GEOSTAT 3 project – Minutes from coordination meeting

Date: February 14-15, 2018
Venue: Statistics Sweden, Stockholm

Participants

Coordinators
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Consultants
Marina Backer Skaar, EFGS secretary
Pier-Giorgio Zaccheddu, Federal Agency for Cartography and Geodesy (BKG), Germany
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Eurostat
Ekkehard Petri (Day 1, pt 2, on remote access)

Agenda/index of minutes

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Slides from presentations are annexed to the minutes.

1 Welcome

Marie Haldorson gave an introduction to the meeting and welcomed all participants. Everyone introduced themselves.

We went through the agenda and did some slight changes.

2 WP1

Before Christmas the draft of the WP-1 report was sent to the members of UN-GGIM: Europe Working Groups on Core Data and on Data Integration. Pier-Giorgio had compiled a document with most of the comments, from which Jerker had summarized some major issues for consideration by the GEOSTAT group. Comments that concerns details in the report will be handled by Jerker with possible requests for contributions from others. Jerker will provide a version of the power point (with general concerns) with solutions and comments from the project as feedback to the UN GGIM: Europe community.

During this last year of the project the input from the geospatial community on the final recommendations coming from the project, will be provided by BKG and Kartverket, since they are already in the project. Statistics Sweden will also contact the Swedish NMCA.

2.1 European vs. global framework

In the draft, the framework is called ESGF – European Statistical Geospatial Framework. But in the comments it was suggested to name it GSGF: Europe, considering that it is a guide on how to implement the global framework in

Europe, rather than a separate European framework. The purpose of the approach is to use the principles of the global SGF, but elaborate the content for the European scene.

The project agreed on this concern and decided not to name it ESGF to avoid confusion. By keeping the acronym "GSGF" it will be clear that the proposals coming from GEOSTAT 3 is about how to implement the global framework in Europe, rather than creating a European version of the framework different from the global one.

A clarification is needed of the generic global issues and what is specific for Europe. The global issues should stick to the section introducing the GSGF.

2.2 References to harmonised data

When it comes to fundamental and harmonised data, for example INSPIRE and the UN-GGIM specifications on core data, we should avoid to duplicate. Instead we should use references to other texts. But we need to consider that some data themes need to be more clearly explained or referenced. For example INSPIRE is probably considered complicated by the NSIs, why we should put some extra effort on making it more clear what is demanded of the ESS countries in connection with the GSGF.

We should focus on European data themes. They rely on global ones, but are more detailed and relevant for our purpose. This will be clarified in the introduction.

Some of the more technical descriptions will be handled by the technical task force of the project. When we are not able to answer all questions, we could mention what is missing.

2.3 The mandate – ownership of recommendations

We discussed the mandate and ownership of the recommendations. To whom are the recommendations made and who is responsible to enforce the implementation? The future management of the recommendations is an important issue, since it affects how the document will be maintained.

If there is a need for it, it could be clarified in the report that the GEOSTAT 3 project is behind the recommendations and that the project itself does not have a mandate to enforce the recommendations. After the report has been delivered it will be up to the ESS to decide on how to reach out and gain endorsement of the recommendations.

2.4 Receiver of the framework – the geographical scope

We discussed the geographical scope of the recommendations. Is it only the "political" Europe, meaning countries in EU/ESS, or is it the whole geographical definition of Europe?

The answer would be both, as the ESS has initiated the task to draft the framework, building on INSPIRE. The mechanisms of ESS and INSPIRE will be the main "tools" to implement the recommendations. But the recommendations can also include a wider definition of Europe, especially as many candidate countries are already working on harmonising their NSDI's and National Statistical Systems to prepare for future EU membership.

According to the grant agreement we should propose generic solutions to include more countries. But there is a risk that the content will be to general if the approach is to broad. We agreed that EU/ESS needs to be the core on which to focus. Countries in the wider Europe (outside of the EU) are encouraged to implement those recommendations that they find relevant.

2.5 Receiver of framework – the institutional scope

From the UN-GGIM: Europe consultation we learned that there is some confusion over the mandate/institutional scope of the recommendations. "Who" is the ESGF? What is its mandate? To whom are the recommendations made? Who is responsible to enforce the implementation? This issue is partly related to the geographical scope.

The project agreed on, that the recommendations are drafted as a proposal by the GEOSTAT 3 project (and no other). The project itself has no mandate and cannot enforce the implementation, but hopefully recommendations will be endorsed by the EU (and others). This will be a recommendation on its own.

2.6 The statistical focus of the document

The purpose of the framework, for both the geospatial and the statistical community, should be more clear. The overall goal is data integration and by necessity we will keep a strong statistical focus in some parts (e.g. principle 2), but not only NSI's should be addressed. In some countries geospatial agencies are also involved in actions described under principle 2. This should be reflected better in the text.

It was concluded that it is more relevant to describe what elements of data integration that need to be in place rather than to focus too much on which institution should be responsible, as this may vary between countries.

2.7 Include work process in document

In the comments there was a proposal to illustrate the model from a workflow point of view. A stronger focus on service architecture and workflows would clarify how the different elements of the framework are linked. This was mainly the approach of the GEOSTAT 2 project, where the GSBPM was used to structure the integration of geospatial and statistical information.

In GEOSTAT 3 we need to prioritize the infrastructure that should be in place, in favour of the processes. However, we are aware of that it is a challenge to describe only the infrastructure, without including the work processes. One solution to it could be to add some additional chapters that describe some of the processes. It could be tested in WP-2, how the workflows could be illustrated.

It could be a good idea to wait with the descriptions of work processes, until we have the time to gather more experience of the practical use of the framework. There is a need from the mapping community, to learn more about how the statistical community deals with the technical issues of linked data, standards, formats etc.

2.8 Terminology and explanations

We will include a glossary/explanation for acronyms. We also have some concepts that need to be explained better. Some terms have an ambiguous meaning and can be interpreted differently in different communities. Some examples of that are *Statistical units*, *Geographies* and *Geocoding*.

2.9 Structure of report

There is a demand for references to practical examples. Those will be described in a separate appendix, which is already under way. Our goal is to keep the main document general and short, which means that the details will be put in the appendix.

2.10 Miscellaneous

The point-based foundation needs to be further clarified and open to other types of data that also qualify for geocoding, for example building polygons, cadastral parcels and road segments. It should be clarified that a point-based foundation should be used in contradiction to traditional use of area-based data (census tracts etc), to assign location to unit record data.

The comments from UN-GGIM: Europe asked for a stronger emphasis on service oriented architecture. That could be implemented in the report, if we

could get the support from some mapping institutions. The case example from Statistics Finland, of Geocoding service, will highlight the benefits of geospatial micro service in production of geospatial statistics.

Regarding Linked Open Data (LOD), we think that it may be too early to make specific recommendations. LOD has not been around for a long time and it was concluded that is still somewhat experimental. We agreed to give some generic proposals and illustrate them with progress made in some countries. Statistics Finland will contribute to that part.

GDPR is the up-coming framework that restricts usage of personal data. Should we describe how that will affect our recommendations? We concluded that it is too difficult to predict impact, as it so new and there are still a lot of uncertainty of how to implement it. There will probably be different approaches within ESS.

There was a proposal to classify our recommendations in long-term and short-term tasks. We could put all recommendations from the text in a table and classify them. That would provide a good summary and overview.

Conclusions:

- Rename the document to *GSGF Europe* or *Implementation guide for the GSGF in Europe*. This way it will be clear that it is a global framework with European guidelines.
- Clarify what is generic GSGF content and what is added as specific European.
- Focus on data themes that are relevant for ESS countries.
- Relation between global and European data themes and specifications need to be clarified in the introduction. Pier-Giorgio and Arvid will help out.
- If there is a need for it, clarify that the GEOSTAT 3 project is responsible for the recommendations and that they should be included in the regular processes at Eurostat, otherwise they will not be maintained.
- Clarify the geographical and institutional scope and mandate.
- Clarify the purpose of the framework, for both communities.
- We cannot restructure the whole document from an enterprise architecture point of view, but point to the usefulness of including such development as a next project phase.
- If we have the time, we will add some extra chapters to describe some of the work processes. They could rely on tests being done in WP-2.
- Include a glossary/explanation of acronyms.
- Explain concepts that have a different meaning for the two communities, for example *geocoding*.

- Develop the text about point-based foundation.
- Develop the text about services, with the support from BKG, Kartverket and Statistics Finland.
- Provide only generic suggestions on Linked Open Data, no technical recommendations.
- Provide no recommendations on GDPR, but mention on-going work.

3 WP-1; Technical task force

Niek van Leeuwen presented progress and ongoing work within the technical task force, that is testing Table Joining Services (TJS) for automated mapping. The goal is to determine which conditions are necessary to set up a fully functional solution for automated linking of record data and map services using Census grid statistics in SDMX format + OGC map services for grids. The setup will be tested as part of WP-2.

Tests have been made using INSPIRE data from the eight countries participating in GEOSTAT 3, plus Belgium. The result is documented in a Progress report written by Niek and Pieter Bresters.

The next step is to implement a TJS, using the grid geometry as a reference to join with the SDMX files. The task force will also create SDMX files according to the INSPIRE PD-model. Once the TJS is operational, the join can be tested.

Norwegian Kartverket will participate in the test.

4 WP-2: Testing the SGF

Erik presented each of the three indicators that will be tested within WP-2. We had a discussion based on the descriptions/metadata produced by UN-GGIM Europe WG DI SG 2.

Several of the indicators are vague and complicated in their descriptions. For example it is not clear if we should measure the population or the public transportation in indicator 11.2.1. Perhaps we should rather try to demonstrate the power of good geospatial data and the usage of the framework, illustrated by the tests. The tests will show what kind of data you need, in order to get good results. We would like to show that once you have good data, you are able to use it for many purposes.

Concerning the disaggregation levels, we need to decide what is relevant for Europe. The result may differ depending on the purpose. There may be a need for some sort of data if the purpose is to plan improvements of the

measured situation. Then you will probably need data that is as accurate and detailed as possible. But if the purpose is to evaluate the situation in comparison with other countries, then you will need data that has the same definition and qualities all over the measured region. This is something that we must consider in the testing.

The tests will show to what extent data is comparable; if there is a functioning common method and dataset for all ESS countries, or if the national variations are acceptable. The tests will show if the results are comparable. That is also relevant for how to present the result, if it should be by NUTS/ LAU regions or by grids. The tests will show what level of detail is possible in our countries.

France conducted a similar study for indicator 15.1.1. They compared different datasets to study the effect on the result. We could use the same approach as that study. http://ggim.un.org/meetings/2017-4th_Mtg_IAEG-SDG-NY/documents/Session_4_Frederick_Vey.pdf

11.2.1 Access to public transport (Tier 2)

The full title of the indicator is *11.2.1 Proportion of population that has convenient access to public transport, by sex, age and persons with disabilities*.

It will probably be difficult to get access to data of persons with disabilities. A solution is to use information about the station (facilities for disabled persons or not) rather than the information about the population.

We could use Sweden's proxy indicator that says that the station should offer a transport service at least once an hour between 06:00-20:00 during working days. We do not need data of traffic frequency for the global comparison.

The metadata contains a lot of suggested disaggregation levels. We must decide what is relevant for Europe and if the regional level is more important than the suggested disaggregation groups?

We will need data that shows in which populated areas there is a deficiency in access. If the purpose of the study is to decide where to improve the public transportation service, you will probably need more detailed data.

11.3.1 Land consumption by population growth (Tier 2)

The full title of the indicator is *11.3.1 Ratio of land consumption rate to population growth rate*.

To clarify the content we need to decide which land use or land cover classes to include. Should it only be urban land or should we also include built up land outside of the cities, for example roads, harbours and airports. Even agricultural land and forestry are mentioned in the metadata. Should we also include "green space" within the cities, for example parks, sports fields and playgrounds?

There are different methodologies for the delimitation of urban areas. The TERCET 1 km grids are more coarse, but they cover the whole European region and gives us comparable data with the same definition. It might even be a global standard, as it is used in some global studies. The Global human settlement layer (GHSL) is another data source that should be tested.

National delimitations are more detailed and accurate, but the definitions vary a lot between countries. Again, the choice of data depends on the purpose of the study.

This will be a good opportunity to test different delimitations and discuss the results. It will be beneficial for the work of UN-GGIM: Europe as well, as there are several indicators that need to use urban area delimitation data.

There are already some studies being done, where different types of delimitations have been tested and evaluated. There is a study of urban sprawl that EEA has done. We will check which data sources they used.

11.7.1 Built up areas of cities, open space for public use (Tier 3)

The full title of the indicator is *11.7.1 Average share of the built-up area of cities that is open space for public use by all, by sex, age and persons with disabilities*.

The metadata is missing a definition of the connection between open space and population, as no distances are mentioned. This is a problem if you want a more detailed result. But for a more overall result you could define the whole city as one unit.

We must decide how to define the open space areas. Is it all open space including the street network, or is it just green areas? We must also define what is meant by *public use*.

The definition and delimitation of cities/urban areas should be the same as for indicator 11.3.1. Then the results of the indicators can be used together.

Here we have the same issues concerning Global/European data vs. national data. Here it concerns the definition of cities, open space and population. To

measure open space we must probably use earth observation data. We know of some examples to explore further.

4.1 Timetable for the testing

The plan is to accomplish all tests during the first half of 2018. The metadata descriptions by UN GGIM: Europe will be finished by March, then the testing can start. We will need a WebEx start-up meeting for that.

The results should be delivered as country reports to Statistics Norway, by the 30th of June, at the latest. Statistics Norway will then evaluate the results during the autumn and present it at the EFGS conference in October. By 30th November they will have a draft of the test report ready.

UN-GGIM: Europe would like some preliminary results by this autumn, so they can use the conclusions in their final report. We need to agree on a suitable solution. The draft of the GEOSTAT 3 results could be sent to UN-GGIM: Europe during autumn.

4.2 Choice of unit record data

Unique identifiers of addresses and the management of them is a problem in many countries, also the harmonisation between countries. Many countries only have address data produced for the census.

4.3 Template for reporting

Erik showed a draft of a template that we will use when documenting the test results. It includes documentation of solution, results and assessments.

We discussed the template's system of grading the SGF-principles and their applicability in the testing. Statistics Norway will more clearly define what each different grade means, so the grading will be comparable. Perhaps three categories are easier to handle. Also consider changing the grades from letters to numbers.

4.4 Example from Sweden: Using Swedish localities to measure indicator *11.3.1 Land consumption by population growth*

Sweden presented their national delimitation of urban geographies/localities and how it suits the description in the indicator's metadata. An assessment to calculate the indicator was done, using the formula in the metadata. The formula was rather complex and poorly described and the result was hard to

understand without clear explanations. It should be evaluated if it is the best to use.

Conclusions:

- Statistics Norway will consider the result of this discussion and include it in the metadata descriptions of each indicator.
- The template for indicator evaluation will be updated.
- When the metadata descriptions are finished, in March, the tests can start. We will need a WebEx start-up meeting then.
- Deliver the results as country reports to Statistics Norway, latest by 30th June.
- Statistics Norway will present a draft for a test report by 30th November.

5 WP-2; Detailed planning of tests

We had a "tour de table" where everyone presented the indicators and data they plan to use for the testing.

5.1 Statistics Sweden

Sweden presented an approach for measuring *11.2.1 Access to public transportation*. Thanks to an assignment carried out recently, the data needed for the indicator has been processed and assessed. EU standards have been used for the calculations.

Statistics Sweden used national data provided jointly by the regional public transportation service providers. This means that the data is not authoritative, which is a problem because it then lacks demands on quality and documentation. The data format was GTFS (Google General Transit Feed Spec).

Transportation data from 2012 and onwards is available. It includes stops with coordinates and time table. Only stops that were used at least once an hour from 06:00-20:00 on weekdays was used in the calculations. The distances 400, 500, 1000 and 2000 metres was used.

Data does not currently allow for assessment of availability for disabled, but this may be possible in the future, on transportation stop level.

The population data was geocoded, for each individual, to address point location. It was retrieved from the central population registry. Point-based

population data makes calculations very easy and can be repeated for any geographic areas.

When calculating the other two indicators, Statistics Sweden have access to data used when producing official statistics of localities/urban areas, and green space in urban areas. The data has a high quality of detail.

5.2 Statistics Austria

Statistics Austria has access to data on cities and access points for public transportation. Information of access point available for disabled people is also at hand.

Data sources to measure open public space and land take needs to be look into further.

5.3 Statistics Finland

Statistics Finland will not take part in the indicator tests in WP-2. But as they have a national initiative to calculate geospatial related SDG indicators, they will look at what data is available. They consider they have all data that is needed, with some exceptions. Co-operation with other data providers is thus needed.

5.4 Statistics Netherlands

Neither Statistics Netherlands will take part in the indicator tests in WP-2. They have access to data on train stops and commercial data on bus stops. But it has not been used for statistical purposes before.

5.5 Statistics Norway

Statistics Norway will test all three indicators.

5.6 CSO Poland

CSO Poland has a proxy indicator for 11.2.1 and 11.7.1. But there is no data to use for indicator 11.3.1, since it is difficult to find data for all criteria.

They will have to look for other data with coordinates than authoritative which enable to test proxy indicator for 11.2.1 or 11.7.1. There is Google maps and another open service where you can search for a public transportation route.

5.7 BKG Germany

BKG Germany will also test these three indicators but not as part of the GEOSTAT 3 project. However, the project welcomes voluntary contribution from BKG Germany if possible.

5.8 Statistics Portugal

Statistics Portugal have data to test indicators 11.3.1 and 11.2.1. They do not have a population register with coordinates for every person, but will use building coordinates to make assumptions of the population. To measure urban areas they will probably use municipality borders for some parts of Lisbon. Transportation data might not be available for the whole country.

It will be an important case study, to test how to link population data without having a population register. That is the case for many countries. Statistics Portugal will test using census population on postal codes.

5.9 Statistics Estonia

Estonia has access to time tables, so that they may test indicator 11.2.1. Information on train stops is not open data, so they have to test the access to that data.

There is a great national interest to measure access to green areas, so indicator 11.7.1 will be tested in some way. It is a problem, though, that there is no clear definition of green areas in the metadata. Data for that indicator is land cover data.

5.10 Approach of WP-2 testing

Statistics Norway will summarize the present state in a table, together with the available testing results from UN-GGIM: Europe. We can already see that this project has a coverage for all indicators. There are at least two countries on each indicator.

We need to agree on exactly what definitions and methods to use. We will have a final round in the project group when everything is on the table.

We discussed how to handle time gaps of a couple of months in data. We agreed on that it is acceptable and it is most unlikely that it will make any big difference. We recommend not using time tables for the first week of the year, as national holidays might affect the transportations with fewer stops compared to a normal weekday. If you compare data for several years you should use the same date for every year.

Marie showed us an example of indicator 15.3.1 (Tier 3) using Land cover data and measuring artificialization rate and soil sealing. It was an example of how the results could differ depending on which data you use. It depends on methods, scales and content of data. It is therefore important to use the same source.

Conclusions:

- Statistics Norway will summarise the present state in a table. They will distribute all documents when they are updated.
- We must agree on exactly what definitions and methods to use, interpreting the global metadata from a European context.
- Smaller time gaps in data are acceptable.
- When studying public transportation, only use time tables of a normal working week. Use the same date for every year, if you are comparing several years.

6 WP-1; Work through report, list of good practise examples

We went through every principle in the report, discussing the needs of improvement and which cases we should present in the good practise annex.

We will do a follow-up up during the up-coming WebEx meetings. Input to the report is needed by March or early April, so we have a discussion material ready for the GISCO meeting in April. Deadline for reporting use cases is the 30th of June. We will then have time to structure them and present some of them at the EFGS conference in October.

6.1 Some general comments on the report

We discussed if we should include references to the ELS in the framework, as it is not yet operational. We concluded that it is important to take stock of the intention reflected through this initiative. Even though it is not a full service yet, we should focus on what the ELS can become in the near future, because it is very beneficial for data harmonisation.

What should be in the main report and what should be in the good practise annex? An example of a checklist should be in the annex, but if we can extract a recommendation from it, we should put the recommendation in the main report, with reference to the whole checklist in the annex.

Can we rely on that the reader will be going to the annex to get the full text? The texts before the recommendations are now quite short.

We have a lot of proposals for case studies, but it is hard to decide now exactly who can do what. We will get back to that later.

There are several unclear issues with both principle 4 and 5. That should be explained in the introduction. The message from Eurostat has been to focus mainly on the principles 1, 2 and 3. It should be acceptable to have more generic recommendations for principles 4 and 5.

We might need a stronger emphasises on services and a more processual perspective.

6.2 Principle 1

This chapter is ok for now. Jerker will manage the comments from UN-GGIM: Europe.

We need references to INSPIRE and the work of UN-GGIM: Europe, either in this chapter or in an introduction. Pier-Giorgio and Arvid will contribute with that text.

It was suggested to remove some parts of the text, to make it shorter.

All core data should be recommended as open data, not only address data.

6.3 Principle 2

In this chapter we have more work to do:

- The coherence between statistical objects in unit record data and spatial objects in location data need to be refined.
- The part about *Store location only once* is ok for now, but needs some more attention later on.
- The part about *A safe and effective data storage* needs to be developed.
- The part about *Consistency and quality of geocoding results* is ok for now, but needs practical cases.
- *Consistent management of non-matching data* needs recommendations.

6.4 Principle 3

This chapter is ok for now. Jerker will manage the comments from UN-GGIM: Europe.

6.5 Principle 4

We have some things left to write in this chapter, but the present sections are ok for now. We need to consider the level of concretion of the proposals that we put here.

6.6 Principle 5

This chapter needs to be structured in the same way as the others, concerning the level of detail. We must be more clear that this is about dissemination, not about consuming data.

Some specific issues to take care of:

- *Map services to increase access to pan-European data*: Needs more content and probably also a revision.
- The metadata in Principle 5 is statistical metadata, which will help the user to find the services. We need to develop this part.
- The part about national data portals supporting dynamic integration of data needs recommendations. Statistics Finland will contribute to the text about national data portals. They will discuss this with the Mapping Agency of Finland.
- In the section about privacy, we should not go into the details, as there is no solution of it yet. This is a complicated issue. Studies are being done but there are no results to show yet. However, this section still needs some more text.

Conclusions:

- Input to the report is needed by March or early April.
- Deadline for reporting use cases is the 30th of June.
- It should be explained in the introduction, that there are several unclear issues with both principle 4 and 5.
- We need a stronger emphasises on services and a more processual perspective.

7 WP-4; EFGS conference 2018, Helsinki

Rina Tammisto presented the planning of the conference so far, with a draft for agenda with time frames, suggestions of key note speakers, motto, logo and some picture of the venue. The suggested motto was *Finding the future – together*.

The conference will be for three days. The general assembly will be the last day after lunch. During the second day of the conference there will probably be parallel sessions, depending on the number of abstracts. This will be the first time that an EFGS conference has parallel sessions, so it will be a test of this approach.

To get the audience more active, Statistics Finland is considering using a mentometer mobile phone app. A moderator will give the audience questions, that everyone will answer with their mobile phone app and the result will be shown on a screen. The audience could also use the app to ask questions to the presenters.

It is a good idea to have a moderator during the conference, as we had in Dublin.

A draft of themes will be presented in the invitation letter. Some ideas of themes for the key note speakers were AI, future studies, machine learning and projects going on. One proposal was to invite someone from Google or Facebook, to talk about their geospatial data innovations and implementations. Marie had a suggestion of a speaker who had been using the EFGS grids in the software R, http://hadley.nz/.

Key note speakers that are traveling a long way could also give a workshop, in addition to just their speech.

It is important that decisions and other sorts of information about the conference reaches the whole EFGS organisation, as all are not part of the steering committee.

8 WP-3; EFGS website

Anna Sławińska presented the work within WP-3, concerning the EFGS website. There are a lot of visitors from the United States and China, which is a bit surprising. The visitors from China could be explained by the large number of study visits from China, that Statistics Sweden has received lately.

We should use the information that is posted at the EFGS site on Facebook and put it by the www.efgs.info news as well.

By the end of this project we should put our good practise cases on the website. We also need to integrate our guidelines at the website. This might need a new structure of how the cases and the framework is presented there. But it is important to do it, to make our work more visible. We could already now start thinking of the structure.

Anna will test implementing EFGS at the CROS portal. Ekkehard will help providing a test space.

Concerning the future maintenance of the website, there will be no GEOSTAT project during 2019. The proposal is to instead finance it with a Tender. That will also be the case for the EFGS conference in 2019. Ekkehard would like to know the interest for the website Tender as soon as possible.

The cost for the hosting of the website is quite small, about 100 EUR per year. In contrast, the big cost is the work to keep the website maintained and well updated.

9 Upcoming meetings

9.1 GEOSTAT 3 meetings

Karin will send out doodles for WebEx meetings in the next 6 months. We will meet at least once a month.

The project will be more focused on WP-2 and the testing, which will be reflected in the meeting agendas. Norway and Sweden will have a dialog about the agenda, before each meeting.

Our next physical meeting will be in Helsinki, in conjunction with the EFGS conference in October. Karin will check with Marja which day we could meet. We prefer to meet before the conference starts.

Some of the project's members will meet at the GISCO meeting in April. If there is a need, they could meet up for a separate project meeting.

9.2 Meetings with related projects

Jerker, Ingrid and Anna will probably go to the UN-GGIM: Europe meeting in Switzerland, 8-9 March. There will be a discussion of the indicators then.

Vilni is continuing his studies of the global grid systems, by looking at scripts, specifications and taking contacts. There are no physical meetings in his agenda for that.

The Q-Conference in Krakow this summer will probably have a geospatial session. Karin has send an abstract about the GEOSTAT 3 project.

Marie will gather a group at Statistics Sweden, to discuss geospatial activities at the International Statistical Institute Conference in Malaysia next year. They are gathering abstracts now.

The global UN-GGIM are now forming working groups responsible for every principle in the framework. They are also making guidance documents. Statistics Sweden and Australia are taking the lead of the group responsible for Principle 2 and the implementation of the framework.

Ingrid will update our communication plan within WP-5.

10 Summing up

Marie thanked us all for two very productive days. This was our last GEOSTAT 3 meeting in Stockholm.

We concluded that we have a good division of tasks, between the GEOSTAT 3 project and the EFGS steering committee, where the steering committee is responsible for more practical and strategical questions concerning the conference and the website. Within WP-3 and -4 the GEOSTAT 3 is functioning as a financer and a reference group, which is working very well.

11 List of actions

WP	Activity	Performer
WP-0	Send doodles for WebEx meetings in the next 6 months.	Statistics Sweden
WP-0	Check with Marja which day we could meet in Helsinki, for our next physical meeting.	Statistics Sweden
WP-1	Manage the comments from UN-GGIM: Europe concerning the report, both details and those that we have discussed during this meeting.	Statistics Sweden
WP-1	During this last year of the project we will primarily address those NMCA's that are already in the project. Statistics Sweden will also contact the Swedish NMCA.	Statistics Sweden, BKG, Kartverket
WP-1	Input to the report is needed by March or early April.	All
WP-1	Reporting of use cases , latest the 30th of June.	All

WP-1	Technical task force: Proceed the work according to plan.	Statistics Netherlands
WP-1	Technical task force: Involve the Norwegian Kartverket.	Statistics Netherlands, Kartverket
WP-2	Summarise the present state of available data in each country. Distribute this to the project group.	Statistics Norway
WP-2	Produce metadata descriptions of each chosen indicator. This will be ready in March.	Statistics Norway
WP-2	Update the template for indicator evaluation. Work through the grading system.	Statistics Norway
WP-2	The testing period will start with a WebEx start-up meeting.	Statistics Norway, Statistics Sweden
WP-2	Performance of tests	All
WP-2	Include in the tests, how the workflows could be illustrated	All
WP-2	Deliver the testing results to Statistics Norway, by 30 June, at the latest.	All
WP-2	Evaluate the results. Present a draft for a test report, by 30 November at the latest.	Statistics Norway
WP-2	Deliver preliminary results to UN-GGIM: Europe during autumn 2018.	Statistics Norway
WP-3	Test implementing EFGS at the CROS portal. Contact Ekkehard who will help providing a test space.	CSO Poland
WP-3	Report interest to Ekkehard, for the 2019 EFGS website Tender, as soon as possible	All
WP-4	Proceed the work according to plan.	Statistics Finland
WP-5	Update the communication plan.	Statistics Austria