

Focus area - Water and energy security

PI Lot 4 project

Sustainable Hydropower Use and Integration in China and EU

Main achievements

Aim of the Lot 4 project

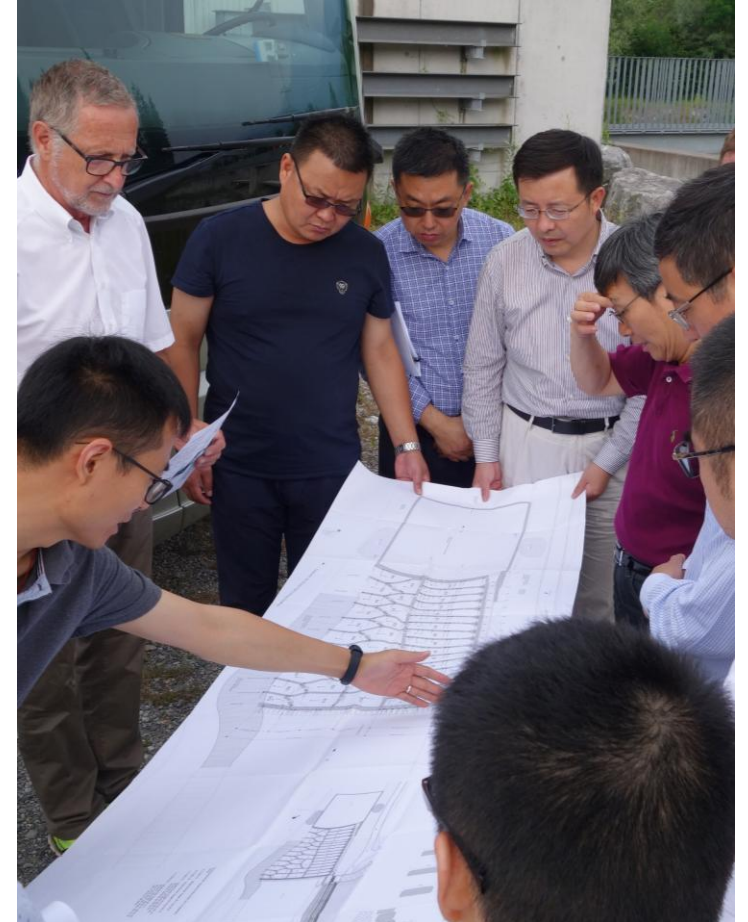
To enhance the co-generation and exchange of knowledge through synthesizing and sharing experiences and best practices between EU and China targeting sustainable hydropower in realizing low-carbon development pathways and market integration.

The project's three main achievements:

1. Enhanced knowledge on green hydropower and tapping hidden energy potentials (Green dimension)
2. Enhanced knowledge on hydropower's "blue storage" function and its role for enhancing regional energy cooperation and renewable energy system transition (Blue dimension)
3. Enhanced cross-sectoral dialogue between Europe and China on sustainable hydropower

Key recommendations from the **green dimension**

1. **Compilation of examples** is needed to showcase how hydropower can be upgraded for both reduced environmental impacts and improved efficiency.
2. Strategic planning is needed to **balance hydropower exploitation and environmental conservation** under consideration of economic and environmental criteria.
3. Environmentally friendly Hydropower requires assessment and implementation of a wide range of **mitigation and compensation measures**, especially in the case of medium and small rivers.
4. Research cooperation needs to be strengthened in the field of **basin-scale assessment of and response strategies** for cumulative effect of hydropower development on riverine ecosystems.
5. China and the EU should continue the **dialogue on sustainable hydropower** under the European Green Deal



Key recommendations from the blue dimension

1. **Policy support and investment on research** needs to be strengthened for realizing and maximizing the full potential of hydropower's balancing role in the energy system.
2. Stronger policy and financial support is needed to **encourage upgrade of existing pumped storage hydropower (PSH)** for acquiring additional and more advanced capacity to provide flexibility in the energy system.
3. **More economically sustainable business model** needs to be developed and applied to accelerate development of pumped storage hydropower (PSH).
4. **Clear and strategic positioning of sustainable hydropower** is needed in the overall national strategy for achieving the 'dual carbon' objective in China.
5. **Cross-sectoral policy dialogue is essential** for realizing system solutions required for sustainable hydropower development in the context of climate and clean energy transition.

