



PRESS RELEASE

Sustainable regions require regional energy planning

SciLake's "Energy pilot" launches "Regional Energy Planning Pilot"

Sion, Switzerland, April 26, 2024

In a strategic move towards sustainable energy solutions, the SciLake project [1] announces the refinement of its Energy Pilot into the Regional Energy Planning (REP) Pilot. This initiative builds a research ecosystem that seamlessly contextualises, interconnects, and makes scientific knowledge interoperable and accessible based on the know-how of the HES-SO Valais-Wallis. The Regional Energy Transition includes specific characteristics tailored to diverse geographical contexts.

Regional systems are often linked to specific forms of governance: a higher level of governance defines the overall goal that is then further contextualised at the regional level into actionable plans before being implemented by local governments such as cities and smaller communities. The context includes the secure, resilient, and carbon-free regional energy supply, leveraging the flexibility of locally and regionally available energy sources. The focus is on literature aligning with local and regional requirements about generation, demand, and sustainability while optimising the use of infrastructures and resources. Energy sobriety is a critical driver in significantly reducing energy consumption.

The REP is managed by the HES-SO Valais/Wallis team of "sustainable energy and territory" led by Prof. Jakob Rager within the Institute of Energy and Environment at the



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School of Engineering. The team gathers competencies related to energy planning, project management and environmental engineering and actively works on energy planning research and applied research projects at local, regional, national and European scales.

HES-SO's "sustainable energy and territory" team manages the REP platform. Prof. Jakob Rager, leading the team, explains: "Our activities focus on our holistic system analysis to derive sustainable policies." The team builds energy planning, project management, and environmental engineering competencies. It actively supports actors on multiple levels, from local to regional or national, to develop more actions towards a sustainable world. It combines European scales related to energy planning research and applied research.

As part of the SciLake project, the REP, one of the four pilots, uses cutting-edge tools to build scientific knowledge graphs (SKGs). These SKGs connect data and capture expert knowledge, facilitating the collection, organisation, and retrieval of heterogeneous scholarly content.

The pilot aims to leverage SciLake tools for semantic modelling, maintenance of ontologies, extraction of knowledge from unstructured raw data, and graph mining to create a knowledge graph that will facilitate the discovery of knowledge sharing in the respective field. To this end, advanced knowledge discovery approaches that exploit impact and reproducibility indicators for research products (e.g., publications and datasets) will also be used. The EnerMaps Open Data Management Tool [2] will notably be enhanced to support the Regional Energy Transition initiative.

By aligning with regional energy planning, SciLake's Energy Pilot REP marks a significant step towards sustainable regions. By integrating advanced tools and methodologies, this pilot addresses energy challenges and contributes to a broader research ecosystem that enhances the accessibility and interoperability of scientific knowledge. The journey towards regional energy sustainability begins here in Sion, Switzerland.

References: [1] <https://doi.org/10.3030/101058573> ; [2] <https://enermaps.openaire.eu/> .

About HES-SO

The HES-SO is the largest university of applied sciences (UAS) in Switzerland and the country's third largest higher education institution, with more than 21'000 students and a broad network of schools in 7 cantons. HES-SO is organised into six faculties: Design & Visual Arts, Business Management and Services, Engineering & Architecture, Music & Performing Arts, Health and Social Work, and education and research are oriented towards practical applications in the same areas. HES-SO offers many education programs: 46 Bachelor's degrees, 26 Master's degrees and 301 continuing education courses. It employs more than 17'000 collaborators, with approx. 960 FTE dedicated to R&D activities. Firmly anchored in the regional economy, HES-SO collaborates closely with SMEs, and its R&D also extends to certain aspects of industrial-scale production. HES-SO undertakes research projects with various partners in Switzerland and abroad. HES-SO has been involved in European Framework Programs since 1998. In Horizon 2020, we participated in 45 collaborative projects, including six as coordinator and covering the program's three Pillars. We are participating in 15 projects in Horizon Europe as an associated partner.

About SciLake

SciLake is a project funded by the European Union's Horizon Europe program (grant No. 101058573). The project aims to seamlessly integrate domain knowledge and open Scientific Knowledge Graphs while developing valuable added-value services for specific research areas. The ultimate goal is to empower researchers and foster a more interconnected and efficient scientific community. SciLake brings together a competent consortium of 13 partners from 9 different countries. The consortium comprises partners with expertise in knowledge management and discovery and experts from Neuroscience, Cancer, Transportation, and Energy research involved in piloting activities.

Contacts:

Alejandro Pena-Bello: alejandro.penabello@hevs.ch

Andrea Salmi: andrea.salmi@hevs.ch

Jakob Rager: jakob.rager@hevs.ch

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