

TIGER-NET

Satellite Observations
Supporting Integrated Water
Resources Management in Africa

Organised by ESA & AMCOW



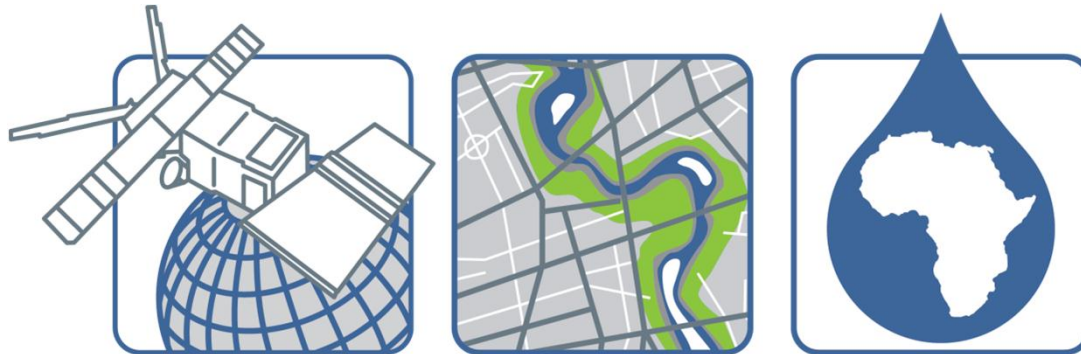
TIGER
AFRICA

TIGER NET

User Kick-off Meeting

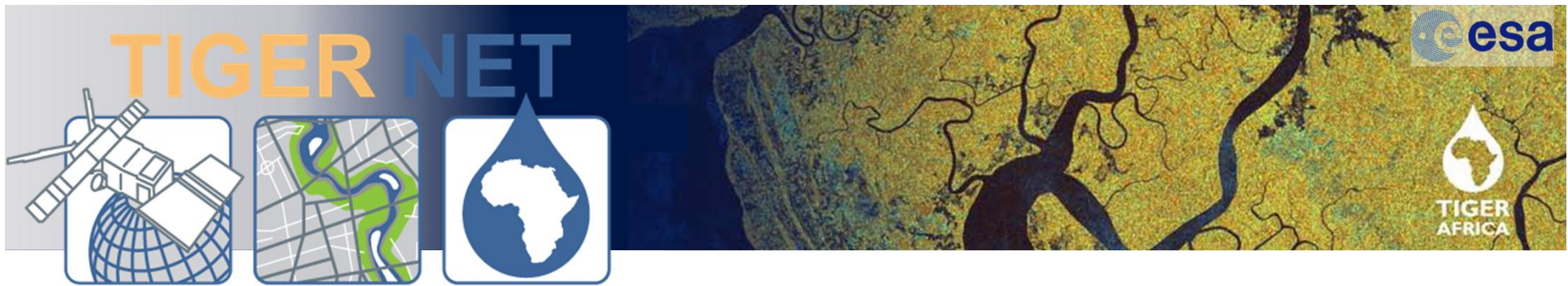


12 > 17 March 2012
MARSEILLE - FRANCE



Dr. Andreas Walli, GeoVille Innsbruck, Austria

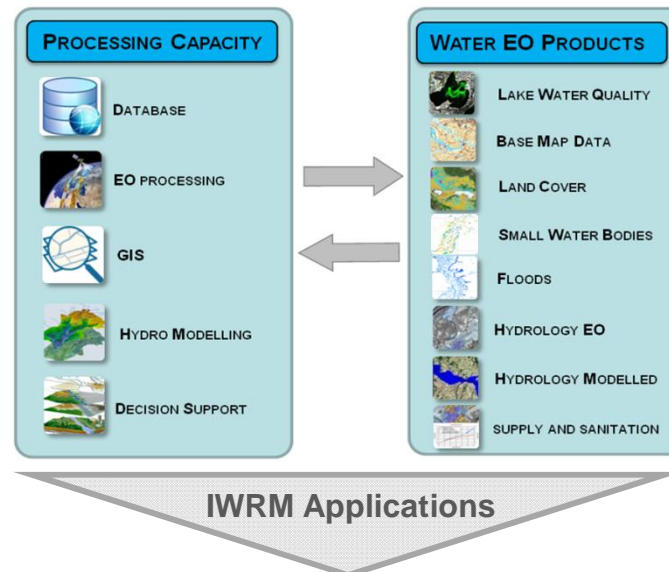


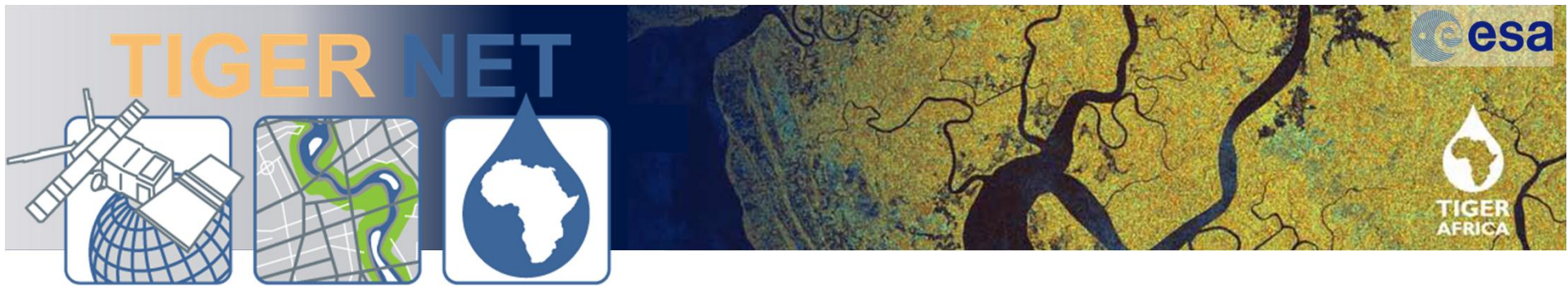


Satellite Observations Supporting Integrated Water Resource Management in Africa

AIMS

- 1) **Development of Water Observation and Information Systems** for monitoring, assessing and inventorying water resources in a cost-effective manner by satellite observation data;





Satellite Observations Supporting Integrated Water Resource Management in Africa

AIMS

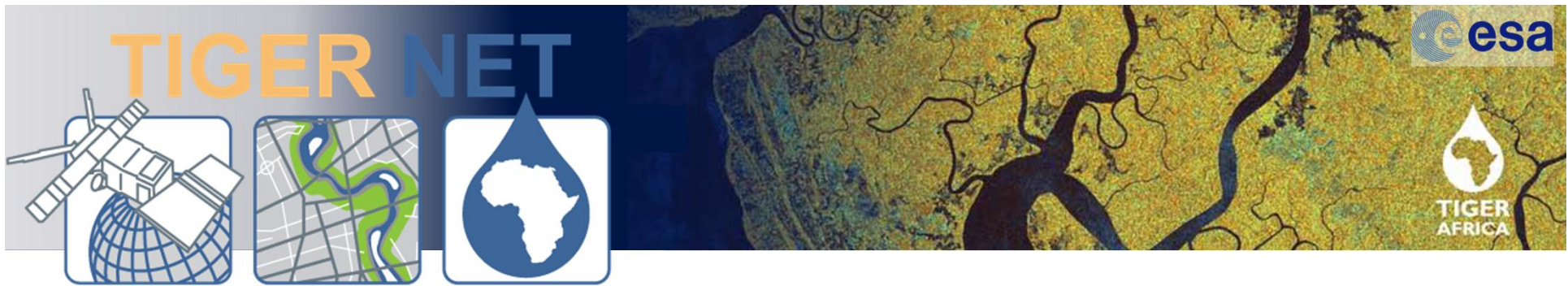
- 2) **Capacity building and training** of African water authorities to fully exploit the observation capacity offered by the next generation of satellites

CAPACITY BUILDING



TRAINING



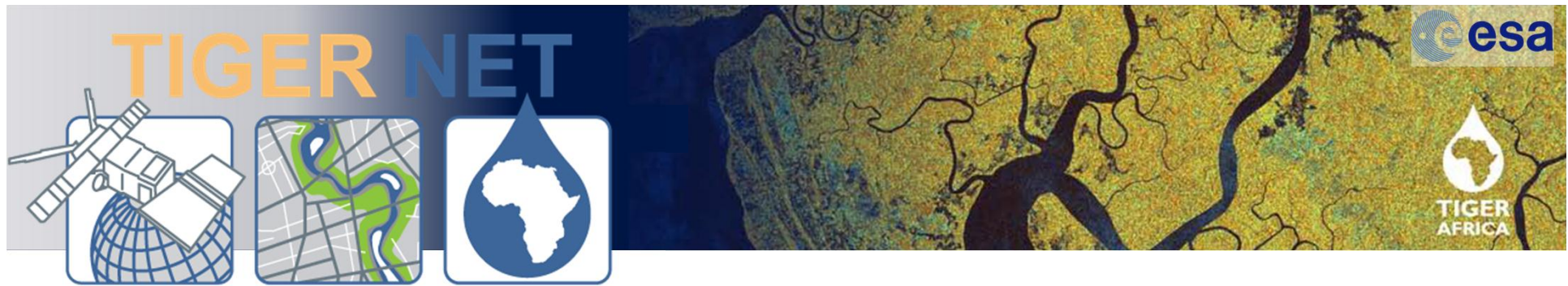


Satellite Observations Supporting Integrated Water Resource Management in Africa

CHAMPION USER ORGANIZATIONS

- “ Nile Basin Initiative
- “ Lake Chad Basin Commission
- “ Volta Basin Authority
- “ Department of Water Affairs, South Africa
- “ Ministry of Water, Namibia
- “ Further users to be determined





Contractors

KEY ORGANIZATIONS



” GeoVille Information Systems GmbH, Austria (**PRIME**)



” Geographic Resource Analysis & Science A/S, (**Partner**)

SUPPORT SUB-CONTRACTORS



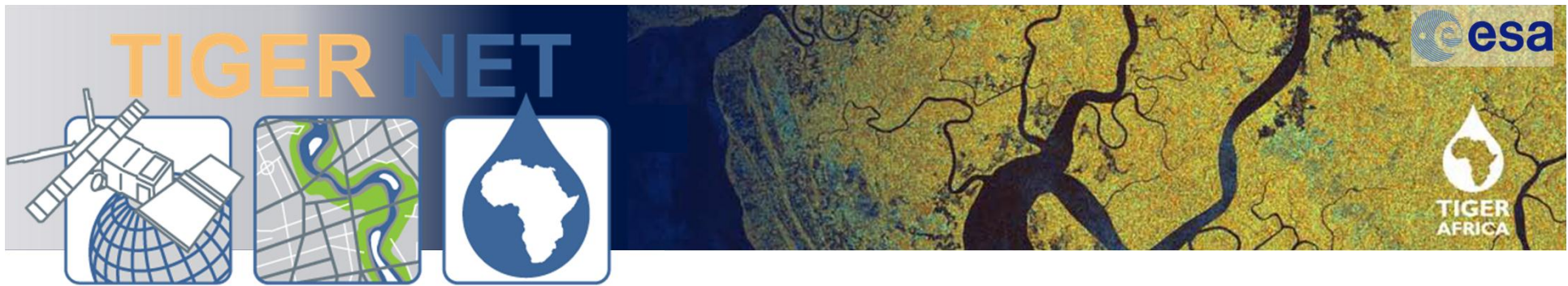
” Institute of Photogrammetry & Remote Sensing, Vienna University of Technology (TU Vienna) , Austria



” Department of International Health (ISIM), University of Copenhagen, Denmark



” Dept. of Environmental Engineering, (DTU ENV ENV), Technical University of Denmark, Denmark



Consortium Africa Experience

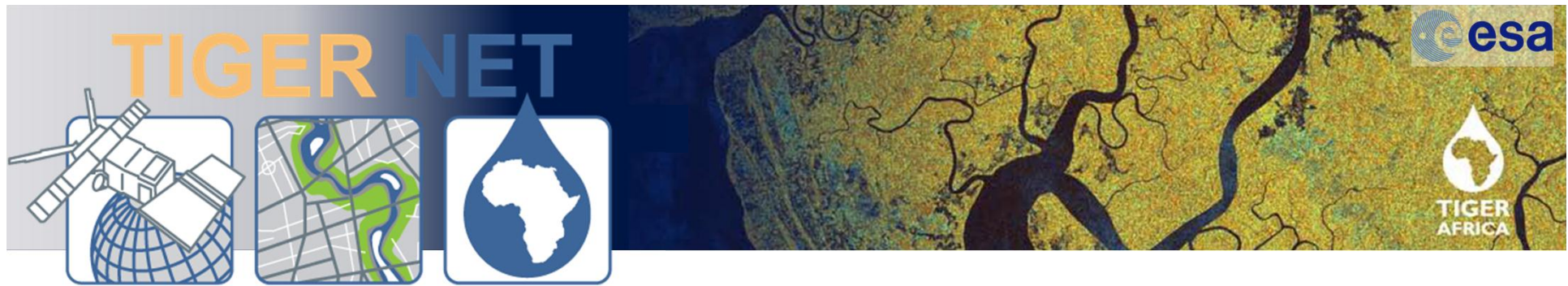
KEY INSTITUTIONELL AND THEMATIC EXPERTISE



and country project experience



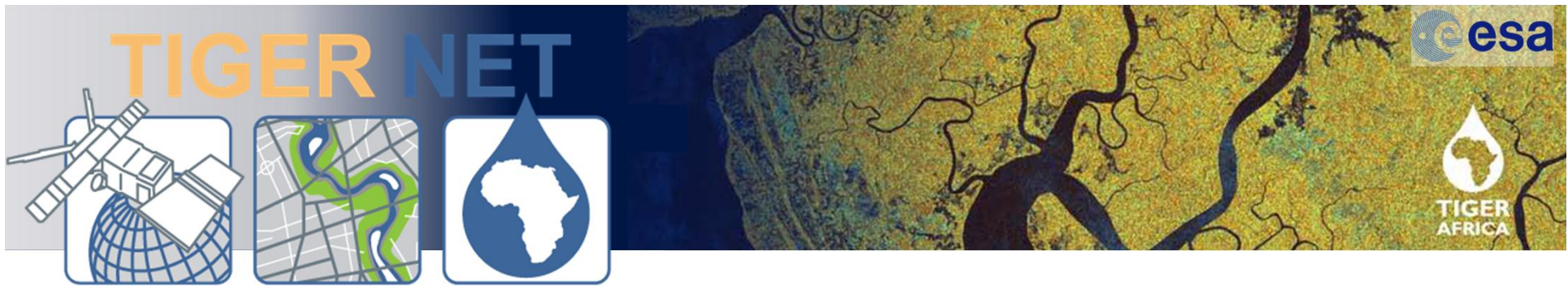
- ~ Supporting food security assessments
- ~ Flood mapping
- ~ Coastal Change Mapping
- ~ Water Scarcity Mapping
- ~ Monitoring droughts in Africa
- ~ Sanitation system planning support
- ~ Land Cover and Land Cover Change Mapping
- ~ Monitoring of agricultural production
- ~ Water related Climate Impact Mapping
- ~ Water related Forest Mapping
- ~ Water Quality Monitoring
- ~ Dam Reservoir Monitoring
- ~ Hydrological Modelling
- ~ Remote sensing of water balance
- ~ WACMOS
- ~ GLOWASIS
- ~ Irrigation planning
- ~ Soil moisture for hydrometeorological applications
- ~ Development of Earth Observation & Information Systems
- ~ Earth Observation Training & Capacity Building
- ~ Etc.



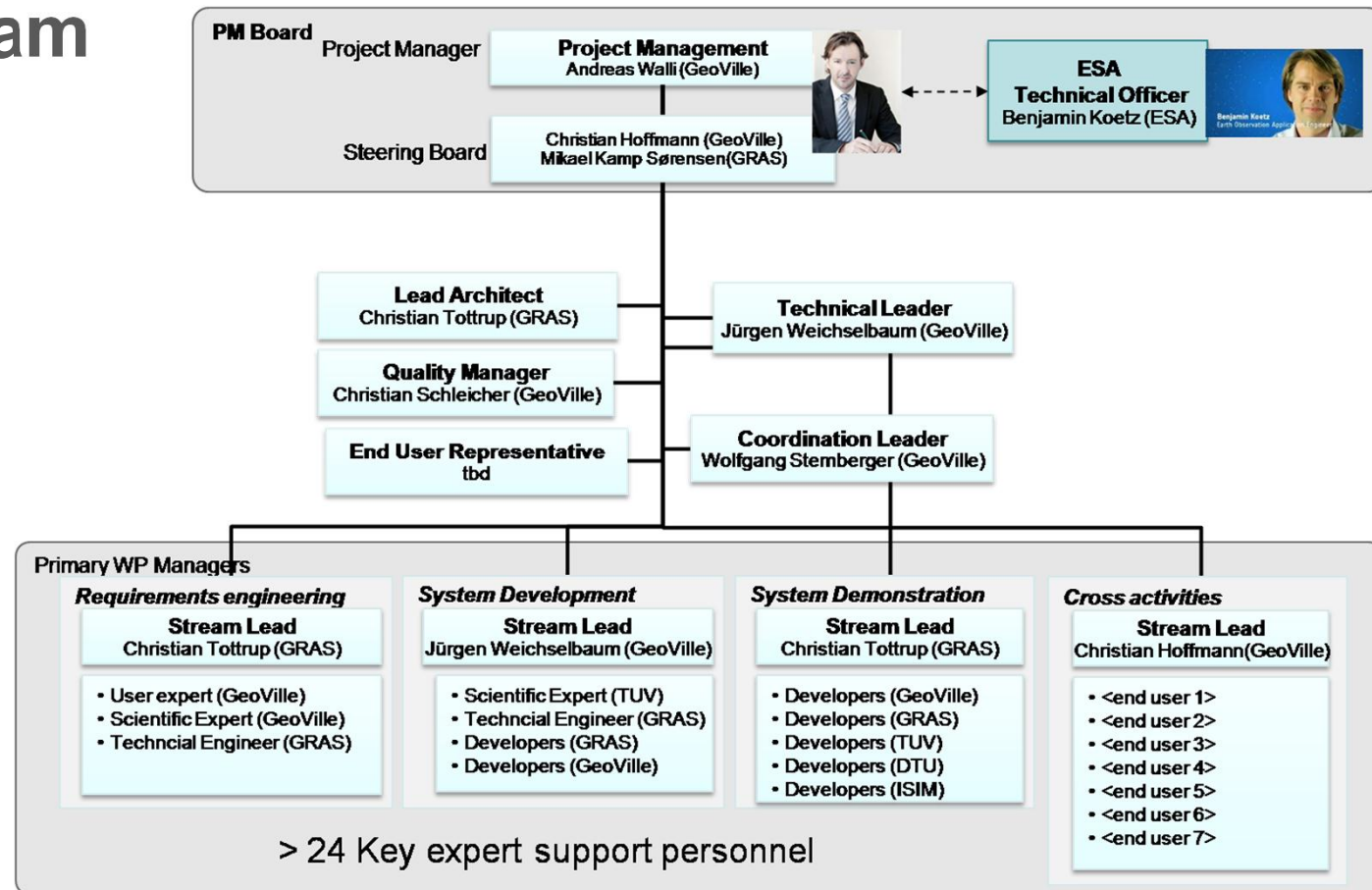
Consortium Africa Experience

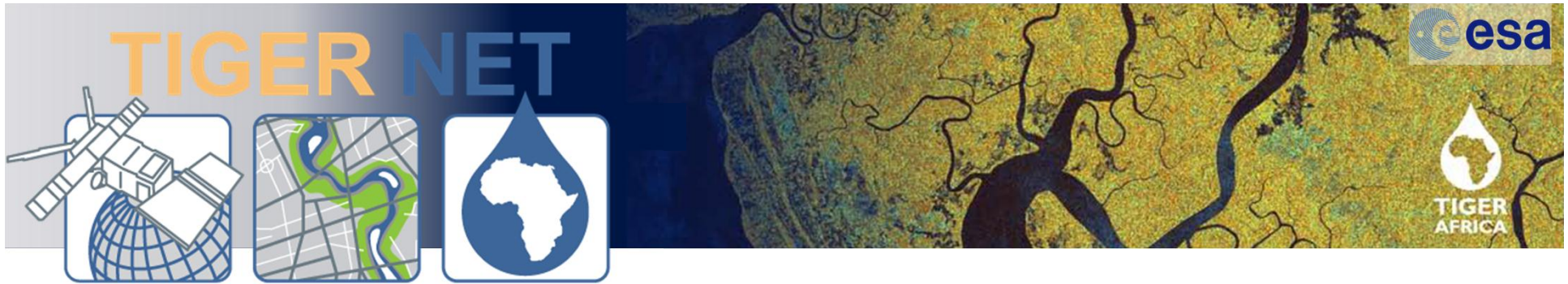
SUPPORTING AFRICAN COUNTRIES AND INSTITUTIONS

- assisting **Liberia** in its land reform
- assisting **Senegal** in climate change adaption
- assisting **all African countries** in monitoring food security
- assisting **West African countries** in coastal change adaption
- assisting **South Africa** in monitoring droughts and floods
- assisting **Madagascar** in assessment of agricultural production
- assisting **SADC region** in assessment of groundwater vulnerability
- assisting **Burkina Faso** in agricultural mapping
- assisting **Ghana** in land cover mapping and urban water sanitation planning
- assisting **Uganda** in monitoring of damn reservoir dynamics
- assisting the **Department of Water Affairs in Botswana** in training and capacity support
- assisting the **Okavango Delta** Management Plan
- assisting **Zambia** in its flood risk management
- **many more related project implementations throughout Africa.**



Project Team





Project Key Contacts

COORDINATOR

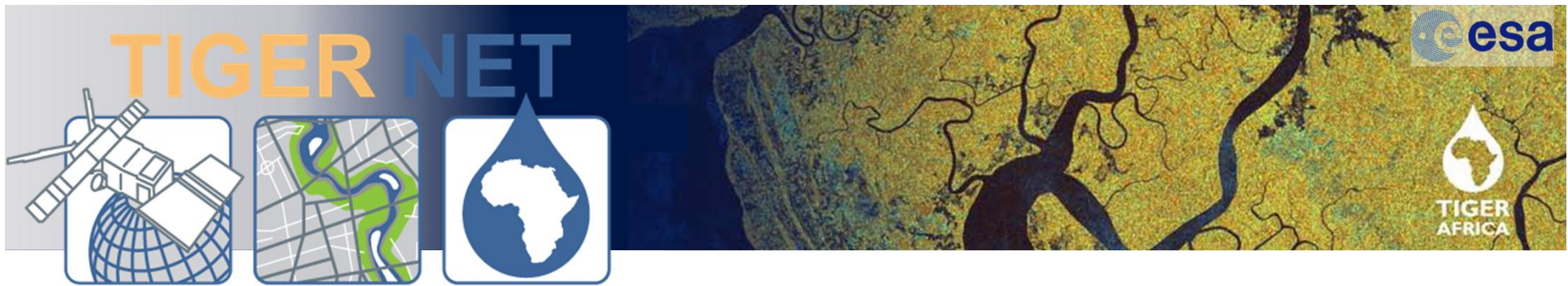


” ESA Technical Officer, **Dr. Benjamin Koetz**, Email: Benjamin.Koetz@esa.int

PROJECT MANAGEMENT AND IMPLEMENTATION

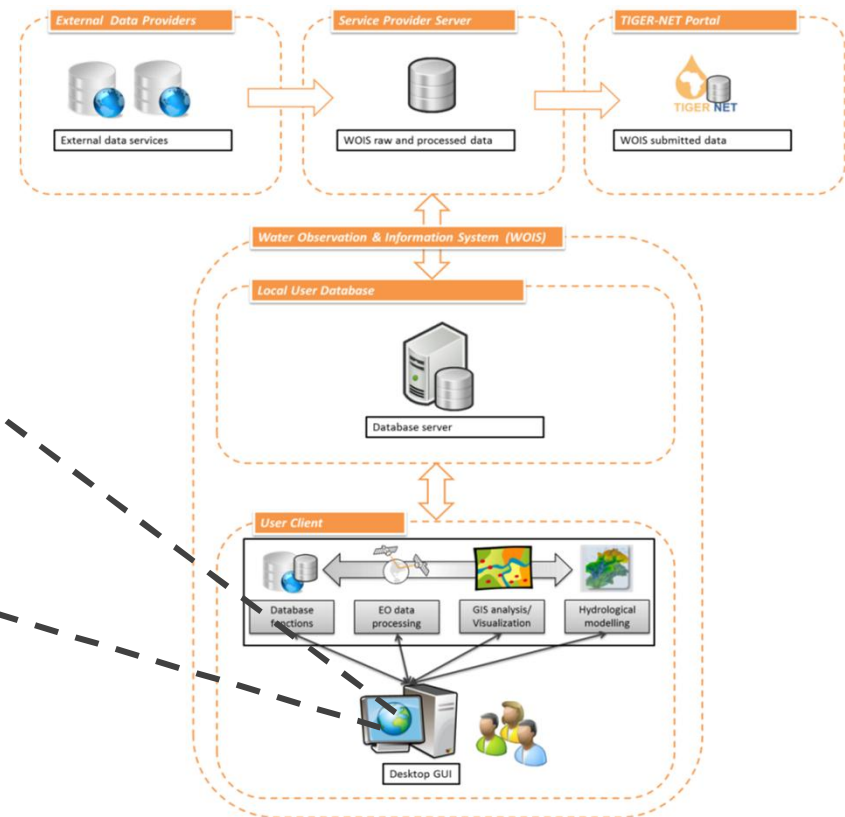
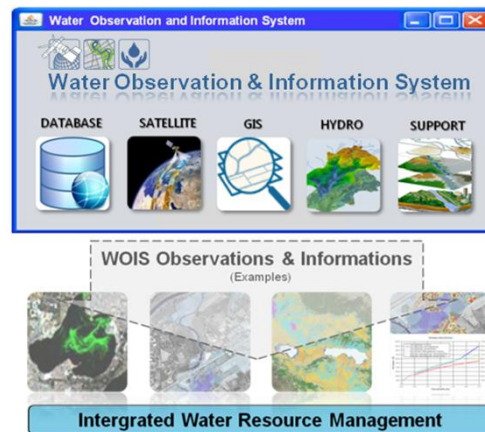


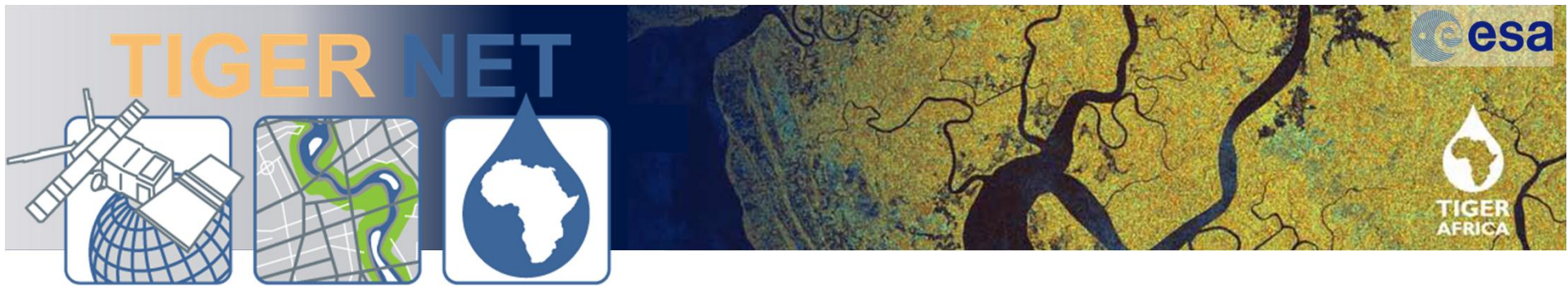
” GeoVille Director, **Dr. Andreas Walli**, Email: walli@geoville.com



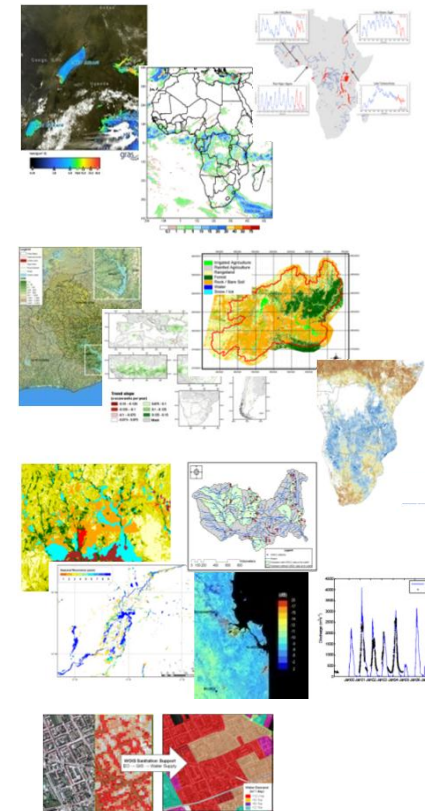
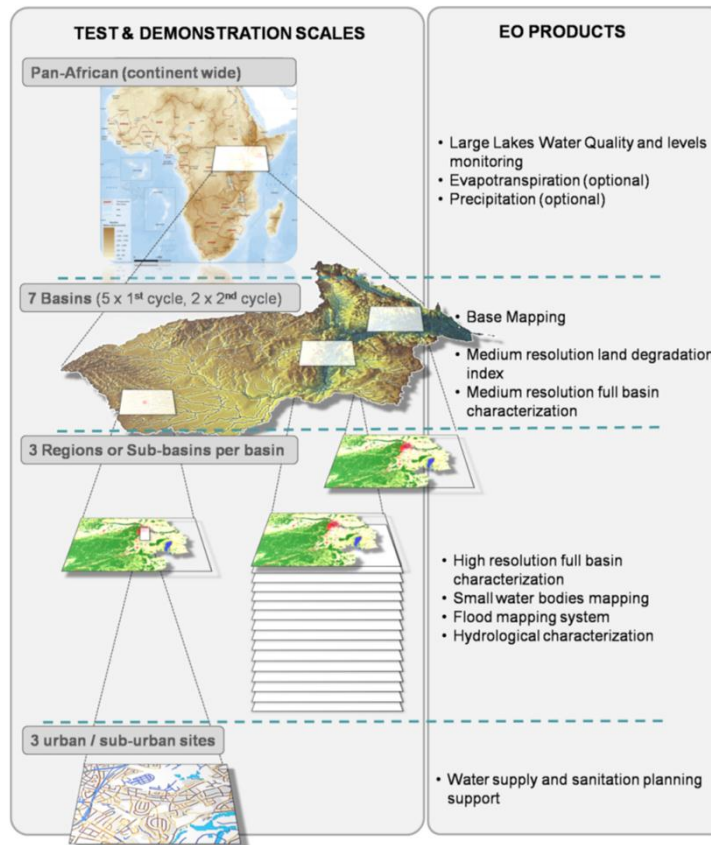
WOIS SOFTWARE & SYSTEM

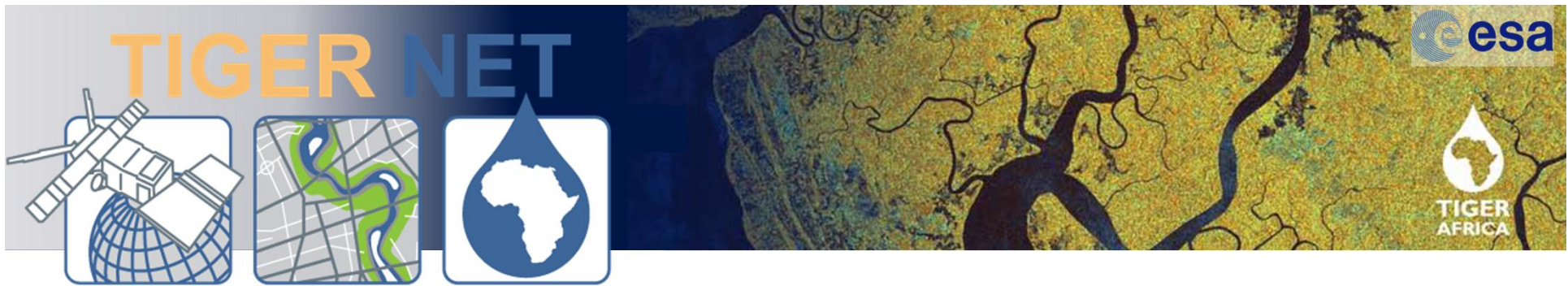
- “ License free Water Observation and Information System (WOIS)
- “ Enabling full end-to-end satellite data processing, production of water information system, analysis and integration into existing operation systems and working flows





WOIS PRODUCTS & SCALES





CAPACITY BUILDING & TRAINING

TRAINING

Host institution focused training

- " 5-day **System Installation and training**+workshop
- " 5-day **Demonstration training** workshop+
- " 3-day **Operational Training workshop**+
- " 7+-day **training and capacity building workshop** contractor in Europe

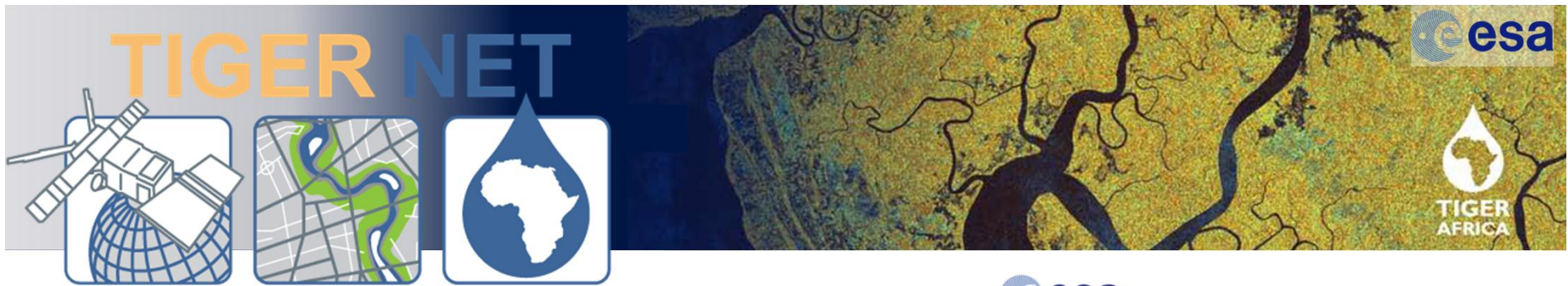


CAPACITY BUILDING

Empowering human, technical and institutional capacity

- " free of cost, open source **Water Observation and Information System (WOIS)**
- " water dedicated **EO information products**
- " **funding of user engagement, travel and hardware**
- " technical support measures
- " promotion and dissemination measures
- " **fund raising support** to reach sustainability
- " coordination with existing initiatives

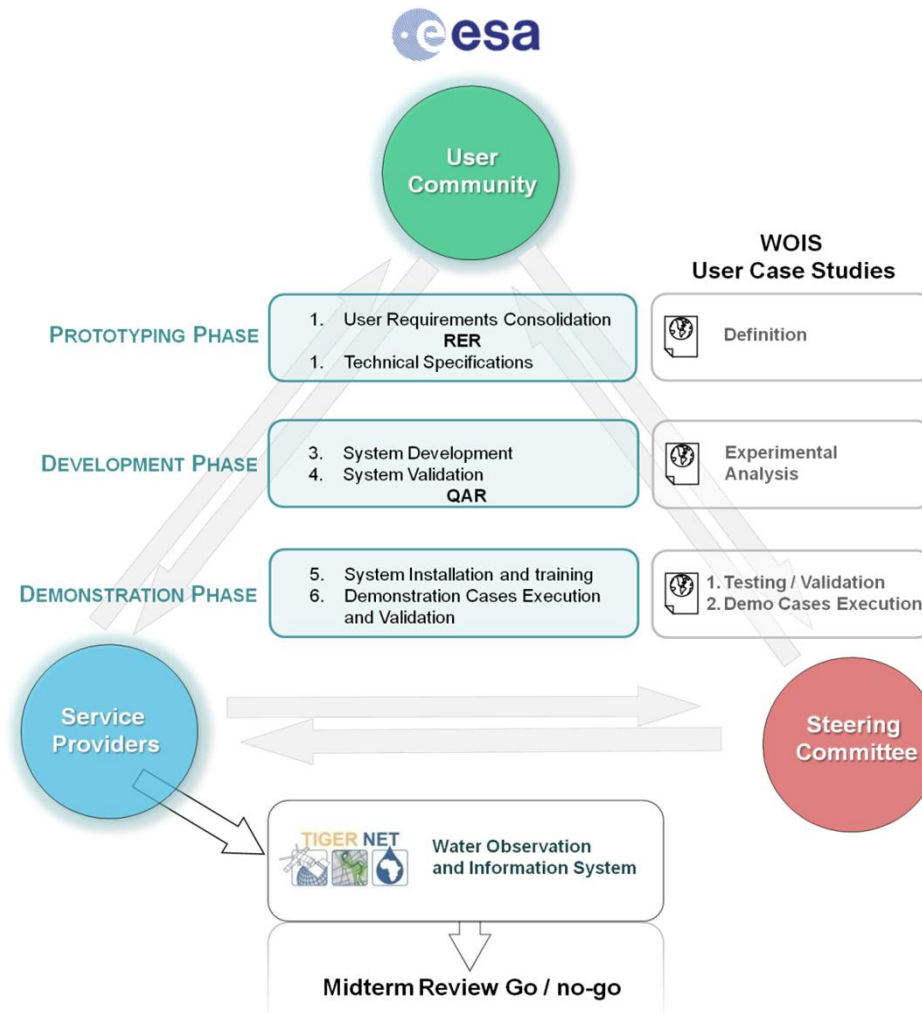


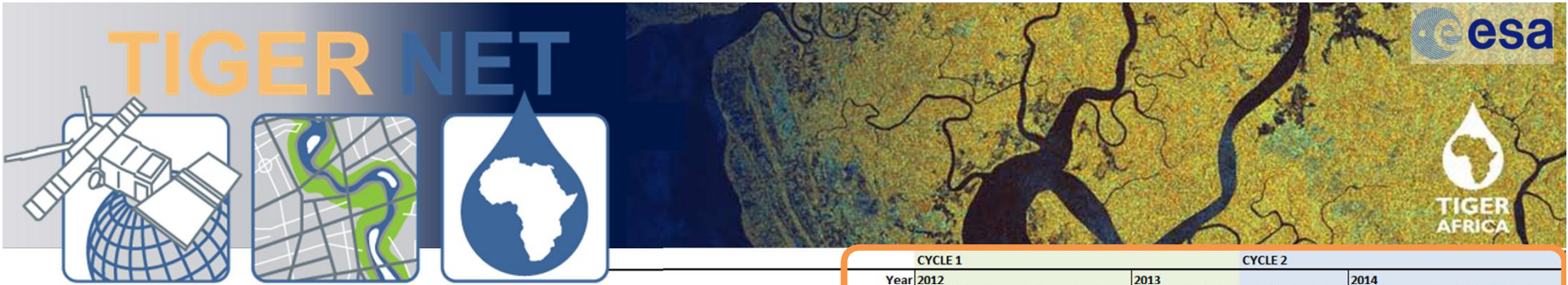


Project Logic

2 x 18 MONTH CYCLES

- “ Cycle 1: 5 champion users, for each a number of **parallel User Cases will** be implemented for each information product of interest
- “ Cycle 2: **New users/cases**, new target products and enhanced system capabilities and involve the users from Cycle 1





Project Timeplan

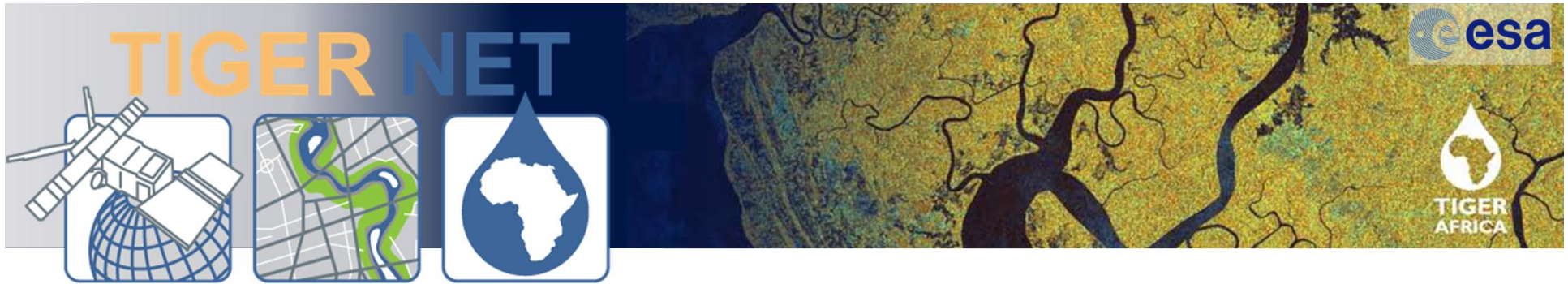
START: April, 2012
END: March, 2014

WP	Description	CYCLE 1												CYCLE 2																							
		Year 2012												Year 2013												Year 2014											
		Month	M	J	J	A	S	O	N	D	J	F	M	Month	M	J	J	A	S	O	N	D	J	F	M	Month	M	J	J	A	S	O	N	D	J	F	M
Month Nb.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	
1-0-0-0	Management and coordination																																				
1-0-1-0-0	Coordination																																				
1-0-1-1-0	Contracts Management																																				
1-0-1-2-0	Liason with ESA																																				
1-0-1-3-0	Scientific & technical coordination																																				
1-0-1-4-0	Coordination of the work of the different User Cases																																				
1-0-1-5-0	Coordination of relevant projects																																				
1-0-1-6-0	Planning and hosting of meetings																																				
1-0-2-0-0	Management																																				
1-0-2-1-0	Project Management Plan																																				
1-0-2-2-0	Monitoring of WP progress																																				
1-0-2-3-0	Project Actions Database																																				
1-0-2-4-0	Internal quality review																																				
1-0-2-5-0	Monthly Progress Reports																																				
1-0-2-6-0	Organisation of meetings																																				
1-1-0-0-0	Requirements engineering																																				
1-1-1-0-0	User Requirements Consolidation																																				
1-1-2-0-0	Technical Specifications																																				
1-2-0-0-0	System Development and validation																																				
1-2-3-0-0	System Development																																				
1-2-3-1-0	EO Product development																																				
1-2-3-2-0	WOIS development																																				
1-2-4-0-0	System Validation																																				
1-2-4-1-0	Test sites production and validation																																				
1-2-4-2-0	WOIS database population																																				
1-2-4-3-0	WOIS assemblage																																				
1-2-4-4-0	WOIS testing																																				
1-2-4-5-0	WOIS users assessment																																				
1-3-0-0-0	System Installation and Demonstration																																				
1-3-5-0-0	System Installation and training																																				
1-3-5-1-0	System Installation																																				
1-3-5-2-0	Training																																				
1-3-6-0-0	Demonstration Cases Execution and Validation																																				
1-3-6-1-0	Full demonstration production and validation																																				
1-3-6-2-0	WOIS database population																																				
1-3-6-3-0	Local Operational WOIS Demonstration																																				
1-3-7-0-0	Utility Assessment																																				
1-3-8-0-0	Transfer plan to sustainability																																				
1-4-0-0-0	Cross activities																																				
1-4-9-0-0	Capacity Building and Training																																				
1-4-10-0-0	Fund raising																																				
1-4-11-0-0	User Engagement																																				
1-4-12-0-0	Promotion and outreach																																				
1-4-12-1-0	Project Web Portal																																				
1-4-12-2-0	TIGER Water Portal																																				
1-4-12-3-0	Promotional movie																																				
1-4-12-4-0	Quarterly newsletter																																				
1-4-12-5-0	A EO for Water Awareness Kit																																				
1-4-12-6-0	Presentations																																				
1-4-12-7-0	Product/Services and System Portfolio																																				
1-4-12-8-0	Participation to the TIGER Workshops report																																				

Timeplan of Cycle 2 activities to be specified in Midterm proposals

User Kick-off Meeting,
 6th World Water Forum, Marseille, 13 March 2012

Dr. Andreas Walli, GeoVille Group



1st Phase

USER REQUIREMENTS CONSOLIDATION

“ AIMS:

- System requirements: consolidation of the user requirements and technical solutions, such as the functionalities of the system and adapt specifications of the defined water information products. Clarification of installation requirements.
- Demonstration requirements: Definition of test and demonstration cases and areas of interest
- Definition of success criteria and indicators

“ HOW:

- 3-day consultation meetings at each host institution, starting **May Æ Aug 2012**

- Results determine **TECHNICAL SPECIFICATIONS** for development and demonstration of WOIS !