BIG CHALLENGES TO OVERCOME TOWARDS A COMMON FRAMEWORK FOR ALL EUROPEAN ENVIRONMENTAL REFERENCE DATA

Letâ€™s Embrace Itâ€¦ INSPIRE is Here to Stay

The idea behind INSPIRE is quite simple: a common framework for all European environmental reference data. The implementation of such a system, however, is less simple. Technology is one thing – but when 38 European countries have to deliver their data, preferably in such a way that they are interoperable, anyone can see that there are big challenges to overcome. Stefan Jensen is head of data governance at the European Environmental Agency (EEA), one of the European institutions that would profit from a harmonised environmental data system and fulfils a coordinating role in the implementation. With the next INSPIRE conference in Antwerp coming up in September, now seems a good time to hear more about his experiences, views and challenges with regard to INSPIRE.

How important is INSPIRE in achieving the objectives of the EEA?
"At the EEA we have a lot of different objectives. Our policy reports, however, are key to anything we do. And for these reports we need data. Some of this data we are getting from others, some of it we are preparing ourselves. INSPIRE is part of that data story. It helps with improving data quality and it helps us with getting more harmonised data from countries. The issue, of course, is that the fruit takes a long time to ripen. We have not harvested the real benefits yet. Nevertheless, after a long time of implementation, some of the first positive elements are starting to show."

You have been working in this area for quite a while. Have the ambitions around INSPIRE changed compared to when you started?
"I don't think the ambitions have changed, although I do think we may have become a bit more realistic. But let's face it, the landscape around us has also changed. If we look at the speed with which technology has advanced, it is easy to see that we sometimes have difficulties in having the right discussions at the right time. More than ten years ago, when I was working in the water policy area, we already wrote in our guidelines that GML (Geography Markup Language) should be provided by the countries. Only now is GML slowly coming in, as we are seeing the limits and newer technical options emerging. In other words, technology is running faster than many other things. Nevertheless, technology has helped a lot with opening up data. In addition to INSPIRE, we have many other open data initiatives that are supported by new technology. However, INSPIRE is the one that is also directly supported by legislation. That makes it an important factor in opening up European data."

What do you mean when you say you may have become more realistic?
"From the very start, INSPIRE has formulated rather broad ambitions. It was meant to make provisions for environmental data. But how do we specify environmental data? Especially nowadays, with the sustainability agenda linking deeper with other sectors such as transportation, agriculture, energy and health, providing standardised and integrated environmental data becomes a very huge ambition. So, learning from this, we have started to prioritise our key environmental data needs related to the legal obligations, which exist on the European level and in countries. Through defining these priorities and limiting our scope a bit, implementing INSPIRE becomes slightly more doable."

What is the overall approach in the implementation of INSPIRE?
"INSPIRE has three key areas in which it should deliver. The first one is about metadata. Metadata is what you need to identify data. It is like the catalogue in a library. The catalogue is crucial to help you find the books. The second area is about making the actual data available. This can be in the form of services, mainly download services. So, if the first step is the catalogue which helps you find the books, the second step is about getting the actual books. The third leg is harmonisation, or interoperability. This is especially important for an agency like ourselves. It is easy to imagine the challenge when, for example, we need to combine data from many different sources and countries into one report. That is where we need harmonised data. In the overall INSPIRE process, we are not very far yet in terms of interoperability, but it does help that, nowadays, we can insist on some of the conditions around data. The data needs to be described, it

has to be in the catalogue and you should be able to find it. And you need to be able to get it, by downloading it to your computer at once or, when available, by using a service which in fact is the modern alternative to downloading."

In the European data context, we hear a lot about e-reporting. What is that? And how does it relate to INSPIRE?
"It is true, the wish for e-reporting is creating even more pressure for harmonised European data. E-reporting is based on the notion that countries, when reporting, should not be uploading their individual files into a kind of European machine. Reporting, in the near future, should instead be done with a system of nodes in which data can be exchanged directly with other data. But in order to have such a system working, we have to take some steps beforehand, such as conducting a fitness check of the available data. That fitness check, especially on older environmental data, is something that has been taking place recently according to a common methodology with clearly defined steps. INSPIRE has helped shaping some of those steps. So, to summarise things, e-reporting is an important driver to improve and modernise our reporting. And INSPIRE addresses some of the steps that are required to come to such an e-reporting system."

Looking back at the last INSPIRE conference, in Strasbourg and Kehl, what was your key takeaway?
"Both countries, France and Germany, have a good governance level and good policy awareness. They are trying to move things forward. Policy buy-in is very good. What impressed me even more, though, was the growth of the exhibition area. The exhibition showed that there are quite a lot of industrial activities developing around INSPIRE. Given the fact that INSPIRE is based on very technical legislation, to me this is an indicator of success. If industry picks up, then we will see things developing. But again, there is still a long way to go. And it is difficult, because some people are losing their breath on the way."

What helps you not to lose your breath in the process?
"There are many open data initiatives but, as I mentioned, INSPIRE is the one that is supported by legislation. And that helps. Like it or not, INSPIRE is here and it is here to stay. So countries will need to do something. However, what I do expect to happen is that in the area of interoperability, we will see some compromises. Partly this is already happening. Some people call it 'flexibility', others speak of 'flattening'. But there are indeed discussions on how to ease things technically to make implementations of INSPIRE successful. But even so, the overall ambition is still to have a common infrastructure for spatial data. And there are big drivers to this ambition. Think of the global sustainable development goals. Think of the new climate targets. In addition to this, I think that developments in technology are going in the right direction. I believe that there is a growing appetite for data and for making it publicly available."

What are you hoping to find at next INSPIRE conference which will be hosted by Belgium and The Netherlands?
"I don't expect a big bang, but we will see further progress in implementation. The Netherlands and Belgium are good examples of countries that are keen on delivering, and they will share some valuable insights. We will also see best practices from other European countries, showing us where we are in the process. I know already that there has been a large number of really interesting submissions, so the conference is certainly something to look forward to."

Thinking of all the countries that will gather at the conference, is there something that you need from them?
"One of the things I would like to reconfirm is the fact that we are working on the interoperability of the environmental data that we collect. And in order to do so, we need more – if not all – countries to make their data available. Even if countries haven't done much on the harmonisation of their data yet, they need to identify the relevant data, and they need at the very least to make it available 'as is'. That would already be a great step forward. We know that in our INSPIRE data system, in which we collect the data submissions from countries, it is very difficult for users to find what they need. That is something we want to improve. And when we have a broader insight in data from all the different countries, we can address some of the interoperability issues, step by step, thematic area by thematic area."

Are there more things that you can use some help with?
"Our need is clearly to show where INSPIRE datasets are starting to provide benefits for our European environmental goals. So best practices are always welcome. We certainly see The Netherlands as an inspiring example. Geonovum, the country's centralised coordination and mapping agency, if I may call it that, seems to have a strong mandate from the government to bring all stakeholders together. That is the way to find out where the obstacles are and how you can solve these issues together. In too many countries, this important dialogue is not held. Sometimes countries are more federally organised, sometimes many different institutions are partly responsible… there are many different explanations. But I think it would be inspiring and motivating for other countries too to see more of what is happening in The Netherlands."

So, it is important to find evidence of success?
"Yes, that is always helpful. On the other hand, it would also be very interesting to have a look at those INSPIRE areas in which, compared to the situation in 2014 or 2016, things are not moving. We would like to know more about those specific areas. Is there something that we as European institutions can help with? What can we do to get things moving? To put it differently, we also call upon countries to bring their requirements to the table. It is a two-way process."

If you would have magical powers, what would the world look like with regard to INSPIRE?
"The dream is that anyone can easily get quality reference data on the environment over the internet. If, for example, you would look at a European river on the map, you should be able to zoom in on specific areas and find all the relevant data right there. You should be able to zoom in on the same river in another country, or in the border area, and still find the same kind of data. That is what I would love to see. And it is possible. We need to stay dedicated to the topic. Many countries are motivated, others perhaps a bit less so sometimes. But we need to carry on. Building common data infrastructures is simply a tedious thing to do. It takes time. And, unfortunately, there is no magic wand. It is just hard work that needs to be continued."

The European Environmental Agency (EEA)

The European Commission has a set of agencies that in a practical way support European policies. The agencies are located in different countries. The EEA is in Copenhagen and it acts as an interface between DG Environment, other environment related DG's, the countries, and civil society. The EEA prepares reports on the state of the environment for which it collects data. In that area of data collection falls the topic of INSPIRE.

Stefan Jensen is head of the Data Governance group, which is part of the larger Information and Data Management group within the EEA. Together with his colleagues, he looks into data standards, data infrastructures, metadata aspects and new ways to model data. With regard to INSPIRE the Data Governance group acts as a coordination team towards all countries involved. The group members advise on the implementation of INSPIRE in general and they help identify areas in which it is advisable for countries to start with. In addition, the

group acts as a networking partner towards the internal EEA organisation and other environmental stakeholders.

About Stefan Jensen

Stefan Jensen is head of the group on data management in the European Environment Agency (EEA), which has a coordinating role in the implementation of the EEA's spatial data infrastructure and of INSPIRE.

Interview by: Rob Burkhard, editor at Geonovum

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