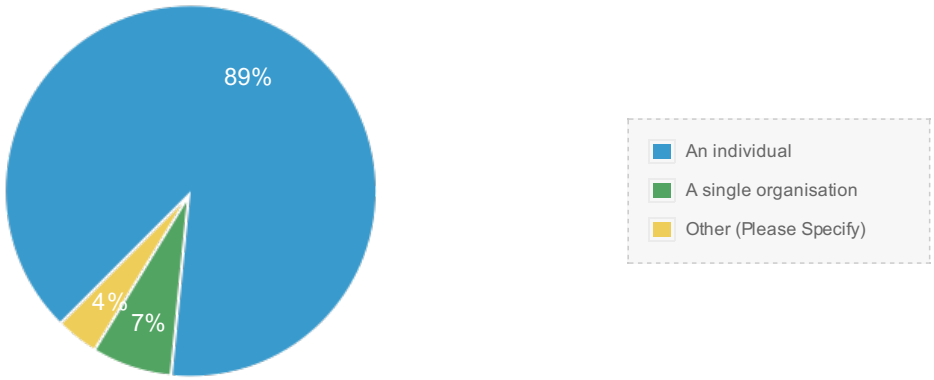
Horizon 2020 Geoscience Survey

Completed Responses	Partial Responses	Survey Visits
143	128	4108

Q1

Are you responding to this survey on behalf of / as:

Answered: 265 Skipped: 6



	Response Percent	Response Count
An individual	89.06%	236
A single organisation	7.17%	19
Other (Please Specify)	3.77%	10

1. Swiss individual, not selectable below
2. Swiss individual, not to select below
3. USA
4. (Empty)
5. (Empty)
6. non-metallic raw materials,company for 100 years in the same activity
7. (Empty)
8. European members of the Total Carbon Column Observing Network (TCCON)
9. A small consulting company
10. (Empty)

Q2

Name of organisation

Answered: 18 Skipped: 253

1 . EUROPEAN COMMISSION

2 . UNECE

3 . University of Zagreb Faculty of Agriculture

4 . Aristotle University

5 . Geological Survey Ireland

6 . Tara Mines

7 . American Institute of Professional Geologists

8 . SGC - Servicio Geologico Colombiano

9 . BDG - Berufsverband Deutscher Geowissenschaftler e.V.

10 . Icatalist

11 . Institute Revivo

12 . YES

13 . North West Environmental

14 . Wageningen University and Research

15 . Chambre des Géologues de la Tunisie

16 . KNGMG

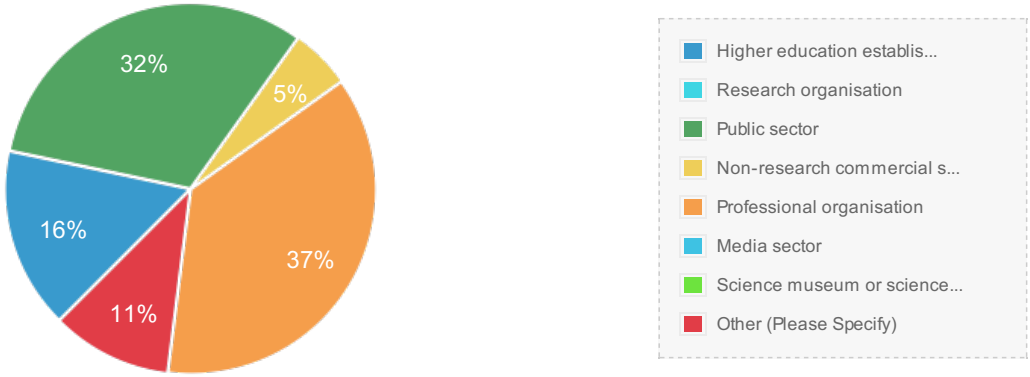
17 . CHGEOL

18 . Ministry of Science, Technology and Productive Innovation (Argentina)

Q3

What type of organisation are you representing?

Answered: 19 Skipped: 252

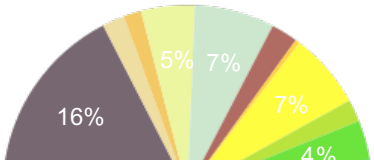


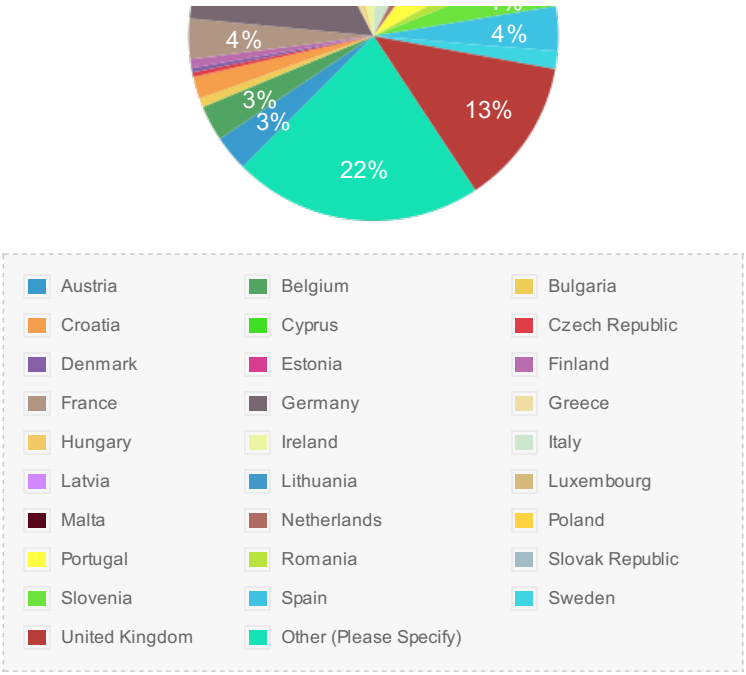
	Response Percent	Response Count
Higher education establishment	15.79%	3
Research organisation	0.0%	0
Public sector	31.58%	6
Non-research commercial sector including SMEs	5.26%	1
Professional organisation	36.84%	7
Media sector	0.0%	0
Science museum or science centre	0.0%	0
Other (Please Specify)	10.53%	2
1. research NGO		
2. Sme		

Q4

Please select your country of residence / location of headquarter of your organisation:

Answered: 257 Skipped: 14





	Response Percent	Response Count
Austria	3.11%	8
Belgium	3.11%	8
Bulgaria	0.78%	2
Croatia	1.95%	5
Cyprus	0.0%	0
Czech Republic	0.39%	1
Denmark	0.39%	1
Estonia	0.0%	0
Finland	0.78%	2
France	3.5%	9
Germany	15.95%	41
Greece	1.95%	5
Hungary	1.56%	4
Ireland	4.67%	12
Italy	7.0%	18
Latvia	0.0%	0
Lithuania	0.0%	0
Luxembourg	0.0%	0
Malta	0.0%	0
Netherlands	2.33%	6
Poland	0.39%	1
Portugal	6.61%	17
Romania	1.95%	5

Slovak Republic	0.0%	0
Slovenia	3.5%	9
Spain	3.89%	10
Sweden	1.56%	4
United Kingdom	12.84%	33
Other (Please Specify)	21.79%	56

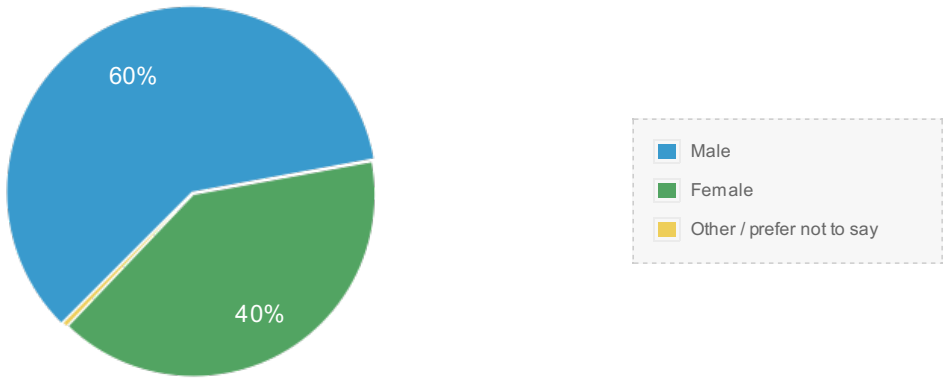
1. Serbia
2. Argentina
3. USA
4. Chile
5. Argentina
6. United Arab Emirates
7. Switzerland
8. Iceland
9. Tunisie
10. Switzerland
11. Iceland
12. United States
13. Russia
14. Chile
15. Norway
16. Switzerland
17. China
18. India
19. Switzerland
20. Singapore
21. Nigeria
22. Mozambique
23. Argentina
24. Turkey
25. Turkey
26. Turkey
27. Switzerland
28. Norway
29. Serbia
30. Montenegro
31. United States
32. Serbia
33. OMAN
34. India

35. ukraine	Response Percent	Response Count
36. Israel		
37. Switzerland		
38. turkey		
39. Norway		
40. Egypt		
41. turkey		
42. TAIWAN		
43. Ukraine		
44. Colombia		
45. Canada		
46. Norway		
47. United States		
48. switzerland		
49. Algeria		
50. Brazil		
51. Iceland		
52. Switzerland		
53. Ukraine		
54. DRCongo		
55. Norway		
56. India		

Q5

Do you identify as:

Answered: 260 Skipped: 11

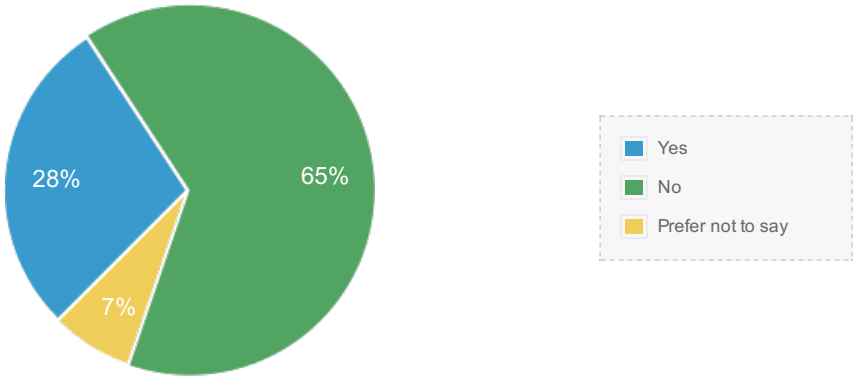


	Response Percent	Response Count
Male	59.62%	155
Female	40.0%	104
Other / prefer not to say	0.38%	1

Q6

Have you received funding from the Horizon 2020 Programme?

Answered: 262 Skipped: 9



	Response Percent	Response Count
Yes	28.24%	74
No	64.5%	169
Prefer not to say	7.25%	19

Q7

Please list the Horizon 2020 programmes or projects that you are / have been involved with

Answered: 67 Skipped: 204

1 . MESOPP

2 . HackAir

3 . H2020 FREEWAT

4 . Marie Curie Global Fellowships

5 . FP7, H2020

6 . EINFRA

7 . Marie Curie

8 . EuroVolc

9 . 1. SC5-11a-2014. BioMOre - New Mining Concept for Extracting Metals from Deep Ore Deposits using Biotechnology
2. SC5-11b-2014. FAME - Flexible and Mobile Economic Processing Technologies
3. SC5-15-2017-CSA. MIREU - Mining and Metallurgical Regions of EU
4. SC5-15-CSA. ORAMA - Optimising quality of information in RAw MAterials data collection across Europe
5. SC5-13-RIA. NEXT - New Exploration Technologies

10 . VAMOS
UNEXMIN
MINLAND

11 . MSCA-IF-GF Programme: Nearcontrol Project

12 . H2020 CIRC
12. Climate action, environment, resource efficiency and raw materials
etc.

13 . Citi-sense; hackAir

14 . I have been involved in:
- grant agreement no 635750
- grant agreement no 00025788

15 . H2020-DRS-2015: topic DRS-01-2015
H2020-SC5-2016-2017: topic SC5-08-2017
H2020-SC5-2016-2017: topic SC5-21-2016-2017

16 . Mostly H2020 and FP7: e.g., AMBER, REFORM, RESTORE Etc...

17 . INSPIRATION ITN

18 . COST

19 . PRIMAVERA
APPLICATE
EUCP
PLACARD

20 . Several Raw Materials and marine projects

21 . BINGO
STOP-IT

22 . GroundTruth2.0
Insurance H2020
TWIGA

23 . INTRAW
KINDRA

24 . Societal challenges

25 . FORAM POJECT

26 . GIMS

27 . INTRAW - International Cooperation on Raw Materials
INFACT - Innovative, Non-Invasive and Fully Acceptable Exploration Technologies
KINDRA - Knowledge Inventory for Hydrogeology Research
CHPM2030 - Combined Heat, Power and Metal Extraction

28 . ENVRI Plus

29 . CLARA, IMPREX, S2S4E

30 . BRIGAID

31 . Marie Curie COFUND Oersted DTU

32 . FATIMA, LANDMARK, AgriDemo-F2F

33 . Educen (2015-2017); afrialliance as action group; brigaid (2016-2020); naiad (2017-2019)

34 . I have been involved only like participant in seminars of SARMA projects, but I have expert candidature number in Research and Innovation , of Participant portal of European Commission.

35 . NAIAD project

36 . Raw Material issue (SC5)

37 . CHPM2030
SmartExploration
Explora

38 . INTCATCH

39 . MINATURA 2020

40 . System Risk (Marie-Skłodowska-Curie European Training Network)

41 . Sera

42 . water

43 . GEISER
DESTRESS

44 . ERA-NET ACT

45 . ANYWHERE

46 . LIFE
Interreg

47 . LANDMARK

48 . SUBITOP ITN

49 . Marie Curie Individual Fellowships

50 . COSMOS2020; GEO CRADLE

51 . ProSUM
MICA
Geocradle
Intermin
Foram

52 . Kindra

53 . GeoEra, EPOS

54 . Subitop ITN

55 . grant agreement No. 640979

56 . WaterWorks2014

57 . Blue Action

58 . Trustee

59 . MSCA, INTERREG

60 . MED-GOLD, S2S4E, SECLI-FIRM

61 . INTRAW, ERA-MIN2, ERA4CS, M-ERA.NET2

62 . MINATURA2020
MICA
MINLAND
MinFuture
FORAM

63 . Kindra
CHPM2030
INTRAW

64 . UNEXMIN
CHPM2030

65 . MSCA, ERANET, CSA.

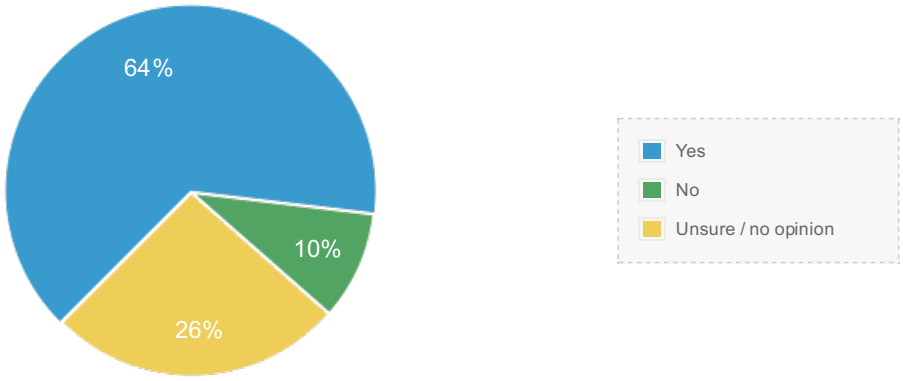
66 . MSCA
SINCERE Strengthening INternational Cooperation on climatE change REsearch
MarTERA BG-05-2016 - ERA-NET Cofund on marine technologies
ForestValue - Innovating the forest-based bioeconomy
ERA-NET Cofund on Raw Materials (ERA-MIN 2)
ERA-Net “Cofund on BioTechnologies” (CoBioTech)
Idealist2018 ICT
ERANET Sustainable Urbanisation Global Initiative (EN-SUGI)
EXEDRA, an EXpansion of the European Joint Programming Initiative on Drug Resistance to Antimicrobials
Giving focus to the Cultural, Scientific and Social Dimension of EU – CELAC Relations

67 . Mine expert candidature number: EX2015D260459.
But, I have not any chance include in some separate project.

Q8

Do you consider the methods and criteria used to evaluate the Horizon 2020 projects to be sufficient and fair?

Answered: 73 Skipped: 198



	Response Percent	Response Count
Yes	64.38%	47
No	9.59%	7
Unsure / no opinion	26.03%	19

Q9

Please provide further information detailing why not below

Answered: 7 Skipped: 264

1 . I have seen excellent projects turned down while others a lot less good were approved.

2 . This is based on the experience of the evaluation of one previous proposal where at least one of the evaluators did not know much about deep exploration and mining in depths. From the ESR: "In addition it is difficult to envisage geomodels to a depth of 3-4 km; at these depths minerals cannot be mined as temperatures rise to 100-130 degrees Celsius."

3 . Too technocratic

4 . I believe that the evaluation process involves relevant randomness and may also suffer from "confirmatory bias". It is difficult to get financed for a newcomer.

5 . Lack of specific expert knowledge of evaluators

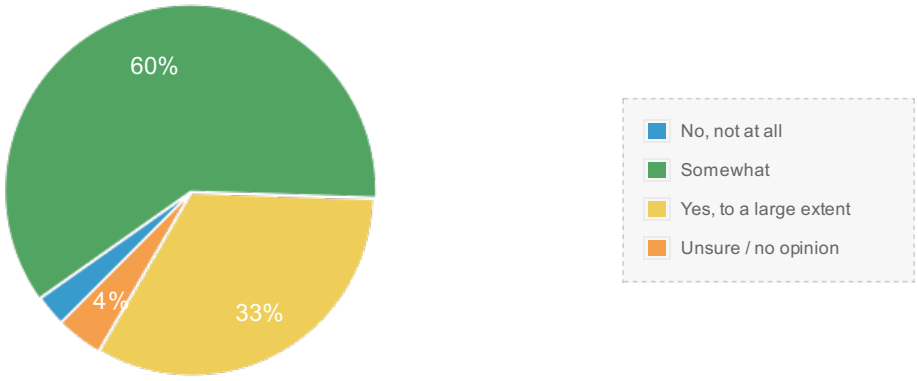
6 . I am increasingly of the opinion that the reviewers of H2020 project proposals have not enough time provided so as to give each and every project a fair amount of consideration.

7 . Judge too focused on the applicative outcomes of the project, and on the development of functioning solutions. These projects are too short to have the time to develop real solutions. Most of the time the win is due to the promise of solutions that are never achieved or are just started

Q10

Do you think that the impact created by Horizon 2020 projects could be improved?

Answered: 73 Skipped: 198

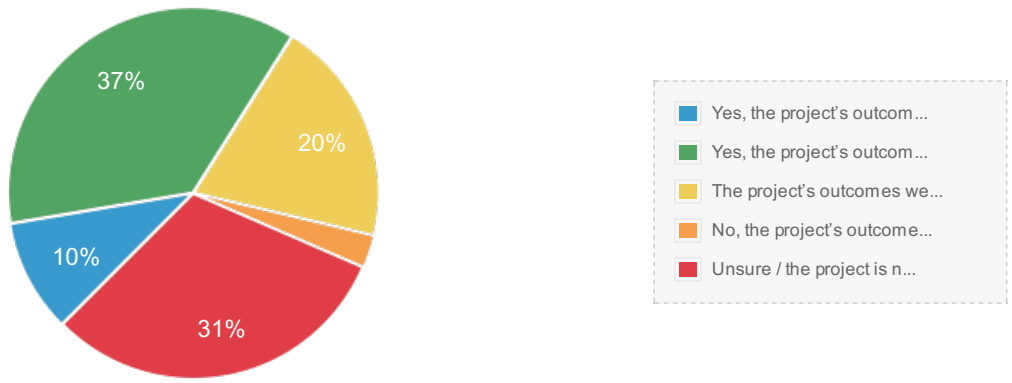


	Response Percent	Response Count
No, not at all	2.74%	2
Somewhat	60.27%	44
Yes, to a large extent	32.88%	24
Unsure / no opinion	4.11%	3

Q11

Have the project(s) that you were involved with achieved the expected outcome(s)

Answered: 71 Skipped: 200



	Response Percent	Response Count
Yes, the project's outcomes were exceeded	9.86%	7
Yes, the project's outcomes were achieved	36.62%	26
The project's outcomes were somewhat achieved	19.72%	14
No, the project's outcomes were not achieved	2.82%	2
Unsure / the project is not yet complete	30.99%	22

Q12

Please outline the reasons for your project's level of achievement (e.g. insufficient funds, planning, etc.)

Answered: 41 Skipped: 230

1 . The project achieved substantial outcomes: the main issue is how to maintain these achievements in the short intermediate termand how to consolidate these.

2 . To be determined

3 . Insufficient management. EC project officer not able to grasp the project hidden issues.

4 . Funds are low since projects are with numerous participants, thus research part of projects are limited.

5 . All mentioned projects are still ongoing. MIREU and ORAMA started on 1st December 2017. NEXT will start on 1st May 2018.

6 . The project is still ongoing. Main results are being achieved as planned.

7 . great consortium and motivation to do even more than planned

8 . Good management of a good team

9 . All 3 projects are not yet completed, but for all of them we need to raise extra funds especially as it will be impossible to complete all tasks with the funds we currently have

10 . We had a very few common data but now we are beginning to create a common view.

11 . In some cases, planned project outcomes are forced to fit a detailed call description. Therefore the chances of achieving them are lowered. There is little room for basic research or new/unexpected outcomes.

12 . Projects are not yet completed.

13 . I guess the main problem is that everything grinds to a halt after the last report/deliverable. Some transition-like arrangement may not be difficult to arrange.

14 . The Intraw project exceeded it's expected outcome.

Kindra has not been as successful, in large part due to the project being underfunded. I believe the underfunding was part of the budget that was submitted to Horizon 2020, and was not a result of a smaller amount of funds being received than that which was requested.

15 . The project is not yet complete

16 . Due to the inexperience regarding the procedures (reporting, working methods, etc.), the potentials have not yet been fully exploited in some cases. However, with increasing routine, projects are expected to be processed more efficiently.

17 . The project aims were fulfilled in terms of impact. The project has robust impact indicators that provided a satisfactory assessment.

18 . No sufficient time.

19 . To integrate farmers into a research project is not as easy as one thinks. It takes time to find people that are ok with English. When you find them, it is great!

20 . More time needed, problem of año partner working at same level of engagement

21 . It is need for planning or funds but in this case project must be open to many country qualified geologists for example, geologists-specialist for raw materials.

22 . inequality among consortium members: large organisations not delivering as promised in the proposal and smaller have to cover for them by using their own resources.

23 . Projects were reasonably good managed and well observed by the EC. This allowed for early remedial activities if necessary. Funds could of course always be higher, but the EC provides a good level.

24 . We are in na initial phase of the projects, it is too early to comment

25 . still in the early stages- lots of planning and development but only just starting the application

26 . Some project partners in other organisations over-promise (in order to win the bid) and then under-deliver; some project partners do not participate sufficiently

27 . planning, communication and linking of institutions

28 . Good engagement of all partners and good definition of the project were at core of the success.

29 . Administrative accompanying content is more important than the program.

30 . Mid project life

31 . Still ongoing but seems to be on track and doing well

32 . my projects outcomes were achieved

33 . some of the foreseen activities were not easy to implement due to lack of support from national institutions

34 . In one case the sveral aspects were not well forseen and develop problems that affect the results of the project.

35 . Based mostly on experimental outcomes, it was a relatively highly possible that some of the achievement could be not met.

36 . Not enough time. The solutions should be studied. And disorganisation in funding the single countries taking part into the call.

37 . still ongoing

38 . Complexity of the organization

39 . The UNEXMIN project is a bit more than the half is now and it is progressing as expected.

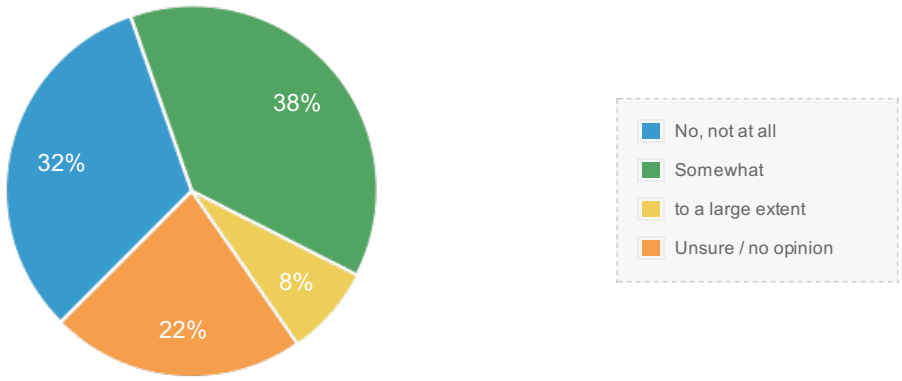
40 . N/A

41 . In my opinion, must be very high relation of present activity of project to governmental.

Q13

Do you feel that there are a sufficient number of geoscience related Horizon 2020 projects?

Answered: 140 Skipped: 131



	Response Percent	Response Count
No, not at all	32.14%	45
Somewhat	37.86%	53
to a large extent	7.86%	11
Unsure / no opinion	22.14%	31

Q14

What thematic areas (if any) do you feel are underrepresented or missing in the Horizon 2020 Programme?

Answered: 96 Skipped: 175

1 . none
2 . WATER
3 . Szkolnictwo Zawodowe.I Zasadnicze Zawodowe. Oraz tzw. Hufce Pracy.
4 . Early career programs
5 . Natural hazards International cooperation in geosciences
6 . Social issues in raw material and energy resource development, production, refining and utilization.
7 . Volcanic problems and marine geological science.
8 . Groundwater related calls are missing to a large extent.
9 . Basic, fundamental researches on all fields
10 . Oil and gas, making extraction and exploration more efficient
11 . Mineral Resources - acquisition of new data (Current programs focus on working on existing data)
12 . Global Resource inventory for Europe
13 . - Coastal processes and management - Southern Ocean and Southern Atlantic ocean investigation
14 . medical geology regions with low innovation index circural agronomy efficient recycling in all areas
15 . I have little or no knowledge or experience of the Horizon 2020 Programme, so I do not feel that I can answer any of the questions.
16 . HYDROGEOLOGY WATER EXPLOITATION CURATIVE WATERS GEOTHERMAL ENERGY
17 . Hydrology/floods Water quality
18 . geo-engineering and especially the ethics related to this topic
19 . H2020 do not foster pure research. H2020 program encourage projects based on managers and policy-makers priorities. Project are evaluated as consultancy activity in the private sector. That does not always foster and enhance research advance. The programs for blue sky research in Europe are too limited (only ERC). This policy has and will have an impact on the European research quality.

20 . Structural Geology, Plate Tectonics, Rock Physics

21 . Rather than thematic areas, I would appreciate the availability of additional calls for smaller projects requiring a less ambitious funding. Though I understand that big projects help avoiding fragmentation of research.

22 . Practically no programs on geological subjects.

23 . Radon
Risks (seismic, floods)

24 . - Ore deposits
- Geochemical mapping
- Geothermal energy

25 . Clean coal technologies (since coal will still be important energy source in the future in spite of its inevitable decline.
Unconventional geo-energy resources (eg. shale gas, coal bed methane)

26 . Engineering geology

27 . Geohazards - basic understanding, not implementation of mitigation measures (flooding, coastal erosion/sediment dynamics, tsunami, groundwater, earthquakes, volcanoes)
Earth processes - we do not fully understand these yet, this work must be continued in parallel to e.g. mitigation, resources management etc.

28 . Hydrological sciences, water quality issues

29 . There are probably many but my own field, hydrology, seems to be underrepresented somewhat as all water issues are conflated to drinking water and waste water.

30 . Remediation of human impacts across all sectors of the geosciences

Projects that focus on the interface between geoscience and society (e.g. mass movement, earthquake preparedness, soils, earth science education at all levels)

31 . devellopingthe feeling for protection of drinking water in ervery country.

32 . Seismic hazard

33 . The real risks attaching to minerals exploration

34 . air quality/atmospheric science (specifically related to emissions, health, atmospheric chemistry, urban, not climate change related)

35 . It is difficult to reply to this question. I have a good knowledge of my area but I do not know the situation for sister disciplines.

36 . ich bin nicht orientiert

37 . geodesy

38 . Solid earth, earthquakes, melting glaciers

39 . I have no idea, I didn't know there were thematic areas. If there are, I haven't been aware

40 . Coastal hazards; the intersection of coastal process/hazards, climate change Impacts and adaptation; the sdgs and coastal areas

41 . Basic science; basic science informing policy; basic science informing innovation

42 . The accent of law regulation or legislative must be huge.

43 . Ecological/biological

44 . all basic science compared to applied.

45 . classic geology

46 . question of unemployment of young educated people..

47 . exploration and primary resources production because they are the basis for sustainable raw materials provision at all

48 . Seismic Hazard and neotectonics

49 . seismology

engineering geophysics

50 . How to deal with the upcoming environmental challenges, primarily: i) how to deal with the expected changes du to global warming, ii) how to deal with the waste problem, in particular plastic waste, iii) how to deal with eutrophication, e.g. nutrient recycling

51 . - history of mining in Europe and overview of the current state, as good start of any project Horizon 2020 and
- history of legislation of mining in Europe and overview of the current state of EU members states
- connectivity of mining with the economy, especially waste
management
- collecting data on the current state of the incorporated materials as a zero-existing level, by principle cradle to cradle, via programs BIM and GIS, aiming organization market materials
- remediation, landscaping and good practices, shedding light on serious cases and seeking for solutions...all together to be involved as a team
- connect horizon projects with military programs and action plans

52 . Geodesy

53 . Hazards

54 . Environment
Geo-Hazards
Water Management

55 . Polar geoscience
Marine geoscience

56 . Geodesy

57 . Natural hazards

58 . Geomorphology and natural hazards

59 . Weather and Climate Risks
Extreme event modeling

60 . Projects that includes studies on Africa, and incorporates Africa's scientists especially early career scientists in or from Africa.
Hydrology can't be studied in isolation, recent evidence based studies have proved this beyond all reasonable doubt.

61 . Blue sky PI driven research

62 . coverage changes along policy priorities

63 . Continental scale biogeochemical stdies

64 . No

65 . Theoretical/basic sciences

66 . Natural Hazards

67 . Hydrology, hazard, water at all.

68 . Groundwater

69 . Risk communication, research on social impacts of geo-science assessment

70 . Ecosystem assessment

71 . I don't know

72 . --

73 . data infrastructure
geonergy
cities
geohazards
geomedicine

74 . Social acceptance of mining/quarry industry
Mine rehab under tropical cover (french guiana is still EU)

75 . -Exploration
-Marine mineral resources

76 . I feel that the longer-term perspective of natural climate variability, which constitutes crucial boundary conditions for assessing and projecting future climate change, has been largely bypassed in favour of policy/adaptation. Yes, the latter responses are vitally important, but we absolutely do not know how the climate system works, where the tipping points are, and thus how it is likely to impact Europe in the coming years and centuries.

77 . field exploration

78 . engineering geology

79 . Mineral Exploration

80 . Education for uncontrolled consumption and ignorance in mining.
Small businesses have to exist in the mining and geological business fabric because their inpactos are much smaller.
Surveys and information on the formations to be explored

81 . Paleoenvironmantal and Climate Change in geological time scales

82 . Groundwater and water resources, water management of urban and industrial areas, postindustrial enwironmental hazards, mine water management

83 . Exploration Risk
Greater involvement of successful explorationists

84 . Clay mineralogy and lithium raw materials

85 . Geology, landslides, floods, soil conservation

86 . Geochronology

87 . Geothermal energy exploration
Hydrogeology in desertifying Mediterranean areas

88 . Fundamental research in geophysical flows

89 . paleoclimate studies (from decades to million years)

90 . Disaster Risk Reduction

91 . no information

92 . I

93 . Groundwater assessment, management and protection

94 . international cooperation with third countries outside the EU.

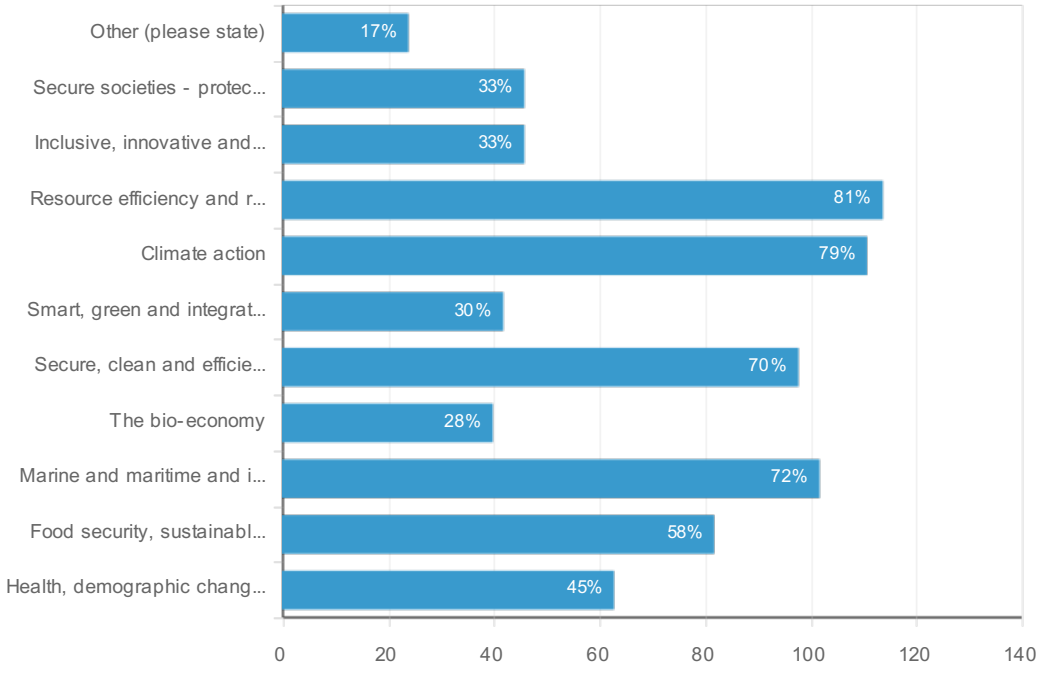
95 . N/A

96 . The best families to antropogenic resources

Q15

Which global societal challenges do you believe geosciences can contribute to? Please tick all that apply.

Answered: 141 Skipped: 130



	Response Percent	Response Count
Health, demographic change and wellbeing	44.68%	63
Food security, sustainable agriculture and forestry	58.16%	82

	Response Percent	Response Count
Marine and maritime and inland water research	72.34%	102
The bio-economy	28.37%	40
Secure, clean and efficient energy	69.5%	98
Smart, green and integrated transport	29.79%	42
Climate action	78.72%	111
Resource efficiency and raw materials	80.85%	114
Inclusive, innovative and reflective societies	32.62%	46
Secure societies - protecting freedom and security of Europe and its citizens	32.62%	46
Other (please state)	17.02%	24

1. Serbia
2. no information
3. Disaster Risk
4. Water scarcity and extremes event in towns
5. soil compsumption
6. education for uncontrolled consumption and ignorance
7. water management
8. Urban planning and management, city development, construction
9. Continued existence and preservation of life on earth.
10. land use and development
11. Geohazards
12. Geohazards
13. Natural hazards
14. the contribution of history, economy and military readiness
15. general knowledge
16. (Empty)
17. gps
18. Projektierung von Infrastrukturprojekten, Ingenieurgeologie!
19. Supply of raw materials
20. Resource Security / Discovery
21. Free and fair trade, including investment and funding opportunities
22. Education to understand the Earth
23. Polityka Prorodzinna
24. Science with and for society

Q16

Are there other global societal challenges that the EU should be tackling that are not listed in the above question?

Answered: 58 Skipped: 213

1 . Lack of real democracy.

2 . no

3 . Szpitale, Szkoły Zawodowe w tym zasadnicze zawodowe, i specjalne. Wydatki na remonty dróg, wydatki na remonty budynków i toalet, w tych budynkach. Żłobki i przedszkola, które powinny być bezpłatne.

4 . Protecting the environment

5 . Energy and raw material discovery, production and utilization are facing challenges globally in (i) social acceptance; (ii) efficiency and productivity; (iii) responding to climate change and environmental issues; (iv) human resources including diversity and inclusiveness. This leads to demand/supply mismatch in short-term and security of supplies challenges in long-term. Applying appropriate technologies and protocols developed by EU institutions globally under a new initiative should be considered.

6 . Geological sciences do also benifit society in regard to security and natural hazards prevention and preperation responce.

7 . /

8 . Separation of waste for re-purposing or appropriate disposal. Adequate separation of waste is still considered to be done but is rarely efficient and relies on cheap labour to hand pick most recyclables.

Removal of refuse from river mouths. floating barrages should be commonplace/

9 . The generally very negative perception of mining by the public in general and environmental groups in particular. Mining can be clean ! Mining has an environmental credibility problem (largely the industry's fault).
A major campaign to change perceptions is necessary. A big part of Europe HAS major untapped resources & is strongly underexplored

10 . - poverty and sustainable development in poor countries

11 . Access to water

12 . DATA SECURITY

13 . There is a lot of focus on ecosystem services, but the geosciences are too often completely excluded, although geology is part of the ecosystem

14 . Geohazards

15 . cultural heritage does not seem to be a priority in EU calls (including the environmental cultural heritage), although this is the year of CH (and there is some dedicated funding)

16 . energy independence

17 . Analiyses , ratios between the use of conventional geo-energy sources and renewable ones (including the alternative). Giving fair information and education to people to get a real picture how they are provided and secured with energy - of course not to restrict and limit modern developments in the studies and applications of using sustainably new new energy sources of a wide range of types.

18 . Global society - better integration of the EU society with the rest of the Planet.

19 . Understanding earth (planetary?) processes, resources and resource management.

20 . The impact of increasing nationalism on all aspects of human society is an issue that all of us, EU and non-EU alike must address.

21 . not only talking.... just doing
Too often I read wunderfull ideas and sentences, but nobody or better no organization is respecting such Things!

22 . Establishing resource supply with the EU. Mines can't be moved.

23 . Safe and sustainable use of land with regard of natural hazards

24 . The real risks attaching to minerals exploration and the EUs dependence on imports
The importance of metals in the body for good health - too much emphasis on the 'bad'

25 . I think geosciences have the potential to contribute to all of the current themes that exist, however, I think what is explicitly outlined under those themes often misses some of the communities that have a lot to contribute. Especially considering the policy relevance of the issue, more should specifically address air quality in urban areas linked to mobility/transport, urban infrastructure, considering health and personal exposure. Air quality is the number one environmental health issue!

26 . Geotechnik, Felsmechanik scheint für die EFG nicht sehr hohe Priorität zu haben. Ingenieurgeologen sind diejenigen, die zusammen mit Bauingenieuren gesellschaftsevidente Infrastrukturprojekte vorantreiben. Bahn-, Strassenbauten, Städte Entwicklung, Hydroenergie, Geothermie, Deponien etc.

27 . diversity/gender parity

28 . Consequences of climate change (not only migration)

29 . recycling

30 . Nature conservation for the benefit of all (people and nature)

31 . no

32 . the list seems almost complete: space exploration is missing

33 . geohazards and impact on communities

34 . i) waste problem, i.e. plastic waste, ii) mass extinction of species due to anthropogenic impacts, iii) loss of clean drinking water, iv) soil degradation

35 . - eu mineral disadvantages and links to the world
- legislation

36 . Natural hazards

37 . I don't have no idea

38 . Yes, natural hazards

39 . Collaborations that supports developing nations to live sustainably, maintain the hydrological integrity of pur common space.

40 . Science w/out agenda. Curiosity driven.

41 . no

42 . Economic inequality
Economic evaluation of EU

43 . No.

44 . Planetary research
AI and robot adoption by the society

45 . Yes. Water supply, particularly groundwater, is a major societal challenge.

46 . no

47 . Urban planning and construction

48 . --

49 . Sustainability/vulnerability of natural water resources

50 . no

51 . Study of the geological and mining landscape of the past and the future of the mining landscape in Europe developed technologically.
The contribution of equipment builders in geological projects.
Measure, control to assess the tranquility of populations.
Legislation that conditions geologists in access to land

52 . Water scarcity

53 . Exploration for, development of and production of primary raw materials from within the EU

54 . Inequity in the distribution of services (water, green infrastructure) in developed countries. How everybody can benefit from clear water, unpolluted areas reducing in the same time their footprint on the environment.
Integrate hazard awareness in small municipalities and among professionals.

55 . Disasters

56 . communication

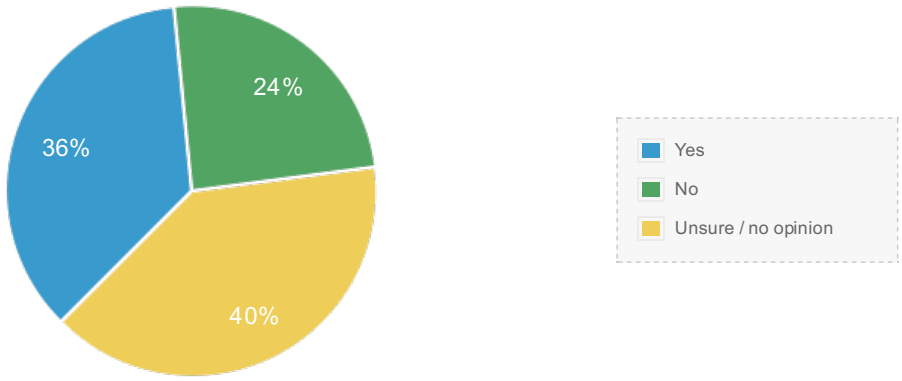
57 . globalization and its impact on national economies

58 . N/A

Q17

Do you feel that the application process for Horizon 2020 funding is straightforward?

Answered: 139 Skipped: 132



	Response Percent	Response Count
Yes	35.97%	50
No	24.46%	34
Unsure / no opinion	39.57%	55

Q18

Please provide further information detailing why not below

Answered: 21 Skipped: 250

1 . The application process is too complicated.

2 . The amount of time and energy spent for project proposals, applications and reporting is often disproportionately large in comparison to time and funding available for actual research.

3 . It is an enormous amount of work and paperwork. You need to know the tricks (how to word things etc). And especially it is a lot of work with a large chance of not getting anything.

4 . Difficult to identify relevant calls.

5 . Its appallingly bureaucratic and difficult to use!

6 . Too bureaucratic and not enough small scale projects

7 . Submitting two proposals at the same time does not make sense. Two step approach as sometimes done is better

8 . It's probably one of the most user hostile websites in the world.

9 . It's hard to narrow by theme and by upcoming calls.

10 . Burocracy is long and multople obligatory Workpackages as Ethics, Gender, Dissemination make it hard not only to submit, but to manage

11 . In my opinion real innovative and solution oriented proposals should be prioritized; having been an evaluator I do see that this is difficult to improve and perhaps too complex to explain here..

12 . Very complicated forms

13 . The length of the proposals and the number of aspects that need to be covered is large

14 . For example in Romania all the deadlines are not respected by the authorities and there is a centralized way of controlling the funds which do not allow local actors to be involved.

15 . The websites are hard to navigate

16 . Treats E Europe as a colony. Fund accomplished PI from E Europe not as exotic team members

17 . Complicated application procedure
A lot of bureaucracy
Lack of simplification

18 . High degree of complexity to apply where only full time expertise personal can deal with it properly + lobbying.

19 . It's too conplicated for smal comopanies and small NGOs

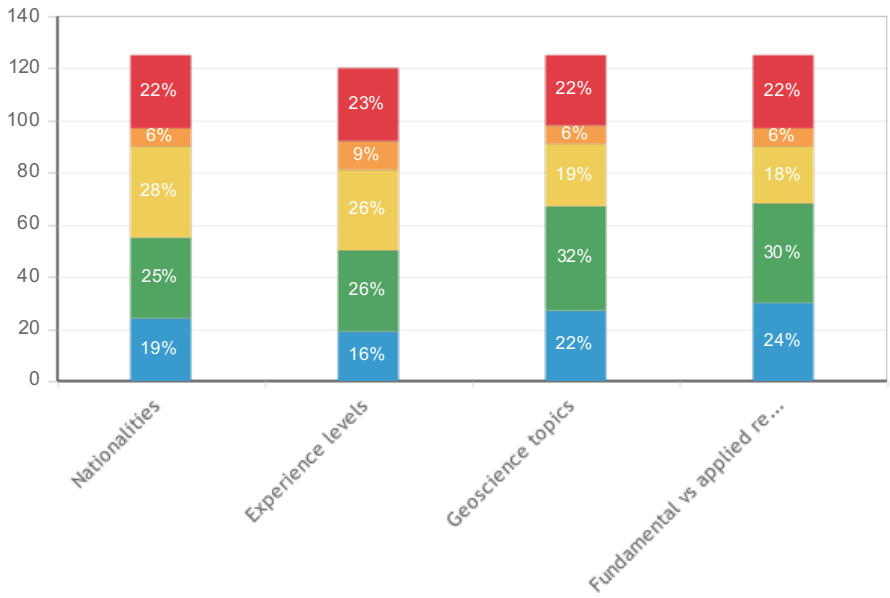
20 . Too much bureaucracy for (small) SMEs, lack of financial help for applicants within the small SME sector

21 . because of weak communication

Q19

Do you feel the allocation of Horizon 2020 funding is fairly distributed within the below categories?

Answered: 132 Skipped: 139



	No, not at all	Somewhat	to a large extent	yes, completely	unsure	**Response Count**
Nationalities	19.2% (24)	24.8% (31)	28.0% (35)	5.6% (7)	22.4% (28)	125
Experience levels	15.83% (19)	25.83% (31)	25.83% (31)	9.17% (11)	23.33% (28)	120
Geoscience topics	21.6% (27)	32.0% (40)	19.2% (24)	5.6% (7)	21.6% (27)	125
Fundamental vs applied research	24.0% (30)	30.4% (38)	17.6% (22)	5.6% (7)	22.4% (28)	125
Please provide more information regarding one or more of your answers below						42

1. Very short circle of geoscientists

2. weak communication

3. H2020 should further promote international cooperation with partners outside the EU.

4. I feel fundamental research is not represented enough. And certain topics toachieve good results need more than 3-4 years lifetime.

5. Too much money being given to non-geoscientists, who invariably get the geology wrong

6. No opinions

7. Funding allocation it is a bit biased toward who has a large and sound track record of funding. This mechanism does not allow early carrier scientists to build their track records.

8. Need more funding for technique development

9. we need more specialists from upper polytechnic courses we already have more specialists.

10. I get the impression that Applied Research receives more funding than Fundamental Research.

11. Looks like a bog mess with lot of difficulties to find answers.

12. I have no insight into H2020 funding statistics

13. May be useful to provide training opportunities for individuals switching careers into science - people older than the typical phd student and with different experience who are coming into science later in life.

14. Fundamental research is underrepresented

15. the more the country applies the more it is represented. Language or administrative barriers can be high.

16. The fake idea that science needs to solve society's problems directly via large inefficient fund-wasting teams is detrimental

17. Most H2020 funding is for applied research. More finding is needed for fundamental research.

18. Too little fundamental science

19. - each new project will provide a better continuation, by learning the mistakes or shortcomings of the previous one

20. Too few bottom up call. Or when there are, the structure is too complex and scientific evaluation compared to call specific criteria are not really the main concern of agencies.

21. To fully exploit local knowledge, NGOs and start-ups should be required partners in all consortiums, especially from Eastern EU countries.
There is a strong focus on market oriented research, not allowing fundamental science to be funded.

22. There is no oversight to make sure that the funded persons carry out a transparent hiring process. For example, an ERC grantee at Utrecht has used the money to exclusively hire local Dutch people from Utrecht. Maybe ERC should do a follow up to find out how grantees spend money. There is a lot of academic inbreeding and ERC money should be used to encourage new blood and international cooperation.

23. Mothers in science are completely neglected

24. vermutlich geniessen die Ingenieurgeologen ein Schattendasein. Wer pusht die grossen Infrastrukturprojekte? wer warnt vor oder macht Risikoanalysen zu Naturgefahren?

25. It seems to me that there are underperforming countries.

26. While transdisciplinary research is really important, as is market innovation, I think the emphasis is going much too far in the direction of applied/market oriented outcomes. Different funding and investment structures exist for products aimed to go to market, but this is less so the case for fundamental or even applied research that is not aiming at a product to sell, and I think that is where H2020 is doing a disservice to European research excellence.

27. Geomedicine was neglected

28. Need more fundings for natural hazards.

29. Ju

30. My experience with H2020 makes it seem as though the focus was more on applied research, the results of which can have immediate application and impact. It seems as though the more fundamental or 'pure' research topics received less attention, if not lesser amounts of funding. However, these two types of research work in tandem to provide longer-term measurable solutions.

31. I have no overview of H2020 funding depending on nationalities, experience levels or research types.

32. Basic, fundamental research is generally excluded from H2020 projects

33. Distribution depends on the national attitudes and support for the programme - e.g. access to facilities, some funding to support projects development, recognition of awards etc.

34. Limited funds to early career to develop a research career (MSCA actions too limited in time)

35. It is realistically distributed

36. I have the feeling that to a large extent there are more funding for travel and meetings than there is for real science, somewhat this is due to low budget grants that automaticly exclude high end expencive research.

37. H2020 is not really funding basic research that is for sure needed!

38. I can not give a clear and objective assessment of this issue.

39. Less research intensive countries still lack of skills necessary to prepare a successful proposal; in some other Southern Europe country the hierarchical system makes it difficult for young researchers to emerge

40. The programs for blue sky research in Europe are too limited (only ERC). This policy has and will have an impact on the European research quality.

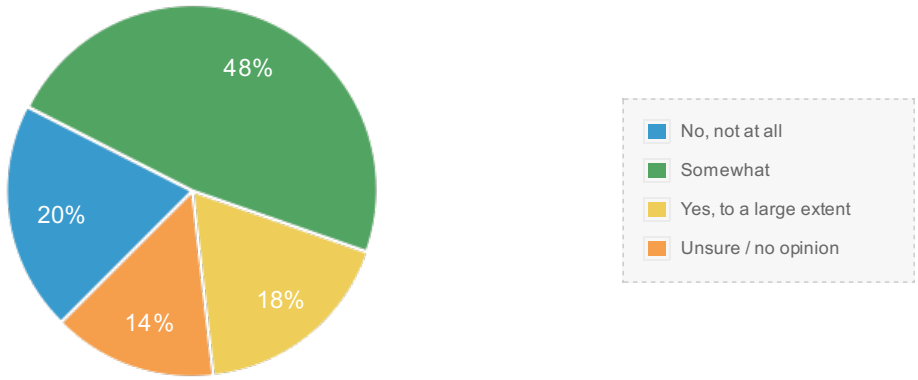
41. Delegowanie Przedstawicieli Komisji Europejskiej.

42. The ERC programme has a career-stage gap between the early-career grants and the advanced grants. Fundamental research in the geosciences is pretty difficult to place in the H2020 programme.

Q20

Do you believe that the Horizon 2020 Programme is creating jobs or greater job security within the geoscience community?

Answered: 140 Skipped: 131

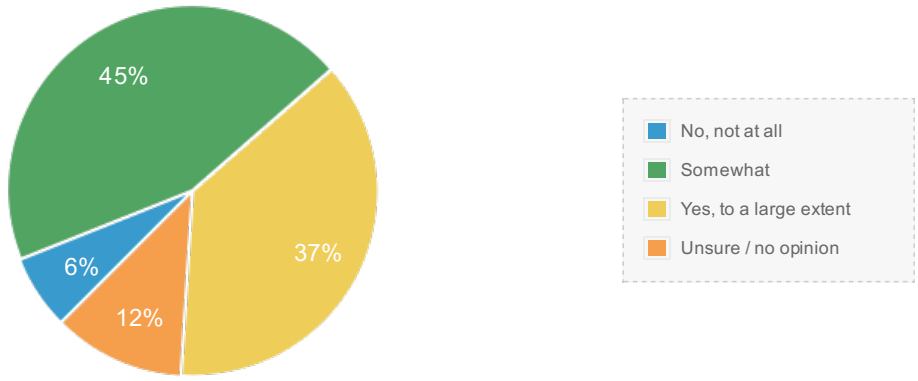


	Response Percent	Response Count
No, not at all	20.0%	28
Somewhat	47.86%	67
Yes, to a large extent	17.86%	25
Unsure / no opinion	14.29%	20

Q21

Do you believe that the Horizon 2020 programme has increased the collaboration between different scientific disciplines?

Answered: 139 Skipped: 132



	Response Percent	Response Count
No, not at all	6.47%	9
Somewhat	44.6%	62
Yes, to a large extent	37.41%	52
Unsure / no opinion	11.51%	16

Q22

How do you think greater collaboration between different scientific disciplines could be encouraged?

Answered: 39 Skipped: 232

1 . Starting from multidisciplinary calls written by multidisciplinary experts, and ensuring a multidisciplinary participation.

2 . As the challenges are quite complex, collaboration with human behavioural studies, neuroscience, model thinking and energy and raw material management should be considered.

3 . Less paperwork, more real-world applied research

4 . The calls should reflect that need

5 . more cross-disciplinary calls

6 . -with rules that would define which disciplines must be covered by experts in each particular topic
-with additional budget for interdiscilpinary consortiums
-etc

7 . Yes.

8 . Yes. Common methodologies to control parameters.

9 . multi-disciplinary project teams

10 . Rather than encouraged (pushed) it needs to be recognised and rewarded (pulled). It is also not obvious to some people e.g. where to publish outputs from multi-disciplinary work.

11 . Make application process easier

12 . Defining explicit inter-disciplinary goals/driven by a societal issue.

13 . The single largest shortcoming of the H2020 program was its definition of program areas. I think the persons involved in outlining the program understood clearly that many of the challenges facing the EU and the world, require a multi-disciplinary approach. The program announcement and application process could have specified that preference would be given to proposal that outlined an integrated, multi-disciplinary approach.

Even then, I am skeptical that multi-disciplinary projects would have been forthcoming. It seems that we experts enjoy living in our stovepipes.

14 . Yes, with interdisciplinary projects and cooperation with other work areas.

15 . Greater participation by practitioners rather than academics

16 . I think this is something that universities and research institutes need to embrace and support, not to mention scientific journals where such research would be published. Funding is one side of it, but if it isn't supported on the institutional/working side, it just makes the funding more difficult.

17 . Only allow universities with fair and transparent hiring systems to be eligible for ERC

18 . It could be taken even more into account when evaluating the proposals

19 . Specific calls targeting interdisciplinary methods/frameworks development to support specific challenges.

20 . More scientific networking, under the form of small networks... not huge one, is necessary.

21 . Interdisciplinary projects

22 . Natural Sciences

23 . Through open data, which could allow me as a land surface scientist to access climatic data which I could integrate in my models.

24 . More funding for intetdisciplinary resesrch is needed.

25 . Creating more interdisciplinary research topics.

26 . Fund small interdisciplinary teams not large ineficient ones

27 . via the sharing of data and the development of information systems and semantic/ontologies

28 . It is necessary to provide new criteria as to improve inclusion, collaboration and integration of knowledge within the H2020 project. It is also absolutely needed more effective measures encouragement to hire expert in SSH, policy studies and

29 . Encourage/enforce multidisciplinarity

30 . Expert reviewers should be more open to genuine multi and interdisciplinarity. Geoscience projects, as well as all natural sciences projects, should include/consider social sciences dimension.

31 . yes

32 . First of all by the simplification of application and project approval procedures

33 . percentage of patents to all partners

34 . More interdisxiplinary calls should be announced

35 . yes, with greater emphasis on the inclusion of experienced and successful explorationists

36 . Yes, but a real control should be planned on the effective collaboration

37 . Yes, however greater collaboration should never be a prerequisite.
By joining forces one may answer more complex and detailed questions.

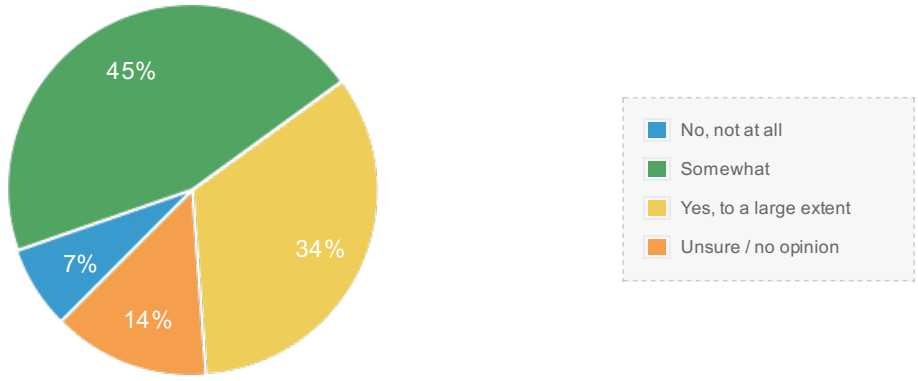
38 . yes. involve social scientists, economists, ICT,

39 . only with better communication

Q23

Do you believe that the Horizon 2020 programme has increased cooperation across different sectors (including industry, government, academia etc,)?

Answered: 139 Skipped: 132



	Response Percent	Response Count
No, not at all	7.19%	10
Somewhat	45.32%	63
Yes, to a large extent	33.81%	47
Unsure / no opinion	13.67%	19

Q24

How do you think collaboration between different sectors could be encouraged?

Answered: 33 Skipped: 238

1 . By providing industry with more incentive and information to engage/participate. Also, with regard to government, the incentive again is very low, especially in Greece.

2 . Not subsidizing the market through H2020 funding.
Only the international open market can create really competitive European industry.

3 . Collaboration with food, water, environment, energy, and raw material sectors should be strengthened.

4 . 1st: Decrease the stakeholders engagement paranoia because it gives nothing
2nd: Increase the number of calls that ask for cooperation between different sectors

5 . especially governments should be encouraged to employ researchers who would be able to collaborate with others. Nowadays they have too much administrative work and therefore they are not interested in research projects.

6 . Providing finantial support to projects joining different sectors.

7 . It is frequently a matter of fruitful personal and group contacts. In recent years a very welcome step forward was made by so called experts groups. In my field of work (geology of coals and hydrocarbons, CCS ..,) active is e.g. Geo-energy Expert Group in the frame of EuroGeoSurveys with active participation of almost all EU Countries

8 . Further encouragement of participation of different sectors in the Horizon 2020 programme.

9 . Companies need to see the benefits but the big problem is speed of outputs. The value of research is the depth to which researches can understand a problem and help answer it. Industry partners often do not want/need this, they only need the 'best' solution at the time or one that is better than their competitors. They also need to recognise that H2020 is not a source of commercial income.

10 . Make application process easier

11 . Yes

12 . make easier for smaller organisations / individuals to particpate

13 . For one, I think that while such collaboration can be very important and enriching, I think pushing it in all areas is also not ideal. There are plenty of areas where transdisciplinary projects don't necessarily make sense, or where e.g., industry works on a completely different timeline/funding structure and getting them engaged to get H2020 funding isn't something they are interested in, even if the connections or interest are there from the academic side.

14 . to evaluate it even more in the proposal phase.

15 . I think, that need to include many people- competent geologists from different sectors in separately projects and their realize.

16 . Requesting allocation of certain amount of each project budget to collaboration among sectors in the form of outsourcing or paid workshops/knowledge calls.

17 . again small very focused project. Small project are the more innovative.

18 . In Geosciences not always the results are applicable straight away, but require further integration by other disciplines.

19 . Interdisciplinary learning and research collaboration

20 . As above

21 . By granting independence of research funding (i.e., Horizon 2020 should for its large part be funding 100% of the project and not pushing for co-funding from external stakeholders)

22 . Government involvement is very limited. Programs to enhance communication between scientists and politicians are needed

23 . By providing incentives in the annual announcement and reinforcing their weight in project's assessment.

24 . more citizen science, more farmers

25 . please see the answer above

26 . Make it easier to understand how they can finance projects with H2020

27 . Building together equipment and knowledge to be applied;
encouraging teamwork on longer tasks.
dignify the profession of geologist
Creating mandatory jobs in the local administrations of specific mining regions.
That reports must be based on teams that include geologists
Creation of the order of geologists

28 . More calls where collaboration between sectors is a must

29 . Too little involvement of explorationists, too much money being devoted to academics, who have little corporate experience, and bureaucrats who don't understand "exploration risk".

30 . Inclusiveness from the private sector could related to societal goals set by the private sector themselves.

31 . yes. promote knowledge transfer

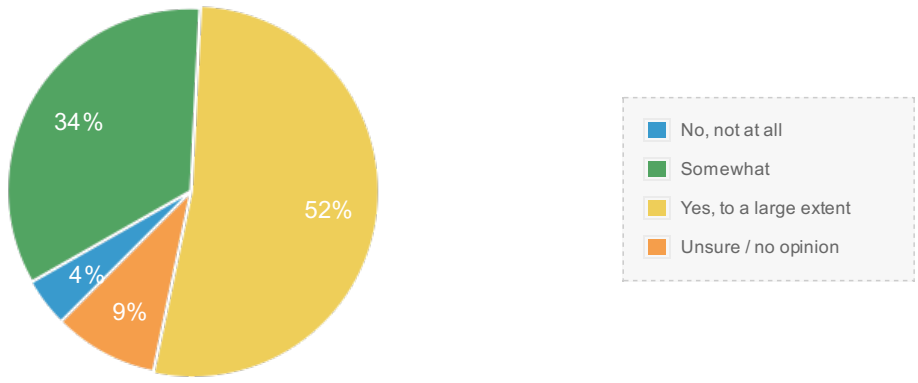
32 . only with better communication

33 . With good collaboration between this Programm and Governmental, Industry, official and private sector

Q25

Do you believe that the Horizon 2020 Programme is improving the ability of geoscientists to communicate, collaborate or network across European countries?

Answered: 141 Skipped: 130

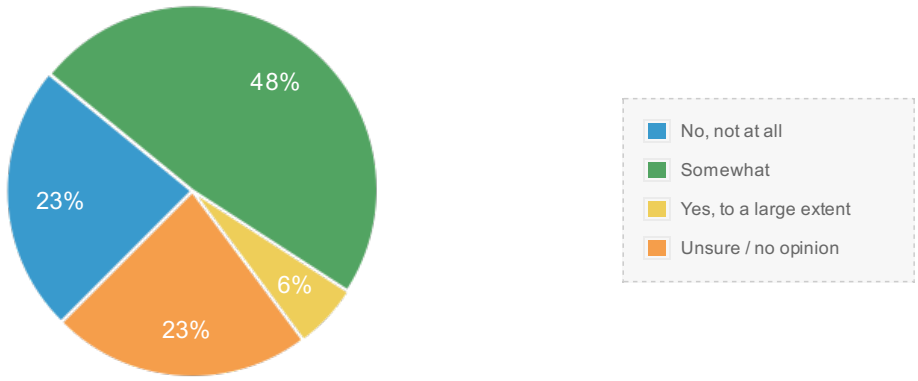


	Response Percent	Response Count
No, not at all	4.26%	6
Somewhat	34.04%	48
Yes, to a large extent	52.48%	74
Unsure / no opinion	9.22%	13

Q26

Do you feel that the Horizon 2020 Programme is generating private sector investment in the geosciences?

Answered: 141 Skipped: 130



	Response Percent	Response Count
No, not at all	23.4%	33
Somewhat	48.23%	68
Yes, to a large extent	5.67%	8
Unsure / no opinion	22.7%	32

Q27

What could the next EU funding programme do better to increase private sector investment?

Answered: 14 Skipped: 257

1 . joint grant schhemes following e.g. the Canadian NSERC MITACS grant scheme

2 . Avoid subsidizing the European industry with H2020 funding

3 . Better conditions for supporting the contracting of young scientists by companies. That will lead for future investment in geosciences

4 . Involve the private sector in the funded projects

5 . Make application process easier

6 . Help the SME that are looking for resources or mining within the EU by setting up an investment fund similar to what China is doing to secure resource projects internationally.

7 . Recognition of the fact that in the west exploration success is mainly due to small companies

8 . Just make possible short term secondments of PhD student within private sector

9 . Raise awareness of the importance of georesources in today society.

10 . Advertising
Participate in private sectors meetings to understand their needs
Favorise creation of private companies
And advertising again!

11 . I don't see Portuguese private sector related to Geology (oil, mines, water, ornamental stones) interested in investing. Don't know how EU funding can change Portuguese companies CO mentalities.

12 . Increase granting of peivate companies

13 . There should be a clear profit for the private sector, however the profit should be equal in all EU countries. Inclusiveness from the private sector could related to their societal goals apart from financial profit.

14 . communication!

Q28

Please provide an example of a private sector investment that has occurred as a result of the Horizon 2020 Programme (if possible)

Answered: 3 Skipped: 268

1 . Jest to inwestycja w szerokiej mierze powiązana z szeroko rozumianymi inwestycjami w węgiel i metal.

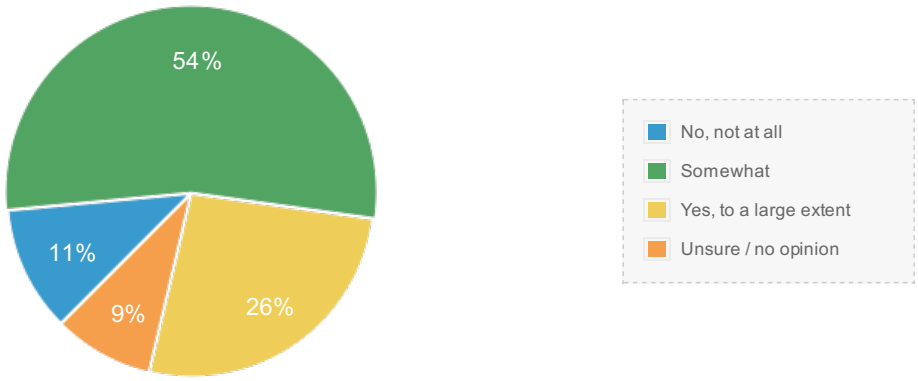
2 . *

3 . Investment in sector of row materials or to prepare base for new planns in recikling sector.

Q29

Do you think that the Horizon 2020 Programme is helping to circulate geoscientific knowledge and technology to the public and wider community?

Answered: 136 Skipped: 135



	Response Percent	Response Count
No, not at all	11.03%	15
Somewhat	53.68%	73
Yes, to a large extent	26.47%	36
Unsure / no opinion	8.82%	12

Q30

Please provide an example of how the Horizon 2020 Programme has helped circulate geoscientific knowledge or technology (if possible)

Answered: 16 Skipped: 255

1 . Służba Podmiotowa dla przedstawicieli i ekspertów, ds. projektów i tworzenia Polityki.

2 . outreach activities are a must in MSCA

3 . Project dissemination activities have been improved with respect to the last workprogrammes

4 . /

5 . Promoting popular articles about the science

6 . By encouraging the dissemination towards non scientific audiences in their calls - many scientists would probably not think of including this kind of activities in their work plan. Of course much more should be done.

7 . *

8 . The International Raw Materials Observatory has been able to generate members on multiple continents. Experts working with INTRAW have derived models of the global supply and demand chain, and have attempted to predict which economic, regulatory, and international actions could impact the global supply and demand chain for raw materials. Those 'scenarios' have been used to generate discussion and action between the private sector, non-governmental organisations, and local and national governments in several countries, even though the institute has been in operation for less than 6 months.

9 . the KINDRA-Project with the EIGR

10 . All projects are required to have dissemination activities and specific projects have been dealing with collecting and presenting the info generated through H2020 projects.

11 . Interaction of projects with the society is happening quite often. In this way, the knowledge is provided to a non-specialists area

12 . Dissemination is na importante point in all projects, in spite that it gives us a lot of work

13 . - good practices
- legislation
- innovations
- databases

14 . Participation of the ETN into scientific events (dissemination to the public)

15 . h2020 roundtables

16 . There are small movies, brochures and presentations about the activity of the currently running H2020 project which shown in many events, even public which distributes the knowledge among the public.

Q31

What do you feel are emerging topics in the geosciences?

Answered: 71 Skipped: 200

1 . Climate change and adaptation
Extreme events
Predictability of hazards

2 . conservation paleobiology
paleoecosystem modeling

3 . Są na nie silne zapotrzebowania eksperckie.

4 . Sustainable resource development
geo-habitat variability and its feedback on migratory pressures

5 . Environmental issues and hazards able to disrupt the global (or a country's) economy

6 . Artifical intelligence / big data leverage for raw material and energy productivity.

7 . The need for actual data from the geological record is becomming more and more important, since data collected so far have been used for modelling up to model capacity. To strengthen research we need more geological data. Thus emphasis on geological observation will become more important in the future, on land and in the sea.

8 . CRM
Water security - climate change effects
Food security

9 . Energy and hazards

10 . Raw materials, mining, recycling, air pollution

11 . Waste management, re-investment in exploration and production efforts of energy and minerals within EU borders in order to reduce reliance on unethical superpowers

12 . Accessibility to undiscovered mineral resources - Land use planning
Biotechnology applied to geosciences

13 . Clean, environmental friendly mining and cleanup after Mining

14 . hazards and earth system science

15 . medical geology
critical raw materials
water resources

16 . Coupling between different elements of the Earth System

Coupling between different societal areas

17 . GeoHealth
Geotourism

18 . The impact of emerging remote sensing technology into physical geography.

19 . Medical Geology, Uncertainty, Communicating science

20 . I do not have such a wide perspective over the entire geosciences area of research. I think that interdisciplinary approaches are very promising and they are becoming more frequent.

21 . *

22 . Sustainable
Efficient
Safety

23 . sampling and assessing resources contained in anthropogenic deposits such as land fill sites and mine waste dumps

24 . In my field, Shift from using fossil fuels especially in economically drastically growing countries to promotion and results on the field of using much and much more renewable and alternative sources for energy supply - and production e.g. of plastics from biomaterials not from oil.

25 . planetary science, remote sensing/earth observation, geohazards, energy, resources

26 . Water quality issues to to pressures from changes in demography and climate.

27 . ?

28 . The EU was prescient in identifying raw materials. Strategic and critical minerals are an emerging topic.

Access to clean usable water is an ongoing issue that has the potential to become critical in the next decade.

Others include:

Science Literacy (focusing on how we know what we know)

The skills gap between what college graduates learn and what they need to know to be an immediately productive employee

The impact of climate change on soils and soil loss

Understanding impacts and predicting the rate of increased methane emissions, both from destabilization of methane hydrates and from the melting of permafrost

29 . drinking water

30 . Supply of raw materials and the importance of metals in a properly functioning and healthy body

31 . In the field of atmospheric chemistry, the use of small sensors is one area. This facilitates new user communities, applications, etc., but is also an area with significant challenges to be able to really use these sensor, while understanding their limitations.

32 . Ingenieurgeologie, Grundbau, Bodenmechanik, Felsmechanik, Naturgefahren

33 . Downscale global climate impacts to local scale and upscaling local adaptation to the global scale, all related to land, cost, and sea processes.
Bridging the climate goals (eg Paris agreement) and the sdgs in the context of geosciences.
Multi hazard assessments and adaptation approaches

34 . food security

35 . environmental Contamination, Limits to Grow, Toward
Global Equilibrium

36 . Exploration of new arctic fields.

37 . - Geosciences has a very wide range of influences, themes, communications and other consequences that occur step by step proven in practice

38 . Climate change

39 . That's a very broad question. If I was going to try to give a sensible answer I'd be here all day. Have a look at the literature.

40 . Hydrological extreme events (flood ,drought

41 . Everything is important. Fund ideas not set topics to carve funding for smooth operators

42 . Sharing of knowledge, impact of IT and electronic devices, mobilisation of ecosystem services and their quantification

43 . Natural hazards and climate change

44 . security
healthrelated to climate change

45 . Raw materials.
Geothermal.
Groundwater.

46 . Risk communication, definitely. After the trials for Chilean tsunami and L'Aquila earthquake and the following appeals from scholars and prestigious review such as Nature and Science it is necessary to give a wider space to technical, professional and ethical issue with respect to risk communications,

47 . sustainable resources

48 . soil functions

49 . Waste management, green energy, atmospheric science, big data

50 . i am not sure

51 . BIM
Cities
Earth Observation aplications, satellite imagenes

52 . Circular economy
Hydrogen exploration
Oil exploration technics applied to mineral exploration

53 . -Marine minerals exploration and exploitation
-Exploration and assessment of deep seated mineral resources

54 . Exploiting geologic records of climate variability and impacts of climate change to inform modelled projections of future climate change.

55 . the contribution of geosciences to biodiversity and sustainability.
the circulation of mineral trace elements in the crustaceans / ecosystems.

56 . Natural Heritage
Deep Oceans
Deep Biosphere

57 . Water scarcity, safe water supply, water management and hazards for water resources quality and quantity

58 . Trace metals and health;
requirement for even more metals in a low carbon future

59 . soil compsumpiton /floods/ landslides geohazard

60 . I

61 . Remote Sensing

62 . Big data and machine learning, bio-interactions with geomorphological processes.

63 . more international press releases

64 . circular economy, social licence to operate, digitalisation, big data, platforms for reuse of materials

65 . ability to communication

66 . cross-sectoral topics - an interaction of geosciences with policy, environmental issues, social issues, economic challenges, etc.

67 . Groundwater management.
CO2 entrapment.
Management and rehabilitation of geotechnical construction sites (incl. slopes, tunnels , etc)

68 . automatition, robotic use

69 . international cooperation with partners outside the EU

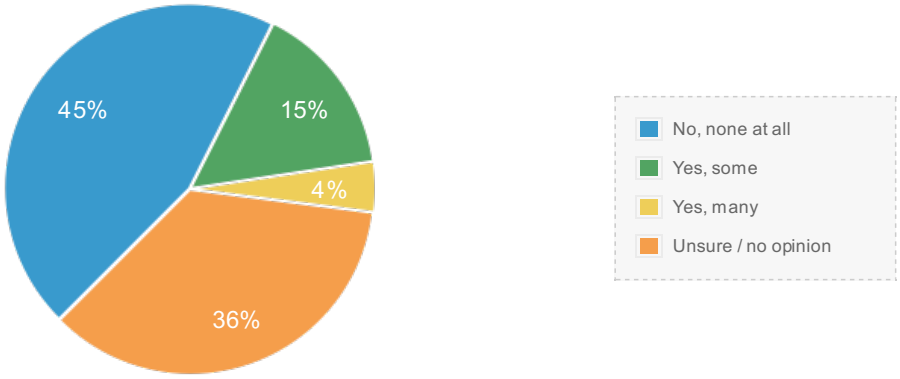
70 . N/A

71 . Adequately understanding of traditional and new geological term in different geology discipline, in relation to national low regulation and competent in international standards.

Q32

Do you believe that there are any negative outcomes (social technical, environmental, economic, etc.) of the Horizon 2020 Programme?

Answered: 138 Skipped: 133



	Response Percent	Response Count
No, none at all	44.93%	62
Yes, some	15.22%	21
Yes, many	4.35%	6
Unsure / no opinion	35.51%	49

Q33

Please provide an example of a negative outcome (if possible)

Answered: 18 Skipped: 253

1 . Pursuing the growth of a subsidized industry which detracts resources to actual scientific research is very shortsighted and will not sustain a positive and competitive European market in the long term

2 . some projects are founded even though their results are not realistic or can even cause harm to environment and society and are after finish forgotten.

3 . hORIZON PROJECT HAVE TOO MANY SMALL PARTNERS WHICH DO NOT REALLY CONTRIBUTE MUCH DUE TO VERY LIMITED FUNDS. THE ONLY BENEFIT THEY HAVE ARE SOME NEW NETWORK POSSIBILITIES IN OTHER COUNTRIES WHILE THE EFFORT PUT IN THE PROJECT IS MUCH GREATER THAT THE FUNDS. OFTEN ALSO THE SOCIETIES ARE (ALSO WITHOUT THEIR DIRECT KNOWLEDGE BUT AS MEMEBERS OF A LARGER EU ASSOCIATION) PARTNERS IN THE PROJECT BUT IF THEY DO NOT HAVE EMPLOYEES, THEY HAVE TO SUBCONTRACT THE WORK TO OTHER INSTITIUTION. THEREWITH QUITE SOME MONEY IS LOST IN THE SYSTEM PLUS THE RESEARCHERS ARE UNDERPAID AND CANNOT DO THE WORK IN THEIR WORING HOURS BUT AS PRIVATE PERSONS.

4 . More and more research organisations have a dependencies on funding agencies to pay the salaries of a large part of their personnel. For those employees (mostly people under 40 years old), they constantly live from short term contract to short term contract, which can become unstabilizing after a certain amount of years, with no clear future vision.

5 . The programs for blue sky research in Europe are too limited (only ERC). This policy has and will have an impact on the European research quality.

6 . H2020 is only useful for organisations that have many admin staff that are able to spend massive amounts of time getting the applications in and nswering the huge amount of admin info requested from the EU. My brief contact with EU funding has persuaded me that the time and effort required are too much to make regular applications

7 . selfcontent feeling... yes we talked about.

But Thats not enough!

8 . A very poorly researched project on public attitudes was rejected by the professional geologists, but submitted none the less

9 . Administrative burden to scientists is increasing, thus allowing less time for research. The competitive nature of the calls hamper cooperation among organisations and scientists competing for the same funding to some extent.

10 . Overlapping projects are funded meaning there is still duplication of effort - a more co-ordinated approach would be more efficient with citizen's money. Long-term funding for maintenance of platforms/portals or updating of data after the projects have ended is completely missing.

11 . I am part of an ETN as an early stage researcher. For this kind of positions, only applicants who did not lived more than 12 months in that country are eligible. On one hand this is in favor of the exchange of science and knowledge among countries, on the other hand makes more difficult to plan a stable lifestyle.

12 . standardisation and need for high level of knowledge of the financial mechanisms can be a barrier for smaller teams or more specialised topics to access EU funding.

13 . Loss of indepency of researcher. Loss of credibility in the results of all the Horizon 2020 due to cofunding mechanism of some part of H2020

14 . Rich countries (namely Germany) take a large portion of the resources, making it impossible to compete with them in future calls

15 . Non geologists assume that the discovery of metals can be turned on and off like a switch

16 . Instability of young researchers that are somehow not well protected (retirement, benefits).
Inequality of treatments among countries (researchers in Portugal do not have the same benefits of researchers in north europe) for example).
Need to open short time position and difficulties to build a long lasting team. Waste of knowledge (it is rare that researchers would use their knowledge on the topic in the following job, while the group has ti hire and form a new one on the topic when new findings are available)

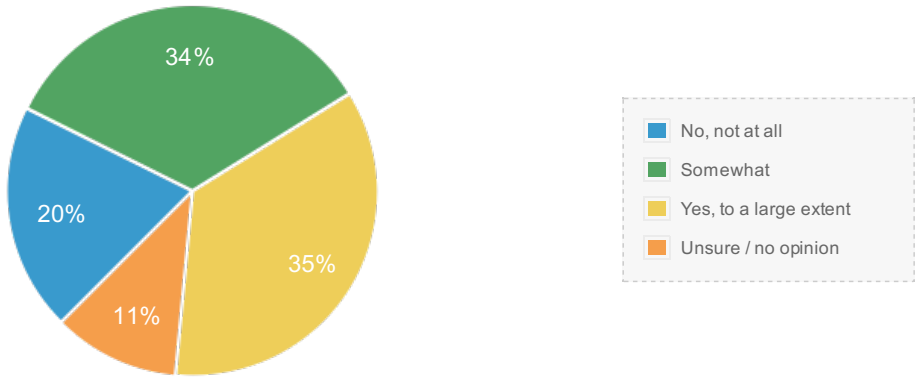
17 . communication

18 . Not convinced all money is well spent, therefore waste of taxpayers money. A lot of bureaucracy, more talking than actual acting

Q34

Overall, do you think that you have benefited from the Horizon 2020 Programme?

Answered: 136 Skipped: 135

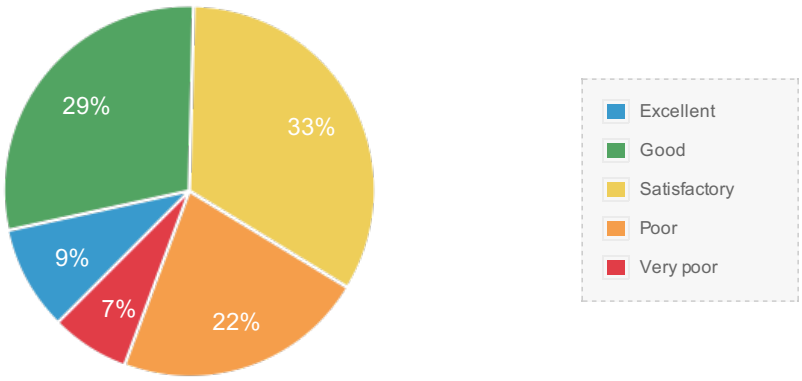


	Response Percent	Response Count
No, not at all	19.85%	27
Somewhat	33.82%	46
Yes, to a large extent	35.29%	48
Unsure / no opinion	11.03%	15

Q35

Overall, how would you rate the Horizon 2020 Programme's effectiveness in supporting the geosciences?

Answered: 132 Skipped: 139



	Response Percent	Response Count
Excellent	9.09%	12
Good	28.79%	38
Satisfactory	33.33%	44
Poor	21.97%	29
Very poor	6.82%	9

Q36

How do you think European geoscience programmes are positioning themselves in the global context?

Answered: 72 Skipped: 199

1 . Very well

2 . not really an idea - an analysis should be done... but is it really worth to discuss how geosciences... ?
maybe better: what about water science?
what about raw materials?
what about energy?

3 . Za pomocą portali UE. Z tzw EU LOGIN.

4 . in fundamental research sectors

5 . Well if compared to most countries other than USA, Japan, Canada

6 . There is a good potential for European geoscience programmes to lead in a global context. However, this could be improved by better coordination and cooperation both within EU as well as globally.

7 . Comparing to programs like NSF and even local programs like NERC, the European programs are not doing what they should be. That is adding to science, As it is build up it is more for modeling and meetings and desk science. If European union wants to get aout of that it needs to increase the budget of there science programs and start to focus on in programs related to geological research with in smaller groups.

8 . These are becoming more important and Europe already leads the way in many aspects of geosciences.

9 . They are beneficial to the European society, economy and research as they support functionality of some institutions and they increase collaboration. But sometimes it seems that observers form other continents or from some industrial sectors see some of the topics rather unproductive

10 . Awfully. The only geoscience programmes that produce anything (in my mind) are university courses - but they only produce excess graduates into a world without geoscience opportunities. While there are any number of environmental opportunities, few are well paying and none produce anything except regulatory compliance.

We have failed in the public eye, and instead of pushing the idea that mining and energy extraction can be carried out responsibly, we have pandered to the outraged minority and avoided development of any kind. We are now entirely reliant on foreign countries to produce our basic and luxury goods simply because we are unwilling to take a chance at something productive. We use excess cement because we are too lazy and greedy to spend time quarrying natural stone for building, much to the detriment of our visual landscapes.

Our geoscience programmes are not in a global context. European geologists work worldwide, but they will be quickly supplanted by the myriad graduates being trained so that universities can make a quick profit, and when they can't get a job they are encouraged to remain in the university.

I see no future in the geosciences for anyone who has not got a job with a supermajor by the age of 25, and encourage all to do engineering instead.

11 . They simply copy what is established as politically correct by the United Nations policies for developed countries, i.e. they maintain the status quo, not being disruptive

12 . increasingly recognised, but still lagging behind AGU.

13 . I guess it could be better...

14 . Well positioned to keep Europe at the forefront

There may be a need to strengthen the interaction between research and applications

15 . TO MUCH EFFORT ON MANAGEMENT AND DATA HARMONIZATION ON EUROPE-SCALE INSTEAD ON DEVELOPPING METHODS AND REAL RESEARCH

16 . Strong

17 . In US , England and Australia national research consortiums do a better job to stimulate research and foster research activity. In EU, research programs are too much oriented as consultancy activities on topics prioritized by policy makers and managers and not by real research opportunity.

18 . A strong player that can be more visible in a global context.

19 . **

20 . We need a better network to use and interchange data. USA has better geoscientific education.

21 . they seem to maintain a reasonably high profile

22 . Recent steps were done within the (ERA Net for Geosciences) programe (Geo-Energy, Minerals, Groundwaters and GeoInformatics) which represents a considerable improvement of the previous situation when Geosciences have been, at least to my opinion, somewhat "sub-situated"

23 . Very good. Still further efforts are needed to align the work conducted within the Horizon 2020 Programme with other initiatives.

24 . HOrizon2020 is becoming too focussed on impact and output which leaves little room for creativity or accidental discoveries. Also too much reporting.

25 . Dont Know

26 . Unknown

27 . Could be better. Compare energy or material sciences, or genetics, etc.

28 . The EU is in a leadership position with respect to raw materials and identifying critical and strategic minerals.

The EU is also ahead with respect to looking at non carbon energy alternatives.

The EU seems to be a bit behind with respect to programs that address soils, soil productivity, erosion, mass wasting, and emergency and disaster preparedness.

The European Higher Education system does a very good job of training future geoscientists.

29 . We feef good, because we have discussed about!

This thinking is a fashon or hip.

Its a petty that the human beeings know the problems but they do not realize consequences

30 . Yes

31 . Largely based on research or service providers not on building the industry from the roots. Look at agriculture and the support for farmers.

32 . Geosciences combine different disciplines. Especially through the projects of the geosciences different fields are connected with each other. This also has cross-national effects and can bring political added value.

33 . It's trying hard to, but is ignoring the realities of risk

34 . I think it depends on the discipline and the country. Overall, I think they are doing pretty well, but I think H2020 could do more to support the geosciences, specifically not just focusing on the topics that garner media attention (e.g., climate).

35 . don't know

36 . Not clear. They should focus on issues in underdeveloped countries. Link w these countries is very poor

37 . Not well enough. Although you need basic science we need the best available knowledge to inform policy particularly with the current global challenges

38 . satisfactory

39 . In my oinion,this programme have good possition in the global context.

40 . Depends on specific field, some are exemplary for the rest of the world, some are way behimd, but there's also huge differences among countries.

41 . The geoscience programmes as such are globally oriented but due to the EC funding requirements they are to some extent "limited" to Europe

42 . Good, partucularly in Resources área. Goehazards, in particulat seismic, is not adequatly funded, maybe because richer countries have a lower hazard

43 . no idea

44 . This could be improved. The quality of project results should be better monitored. Rather than counting publications and academic metrics real output should be evaluated. The EU should take a leading position in this, based on quality research with real results, rather than academic metrics

45 . - As good as possible

46 . Very well, they are inclusive and open. , interesting and are often times funded.

47 . Does it matter? Are we competing with anybody?

48 . Very open and high level of excellence and expertise

49 . Very well, thanks to the push from some national governments, like Denmark and Switzerland

50 . Perfect.

51 . We need more integration in standards.

52 . NO

53 . I don't know

54 . Don’t know

55 . i ma not sure

56 . No opinion due to no information on this subject.

57 . Very poor

58 . Those programmes focused on H2020 funding are, for better or for worse, less free to diversify and pursue the newest leads/ideas than, for example, programmes funded by the US National Science Foundation. H2020 is extremely contained by the specificity of its calls (not including things like ERC).

59 . Yes

60 . revisit the mining past to accept the mistakes correct mistakes and prepare a new future for mines and geologists
mass geological tourism,
publicity of good practices through community education.
traveling exhibitions only for mining areas only.

61 . Not enough information regarding the micropaleontological studies.

62 . Pooe - much worse than USA and Australian geosciences

63 . Very patchy

64 . In line with international ones

65 . Most programmes will definitely have an impact globally, either as reference studies or to develop new tools/proxies.

66 . none with such inability of communication

67 . Need more international collaboration. Especially in the raw materials sector Europe has a lot to learn from countries like Canada and Australia. They are well ahead with their raw materials programmes

68 . Innovative, contributing to sustainable development

69 . Yes.

70 . European geoscience should think global and co-work with partners outside the EU as well. This improves the quality standard of the research and gives more visibility to the european research.

71 . European Geosciences programmes are considered at the top level among their pairs.

72 . I think it is very statsified.

Q37

The EU’s mission-oriented policies aim to use research, technology and industry to realise solutions to societal and economic problems (e.g. plastic waste). Are you able to list one or more potential ‘missions’ in which the geosciences could contribute to solving a societal or economic issue? Feel free to be creative!

Answered: 61 Skipped: 210

1 . Fish stocks depletion. Using paleo-records, we can predict fish population distributions under different scenarios incorporating climate change, biological invasions, and habitat changes, and thus guide fisheries management and policy.

2 . Oczywiście. m.in. jest to nauka o czystym środowisku, pielęgnacji zieleni i lasów. Oraz skuteczne przekazywanie tych nauk następnym pokoleniom.

3 . Land degradation is one grossly oversighted issue. Research has shown that the destruction of optimal farming land in Europe to make space for infrastructures, housing and plants, plus the degradation from wrong agricultural practices, will likely bring Europe to be largely dependent on other countries for food production in only 1-2 decades, with an unacceptable risk for our economies.

4 . - Superforecasting of energy - raw material flows (numerical, model-oriented thinking with Bayesian statistics).
- Global workspace (a blackboard) for inter-sectorial (e.g food-water-energy) interactions.
- "Innovation jumpstart protocols" to accelerate commercial utilization of new technologies.
- "Towards zero waste" initiative for addressing raw material waste challenges.

5 . Geoscience are solving societal and econic issues every day, with out Geology we would most likely still be nomades. Roads, buildings, societal velfaire, society security and responce, travell in air on land and sea all are based on geological knowledge to large extent. Raw material use would not exist with out geology. In global warming senarios, natural hazard and public exposure increases. Understanding of local and global Geology can help to respond to this increase and prepaire future society in cobing with it. Oceans are of huge importans for future generations, understanding of there evolution and generation will help future society to secure food supplies and need of future raw material.. for me the need of geology is endless in future society and I can not see how society can get by without constantly enlarging its understanding of Earths geology.

6 . storage of green house gasses
reducing the amount of particulate matter in air
reevaluation of European mining potential (raw materials independence)
Natural catastrophes (landslides, floods) and climate change

7 . Practical missions - instead of publishing a paper on something, get out and do it! No more research into how to reduce plastic waste - organise beach cleans and place barrages across river mouths! Apply the skills we have already developed.

Open journals - paid journals are a racket.

8 . Enhancement of the use of data from Sentinel missions for land-use, ocean and coastal monitoring, hazards and emergency.

9 . there are several ideas, but according to our experiences from the past, ideas presented (by us from small and "not so important" EU regions) anywhere are most often stolen by large research institutions...
I think that Balkan countries or other regions with low innovation index have great ideas but never or rarely get founding from EU, that is why we must include other "more important" countries in the consortium, even though they are not needed.

10 . Smart living - keeping people close to resources

11 . sustainability science / social geology
circular economy

12 . How to make the most of the data is being recently generated by recent earth observation programs (e.g., Copernicus programme).

Don’t let technology drive questions – use it carefully and effectively to answer questions
• Incorporate emerging technologies alongside field analyses
• When called upon as geomorphologists to contribute to management activities (work alongside mangers) we need to be ready!
– Be prepared – importance of strategic, proactive planning
– Although simple solutions are often attractive, they are not alwaysright
• Science and politics … All power to the writer of the
algorithms … the politics of modelling!

13 . Land-fill mining, Minerals for Windmills, Subsurface CO2 capture, geothermal energy

14 . *

15 . Natural risk assessment
Geoscience education and sensibility
Climate change...

16 . Using new technologies, such as robotic mining methods, to exploit small scale deposits in Western Europe which used to be worked previously. For instance, more building materials could be sourced locally.

17 . Evaluation of the environmental impact of an H2020 project could include carbon footprint of the involved researchers/institutions. This could stimulate: more teleconferences and less traveling, choosing environmentally friendly transport options, decreasing the use of paper, greening offices of the participating institutions. In addition, leading EU researchers should serve as a positive example to the rest of the society, by pioneering environmentally conscious behaving in everyday (research) life.
Similarly to the gender issue that became an integral part of each EU project, a comprehensive environmental effect, or evaluation of positive environmental practices could follow the same path.
This is an area where H2020 can still learn from the industry that is investing a lot in eco-friedndly solutions for the whole production system.

18 . Resources/resources management (groundwater, minerals...)
clean energy (e.g. geothermal)
earth observation for a range of missions
planetary science
natural hazard forecasting and mitigation

19 . Water quality:
- microplastics
- pesticides
- pharmaceuticals
-> follow the challenges within the water cycle from the source to the tap

20 . Could geoscientists identify potential carbon traps, similar to those identified during the search for petroleum plays, but rather than producing petroleum, could these traps be places into which a salt-water, fine-grained plastic slurry could be injected? Many of these traps held petroleum products under tight seals with essentially zero leakage for 100 million years.

Could geoscientists work with sanitation engineers to identify old landfills that could be 'mined' for raw materials that were deposited in the landfills before recycling became common?

Could geochemists and engineers work together to develop a 3D printer that would electrolytically separate sulfide from metal, and print ingots rather than smelting, thereby limiting airborne metal contamination?

21 . Natural resources suply
Agriculture planning
Land use planning
Health and environmental issues
Climate change
Geohazards information

22 . As mining is outside urban areas and you can't move mines it provides an excellent economic stimulus in rural areas if done properly. As can be seen with China stopping taking plastic waste reliance on non-EU countries is problematic.

23 . The availability of raw materials (including water) is a vital issue. Especially in this field, but also in the areas of new technologies, innovations and networking, the geosciences can make a major contribution.

24 . Too much emphasis on re-use and not enough on primary supply

25 . air quality exceedances owing to vehicles in urban areas (e.g., VW scandal) - this links to sustainable cities and sustainable mobility.

26 . Bewusstsein für Ingenieurgeologie stärken, auch unter den Studenten

27 . Renewable energy tech from geothermal, wave, tidal, ocean processes
Coastal protection/restoration/conservation as revenue generation similar to forest carbon offsets and afforestation/ sustainable logging ventures.

28 . Climate change, erosion, new materials,

29 . electronic waste recycling

30 . Data base of Geoscience must involved in base of different technikal or technological programms or projects like antropogenic resources and other industry acitivites.

31 . Nature for people.

32 . interaction earth-sea-atmosphere

33 . - how to deal with the expected changes due to global warming
- mass extinction of species
- Air pollution due to fossil fuel combustion
- soil degradation due to unsustainable agriculture
- loss of clean fresh water, i.e. eutrophication and pesticides in fresh waters
- drastic increase of aviation (let's be honest, the increase of air traffic is simply unsustainable and counterproductive, we have to reduce our air travel)

... i could go on for a while, but these points would already be good to tackle

34 . - history of mining in Europe and overview of the current state, as good start of any project Horizon 2020 and
- history of legislation of mining in Europe and overview of the current state of EU members states
- connectivity of mining with the economy, especially waste
management
- collecting data on the current state of the incorporated materials as a zero-existing level, by principle cradle to cradle, via programs BIM and GIS, aiming organization market materials
- remediation, landscaping and good practices, shedding light on serious cases and seeking for solutions...all together to be involved as a team
- connect Horizon projects with military programs and action plans
- link EU to the world; tracking trends eg.
why the import of gold in China and Russia has been multiplied

35 . Disaster Risk Reduction

36 . Geoscience related problems are usually integrated with climate and environment, which is seen as a future emerging problem, but natural hazards are affecting us these days. Too many areas in Europe have no coverage with real data, although some modelling European wide modelling was performed.
For example soil erosion still does not have concrete actions. Plastic waste is a problem which should also be tackled by local communities, through policies and we should see why these policies are not implemented, or if are implemented why do not work.

37 . In many villages in arid and semi arid regions, the knowledge of geosciences has help revolutionalised water availability , access and portability.

38 . Not the right approach

39 . While most science is oriented towards technology and industry, there is a great challenge in small scale and no regret solutions which sometime require less technology and more klnowledge. An other challenge of the future is making the citizens taking their part in the sustainable consumption and protection of the environment, in particular via easy to use solutions and easy to apply behaviours.

40 . Hydrocarbon: remove them from the food chain (from tractor use in the farms to fertilizers to the use of gas heated supermarket)

41 . ballast Water
ship emmissions and health, and radiation balance
socirtal expectations regarding climate change, positive or negative

42 . 1) involve people in decisions concerning land use
2) involve people in knowledge and decisions concerning geo-risks
3) make policy makers aware of issues from geo-science
4) engage policy makers in a direct dialogue about impact of wrong decisions

43 . no ideas sorry

44 . - Sustainable urbanization of rural regions or growing cities

45 . tackle the out of exploitation mining sites

46 . European innovation partnership on raw materials

47 . Acknowledging that I sound like a stuck record, there is a great deal of climatic information that can only be accessed via the geosciences. And, considering the potential scale of climatic impacts in the coming decades on our economies, societies, food networks, etc., this information is ever more pertinent. I feel strongly that understanding our climate system is key to addressing this most pressing of societal/economic issues.

48 . using the critical raw materials

49 . The University of Zurich has a project through which science creates art. Translate science through art. Create colorful art with the colors of the microminerals in tile. By sculptors working on minerals. Put minerals in the wine industry.
Why not cook stone soup?
Feeding with trace elements and diseases resulting from their deficiency.
Collect nicknames Proverbs and tools to use instead of plastic and conventional objects.
To divulge a mining culture because geology has no borders its borders have a world wide and planetary scale of the universe.
Use theme parks like the quartz park in france.

50 . Public awareness of the implications of present exploitation of resources (e.g. Hi Tec; oil, renewable energies) and future demands related to energy shift paradigm;
More funding to obtain cores for scientific purposes other than those directly related to oil/gas and water exploration;
Better preservation of deep ocean sedimentological archives for Climate Change analysis and prediction;

51 . Social responsible water management in urban areas,

Postindustrial sites reclamation for bringing them back to society

52 . Trace metals and health,
Greater production of CRMs within the EU,
Importance of metals in ordinary everyday life

53 . Methane emissions

54 . reduce traffic (at least the commuting traffic) by more compact cities however with ample green and 'green transportation'

55 . demolition waste.

56 . some basic courses in communication

57 . waste management generally
recycling and resource efficiency
energy efficiency
security of supply from primary and secondary resources
water supply
air pollution

58 . Drought mitigation.
Rational use of freshwater (incl. groundwater).
Rare/strategic element exploration and management.

59 . high efficiency batteries, smart materials (mineralogy)
recycling
raw materials (primary and efficient production and use)
energy (many aspects)

60 . Sustainable Urbanisation
Waste management
Climate change

61 . In my opinion, is need to evaluate competent (geology and other) all waste and prepared some relation to new impact to regulation, economy, ecology, technology etc.