

WatPLAN

Spatial earth observation monitoring for planning and water allocation in the international Incomati Basin

EYE ON THE INCOMATI RIVER

Located within an area of intense development pressure, demand for water from Southern Africa's Incomati river outstrips supply. The WatPLAN project undertakes 'water accounting', paving the way for sustainable use of the river's limited resources.

From the cool and dry Highveld 2000 meters above the ocean in eastern South Africa, to the hot and humid plains of southern Mozambique, the Incomati river runs through the Kingdom of Swaziland on its decent towards the sea. Hence it forms one of 15 international river basins that are shared by southern African countries. The Incomati river basin covers an area of approximately 47,000 km².

Entirely situated within the summer rainfall region – October to March – mean annual precipitation in the basin is estimated at 740 mm, whilst potential evaporation amounts to some 1,900 mm. This water deficit puts significant pressure on the waters from the Incomati, which, especially in the dry lowlands are needed as a source for irrigation, facilitating crop production.

However, the waters of the Incomati are limited too, so enhanced 'water accounting' measures are needed in order to secure that the Incomati's resources are used in a sustainable manner.

The WatPLAN project is set to implement such an advanced 'water accounting system'. By means of medium and high resolution satellite data – including data obtained from Chinese satellites – this joint EU-Africa GMES earth observation project will provide weekly updates on the state of the Incomati waters. Five indicators – water use and evaporation, rainfall, land use, soil moisture and biomass production – will be monitored by satellites, providing the data needed for effective water accounting to be undertaken. WatPLAN will build an online platform to effectively share such data among water users and authorities in the Incomati basin, and also feed its findings into the Global Earth Observation System of System (GEOSS) database.



WIM BASTIAANSEN
IS PROJECT COORDINATOR

QUESTIONS & ANSWERS

What do you want to achieve with this project?

We want to develop and implement an operational earth monitoring system that supports transparent and rational decision making on water allocation and sustainable water utilization in the context of an international river basin.

Why is this project important for Europe?

After implementation in the Incomati catchment, the WatPLAN project may be repeated for European river basins, in which water allocation and verification of water use are key issues for sustainable utilization of water.

How does your work benefit European citizens?

Carrying out a project similar to WatPLAN in Europe will benefit European citizens in ways such as greater water security, more equitable and efficient water allocation, poverty alleviation, and environmental sustainability.



Mangrove tree, Mozambique © EcoView - Fotolia.com

WatPLAN will contribute to facilitating the sustainable use of water from the Incomati river.

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LIST OF PARTNERS

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- Prezent Internet B.V., the Netherlands
- Hidrosoph Lda., Portugal
- WE Consult Lda., Mozambique
- University of KwaZulu-Natal, South Africa
- GeoTerralimage (Pty) Ltd, South Africa

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PROJECT INFORMATION

Spatial earth observation monitoring for planning
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(WatPLAN)

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