



**European Network of  
Observatories and Research Infrastructure for Volcanology**

**Deliverable Report**

**D3.5 EUROVOLC Outreach box**

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## Summary

In this deliverable we summarize the activity carried out to complete sub-task 3.2.3 of EUROVOLC project, aimed at developing of an outreach resources “box” on volcanoes. The intention has been to create the EUROVOLC Outreach Box “EDUBOX” as a database based on the shared educational and outreach resources surveyed in D3.3 and partially evaluated in D3.4. After reviewing the resources uploaded to the Basecamp project platform, discerning them by categories, languages and typology, the effort has been to make EDUBOX a contribution to Gateway developed in EUROVOLC WP20, as a sort of “tool” able to be active beyond the EUROVOLC project’s conclusion.

### 1. EDUBOX construction

First step has been the revision and integration of the resources uploaded in BASECAMP and surveyed in D3.3, and in addition, an effort was made to update this list and integrate it with new material.

In particular, where the link to a resources was no more active, as MEDSUV project web Page, another link has been provided where to download the MEDSUV products quoted by several partners in the D3.3 survey. Furthermore, in case of missing contribution by a EUROVOLC partner who did not collaborate to the survey, ad hoc research was carried out to find resources available on-line, in order to expand the EDUBOX catalogue both in terms of available language and target audience.

The resources’ list was foremost classified according to the target audience, and adding other descriptive fields discussed and defined during some online meetings with the colleagues involved in EDUBOX development as a contribution to EUROVOLC WP20 Gateway

In particular, the proposed classification refers:

Three main categories:

- Resource for **General Public**, outreach material for the general public;
- Resource for **Educational**; material for educational activities (primary school to high school)
- Resource for **Academy/Expert**.

Other descriptive field:

- **Name** of the resources
- **Institution** author of the resources
- **Language** available
- **Volcano**, if present, to which the resource refers
- **Description** of the resources
- **Link** where the resources are available

A	B	C	D	E	F	G	H	I
Category	Name	Institution	Language	Volcano	Description	Link		
Academic/Expert	Project Futurevolc	Project Futurevolc	English		Web Page of Faller	<a href="http://futurevolc.ch/">http://futurevolc.ch/</a>		
General public	The Civil Protection for Civil Protection Department (Italy)	Italian; English	General		Handbook introducing main risks present on Italian	<a href="https://www.protezionecivile.gov.it/en/publication/the-civil-protection-for-families">https://www.protezionecivile.gov.it/en/publication/the-civil-protection-for-families</a>		
General public, Educational	Il rischio vulcanico nel C. Civil Protection Department (Italy)	Italian	Campi Flegrei		Video introducing volcano hazard at Campi Flegrei Ca	<a href="https://www.youtube.com/watch?v=5U_V_75U0A">https://www.youtube.com/watch?v=5U_V_75U0A</a>		
General public, Educational	Med-SuV Project	Project MED-SuV	Italian; English	General	Video introducing volcano hazard and monitoring	<a href="https://www.youtube.com/watch?v=4CUBaF3D6">https://www.youtube.com/watch?v=4CUBaF3D6</a>		
General public, Educational	Volcanoes and their risk: Project MED-SuV SUPERSTES	English; Italian; Portuguese; French; Spanish; German			Leaflets and Posters on volcanoes, hazard and moni	<a href="https://www.bram.it/en/reference-completed-project/med-supersites-med-supersites-volcanoes">https://www.bram.it/en/reference-completed-project/med-supersites-med-supersites-volcanoes</a>		
Academic/Expert	Active volcanoes in south Et. Geological Survey of Italy	English	Etne, Vulcano, Stromboli, Lipari,		Field Trip Guide. Keywords: Active volcano, Hazard, M	<a href="https://www.geologicalfieldtripsandmaps.com/286issue-38/active-volcanoes-in-southern-italy-etne-stromboli">https://www.geologicalfieldtripsandmaps.com/286issue-38/active-volcanoes-in-southern-italy-etne-stromboli</a>		
Academic/Expert	The Vesuvius and the et. Geological Survey of Italy	English	Vesuvio, Colli Albani, Roccamorfinia, Ce		Field Trip Guide. Keywords: Active volcano, Hazard, M	<a href="https://www.geologicalfieldtripsandmaps.com/286issue-38/the-vesuvius-and-the-other-volcanoes-of-central-ita">https://www.geologicalfieldtripsandmaps.com/286issue-38/the-vesuvius-and-the-other-volcanoes-of-central-ita</a>		
Academic/Expert	Landslides, volcanism and Et. Geological Survey of Italy	English	Vesuvio, Campi Flegrei Ischia		Field Trip Guide. Keywords: Volcanism, Landslide, Ri	<a href="https://www.geologicalfieldtripsandmaps.com/286issue-38/landslides-volcanism-and-volcano-technics-the-fr">https://www.geologicalfieldtripsandmaps.com/286issue-38/landslides-volcanism-and-volcano-technics-the-fr</a>		
Educational, Academic	Volcanologie physique : IGP	French; English	General		Online course on Volcanology	<a href="https://www.fun-mooc.fr/en/cours/volcanologie-physique-des-phenomenes-sua-processus/">https://www.fun-mooc.fr/en/cours/volcanologie-physique-des-phenomenes-sua-processus/</a>		
General public, Educational	MOOC: Cours en Volcanol IGP	French	General		Youtube Channel, proidig videos, and seminars	<a href="https://www.youtube.com/channel/UC9QemW0ydeV5ashQ0n4">https://www.youtube.com/channel/UC9QemW0ydeV5ashQ0n4</a>		
General public, Educational	Monitorio del volcán TEI Proyecto MultiTeide	Spanish	Teide		Youtube video on Teide volcanic hazard and monitori	<a href="https://www.youtube.com/watch?v=d11_n0bN2Q">https://www.youtube.com/watch?v=d11_n0bN2Q</a>		
General public, Educational	Proyecto MultiTeide El do Proyecto MultiTeide	Spanish	Teide		Youtube video on volcano monitoring	<a href="https://www.youtube.com/watch?v=2p4t4F6a2Q">https://www.youtube.com/watch?v=2p4t4F6a2Q</a>		
General public, Educational	Proyecto MultiTeide El do Proyecto MultiTeide	Spanish	General		Youtube video on Proyecto MultiTeide			
General public, Educational	IGN recursos educativos. IGN- Instituto Geografico Naciona	Spanish	Teide, Spanish Volcanoes, General		Web page with educational resources	<a href="https://www.ign.es/web/ign/porta/recursos-educativos">https://www.ign.es/web/ign/porta/recursos-educativos</a>		
General public, Educational, Expert	INSTITUTE FOR THE STUDY AND MONITORING OF THE SANTORI	English; Greek	Santorini		Web page where to download Volcanic Hazard Map.	<a href="https://www.santorini.net/smsr.pdf">https://www.santorini.net/smsr.pdf</a>		
General public, Educational, Expert	Monitoring Network Santorini Islands- INO	English; Greek	Santorini		Web page with information and signals from: monito	<a href="https://www.immstau.gr/en/Pages/index2">https://www.immstau.gr/en/Pages/index2</a>		
General public, Educational, Expert	INO Icelandic Meteorology/Volcanology Islands- INO	Icelandic; English	Icelandic volcanoes;		Web page. Information and regular news updates ab	<a href="https://www.volcanology.is/en/volcanism/volcanic-eruptions/">https://www.volcanology.is/en/volcanism/volcanic-eruptions/</a>		
General public	Varnagæðingurinn Vatnajökullsjógarður National	English; Icelandic	Öræfajökull, Askja, Kverfjörður, Laki, Eldg		Web page. Information about volcanoes, and how to	<a href="https://www.vagnagardur.is/en">https://www.vagnagardur.is/en</a>		
General public	Katla National Park	English; Icelandic	Katla		Web page. Information about Katla volcano, and how	<a href="http://www.katla.is">http://www.katla.is</a>		
General public	Reykjanes Geopark	English; Icelandic	Reykjanes		Web page. Information about Reykjanes volcano, an	<a href="http://www.reykjanesgeopark.is">http://www.reykjanesgeopark.is</a>		
General public, Educational	Air quality guidelines vol NOP ICELAND (National Commissi	Icelandic; English	Icelandic volcanoes		PDF. Air quality guidelines volcanic SO2 exposure	<a href="https://www.almannavarnir.is/utgefni-efni/health-effects-of-short-term-volcanic-so2-exposure/?wpdmfi=22644">https://www.almannavarnir.is/utgefni-efni/health-effects-of-short-term-volcanic-so2-exposure/?wpdmfi=22644</a>		
General public	Almannavarnir NOP ICELAND (National Commissi	Icelandic; English	Icelandic volcanoes		Facebook page. Information on eruptions, volcanic h	<a href="https://www.facebook.com/Almannavarnir/">https://www.facebook.com/Almannavarnir/</a>		
General public, Academic/Expert	Almannavarnir NOP ICELAND (National Commissi	Icelandic; English	Icelandic volcanoes		Web page. Information on eruptions, volcanic hazard	<a href="https://www.almannavarnir.is/">https://www.almannavarnir.is/</a>		
Academic/Expert, General public	Almannavarnir Articles at NOP ICELAND (National Commissi	English; Polish	Icelandic volcanoes; Eyjafjallajökull; Kai		Papers, leaflet and links on eruptions, volcanic haza	<a href="https://www.almannavarnir.is/english/articles/">https://www.almannavarnir.is/english/articles/</a>		
General public, Educational	The Katla Volcano: with e Almannavarnir	Icelandic; English	Katla		Video on Katla Volcano	<a href="https://www.youtube.com/watch?v=j30mAZy">https://www.youtube.com/watch?v=j30mAZy</a>		
Educational, Expert, general public	Catalogue of Icelandic Volc. IMO (Icelandic Meteorological offi	Icelandic	Icelandic volcanoes		Web page. Eruption histories of the volcanoes of Ice	<a href="https://www.icevolcanoes.com/">https://www.icevolcanoes.com/</a>		
General public, Educational/Expert	Information earthquakes IMO (Icelandic Meteorological offi	Icelandic; English	Icelandic volcanoes; Bárðarbunga;		Web page. Information and regular news updates du	<a href="https://www.vedur.is/isl/for-og-eldgos/landskaftar-https://en.vedur.is/earthquakes-and-volcanism/volcanic-eruptions/">https://www.vedur.is/isl/for-og-eldgos/landskaftar-https://en.vedur.is/earthquakes-and-volcanism/volcanic-eruptions/</a>		
General public, Expert	Information earthquakes IMO (Icelandic Meteorological offi	English; Icelandic	Icelandic volcanoes		Youtube Channel IMO: videos on the Bárðarbunga 2014-2015, Grimsvötn 2011 and Eyjafjallajökull 2010 eruptions, an other resources	<a href="https://www.visiondauhar.is/">https://www.visiondauhar.is/</a>		
General public, Expert	University of Iceland University of Iceland	English; Icelandic			Web page			
Academic/Expert	Report on forensic analysis Project Futurevolc	English	Eyjafjallajökull, Grimsvötn		PDF. Report on forensic analysis of the Eyjafjallajökull	<a href="http://futurevolc.ch/sites/futurevolc.ch/files/Pdf/Deliverables/fv_d5_1_submitted.pdf">http://futurevolc.ch/sites/futurevolc.ch/files/Pdf/Deliverables/fv_d5_1_submitted.pdf</a>		
Academic/Expert	Information for EU-MIC (E Project Futurevolc	English			PDF. Information for EU-MIC (European Union Monito	<a href="http://futurevolc.ch/sites/futurevolc.ch/files/Pdf/Deliverables/fv_d5_2_to_submit.pdf">http://futurevolc.ch/sites/futurevolc.ch/files/Pdf/Deliverables/fv_d5_2_to_submit.pdf</a>		
Academic/Expert	Mapping best practice in Project Futurevolc	English			PDF. Mapping best practice in the dissemination of s	<a href="http://futurevolc.ch/sites/futurevolc.ch/files/Pdf/Deliverables/fv_d5_3_to_submit.pdf">http://futurevolc.ch/sites/futurevolc.ch/files/Pdf/Deliverables/fv_d5_3_to_submit.pdf</a>		
Academic/Expert	Earthquake location in a Project Futurevolc	English			PDF. Earthquake location in a three-dimensional sta	<a href="http://futurevolc.ch/sites/futurevolc.ch/files/Pdf/Deliverables/fv_d5_5_to_submit_without_appendix_d.pdf">http://futurevolc.ch/sites/futurevolc.ch/files/Pdf/Deliverables/fv_d5_5_to_submit_without_appendix_d.pdf</a>		
General public, Academic/Expert	Near-real-time correlation Project Futurevolc	Icelandic; English			PDF. Near-real-time correlation of high-rate geodetic	<a href="http://futurevolc.ch/sites/futurevolc.ch/files/Pdf/Deliverables/fv_d6_4_to_submit.pdf">http://futurevolc.ch/sites/futurevolc.ch/files/Pdf/Deliverables/fv_d6_4_to_submit.pdf</a>		
General public, Expert	Iceland: The Natural Lab UNAVCO Science Workshop 2011		Icelandic volcanoes		Youtube video: Iceland: The Natural Laboratory for Vc	<a href="https://www.youtube.com/watch?v=uiabUu_Kyo">https://www.youtube.com/watch?v=uiabUu_Kyo</a>		
Academic/Expert	Pamphlets for the public: IWHN The International Volcanic Health Hazard Network				Pamphlets for the public and emergency managers of	<a href="https://www.iwhn.org/ish-pamphlets">https://www.iwhn.org/ish-pamphlets</a>		

Figure 1: Example of the resources' list classified by fields: Category; Name; Institution; Language; Volcano; Description; Link.

## 2. EDUBOX implementation in the Gateway

The subsequent step in EDUBOX development has requested the involvement of IT experts at INGV, and this significant collaboration has permitted to outline EDUBOX as a section (red circle at the top of page) as well as the already active ones as Services, Software, Data, and to define the technical structure of the database.

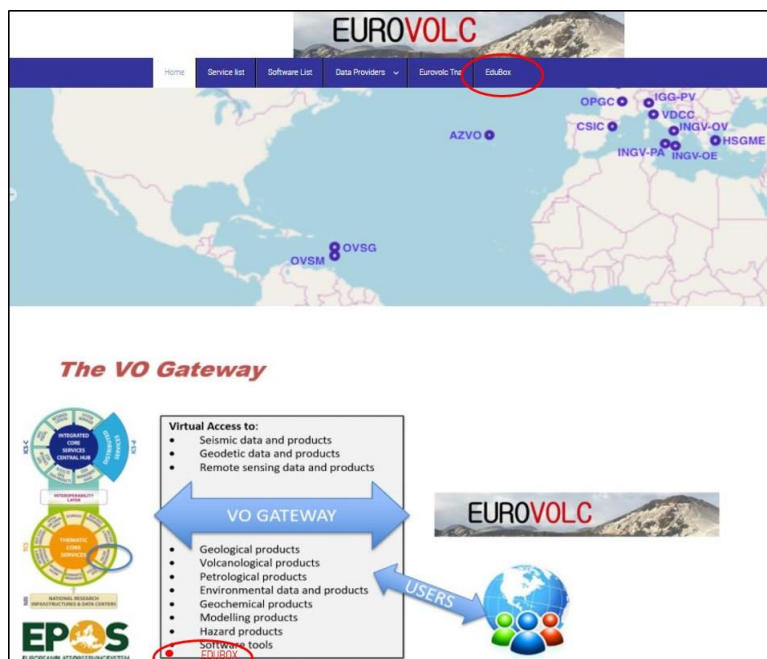


Figure 2: The VO-TCS Gateway access page with EDUBOX listed (red circle at bottom of page).

To finalize the definition of the database structure, from a technical point of view the **EDUBOX** section of the Gateway has been implemented by creating a **MYSQL** relational database, in which the data in the excel file (Fig1) were structured and stored with similar structure adopted for the other Gateway sections.

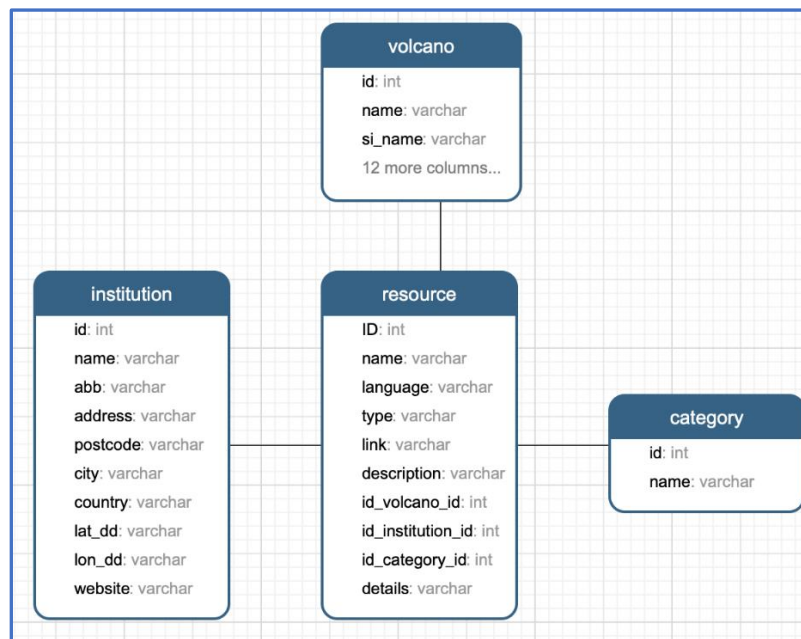


Figure 3: The EDUBOX MYSQL relational database

Furthermore, to make the Edubox database tool suitable for multi-query searches as it was implemented:

- a PHP script to read the data present in the database;
- data visualization, using Javascript libraries for the realization of DataTables, structured tables that allow efficient data discovery;
- a free search section, which allows you to carry out a semantic search on all data (specifically on all words) shown in the table.

Category	Name	Institution	Details	Link
Academy/Expert	The city of Napoli and its active volcanoes	Civil Protection Department (Italy)	Language:English Description: Field trip GUIDES Volcanoes: Vesuvio, Campi Flegrei	<a href="https://www.geologicfieldtripsandmaps.com/296/issue-39/the-city-of-napoli-and-its-active-volcanoes.html">https://www.geologicfieldtripsandmaps.com/296/issue-39/the-city-of-napoli-and-its-active-volcanoes.html</a>
Academy/Expert	Field trip to the Ischia resurgent caldera, a journey across an active volcano in the Gulf of Naples	Civil Protection Department (Italy)	Language:English Description: Field trip GUIDES Volcanoes:Ischia	<a href="https://www.geologicfieldtripsandmaps.com/296/issue-37/field-trip-to-the-ischia-resurgent-caldera-a-journey-across-an-active-volcano-in-the-gulf-of-naples.html">https://www.geologicfieldtripsandmaps.com/296/issue-37/field-trip-to-the-ischia-resurgent-caldera-a-journey-across-an-active-volcano-in-the-gulf-of-naples.html</a>
Academy/Expert	Project Futurevolc	Project Futurevolc	Language:English Description: Web page of Project Futurevolc	<a href="http://futurevolc.hi.is/">http://futurevolc.hi.is/</a>
Educational	EDURISK Project (english)	Istituto Nazionale di Geofisica e Vulcanologia	Language:English Description: Booklet for primary schools. The EDURISK Project website provide other resources on natural hazard for (primary- High School)	<a href="http://www.edurisk.it/edition/volcanoes-and-us/">http://www.edurisk.it/edition/volcanoes-and-us/</a>
Educational	RACCE project	Civil Protection Department (Italy)	Language:Italian, English, French, Greek Description: Material for educational activities	<a href="http://racce.rhmc.uoc.gr/enorth/userfiles.html">http://racce.rhmc.uoc.gr/enorth/userfiles.html</a>
Educational, Academy/Expert	University of Iceland	University of Iceland	Language:English, Icelandic Description:Web page	<a href="https://www.visitdavefur.is/">https://www.visitdavefur.is/</a>
General public	INGV - InfoPoint (isole di Vulcano e Stromboli)	Istituto Nazionale di Geofisica e Vulcanologia	Language:Italian, English, French Description: Web page Volcanoes: Stromboli, Vulcano	<a href="https://isole.ingv.it/">https://isole.ingv.it/</a>
General public	MED-SUV web site	Istituto Nazionale di Geofisica e Vulcanologia	Language:English Description: Video Volcanoes: Etna, Vesuvio, Campi Flegrei	<a href="http://med-suv.eu/sip/zh2mukius32">http://med-suv.eu/sip/zh2mukius32</a>
General public	The Civil Protection for Families	Civil Protection Department (Italy)	Language:Italian, English Description: Handbook introducing main risks present on Italian territory, suggesting to the approach to be taken in front of small or large emergencies, a practical and effective way to build your own "Family Plan of Civil Protection"	<a href="https://www.protezionecivile.gov.it/en/publicazione-the-civil-protection-for-families">https://www.protezionecivile.gov.it/en/publicazione-the-civil-protection-for-families</a>
General public	Katla National Park	Katla National Park	Language:English, Icelandic Description:Web page: information about Katla volcano, and how to visit it safely	<a href="http://www.katlaaegjask.com">http://www.katlaaegjask.com</a>

Figure 4: Example of an available research in EDUBOX, promoting resources with a chosen word

### 3. Conclusions

The implementation of EDUBOX section in the Gateway, gives the possibility to the EUROVOLC WP3 Task 2 outcomes to go beyond the EUROVOLC Project. EDUBOX be can be considered a first step, and further development is already being made. In order to keep EDUBOX updated, the development of a web form giving the possibility to EUROVOLC colleagues (at least) to add or update resources, and also to add new categories.

### 4. Acknowledgements

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***EDUBOX is on Gateway EPOS-EUROVOLC***

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