

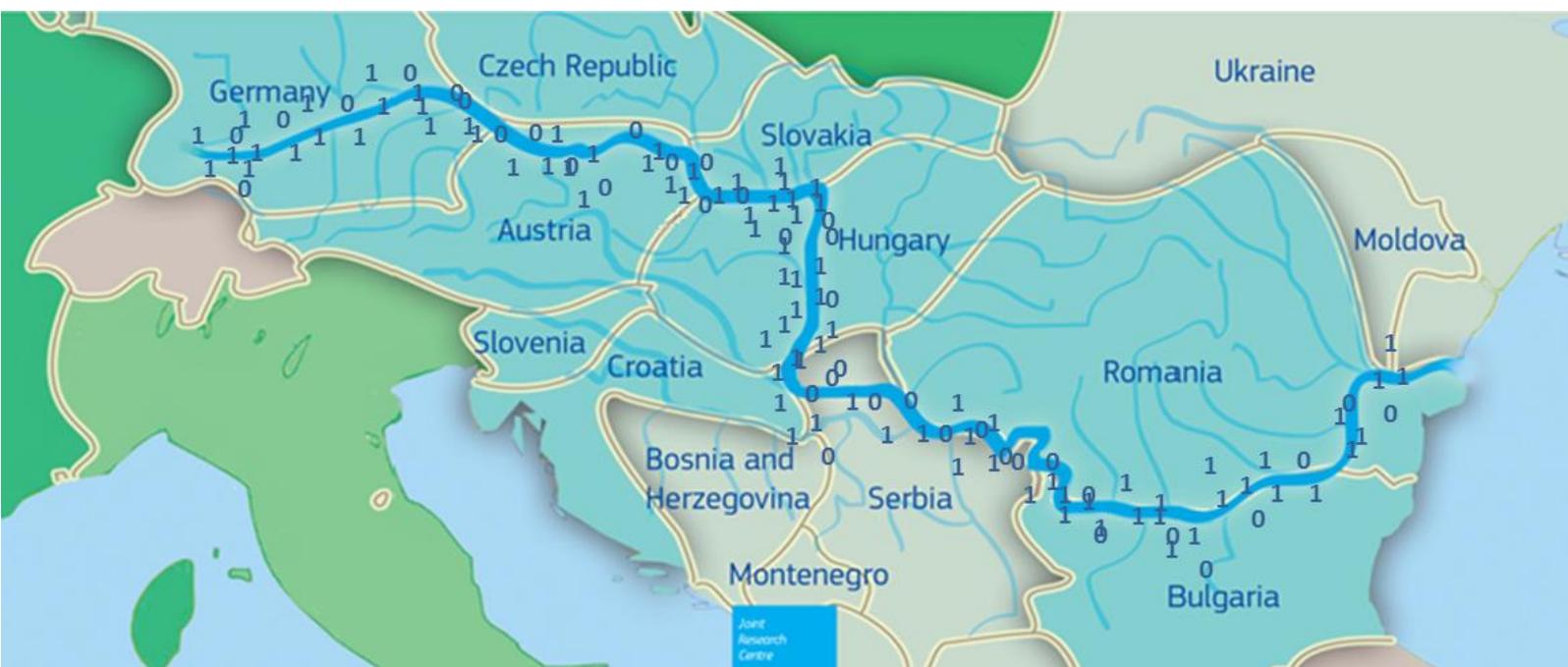
Danube Reference Data and Services Infrastructure

Danube_Net (D1)

State-of-play and organisational context of data infrastructure in Austria

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1 Introduction

1.1 Outline of the task

The main objective of this document is to give an overview of the data and service infrastructure in Austria and represent the state-of-play. Moreover, the present document aims at making the connections between the projects, stakeholders and networks behind the scenes of the infrastructure. This document describes the connection points to the Danube Reference Data and Services Infrastructure (DRDSIO) and relates this work to the JRC Nexi projects on air, water, bioenergy and soils.

1.2 Outline of the document

The report focusses on the national perspective and gives an overview of relevant datasets and data sources, the legal background as well as the political framework and supporting initiatives. Beyond the national point of view the lists show the broad context of the EU Strategy for the Danube Region (EUSDR) in terms of data and how the networks involved are working.

The information is based on different sources of publicly available online information (all links were available on 20th January 2015), individual contacts with stakeholders and interviews with experts in the Austrian Environment Agency.

The lists are not comprehensive and cover only selected aspects of broader issues. In particular, the networks and stakeholder engagement only represent a snapshot. It has to be emphasised that the order within the list is purely coincidental.

1.3 Context of the country and the main players

There are two ways to describe the data structure in Austria. First of all, it can be structured by the federal levels, and then by different technical issues that networks rely upon. Two main approaches equally give impetus to the availability of data. On the one hand the INSPIRE directive and related regulations, which operate as a top-down approach for the national administration. On the other hand, a bottom-up approach can be seen as a pull from the need for data in the economic world, in particular from the open data community.

1.3.1 Legal background

The INSPIRE Directive 2007/2/EC is implemented at the national level in Austria through *Geodateninfrastrukturgesetz – GeoDIG* BGBl. I Nr. 14/2010¹. The competences on environmental issues in Austria are both on national and federal levels, where nine legal acts have been implemented. Coordination points and working groups manage the workflow for the INSPIRE implementation (See Figure 1). All relevant information on the national level is published online². As mentioned in the INSPIRE monitoring report 2013³, there is no

¹ https://www.ris.bka.gv.at/Dokumente/BgblAuth/BGBLA_2010_I_14/BGBLA_2010_I_14.html

² <http://www.inspire.gv.at>

³ http://www.inspire.gv.at/INSPIRE_Oesterreich/Monitoring-und-Reporting.html

national geodata infrastructure for INSPIRE. There are a variety of geodata infrastructures on national, regional and local levels. An example of a coordinated SDI is the GEOLAND.AT⁴, which was launched by the federal states.

Besides INSPIRE's implementation, many data are also available on open governmental data platforms. The legal background here relates to the *Informationsweiterverwendungsgesetz (IWG)*⁵ the Austrian implementation of the Public Sector information (PSI) Directive⁶ in 2005.

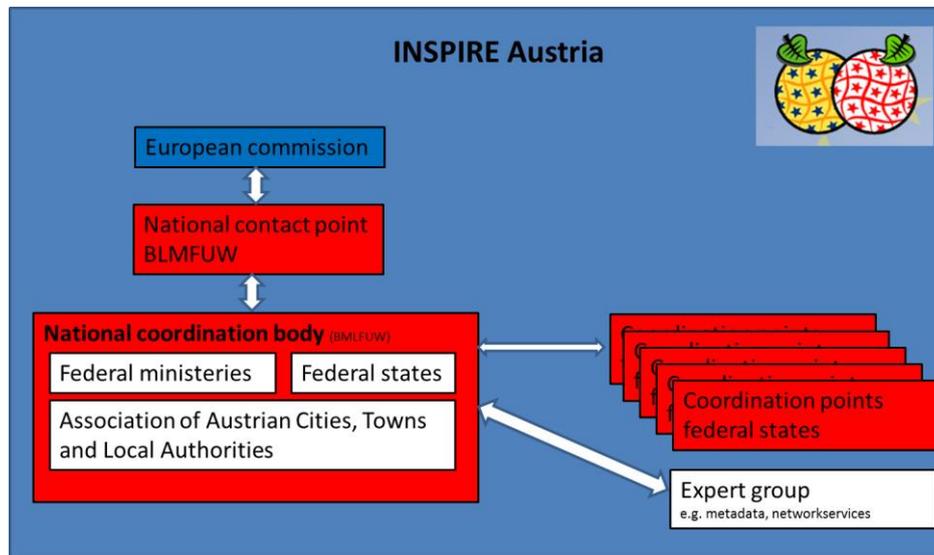


Figure 1: National INSPIRE coordination structure in Austria

1.3.2 Danube Strategy

In 2011, Austria started with the preparatory phase in the Danube strategy framework. The EUSDR is a macro-regional strategy, aimed at strengthening and developing the Danube region. The national contact point in Austria is the federal chancellery, supported by the Federal Ministry for Europe, Integration and Foreign Affairs, alongside the Austrian Association of municipalities and cities.⁷

The EUSDR is structured in 11 priority areas. Each priority area (PA) is coordinated by representatives of two nations of the Danube region. Austria coordinates:

- Priority Area 1a "Mobility and intermodality of inland waterways." Together with Romania
- Priority Area 9 "People and Skills". Together with Moldova
- Priority Area 10 "Institutional capacity and cooperation" coordinated by the City of Vienna (Austria) and Slovenia.

⁴ <http://www.geoland.at/>

⁵ <https://www.ris.bka.gv.at/GeltendeFassung.wxe?Abfrage=Bundesnormen&Gesetzesnummer=20004375>

⁶ Directive 2003/98/EC

⁷ http://www.oerok.gv.at/fileadmin/Bilder/2.Reiter-Raum_u._Region/4.Europ-Raumentwicklung/Makroregionen/EUSDR/Docs/OE_und_EUSDR_final_20121002.pdf

Furthermore, Austrian members of the Steering Groups were nominated for all priority areas⁸. The Austrian Conference of Spatial Planning maintains a platform with all information about international cooperation within the European Union and beyond, as well as a database with all current and finished projects funded by the European Territorial Cooperation (ETC) programme⁹.

2 Data providers

2.1 Examples of data providers

The list in table 1 is mainly based on the results of the monitoring report 2013¹⁰ of progress on INSPIRE. Moreover the list is supplemented by datasets of NGO organisation, which also provide data and data portals. Some data providing institutions do not publish all kinds of data on the INSPIRE platform, as presented in the last column of the table. A key describes the classification of the data providers to show the institution in a wider context.

Table 1: List of data providers

Key

Federal States
Organisation related to the Federal Ministry of Agriculture, Forestry, Environment and Water Management
Traffic
Organisation related to the Federal Ministry of Science, Research and Economy
Energy sector
Interdisciplinary working group/ project
Third sector/NGO

⁸ <http://www.oerok.gv.at/eu-kooperationen/portal-makroregionale-strategien/eu-strategie-fuer-den-donaunraum/oesterreich-und-die-eusdr.html>

⁹ <http://www.oerok.gv.at/eu-kooperationen/english-information.html>

¹⁰ http://www.inspire.gv.at/INSPIRE_Oesterreich/Monitoring-und-Reporting.html

No.	Organisation	Fullname	Typical data provided
1	AGES	Österreichische Agentur für Gesundheit und Ernährungssicherheit GmbH	Bathing water, radon monitoring, crop gene bank, veterinary service
2	AMA	Agrarmarkt Austria	INVEKOS, ÖPUL (Austria's Agri-environmental Programme)
3	APG	Austrian Power Grid	High-voltage system (Lines, cable, substations)
4	AWI	Bundesanstalt für Agrarwirtschaft, The Federal Institute of Agricultural Economics ("AWI")	agricultral production areas, Grüner Bericht (Data for agriculture and forestry)
5	BEV	Bundesamt für Eich- und Vermessungswesen	administrative boundaries, official map series (1:50000), addresses, DEM, cadastre, orthoimagery, geographical names - register of real estate
6	BFW	Bundesforschungszentrum für Wald, Austrian Research Centre for Forests	Forest Development Plan, Forest-inventory, BIOSOIL Soil
7	BMLFUW, Nachhaltigkeit	Ministerium für ein Lebenswertes Österreich	
8	BMLFUW, Wasser	Ministerium für ein Lebenswertes Österreich	
9	Burgenland	Federal state	Laserscan DEM, local development plan (spatial planning), road network, tunnel in federal state competence, protected sites(natura 2000, national parks etc.), natural monuments, hospitals, schools, air emission cadastre, hunting and fisheries cadastre, water protection area, hazard zone plan, biotopes
10	Ennskraftwerke	Energy	
11	Kärnten	Federal state	Laserscan DEM, local development plan (spatial planning), road network, tunnel in federal state competence, protected sites(natura 2000, national parks etc.), natural monuments, hospitals, schools, air emission cadastre, hunting and fisheries cadastre, water protection area, hazard zone plan, biotopes
12	KNG, Kärnten Netz	Energy	

13	LFRZ	Land-, forst- und wasserwirtschaftliches Rechenzentrum GmbH	Orthoimagery 2006-2011, Natural Hazard Overview & Risk Assessment Austria Zones
14	LFZ Gumpenstein	Höhere Bundeslehr- und Forschungsanstalt für Landwirtschaft Raumberg-Gumpenstein	
15	Netz Burgenland	Energy	
16	Netz Niederösterreich	Energy	
17	Netz Oberösterreich	Energy	
18	Niederösterreich	Federal state	Laserscan DEM, local development plan (spatial planning), road network, tunnel in federal state competence, protected sites(natura 2000, national parks etc.), natural monuments, hospitals, schools, air emission cadastre, hunting and fisheries cadastre, water protection area, hazard zone plan, biotopes
19	ÖBB	Federal Railway	
20	Oberösterreich	Federal state	Laserscan DEM, local development plan (spatial planning), road network, tunnel in federal state competence, protected sites(natura 2000, national parks etc.), natural monuments, hospitals, schools, air emission cadastre, hunting and fisheries cadastre, water protection area, hazard zone plan, biotopes
21	Salzburg	Federal state	Laserscan DEM, local development plan (spatial planning), road network, tunnel in federal state competence, protected sites(natura 2000, national parks etc.), natural monuments, hospitals, schools, air emission cadastre, hunting and fisheries cadastre, water protection area, hazard zone plan, biotopes

22	Salzburg AG	Energy	
23	Statistik Austria		National and regional socio-economic development statistics (area of permanent settlement, regional statistical raster, census tracts, urban areas, Standardised Death Rate (caused by myocardial infarction, Alzheimer's disease, alcohol abuse, arteriosclerosis, cancer etc.), cohortes, population, labor statistics)
24	Steiermark	Federal state	Laserscan DEM, local development plan (spatial planning), road network, tunnel in federal state competence, protected sites(natura 2000, national parks etc.), natural monuments, hospitals, schools, air emission cadastre, hunting and fisheries cadastre, water protection area, hazard zone plan, biotopes
25	Tirol	Federal state	Laserscan DEM, local development plan (spatial planning), road network, tunnel in federal state competence, protected sites(natura 2000, national parks etc.), natural monuments, hospitals, schools, air emission cadastre, hunting and fisheries cadastre, water protection area, hazard zone plan, biotopes
26	TIWAG-Tiroler Wasserkraft	Energy	transmission network, gas, power
27	UBA	Umweltbundesamt, Austrian Environmental Agency	Corine Landcover 2006, 2012, environmental noise, LISA, Land Information System Austria, BORIS Soilinformation system, treatment plant
28	VERBUND Hydro Power	Energy	transmission network, gas, power
29	VERBUND Renewable Power	Energy	transmission network, gas, power
30	VERBUND Thermal Power	Energy	transmission network, gas, power

31	Via Donau		river transport system, transportation of goods
32	Vorarlberg	Federal state	Laserscan DEM, local development plan (spatial planning), road network, tunnel in federal state competence, protected sites(natura 2000, national parks etc.), natural monuments, hospitals, schools, air emission cadastre, hunting and fisheries cadastre, water protection area, hazard zone plan, biotopes
33	Vorarlberger Energienetze	Energy	transmission network, gas, power
34	Wien	Federal state	Laserscan DEM, local development plan (spatial planning), road network, tunnel in federal state competence, protected sites(natura 2000, national parks etc.), natural monuments, hospitals, schools, air emission cadastre, hunting and fisheries cadastre, water protection area, hazard zone plan, biotopes
35	ZAMG	Zentralanstalt für Meteorologie und Geodynamik	Meteorological data (climate data, precipitation, cloud, temperature, pressure)
36	GBA	Geologische Bundesanstalt, Geological Survey of Austria	geological map (1:50.000, 1:100.000, 1:200.000), hydrogeological map 1:500.000, metallogenetic map 1:500.000
37	ASFINAG	Autobahnen- und Schnellstraßen-Finanzierungs-Aktiengesellschaft (motorway operator)	national road network, tunnel
38	GIP	Graph Integration Platform GIP	national road network, tunnel
39	Openstreetmap Austria		
40	Open data	Open data portal Austria, non governmental data	
41	ÖROK	Austrian Conference on Spatial Planning, ÖROK	database for transnational and network programs, ÖROK atlas, spatial planning development in Austria
42	Geoland	Open Data Portal of the Austrian Provinces	basemap.at

Most data are provided by the public sector, mainly from the federal states and the ministries. Other research data and data coming from the third sector are rarely published for access. Thematically, the data related to European Directives are the best structured and are available through services. Energy data are mentioned in the platform, but mostly without possibilities to get access to the data. In addition, the access to data from the traffic sector is covered coherently.

2.2 INSPIRE data

As already mentioned, most data are collected on the INSPIRE platform. This has the advantage of a standardised metadata catalogue and a similar structure that are known all over the European Union. Furthermore, there is the opportunity to embed the national source node in further platforms to reuse data. The DRDSI platform is a very good example and fulfils the philosophy of reusing data – to make them accessible to a wider circle of users also beyond the borders of the EU. The next step in INSPIRE process is the harmonisation of the data.

The national INSPIRE platform¹¹ (Figure 2) bundles all metadata of Austria. However, many data providers have their own geoportal, where data can be visualised and some analysis can be done online without any GIS software.



Figure 2: Austrian Metadata portal and national INSPIRE homepage

2.3 Open data

The Federal states, in particular, have promoted the open data philosophy. Most of their INSPIRE data are both meet INSPIRE's requirements and are available as open data. The licensing is standardised through Austria Creative Commons¹² as "CC-BY -Österreich 3.0". The open governmental data platform¹³ contains all open governmental data, allowing data in different formats to be downloaded (See Figure 3).

¹¹ www.inspire.gv.at

¹² <https://creativecommons.org/licenses/by/3.0/at/deed.en>

¹³ <https://www.data.gv.at/>

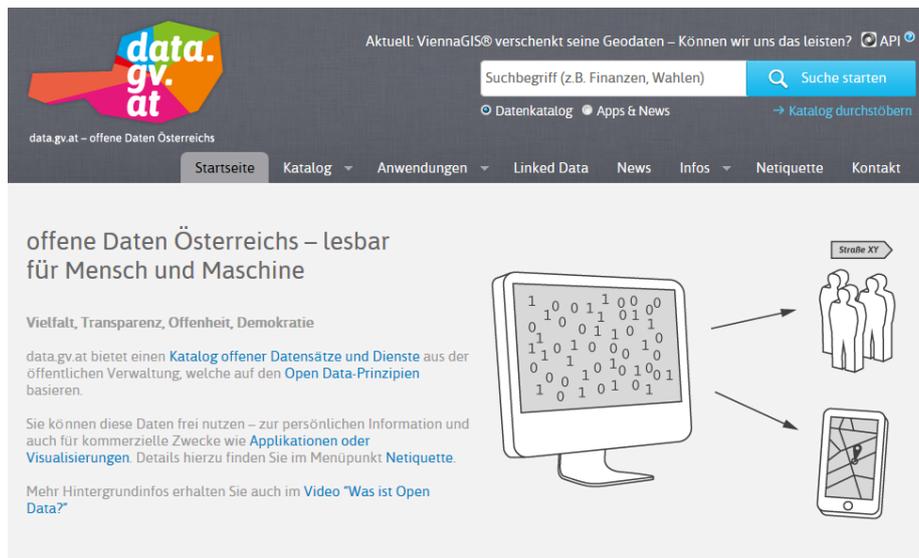


Figure 3 Open governmental data platform Austria

The success of the Open Government Data (OGD) community can be seen in the number of datasets provided by the platform. In January 2015, there are more than 1500 datasets made available, with several in more than only one format. Further steps in the OGD community include a pilot project to address semantic issues and linked open data¹⁴.

It should be noted that this bottom-up approach permits a lot of freedom to share data and it is easier to fulfil the OGD standards than to follow the more inflexible ones of INSPIRE. Nevertheless, the interoperability and the keywords in the INSPIRE approach makes it easier to use the data for non-German-speaking partners, which can help data access and reuse across borders.

3 Policy-making organisations

Austria is a parliamentary representative democracy comprised of nine federal states. In Austria, the policy-making institution with legislative powers is the parliament. The public administration at the ministries acts as the executive authority. The ministries have a variety of consulting institutions with excellent expertise which are listed in the tables of data providers and research organisations. Additionally, the authorities of the federal states have some legislative authority distinct from the federal government, e.g. in matters of social care, culture, youth and nature protection, hunting, buildings, and zoning ordinances.

Table 2 List of policy-making organisations

No.	Organisation	Description	Organisation type/level	Key projects and functions

¹⁴ <http://www.semantic-web.at/>

1	BMLFUW	Ministerium für ein lebenswertes Österreich - The Austrian Federal Ministry of Agriculture, Forestry, Environment and Water Management	central	Extensive data for agriculture, forestry, water, environment (Waterinformationssystem Austria, Floodrisk, EDM, soil data, noise maps ...)
2	BMVIT	Bundesministerium für Verkehr, Innovation und Technologie - Austrian Federal Ministry for Transport, Innovation and Technology	central	Co-Wanda project, Newada
3	BKA	Bundeskanzleramt - Federal Chancellery	central	OGD, National Contact Point for the EUSDR strategy
4	BMG	Gesundheitsministerium - Federal Ministry of Health	central	Gesundheitsportal Gesundheit.gv.at - health portal
5	Österreichischer Städtebund	municipalities cities (http://www.staedtebund.gv.at) Austrian Association of Cities and Towns	local	base statistics; opinion leaders
6	City of Vienna		regional/local	Smart Cities, CityGML,
7	Österreichische Gemeindebund	Austrian Association of municipalities (http://gemeindebund.at/)	local	base statistics; opinion leaders
8	Regional and local governments		regional/local	Electronic services for self-government Data centre of towns and villages

The policy-making organisations are well connected to many institutions in the field of public administration and research. For DRDSI related topics, there already exists many regulations and many data fall into the remit of INSPIRE, or a clear corresponding address to get access is available. It is hoped that the PSI Directive and an active declared need for data will help to push for wider access to those data which are currently not available.

4 Support of national data infrastructure

The responsibility and the support of a national data infrastructure are dispersed at national and federal states level. The implementation of the INSPIRE Directive acts as key piece of legislation.

Table 3: Support of the national data infrastructure

No.	Name of organisation	Key legal act	Key initiative	Key funding
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1	The Austrian Federal Ministry of Agriculture, Forestry, Environment and Water Management	BMLFUW (Bundesministerium für Land- und Forstwirtschaft, Umwelt und Wasserwirtschaft)- Implementation of the INSPIRE Directive: Bundesgesetz, zur Schaffung einer Geodateninfrastruktur des Bundes) Geodateninfrastrukturgesetz – GeoDIG BGBl. I Nr. 14/2010	INSPIRE	state budget, FP7
2	Federal Chancellery	Bundesgesetz über Regelungen zur Erleichterung des elektronischen Verkehrs mit öffentlichen Stellen (E-Government-Gesetz, E-GovG) StF: BGBl. I Nr. 10/2004 (NR: GP XXII RV 252 AB 382 S. 46. BR: 6959 AB 6961 S. 705.)	eGovernment	State budget
3	Federal Chancellery / federal states	Cooperation Open Government Data Österreich	open government data	state budget
	Federal states	Cooperation federal states www.geoland.at	INSPIRE, state geoinfrastructures	state budget
4	Burgenland	Burgenland: Burgenländisches Geodateninfrastrukturgesetz, LGBl. Nr. 8/2011		
5	Carinthia	Kärnten: Änderung des Kärntner Informations- und Statistikgesetzes, LGBl. Nr. 64/2010		
6	Lower Austria	Niederösterreich: Änderung des NÖ Auskunftsgesetzes, LGBl. Nr. 60/2010		
7	Upper Austria	Oberösterreich: Öö. Geodateninfrastrukturgesetz, LGBl. Nr. 79/2010		
8	Salzburg	Salzburg: Änderung des Gesetzes über Auskunftspflicht, Dokumentenweiterverwendung, Datenschutz und Landesstatistik, LGBl. Nr. 60/2011		
9	Steiermark	Steiermark: Steiermärkisches Geodateninfrastrukturgesetz 2011, LGBl. Nr. 35/2011		
10	Tyrol	Tirol: Tiroler Geodateninfrastrukturgesetz, LGBl. Nr. 54/2010		
11	Vorarlberg	Vorarlberg: Landes-Geodateninfrastrukturgesetz, LGBl. Nr. 13/2010		
12	Vienna	Wien: Wiener Geodateninfrastrukturgesetz, LGBl. Nr. 37/2010		

It should be noted that the access to many datasets is not always the result of the legal background and laws mentioned above. In many cases data exist as a product of projects and other international policies. Austria has very well established GDIs and different platforms give access to many data. There are, however, some data which are not easy to obtain. In some cases decisions were made to restrict access to some data but, in recent times, the barriers became weaker and some data which were not accessible were opened. This can be seen to mostly depend on a strong demand from data users and the projects they are working for. For the DRDSI, this could be an opportunity to make such needs more visible.

5 Research organisations

Table 5 shows a list of Austrian research organisations and key projects in cooperation with other institutions within the Danube catchment. It can be seen that there is a great potential for the DRDSI in terms of supporting data-sharing in the region. This list is not exhaustive and shows only a small sample of the existing network among the international funded projects. The database provided by the Austrian conference of spatial planning (ÖROK) served as the main source for this list. ¹⁵

Table 4: List of Austrians research organisations

No.	Name of organisation	Type of organisation	Completed and current projects creating data or tools within and for the danube region	Project Name	Research programme
1	Austrian Federal Ministry of Agriculture, Forestry, Environment and Water Management – Forest Department, Municipality of the City of Vienna – Vienna Waterworks (MA31)	Public research centre	Mitigating Vulnerability of Water Resources under Climate Change	<i>CC-WARE</i>	South East Europe Programme Area
2	via donau – Österreichische Wasserstraßen Gesellschaft	Public research centre	Waste management for inland Navigation on the DANube	<i>WANDA</i>	South East Europe Programme Area
			Convention for waste management for inland navigation on the Danube	<i>CO-WANDA</i>	South East Europe Programme Area
			Network of Danube Waterway Administrations	<i>NEWADA</i>	South East Europe Programme Area
			Network of Danube Waterway Administrations, data and user orientation	<i>NEWADA duo</i>	South East Europe Programme Area
				<i>Danube Floodrisk</i>	
3	Municipality of the City of Vienna – Vienna Waterworks (MA31)	Public research centre	Climate Change and Impacts on Water Supply	<i>CC-WaterS</i>	South East Europe Programme Area

¹⁵ <http://www.oerok-projektbank.at/Suchmaske.asp>

4	Nationalpark Donau-Auen GmbH	Public and private re-search centre	Danube River Network of Protected Areas, Development and Implementation of Transnational Strategies for the Conservation of the Natural Heritage at the Danube River	<i>Danubeparks</i>	South East Europe Programme Area
	Nationalpark Donauauen GmbH		Anchoring the Danube River Network of Protected Areas as Platform for Preservation of Danube Natural Heritage	DANUBEPARKS STEP 2.0	South East Europe Programme Area
5	Austrian Federal Ministry of Agriculture, Forestry, Environment and Water Management – Forest Department		Practical Use of MONITORing in Natural Disaster Management	<i>MONITOR II</i>	South East Europe Programme Area
			Practical Use of MONITORing in Natural Disaster Management	<i>MONITOR</i>	INTERREG IIIB
6	Montanuniversität Leoben	University	Sustainable Aggregates Planning in South East Europe	<i>SNAP-SEE</i>	South East Europe Programme Area
7	Universität für Bodenkultur	University	Formalisation of informal sector activities in collection and transboundary shipment of wastes in and to CEE	<i>TransWaste</i>	Central Europe
	Universität für Bodenkultur Wien <i>Institut für Produktionswirtschaft und Logistik</i>		Sustainable Networks for the Energetic Use of Lignocellulosic Biomass in South East Europe	<i>FOROPA</i>	South East Europe Programme Area
8	Amt der Burgenländischen Landesregierung	Public re-search centre	South East Transport Axis	<i>SETA</i>	South East Europe Programme Area

9	Umweltbundesamt	Public re- search cen- tre	Sustainable Transport and Mobility in Tour- ism Regions along the Dan- ube	<i>TRANSDANUBE</i>	South East Europe Pro- gramme Area
			Stakeholder ori- ented flood risk assessment for the Danube floodplains	<i>Danube Floodrisk</i>	South East Europe Pro- gramme Area
			Sustainable Mo- bility and Tour- ism in Sensitive Areas of the Alps and the Carpathi- ans	<i>ACCESS2MOUNTAIN</i>	South East Europe Pro- gramme Area
			EBONE – Euro- pean Biodiversity Observation Net- work		LTER Eu- rope
10	Joanneum Research GmbH	Public re- search cen- tre	Environmental Infrastructure Measures in the River Drava Basin	<i>Drava River Basin Pro- ject</i>	CADSES
11	AREA m styria GmbH	Private re- search cen- tre	Mechanism for fostering innova- tion in South East Europe	<i>FINNO</i>	South East Europe Pro- gramme Area
12	Technische Universität Graz Institut für Was- serbau und Wasser- wirtschaft	University	SEE HYDRO- POWER, targeted to improve water resource man- agement for a growing renewa- ble energy pro- duction	<i>SEE HYDROPOWER</i>	South East Europe Pro- gramme Area
13	Umweltverband WWF Österreich	Private re- search cen- tre	Sustainable Inte- grated Manage- ment of Interna- tional River Corri- dors in SEE Coun- tries	<i>SEE RIVER</i>	South East Europe Pro- gramme Area
14	Universität Wien Insti- tut für Geographie und Regionalforschung	University	Joint Disaster Management risk assessment and preparedness in the Danube macro-region	<i>SEERISK</i>	South East Europe Pro- gramme Area
15	Technische Universität Wien, Institut für Geoinformation und Kartographie	University	South East Eu- rope improved virtual accessibil- ity through joint	<i>SIVA</i>	South East Europe Pro- gramme Area

			initiatives facilitating the rollout of broadband networks		
16	Alpen-Adria Universität Klagenfurt	University	Franziseischer Kataster: Digitising historic sources and maps, Danube monarchy		FWF
17	Universität Innsbruck	University	Franziseischer Kataster: Digitising historic sources and maps, Danube monarchy		FWF
18	Austrian State Archives	Public research centre	Historical maps (763-1887) rectified; Google Earth plugin	mapire	

This list does not visualise the network itself. It only shows one Austrian partner involved in a particular project. Another approach could have the aim to connect different network platforms. In addition, many projects related to the BalkanGEONet with Austrian participation are also listed at the PNF platform¹⁶.

From the data point-of-view, this list does not reflect the potential availability of outputs from these projects, in particular as project results are contained within reports and most data themselves are normally not available. The DRDSI platform would be a good way to join data outcomes and networks together and to provide a holistic overview on the project itself, as well as to its related network.

6 Stakeholder engagement organisations and networks

Table 6 gives an overview of key organisations who can aid stakeholder engagement to support DRDSI work within the EUSDR on different levels of engagement.

Table 5: List of Stakeholder engagement and networks

No.	Name of organisation	Type of organisation	Main area of interest
1	EU Umweltbüro	International	European Environmental Bureau Austria
2	Umweltdachverband	National	Umbrella Organisation of Environment – Water protection, biodiversity, sustainability, Alpine convention, environmental education

¹⁶ <http://pnf.unist.hr/index.php/search-pnf-database>

3	Ökobüro	National/international	Coordination Bureau of Austrian Environmental NGOs (e.g. Greenpeace Austria, WWF Austria, Friends of the Earth Austria and Umweltforum - forum of Austrian scientists for environmental protection)
4	Naturfreunde International - NFI	National/international	Naturefriends
5	ÖAL – Österreichischer Arbeitsring für Lärmbekämpfung	National	Working group of noise prevention
6	Österreichischer Alpenverein	National	Austrian Alpine Association
7	EIONET	International	Development and dissemination of information of information concerning European's environment
8	AGEO	National/international	Umbrella organisation for geographic information in Austria. EUROGI Member
9	PGO - Planungsgemeinschaft Ost	Regional, cross bordering	Strategies for regional development in eastern part of Austria and cross-border countries. Centrope Map, Centrope Statistics
10	CORP - Competence Center of Urban and Regional Planning	International	Association for Urban Planning and Regional Development in the Information Society
11	WKO - Wirtschaftskammer Österreich	National	Representation of interests of Austrian companies
12	FFG - Austrian Research Promotion Agency	National	National funding institution for applied research and development in Austria. Services for Austrian enterprises, research institutions and researchers
13	Open Knowledge Foundation Austria	National	Association for open data, knowledge and science
14	Institute for the Danube Region and Central Europe	whole Danube Region	Promotion of good neighbourly relations. DanubeCat platform
15	ProDanube international	whole Danube Region	Policy framework, to improve waterway infrastructure and to promote investments into ports, fleet as well as nautical and logistics personnel

16	Agency for European Integration and Economic Development:	whole Danube Region	Developing the public structures in the framework of EU-funded projects in Eastern and South-Eastern Europe committed by the Austrian administration
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The list above only shows an extract of a variety of stakeholders. It represents a mixture of stakeholders in different fields, such as environmental lobbying, the GIS sector, economic interests and stakeholder organisations which rely directly on a priority area of the EUSDR. An activity may have some influence on the Priority Areas that Austria is leading within the EUSDR.

The stakeholders working on data harmonization and connecting cross-border data have potential to support the DRDSI's objectives. These stakeholders work mostly on a regional or national level. The international associations are mostly connected to smaller stakeholders, as was seen at the JRC Scientific support highlevel meeting in Vienna in 2014.

7 Conclusions

The investigations of this report give an overview of the state-of-play of data infrastructures in Austria. It is a starting point for further activities for cooperation with the DRDSI. The lists show how diverse the spectrum of different actors from Austria and the whole Danube region are. Their activities can improve the collection of the data inventory, assessment of data access conditions and Danube_NET's outreach efforts, and not only in Austria. Furthermore, the work on a sustainable platform reusing services can convince stakeholders to become engaged and to provide further support for the DRDSI.

Therefore, it is important for further work to outline the challenges for the DRDSI projects. The following points are a result of experiences and discussions with stakeholders and colleagues.

The stakeholders were impressed by the amount of datasets on the platform contributed by Austria. They also liked the well-structured homepage. However, the abstract level of the DRDSI project was seen as a very challenging issue. This means that it is not easy to make the benefits for stakeholders visible directly. It is possible that pilot project could remove such doubts.

Another statement often heard was the lack of resources and capacity to support the DRDSI or to provide extra data that are not already published on one of the platforms noted above. Moreover, some colleagues in the academic field criticised that preparing data without a specific demand is difficult to justify and expressed their concerns about data quality.

Despite these main critical points, the potential of the DRDSI is recognised. Through targeted projects, new pilots can be undertaken especially on cross-border issues for harmonising data, including of other older projects.