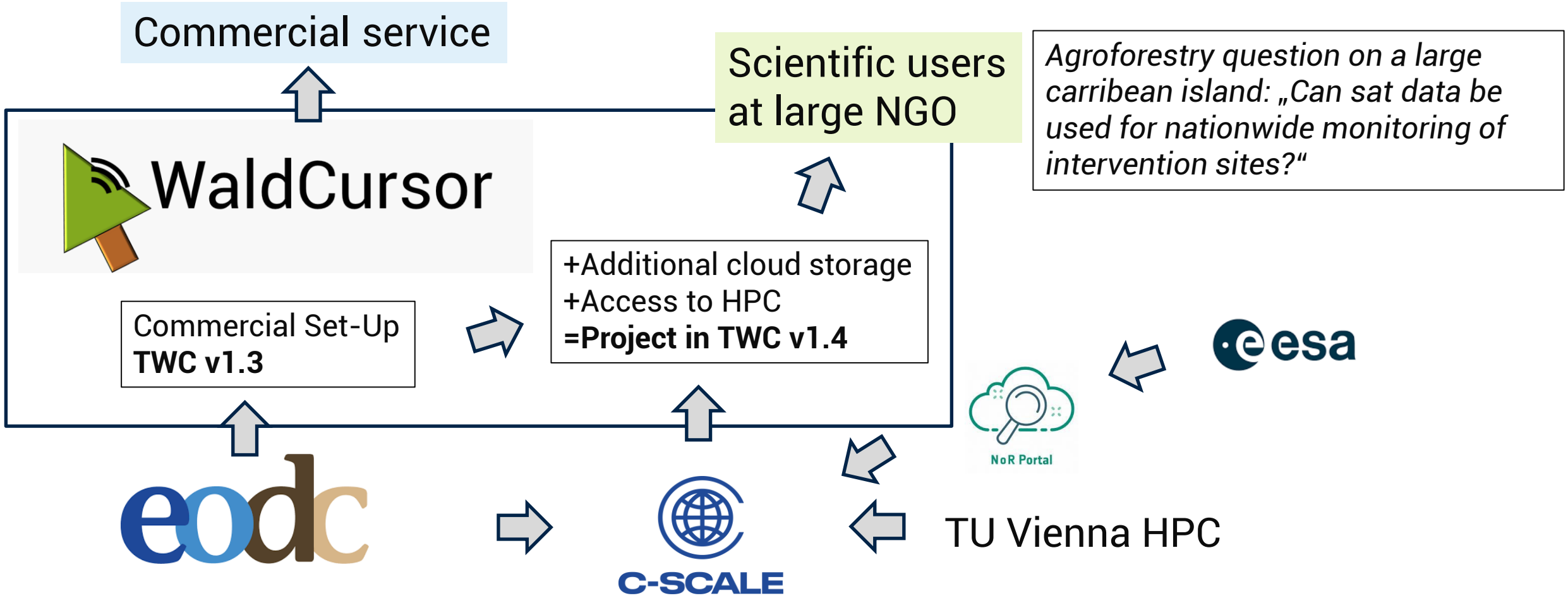
Objectives of the TWC-SCUP project

- Project ID 3619i9
- TWC = Tama WaldCursor (www.waldcursor.com), SCUP = SCaleUP
- The objective of TWC-SCUP was to investigate if the capabilities of the commercial offering of the WaldCursor could be scaled up. In the commercial version, Sentinel-2 data was offered for 12 months time-series and respective analytics for areas with an average size of 5 km². The project should help to find out if an average size of 50km² at a coverage of 60 months is reasonably achievable in cost-effective cloud environments.
- For this investigation an addition of data storage and temporary use of a high performance computing environment was required.

TWC-SCUP

- Objectives of the TWC-SCUP project
- Description how tools and data within a cloud environment helped us to achieve our goals
- Highlights and benefits to society derived from our project

How tools and data within C-SCALE helped us to achieve our goals (1)



How tools and data within C-SCALE helped us to achieve our goals (2)

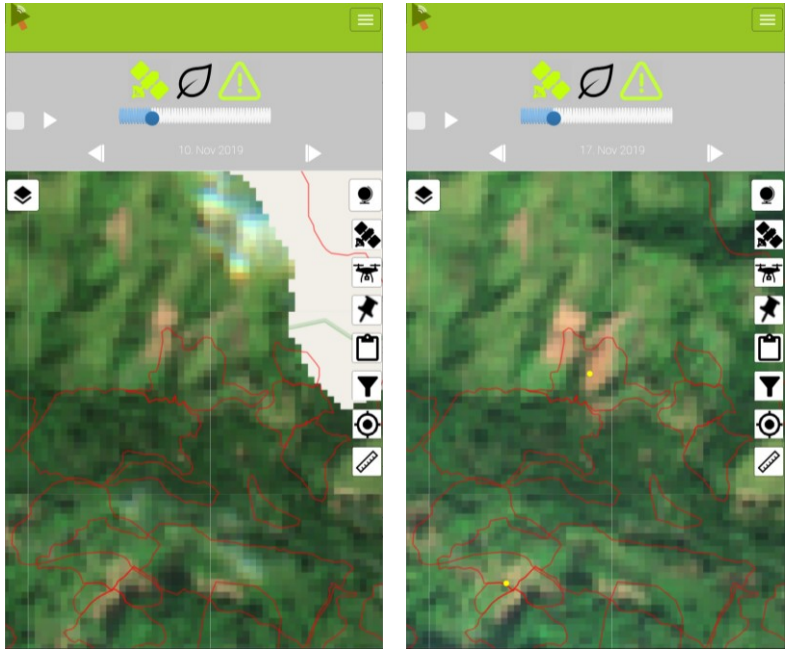
- **C-SCALE resources and support taught us how to deploy a HPC environment**
  - Coaching for creation of batch files, unix-shell, python-scripts and powershell for the HPC environment
  - Onboarding to HPC gateway
  - Bounding box >1.6mio ha tailored to the project
- **C-SCALE provided access to process resources and L2A data instead of the more raw L1C data**
  - Processing of >2,000 S-2 L2A files
  - Hosting of >15TB of temporary data
  - Creation of >2.6mio tiles in more than 250,000 folders

TWC-SCUP

- Objectives of the TWC-SCUP project
- Description how tools and data within a cloud environment helped us to achieve our goals
- Highlights and benefits to society derived from our project

Highlights and benefits to society derived from our project TWC-SCUP

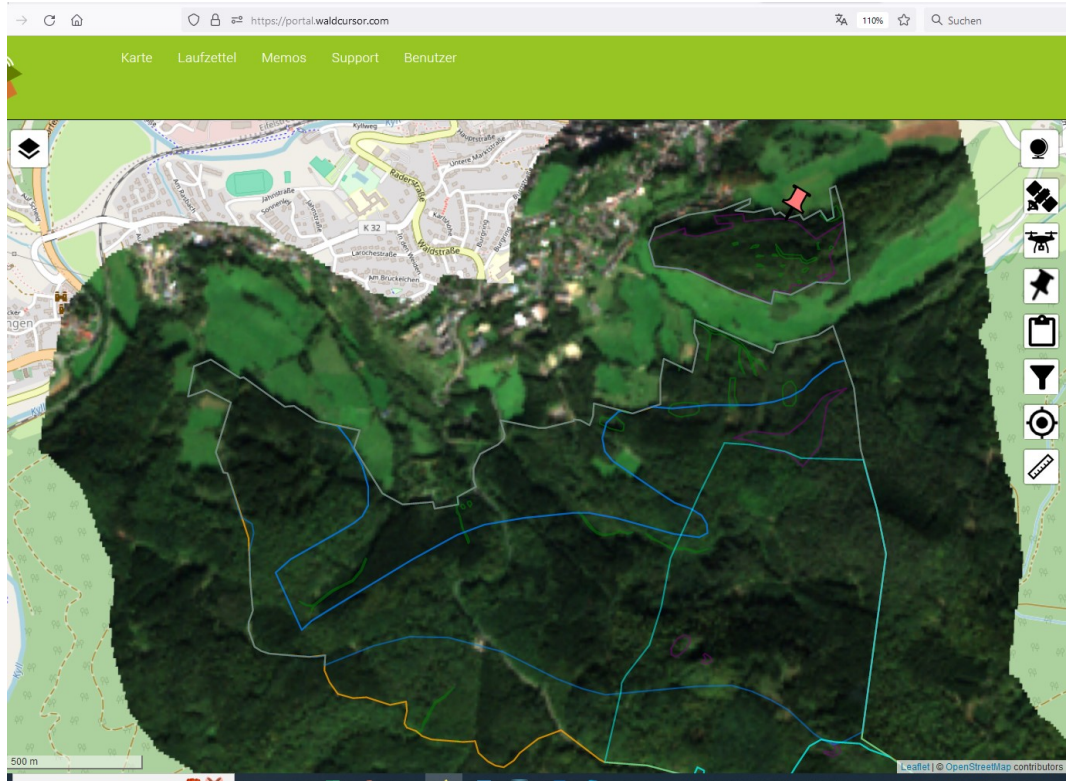
- TWC-SCUP demonstrated that our service, the WaldCursor, is capable of delivering change detection information for a large area agroforestry question
- This demonstration helped us to win a design-in project for a large NGO which sponsors farmers in the Carribean to manage their farming land in a way which is highly sustainable while delivering better returns for farmers (instead of traditional patterns with low-level pastures and soil deteriorating plantations)



Example of automatically extracted change, see yellow circle in center (left: before change event; right: after change event)
Image credit: Tama Group GmbH

Highlights and benefits to society derived from our project TWC-SCUP

- TWC-SCUP also demonstrated to interested parties and us that our service could be extended from pure forestry management to then also cover environmental applications.
- TWC-SCUP shaped the follow-up project ESA TSMF10CM_DP CCN#1 which is now covering comprehensive Land Use / Land Cover features on Sentinel-2 data.



Current service WaldCursor 1.3, now extended to V2.0, covering environmental applications
Image credit: Tama Group GmbH

Remote Sensing, forestry & environmental applications

info@tama-group.com
www.waldcursor.com | www.tama-group.com
Lochhamer Str. 1, DE-82166 Gräfelfing
+49 89 8007 5010