



Deliverable D4.3

Knowledge Share Point Implementation

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1 KNOWLEDGE SHARE POINT

1.1 General introduction

This document supports the implementation and dissemination of the Knowledge Share Point developed in HIKE.

1.2 Implementation

With the development and implementation of the Knowledge Share Point (KSP) the HIKE project serves the following objectives:

- Improve the exchange of information and knowledge used in hazard and impact research, based on a synthesis of methods and sources applied on WP2 and WP3
- Implement a data management strategy to identify, store and integrate data resulting from case studies carried out at the geological surveys of Europe

The KSP implementation consists of three main elements:

1) **The document repository:**

This part has been centrally developed by the GIP-Project within the EGD I framework. It allows registered members of the geological survey community to upload documents, files and tools that are relevant for the assessment of hazards and impacts. The use of a common repository in EGD I facilitates maintenance and access on the longer term while benefitting from ongoing technical support and potential new functionalities that may be developed in the future (e.g. GeoERA's proposed follow-up programme "Geological Services for Europe"). The document repository system is described and explained in the following links below:

- a. **GIP project site:** [GeoERA Information Platform Project \(GIP-P\) – GeoERA](#)
Training video: <https://www.youtube.com/watch?v=bqBtjGW-BtU>

2) **The vocabulary with semantic concepts and keywords:**

The vocabulary and defined keywords are an essential part of the KSP. The keywords are used to tag new documents uploaded in the document repository. The semantic framework defines the logical links and relationships between terms which help to structure search results and retrieve associated documents for a given topic (e.g. induced seismicity > geothermal).

The vocabulary and keywords are developed by the HIKE project and embedded in the keyword and vocabulary system in EGD I. The definitions are fixed at the end of the HIKE project and will require a new project for updates. The following links provide the supporting information and guidelines:

- a. **Definition of the vocabulary and keywords:**
[HIKE KSP Specifications Background](#)
- b. **GIP Documentation on vocabularies and keywords:** <https://geoera.eu/wp-content/uploads/2021/09/D4.4-Final-report-on-Keyword-Thesaurus-and-Project-Vocabularies.pdf>



3) Knowledge Share Point Search engine

The HIKE project and GIP-Project have jointly developed a search engine to retrieve documents and files from the KSP. Documents can be found using keywords. In order to support the knowledge sharing principles, the search engine also uses defined relationships between keywords to find documents on associated topics. The search engine and supporting documentation can be accessed via the links below:

- a. **Search engine:** <https://geoera.eu/projects/hike10/knowledgesharepoint/>
- b. **Documentation and manual:** [HIKE User Manual](#)

1.3 Contents and evaluation

During the HIKE project a series of documents related to the project activities in HIKE have been uploaded in the repository. This includes the results and references from the case studies in work package 3. With the current system it will be possible for geological surveys to generally continue uploading documents and files from other hazard and impact studies.

Following remarks are made with regards to the evaluation of the current system:

- Current document count is still rather low. While the repository grows, a more mature knowledge base will emerge.
- The Repository system is still rather limited in terms of file types that can be uploaded. File types other than PDF and DOI-links can be provided as ZIP (e.g. datasets and tools).
- While the semantic framework incorporates many relations and keywords are hierarchically structured, at present it is not possible to access documents via a separate vocabulary system where one can visualize and browse keywords and keyword relationships.
- While HIKE report D4.2 ([HIKE KSP Specifications Background](#)) describes the relationship with the [EPOS Thematic Core Services on Anthropogenic Hazards](#), this practical link has not yet been established in the present (final) version of the KSP.
- While documents uploaded in the repository can be attributed with location data (e.g. extent of a study area), it is not possible to access and use such information in the KSP search engine. For this it is necessary to use a separate browser in the EGDI platform.

1.4 Future perspective and recommendations

Hazard and impact research will remain an important topic for existing and future subsurface exploitation. Often such studies are tied to specific locations and less relevant for national and regional mapping scope of many geological surveys. On the one hand, this hampers the current exchange of knowledge to perform hazard and impact studies. On the other hand there is a lot to gain by better alignment of national and regional information for local assessments.

Countries have different national guidelines and laws on how to deal with subsurface exploitation and storage. In several countries regulations are still evolving. This is especially the case for new uses such as CCS and geothermal. Exchange of practices and guidelines may help surveys and stakeholders to support development of national guidelines and standards.

With this in mind, the following recommendations are given for the continuation, maturation and application of the KSP:



- Incorporate the KSP in the GeoERA follow-up program “Geological Services for Europe”. This program focuses among others on GeoEnergy uses in the context of the European Green Deal (geothermal energy, heat storage, CCS and underground storage of renewable energy carriers). The future success and societal embedding of these technologies strongly relies on a comprehensive understanding and assessment of potential hazards, effects and impacts. This may be achieved by continued knowledge sharing and competence building.
- In order to increase the added value of the KSP, more documents need to be uploaded. It is recommended to build a habit among surveys to upload key references and knowledge sources that are of value for other countries.
- Although the current share point is intended for both geological survey organizations and external users, more functionality and support is required to serve the latter group. The functionality of the current KSP is still limited to the current search engine. New functionalities such as filtering options, map representations and specific keyword browsers can greatly improve the user experience.
- The current KSP should be linked to other knowledge and document services related to hazards and impacts including the [EPOS Thematic Core Services](#).
- Through the use of related keyword definitions, the KSP entries should be linked to other thematic datasets (e.g. geological resource maps). This will greatly increase the applicability and stimulate a better alignment of regional datasets for local assessments.
- The share point still has limited functionality with regards to spatial searches and filtering. This may be improved in future versions.