Horizon 2020 European Green Deal; Finnish participation in the call

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1. Summary

Horizon 2020 was the EU's research and innovation funding programme from 2014-2020 with a budget of nearly 80 billion euros. The European commission launched the Green Deal Call 2020 with 20 topics and with about 1 billion euro budget for research and innovation projects that responded to the climate crisis, ecosystem damage and loss of biodiversity. Eligible proposals (1487, 96 % of all submitted proposals) were evaluated and there were 799 proposals above threshold. 73 projects were selected for funding. The overall success rate was 5 percent.

We have analysed how Finnish organisations applied and received funding from the Green Deal Call. About 5 percent of Finnish applicants received funding. The most successful Finnish organisation was VTT Technical Research Centre of Finland with five participations whereas there were four organisations with two participations each (Lappeenranta-Lahti University of Technology, European Forest Institute, University of Helsinki, and Finnish Meteorological Institute). Altogether, there were 22 participating organisations from Finland with 31 participations in 18 projects. Three projects were coordinated by Finland: PAUL (Integrated Carbon Observation System/European Research Infrastructure Consortium), PSLifestyle (The Finnish Innovation Fund Sitra) and SUPERB (European Forest Institute). The total project cost for projects with Finnish participants was about 271 million euros.

2. The European Green Deal Call

The European Green Deal is a set of novel actions by the European Commission with the all-embrasing objective of making the European Union climate neutral in 2050. Moreover, the Green Deal is EU's leading growth strategy towards sustainable economics. Climate change and environmental degradation are threats to both Europe and the rest of the world. The Green Deal aims to improve the well-being of people and to transform the EU into a resource-efficient and economically competitive continent by ensuring the following: no net emission of greenhouse gases by 2050; no person or no place left behind; and economic growth decoupled from resource usage.

The Green Deal Call was the last call under the Horizon 2020 program and was worth 1 billion euros. The call funded in total 73 projects aiming at promptly responding to the crisis of climate change while protecting the ecosystems and biodiversity. The Green Deal call was divided into eight thematic areas and two horizontal areas. Some of the areas are further divided into subtopics in Table 1. In total, 31 Finnish participants were funded in seven out of ten thematic areas. These participants were from 22 organizations and received funding in 18 projects (Tables 1 and 4).

Table 1. H2020 European Green Deal Call indicating Finnish participation. The table is modified from the <u>European Union's publication</u>. The table lists all thematic call areas and their sub calls as well as the project action type and the number of funded Finnish participants, if any. Hyperlinks to CORDIS with the presentation of the topic and information of all funded projects are also included.

Areas	Topics, all funded projects (success rate)	Project action type	Funded Finnish participants (pro- ject)
1. Increasing climate ambition: cross sectoral challenges	1.1. Preventing and fighting extreme wildfires with the integration and demonstration of innovative means (H2020-LC-GD-1-1-2020):	IA	2 (FIRE-RES)
	FIRELOGUE , FIRE-RES, DRYADS, SILVANUS (7 %)	CSA	-
	1.2. Towards climate-neutral and socially in- novative cities (<u>H2020-LC-GD-1-2-2020</u>) Net- ZeroCities (9 %)	RIA	2 (NetZeroCities)
	1.3. Climate-resilient innovation packages for EU regions (<u>H2020-LC-GD-1-3-2020</u>)Transfor-	IA	2 (TransformAr)
	mAr, REGILIENCE, IMPETUS, ARSINOE (12 %)	CSA	-
	2.1. Innovative land-based and offshore renewable energy technologies and their integration into the energy system (H2020-LC-GD-	IA	1 (EU-SCORES)
	2-1-2020): EU-SCORES, FORWARD-2030, Bio- FlexGen, HYPERGRYD, RESTORE (5 %)	RIA	1 (BioFlexGen)
2. Clean, affordable and secure energy	2.2. Develop and demonstrate a 100 MW electrolyser upscaling the link between renewables and industrial applications (H2020-LC-GD-2-2-2020): GreenHyScale, GreenH2Atlantic, REFHYNE II (14 %)	IA	-
	2.3. Accelerating the green transition and energy access partnership with Africa (H2020-LC-GD-2-3-2020): SESA, SophiA, REFFECT AFRICA, SteamBioAfrica, ENERGICA (4 %)	IA	-
	3.1. Closing the industrial carbon cycle to combat climate change (H2020-LC-GD-3-1-2020): ECO2Fuel, PYROCO2 (14 %)	IA	-
3. Industry for a clean and circular economy	3.2. Demonstration of systemic solutions for the territorial deployment of the circular economy (H2020-LC-GD-3-2-2020): EcoeFISHent, Agro2Circular, CIRCULAR FOAM, FrontShi1p (4%)	IA	1 (Agro2Circular)
4. Energy and resource efficient buildings	4.1. Building and renovating in an energy and resource efficient way (H2020-LC-GD-4-1-2020): ARV, PROBONO, oPEN Lab (3 %)	IA	-
5. Sustainable and smart mobility	5.1. Green airports and ports as multimodal hubs for sustainable and smart mobility (H2020-LC-GD-5-1-2020): TULIPS, STARGATE, PIONEERS, OLGA, MAGPIE (12 %)	IA	-
6. Farm to fork	6.1. Testing and demonstrating systemic innovations in support of the Farm-to-Fork Strategy (H2020-LC-GD-6-1-2020): NeoGiANT, SchoolFood4Change, ENOUGH, PestNu, ZeroW, ClieNFarms, SISTERS (3 %)	IA	-

Areas	Topics: name and code with a hyper- link; all funded projects	Project action type	Funded Finnish participants (pro- ject)
7. Biodiversity and ecosystems	7.1. Restoring biodiversity and ecosystem services (H2020-LC-GD-7-1-2020): MERLIN, SUPERB, WaterLANDS, REST-COAST (6 %)	IA	6 (MERLIN 3, SUBERB 1, Waterlands 2)
8. Zero-pollution, toxic-free environ- ments	8.1. Innovative, systemic zero-pollution solutions to protect health, environment, and natural resources from persistent and mobile chemicals (<u>H2020-LC-GD-8-1-2020</u>): SCENARIOS, PROMISCES, ZeroPM (3 %)	RIA	1(SCENARIOS)
	8.2. Fostering regulatory science to address chemical and pharmaceutical mixtures: from science to evidence-based policies (H2020-LC-GD-8-2-2020): LIFESAVER, ALTERNATIVE, PANORAMIX (14 %)	RIA	1 (LIFESAVER)
9. Strengthening knowledge (horizon- tal)	9.1. European Research Infrastructures' capacities and services to address European Green Deal challenges (<u>H2020-LC-GD-8-2-2020</u>):RI-URBANS, PAUL, StoRIES (25 %)	RIA	8 (RI-URBANS 2, PAUL 4, StoRIES 2)
	9.2. Developing end-user products and services for all stakeholders and citizens supporting climate adaptation and mitigation (H2020-LC-GD-9-2-2020): LOCALISED, CityCLIM, RethinkAction, REACHOUT, I-CISK (6%)	RIA	-
	9.3. A transparent & accessible seas and oceans: towards a digital twin of the ocean (<u>H2020-LC-GD-9-3-2020</u>): ILIAD INTEGRATED (25 %)	IA	-
10. Empowering citizens (horizontal)	10.1. European capacities for citizen deliberation and participation for the Green Deal (<u>H2020-LC-GD-10-1-2020</u>): REAL_DEAL, PHOENIX (4 %)	RIA	-
	10.2. Behavioural, social and cultural change for the Green Deal (H2020-LC-GD-10-2-2020) (2%)	RIA	-
	10.3. Enabling citizens to act on climate change, for sustainable development and environmental protection through education, citizen science, observation initiatives, and civic engagement (H2020-LC-GD-10-3-2020): ICHANGE. XompAir, AURORA, GreenSCENT, ECFCLIM, PSLifestyle, SOCIO-BEE (4 %)	IA	6 (ICHANGE 1, GreenSCENT 2, ECFCLIM 1, PSLifestyle 2)

2.1. Status of the Finnish applications

In total 615 applications with Finnish participants were submitted to the Horizon 2020 European Green Deal call (Table 2). The proposals were further categorized based on their funding status into four different groups: main (above-threshold proposals, which will be funded), reserve (above-threshold proposals, which will be offered funding if additional funds become available), no money (above threshold proposals, which will not be funded due to lack of funds) or rejected (below threshold proposals, which will not be funded). All of the submitted applications were eligible. About 5 percent of the Finnish applicants received funding.

Table 2. Finnish applicants of Green Deal Call and their status in the evaluation.

Proposal Status	Number of Proposal	% From Eligible Proposals
main	29	4,7
reserve	22	3,5
no money	301	49,0
rejected	263	42,8
Sum	615	100

2.2. The funded Finnish participants and their organizations

The European Green Deal funded in total 31 participants from Finland (Tables 3 and 4). Most of the funded organisations were research institutes (45 %) and universities (32 %). However, also a few projects from companies (10 %) and corporations (13 %) received funding (Figure 1).

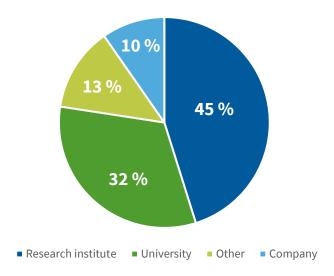


Figure 1. Funded Finnish organisations and their percentage in H2020 Green Deal Call.

Twenty-two different organisations received funding in the Green Deal call (Table 3). The most successful organisation attracting Green Deal funding was VTT the Technical Research Center of Finland, who got five projects funded. The technical combined Technological University of Lappeenranta and Lahti (LUT University) got funding for three projects, and Finnish Meteorological Institute, European Forest Institute and University of Helsinki each got two projects funded. The rest of the organisations received funding for one project. The complete list of funded organisations and the number of the projects is presented in Table 4.

Table 3. Successful Finnish organisations in the Green Deal Call

Organisations	Number of the funded projects
VTT Technical Research Centre of Finland	5
Lappeenranta-Lahti University of Technology LUT	3
European Forest Institute	2
University of Helsinki	2
Finnish Meteorological Institute	2
Aalto University	
Åbo Akademi University	
Demos Research Institute oy	
GTK Geological Survey of Finland	
Integrated carbon observation system/European research infra- structure consortium	
University of Eastern Finland	
University of Jyväskylä	
International Peat Society	
City of Lappeenranta	1
Natural Resources Centre of Finland	
Seqvera Ltd. Oy	
Solity Oy	
The Finnish Innovation Fund Sitra	
SYKE Finnish Environment Institute	
Tampere University	
Tapio Oy	
Viipurin reaalikoulu Oy	

2.3. The funded Finnish participant and their role in projects

In total 31 projects, which had Finnish participants, were funded by the European Green Deal. Out of the 31 there were three projects coordinated by a Finnish organisation. These projects were PAUL, PSLifestyle and SUPERB. The coordinator organisations were the following: Integrated Carbon Observation System/European Research Infrastructure Consortium, The Finnish Innovation Fund Sitra (Suomen itsenäisyyden juhlarahasto Sitra) and European Forest Institute. Moreover, in ten of the projects there were more than one Finnish participant involved. The highest number of Finnish participants (4) was in the PAUL project. In addition, MERLIN project had three Finnish participants, and the following eight projects had two Finnish participants each: FIRE-RES, GreenSCENT, PSLifestyle, NetZeroCities, RI-URBANS, STORIES, TransformAR and WaterLANDS. The rest of the projects included only one participant from Finland. The total funding for projects with Finnish participants was about 290 million Euros, and for Finnish participants the sum was about 17 million euros (Table 4.)

Table 4. Projects of the Green Deal call with Finnish participants. The table includes the name of the call, coordinating country, project acronym, participating Finnish organisations, number of participants in the consortium, number of Finnish participants and project total cost/EU contribution as well as Finnish participant(s) contribution.

Call and coordinator	Project acronym (hyperlink)	Finnish organization	NO of par- tici- pants	NO of Finnish partici- pants	Project total cost/ Project EC contribution €	Finnish participant contribution €
LC-GD-1-1-2020 (Spain)	FIRE-RES	European Forest Institute, VTT Technical Research Centre of Finland	36	2	21 541 5423 / 19 896 327	1 50 0414
LC-GD-1-2-2020 (Netherlands)	NetZeroCi- ties	DEMOS Research Institute Oy, VTT Technical Research Cen- tre of Finland	34	2	52 996 605 / 52 996 605	898 050
LC-GD-1-3-2020 (Belgium)	TransformAr	LUT Lappeenranta-Lahti Tech- nological University, City of Lappeenranta	24	2	12 730 323 / 11 872 257	1 170 063
LC-GD-2-1-2020 (Sweden	Bio-FlexGen	Åbo Akademi University	16	1	5 984 698 / 5 984 698	127 500
LC-GD-2-1-2020 (Netherlands)	EU-SCORES	LUT Lappeenranta-Lahti Tech- nological University	25	1	46 269 294 / 34 831 484	627 625
LC-GD-3-2-2020 (Spain)	Agro2Circu- lar	VTT Technical Research Centre of Finland	41	1	16 846 033 / 14 074 828	288 813
LC-GD-7-1-2020 (Ireland)	WaterLANDS	GTK Geological Survey of Finland, University of Eastern Finland	32	2	23 631 575 / 23 06 8483	530 048
LC-GD-7-1-2020 (Germany)	<u>MERLIN</u>	International Peat Society, SYKE Finnish Environment In- stitute, Tapio Oy	44	3	22 034 618 / 21 245 939	1 083 250
LC-GD-7-1-2020 (Finland)	<u>SUPERB</u>	European Forest Institute	37	1	20 248 122 / 19 996 256	2 512 125

Call and coordinator	Project acronym	Finnish organization	NO of par- tici- pants	NO of Finnish partici- pants	Project total cost/ Project EC contribution €	Finnish participant con- tribution €
LC-GD-9-1-2020 (Germany)	<u>Stories</u>	LUT Lappeenranta-Lahti Tech- nological University, VTT Technical Research Centre of Finland	34	2	7 001 439 / 6 999 980	99 525
LC-GD-9-1-2020 (Italy)	LIFESAVER	Seqvera Ltd Oy	15	1	6 136 513 / 6 136 512	404 950
LC-GD-9-1-2020 (Finland)	PAUL	Integrated carbon observation system/European research in- frastructure consortium, Aalto University, University of Hel- sinki, Finnish Meterological In- stitute	31	4	12 999 999 / 12 999 999	2 24 1246
LC-GD-9-1-2020 (Spain)	RI-URBANS	University of Helsinki, Finnish Meteorological Institute	36	2	8 450 000 / 8 000 000	1 211 000
LC-GD-9-1-2020 (Italy)	<u>SCENARIOS</u>	Tampere University	19	1	11 985 716 / 11 985 716	692 111
LC-GD-10-3- 2020 (Spain)	ECF4CLIM	University of Jyväskylä	10	1	5 383 048 / 4 896 710	936 850
LC-GD-10-3- 2020 (Italy)	GreenSCENT	VTT Technical Research Centre of Finland , Viipurin reaalikoulu ry	15	2	6 511 233 / 5 549 459	500 445
LC-GD-10-3- 2020 (Italy)	I-CHANGE	Natural Resources Centre of Finland	16	1	5 234 118 / 4 949 998	29 9000
LC-GD-10-3- 2020 (Finland)	<u>PSLifestyle</u>	The Finnish Innovation Fund Sitra, Solita Oy	16	2	5 316 803 / 4 999 871	1606688
Sum	18	22	481	31	291 303 702/ 270 485 122	16 729 703