



EUROPEAN COMMISSION
Research Executive Agency



Seventh Framework Programme
Cooperation: Space Call 3
FP7-SPACE-2010-1

Grant Agreement: 262371



**Enabling Access to Geological Information in
Support of GMES**

**D3.1: Survey Team Requirements and Recommendations
Version 1**

14th July 2011
CR/11/116^N

Dissemination Level:	Public	
Author:	Luke Bateson, BGS. Graham Glanfield, FNPA.	Date: 20/6/2011
Checked by (WP Leader):	Stuart Marsh, BGS	Date:
Approved by (Coordinator):	Ren Capes, Fugro NPA	Date: 14/07/2011

Date of Issue: 14th July 2011

CHANGE RECORD

Version X.X of [Date] to Version X.X of [Date]

Section	Page	Detail of change

EXECUTIVE SUMMARY

This version of the deliverable 3.1 comprises the questions that will form the questionnaire to be sent to each Geological Survey. Answers will be analysed to gain user requirements to help design the PanGeo service. The questionnaire has also been designed to enable the core project partners to gain an understanding of what auxiliary information the Geological Surveys hold that can be integrated with the PSI data to produce the PanGeo Service.

The questionnaire addresses 11 areas:

1. General information about the person completing the survey
2. Use of the PanGeo service
3. Information about the Geological Survey and their skills
4. Geological and geohazard issues
5. Auxiliary data and information
6. Politics
7. The PanGeo geohazard summary
8. The PanGeo portal
9. Support information for the creation of PanGeo geohazard information
10. The future of PanGeo
11. Any other information

TABLE OF CONTENTS

Change Record

Executive Summary

1	INTRODUCTION.....	6
2	OBJECTIVE OF THE QUESTIONNAIRE	6
3	THE QUESTIONNAIRE.....	8
3.1	GENERAL INFORMATION	8
3.2	THE USE OF THE PANGEO SERVICE.....	9
3.3	THE GEOLOGICAL SURVEYS (PEOPLE, SKILLS AND WORKING PRACTISES)	10
3.4	GEOLOGICAL AND GEOHAZARD ISSUES	12
3.5	AUXILIARY DATA AND INFORMATION	15
3.6	POLITICS.....	17
3.7	THE PANGEO GEOHAZARD SUMMARY.....	18
3.8	PANGEO PORTAL	19
3.9	SUPPORT INFORMATION FOR THE CREATION OF PANGEO INFORMATION	21
3.10	THE FUTURE OF PANGEO	21
3.11	OTHER INFORMATION	21

1 INTRODUCTION

This is the first delivery of PanGeo Deliverable 3.1 ‘Survey Team Requirements and Recommendations’. This first version of this deliverable is a questionnaire to be sent to all the Geological Surveys involved in PanGeo. Subsequent versions of this deliverable will present the analysis of the questionnaire answers in order to present the PanGeo user requirements from the Geological Surveys’ point of view.

In addition to this questionnaire you will receive supporting material. This material is designed to introduce the concept of the PanGeo project to you and provide the background information necessary to complete this questionnaire. Please read this information first.

2 OBJECTIVE OF THE QUESTIONNAIRE

The PanGeo project has the objective of enabling free and open access to geohazard information in support of GMES. First it is necessary to design the service and the methodology by which the service will be created. As part of the design process we wish to gather inputs from the EU Geological Surveys to ensure that your views are considered.

The objective of this questionnaire is therefore to gain two types of information from the Geological Surveys; 1) information on how you would like the PanGeo service to look, its functionality etc. and 2) your opinions on how the PanGeo service should be created. It is envisaged that each Geological Survey will be both a creator of PanGeo information, - through the production of the PanGeo geohazard information - as well as a user of PanGeo information - through the access of the geohazard information in the PanGeo portal.

The questionnaire is broken down in to several sections. Some questions are multiple choice, but many have a free text box to enable you to add your views. The views of Local Authorities, the anticipated users of PanGeo information are being gathered within PanGeo Work package 4.

3 DELIVERY OF THE QUESTIONNAIRE

The questionnaire will be made available to the Geological Surveys on the PanGeo website. It will be an interactive form based survey where the person taking part can check multiple choice boxes and add additional information in text boxes. Issuing the survey in this way has the advantage that responses are captured and recorded automatically in a Microsoft Excel spreadsheet thereby easing the data analysis process.

Each person taking the survey will require their own unique logon, this is a requirement of the data collection process. Initially the PanGeo technical contact for each geological survey will be sent an email inviting them to complete the survey. This email will also have instructions of how to log on and complete the survey. The text form the email is given below.

“Dear Geological Survey Colleagues,

We are currently designing the PanGeo service; as part of the design it is important to gather the requirements and recommendations of the Geological Surveys. To do this we have designed a questionnaire and made this available on the PanGeo website. This email is being sent to you as the PanGeo technical contact for your Geological Survey Organisation to give you the chance to respond to the questionnaire and input to the service design.

Background information on PanGeo can be found in an overview presentation of the PanGeo service:

http://www.fugro-npa.net/material/What_is_PanGeo_v2_20th_May_2011.ppt

More detailed information can be found in the description of work which you will have received from the project coordinator.

The website allows us to automatically compile your answers, It is therefore necessary for you to log in using the procedure outlined below. If there are other people in your organisation who would like to complete the survey then please send their name and email address to Graham Glanfield (g.glanfield@fugro-npa.com) and we will send log on details to them. If you encounter any problems while completing the survey then please contact Luke Bateson at lbateson@bgs.ac.uk

This survey should take no longer than 20 minutes to complete. If necessary you can stop part way through and save your progress by clicking the 'Save Drafts' button at the bottom of the page. To return to the survey simply log back on to the web page.

To ensure we have time to use the supplied information in the design process please complete the questionnaire by Friday the 1st of July.

Survey procedure:

- a) Navigate to:
http://www.fugro-npa.net/surveys/survey_team_requirements_and_recommendations_v1
- b) Click on the link "You must login to view this form." which will appear above the survey title.
- c) Enter your username and password which is as follows:

Username: XXXXXX
Password: XXXXXX

- d) Having completed the survey and submitted your results, click on the "Logout" link on the left hand side of the screen.

Thank you
Luke

Luke Bateson
Remote Sensing
British Geological Survey
Kingsley Dunham Centre
Nottingham, UK.
NG12 5GG
+44(0)115 9363043"

THE QUESTIONNAIRE

3.1 GENERAL INFORMATION

1.

a. What is your name and title?

b. By what name do you prefer to be addressed?

2. Please provide your PanGeo partner number and short-title. (For example the British Geological Survey would be: 2 BGS.)

3. Contact Email address

4. Will you be:

A creator of PanGeo geohazard polygons

A user of the PanGeo geohazard information

both of the above

3.2 THE USE OF THE PANGEO SERVICE

5. Who do you see as the users of the PanGeo Service? Please mark all that apply.

- Geological Surveys
 - Local Authorities
 - General public
 - Other
- If Other then please specify _____

6. What do you see PanGeo information being used for? Please mark all that apply

- Planning decisions
 - Insurance claims
 - Property purchase

 - Special requirements for ground investigation prior to development
 - Insurance Industry
 - Other
- If Other then please specify _____

3.3 THE GEOLOGICAL SURVEYS (PEOPLE, SKILLS AND WORKING PRACTISES)

7. Is your organisation involved in any of the following terrain motion projects?

- Terrafirma
- SubCoast
- SAFER
- DORIS
- None of the above

8. Is your organisation involved in OneGeology and OneGeology Europe?

- OneGeology
- OneGeology Europe
- Neither of the above

9. If you were involved in OneGeology Europe where are your data held and served from?

- Our own servers and we will reuse them
- Our own servers but we will provide new infrastructure
- The servers of another Geological Survey
- If so which other Geological Survey _____

10. What level of GIS skills are available to your Geological Survey?

- None (we do not use GIS)
- Basic (can open and view GIS data)
- Intermediate (regularly use GIS and create attributed GIS data)
- Expert (create GIS programs and functionality)

11. What GIS systems do you currently use?

- None (we do not use GIS)
- ESRI (Arc View, ArcMap)

- MapInfo
- GRASS
- Smallworld
- Idrissi
- TNTMips
- Other please specify _____

12. What experience of Persistent Scatterer Interferometry (PSI) data does your Geological Survey have?

- None (we have never seen PSI data)
- Basic (We have seen PSI data but not used it)
- Intermediate (We have used PSI data to help understand terrain motion)
- Expert (We create our own PSI data +/- understand the data very well)

13. Have you or someone else in your Geological Survey attended a TerraFirma training course?

- Yes
- No

14. Do you think that you or someone else in your Geological Survey would benefit from training in the geological interpretation of PSI data?

- Yes
- No

3.4 GEOLOGICAL AND GEOHAZARD ISSUES

15. What are the main geohazards in your country?

16. Do you, the Geological Survey hold the geohazard data for your country/cities in PanGeo?

Yes

No

If not who does hold the Geohazard data and do you have access to use it in PanGeo?

17. Does your Geological Survey actively collect information on Geohazards and/or information on factors that might lead to a geohazard?

Yes

No

18. If you do collect geohazard data, for which hazards do you collect data, if so what format is it in?

	Paper reports	Digital reports	GIS data
Landslides	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Anthropogenic subsidence includes subsidence due to extraction of water, brines, hydrocarbons, etc, as well as mining-related subsidence	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
metastable loesses	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Shrink Swell	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Running Sands	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Seismic	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Volcanic	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Dissolution	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Compressible Sediments	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fluvial Flooding	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Groundwater Flooding	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Coastal Flooding	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other (please specify) _____			

19. Do you hold any information on factors that might lead to a geohazard, if so what format is it in?

	Paper reports	Digital reports	GIS data
Isostatic rebound	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Underground construction	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Waste disposal/landfill/man-made ground	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Groundwater abstraction and recharge	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Oil and gas abstraction	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Erosion	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Quaternary sediment heterogeneity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Anthropogenic activities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other (please specify) _____			

20. How much do geohazards cost your country per year?

0 – 100 000 Euro	<input type="checkbox"/>
100 000 to 1 million Euro	<input type="checkbox"/>
1 million to 10 million Euro	<input type="checkbox"/>
over 10 million Euro	<input type="checkbox"/>

Principal source of information:
(please specify) _____

21. Do you have information that you can use to validate the geohazards identified in PanGeo?

	Already hold	plan to collect	No plans to use
Numerical modelling	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
GPS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Levelling	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tachymeter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tiltmeters	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Damage assessment reports	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Photos of damage	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Engineering data	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other (please specify) _____			

3.5 AUXILIARY DATA AND INFORMATION

22. What type of auxiliary information/data do you have available to you to help interpret the PSI data? Are you able to publish any of this information/data on the PanGeo portal? And what is the scale of this data?

	Integrate with PSI data	Publish on PanGeo portal	Scale of data
Geological Maps (2D)	<input type="checkbox"/>	<input type="checkbox"/>	_____
Geological Models (3D)	<input type="checkbox"/>	<input type="checkbox"/>	_____
Elevation Models	<input type="checkbox"/>	<input type="checkbox"/>	_____
Topographical maps	<input type="checkbox"/>	<input type="checkbox"/>	_____
Historical maps	<input type="checkbox"/>	<input type="checkbox"/>	_____
Geohazard data	<input type="checkbox"/>	<input type="checkbox"/>	_____
Mining plans	<input type="checkbox"/>	<input type="checkbox"/>	_____
Engineering data	<input type="checkbox"/>	<input type="checkbox"/>	_____
Other (please specify)	_____		

23. Does the information/data you plan to integrate with the PSI dataset cover the area to be processed by the PSI providers for the town(s) you are going to work on?

Yes

No

24. In what coordinate system would you like to work in and therefore have the PSI data delivered in?

Coordinate system Name _____

Datum _____

Spheroid _____

Central Meridian _____

False Easting _____

False northing _____

Scale factor _____

25. Are you aware of the Urban Atlas?

Yes

No

26. Have you used the Urban Atlas data?

Yes

If yes what for (please specify) _____

No

27. Does the information/data you plan to integrate with the PSI dataset cover the urban Atlas Larger Urban Zone for the town you are going to work on?

Yes

No

3.6 POLITICS

28. What do you think is the more acceptable term for the PanGeo information layer that we shall create?

GeoHazard layer

Ground Stability layer

Other comments _____

29. Who is the mandated or de facto authority for geohazards in your country?

Geological Survey

Civil protection authority

If so which authority _____

Government department

If so which Department _____

Other (please specify) _____

If the authority is different for different hazards or different aspects of the hazards (such as prediction, monitoring, warning etc) then please specify here:

3.7 THE PANGEO GEOHAZARD SUMMARY

30. Would you find it valuable for the geohazard summary document to work as a stand alone document as well as an online document linked to the hazard polygons in the portal?

Yes

No

31. What language do you think the geohazard summary document for your towns should be in?

Local Language (please specify) _____

English

Both of the above

Other (please specify) _____

32. For each hazard area identified in PanGeo what information do you think it would be valuable to capture in the summary document?

Type of geohazard	<input type="checkbox"/>
Description of geohazard	<input type="checkbox"/>
Human activities that might increase or realise the potential for a geohazard	<input type="checkbox"/>
Rate of motion	<input type="checkbox"/>
Range of motion	<input type="checkbox"/>
Type of motion (uplift/subsidence)	<input type="checkbox"/>
Description of the nature of the motion	<input type="checkbox"/>
Primary dataset used to identify the motion	<input type="checkbox"/>
Data used in the interpretation	<input type="checkbox"/>
Validation of the geohazard	<input type="checkbox"/>
Other (please specify)	<input type="checkbox"/>

3.8 PANGEO PORTAL

33. Would you be willing to carry out a small amount of translation so that the PanGeo portal can be presented in your local language?

Yes

No

34. What information would you like to see displayed on the PanGeo portal?

Polygons outlining terrain motion

Overview of PanGeo town locations

Urban Atlas polygons related to PanGeo hazards/motions

Ability to display polygons according to the type of hazard

Other (please specify)

35. What portal functionality is important to you?

Identify/query

Turn on and off layers

Change display properties of polygons (e.g. fill colour)

Ability to add your own data

Download data

Statistics (e.g. % of town covered by hazards)

Other (please specify)

36. How would you use PanGeo hazard information available in the portal?

View it in the portal/load your data into portal

Download and integrate in own GIS

Both of the above

37. What background imagery and/or maps would you like on the portal?

- Aerial Photography/satellite imagery
 - Street maps
 - Urban Atlas data
 - Geological Maps
 - Other (please specify)
-

38. If you would like to see geological maps as a background dataset, are you able to make the geological maps for your country available to go on the PanGeo portal? (If you were involved in OneGeology Europe then some of your geological maps are already available)

- Yes
- No

If yes then what scale of geological mapping could you make available?

39. If you are able to make geological data available for the PanGeo portal is it already in the relevant GeoSciML format (Onegeology-Europe format)?

- Yes
- No

3.9 SUPPORT INFORMATION FOR THE CREATION OF PANGEO INFORMATION

Support information will be available for all Geological Surveys. This will include a step by step guide to how to produce the PanGeo product and also all the specifications required for the output data formats and web hosting requirements.

40. How would you prefer to access support information?

- Downloadable documents on a website
- Interactive documents on a website
- Documents included in the delivery of the PSI data

41. OneGeology used a 'buddying' system, where Geological Surveys with less experience of hosting data on servers were paired with more experienced Geological Surveys. Did you take part in the OneGeology buddying system? If so did you find it useful?

- Yes, we took part
- No we did not take part
- If yes then did you find it useful? _____

Would you like to be considered for a buddy system in PanGeo as

- A more experienced partner
- A less experienced partner?

3.10 THE FUTURE OF PANGEO

42. Which other towns in your country do you think it would be valuable to have PanGeo geohazard information available for?

3.11 OTHER INFORMATION

43. Please supply any other information or opinions that you think are important for the design of the PanGeo service and the methodology for creating this service.

