

Drought-ADAPT – Adaptation to Drought and El Niño Effects in Vietnam

CLIENT II – International Partnerships for Sustainable Innovation

Today, Vietnam is one of the countries most affected by climate change – extreme events such as El Niño and subsequent droughts particularly impact the Central Highlands, one of the country’s most important agricultural regions. To develop appropriate adaptation measures, there is a need for accurate and up-to-date information on future regional climate conditions, water availability, sustainable irrigation techniques and infrastructure for climate-smart agriculture as well as improved information mechanisms – before, during and after drought events.

The impact of climate change

The Central Highlands are one of Vietnam’s most important agricultural regions, growing coffee, rubber, pepper, cashew nuts, vegetables, and fruits, all of which are in high demand and have tremendous export value. At the same time, Vietnam is one of the countries most affected by climate change, with the project region in the Central Highlands already sensitive to extreme weather events, such as those caused by El Niño. El Niño events typically occur every two to seven years and often result in severe droughts during the dry season in the project region. These in turn have a significant impact on agricultural production as well as the environment and the socio-economic sector. The impact of anthropogenic climate change could exacerbate this.

Drought-ADAPT aims to develop innovative approaches to support short-, medium-, and long-term planning and adaptation measures to drought situations and their impact in the context of climate change. The project acts at different levels:

- local level: technically innovative engineering solutions at village level to support local communities in securing their investments and high agricultural productivity;
- regional level: developing innovative climate services to be used by local and regional authorities.

Developing climate services

The following project activities aim to achieve the project’s objectives:

- Support approaches to adaptive water and land resource management that reduce agricultural water use, optimize water storage and build resilience to future drought-related extreme events;

- Transfer technology and knowledge to promote investments in sustainable water infrastructure and systems that can improve adaptability and resilience to drought situations;
- Develop and share seasonal early warning systems that notify authorities in good time of impending droughts so that they can plan and implement appropriate management actions with sufficient lead time;
- Strengthen information management and data sharing, assessment mechanisms and monitoring of droughts and their impact through novel climate services that have been co-developed with partners and stakeholders to support the provision of knowledge to understand climate, climate change and its impact.



Water supply to a coffee plantation in the Đắk Nông province.

Support through collaboration

The project team aims to realise these objectives through innovative methods and combined approaches in the fields of remote sensing, meteorology and hydrometry; climate and hydrological modelling; engineering and planning; and land management and policy consultation (see Figure 2). Corresponding solutions will be developed in close cooperation with Vietnamese partners from academia and both for and with provincial authorities responsible for the Sre Pok catchment area in the two provinces of Đắk Lắk and Đắk Nông in the Central Highlands of Vietnam.



Low water level in Ea De Reservoir near Ea Kar in Đắk Lắk Province.

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