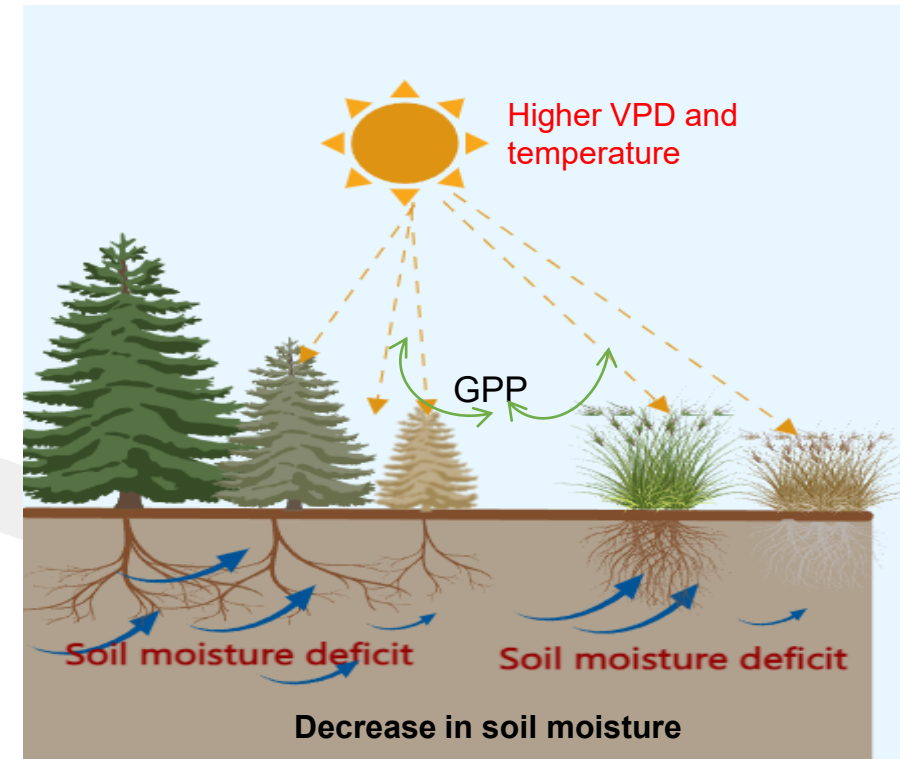
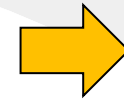
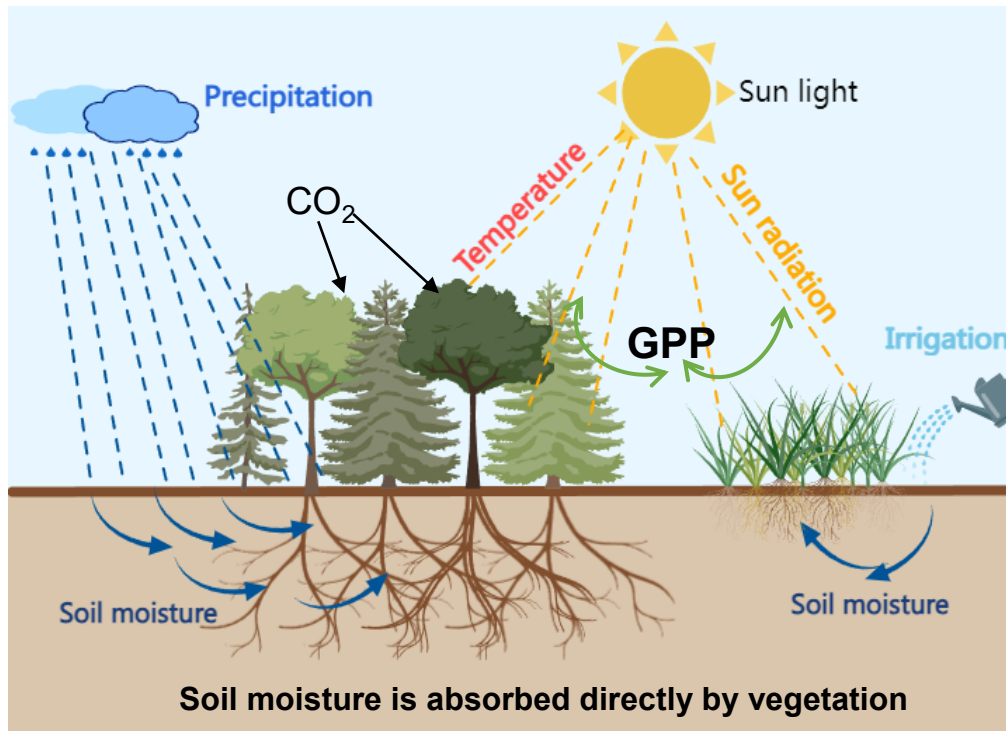


You are kindly invited to attend the public PhD defense of  
**Tao Yu**

## Effect of Soil Moisture on Vegetation Gross Primary Productivity in Dryland Central Asia

When? Monday June 03, 2024 at 09:00 (Brussels time) and  
15:00 (Beijing time),

Where? Follow the online meeting via:  
<https://ap.lc/ifsal>



## Summary

Soil moisture ( SM ) has been widely recognised as a key variable affecting the vegetation carbon cycle due to its important role in vegetation growth. Precipitation, runoff and irrigation water are converted into soil moisture before it can be further utilised by vegetation. Central Asia is a typical arid and semi-arid region in Asia and Europe, where vegetation growth is controlled by water stress. Soil moisture is a key factor influencing vegetation gross primary productivity (GPP) in Central Asia. Therefore, clarifying the effect of soil moisture on GPP is conducive to understanding the carbon cycle mechanism of the Central Asia as well as other arid ecosystems. Based on remotely sensed observed data and model simulations, our study highlights that vegetation GPP in Central Asia is mainly affected by soil moisture and that soil moisture deficit is the main cause of GPP decline under severe drought conditions.

## Examination Committee

Prof. dr. Alain De Wulf (Ghent University, Chair)

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## About the Author

Tao Yu (1993) is a joint PhD candidate at the Department of Geography at Ghent University and University of Chinese Academy of Sciences. In 2017, Tao obtained a bachelor's degree majoring in Human geography and urban and rural planning from Shihezi University. In 2020, Tao obtained a master's degree majoring in Cartography and geographic information system (GIS) from Xinjiang Institute of Ecology and Geography, University of Chinese Academy of Sciences. In 2020, Tao started his doctoral training in GIS at Xinjiang Institute of Ecology and Geography, University of Chinese Academy of Sciences, and pursued his doctorate at Ghent University. During his PhD program, his research focuses on the effects of drought and soil moisture on arid regions vegetation and modeling of vegetation productivity by ecological models.

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