Implementing Rio+20 In The Nordic Higher Education Institutions – A Survey Report

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Nordic Sustainable Campus Network

norden
Nordic Council of Ministers

RIO+20
United Nations Conference on Sustainable Development

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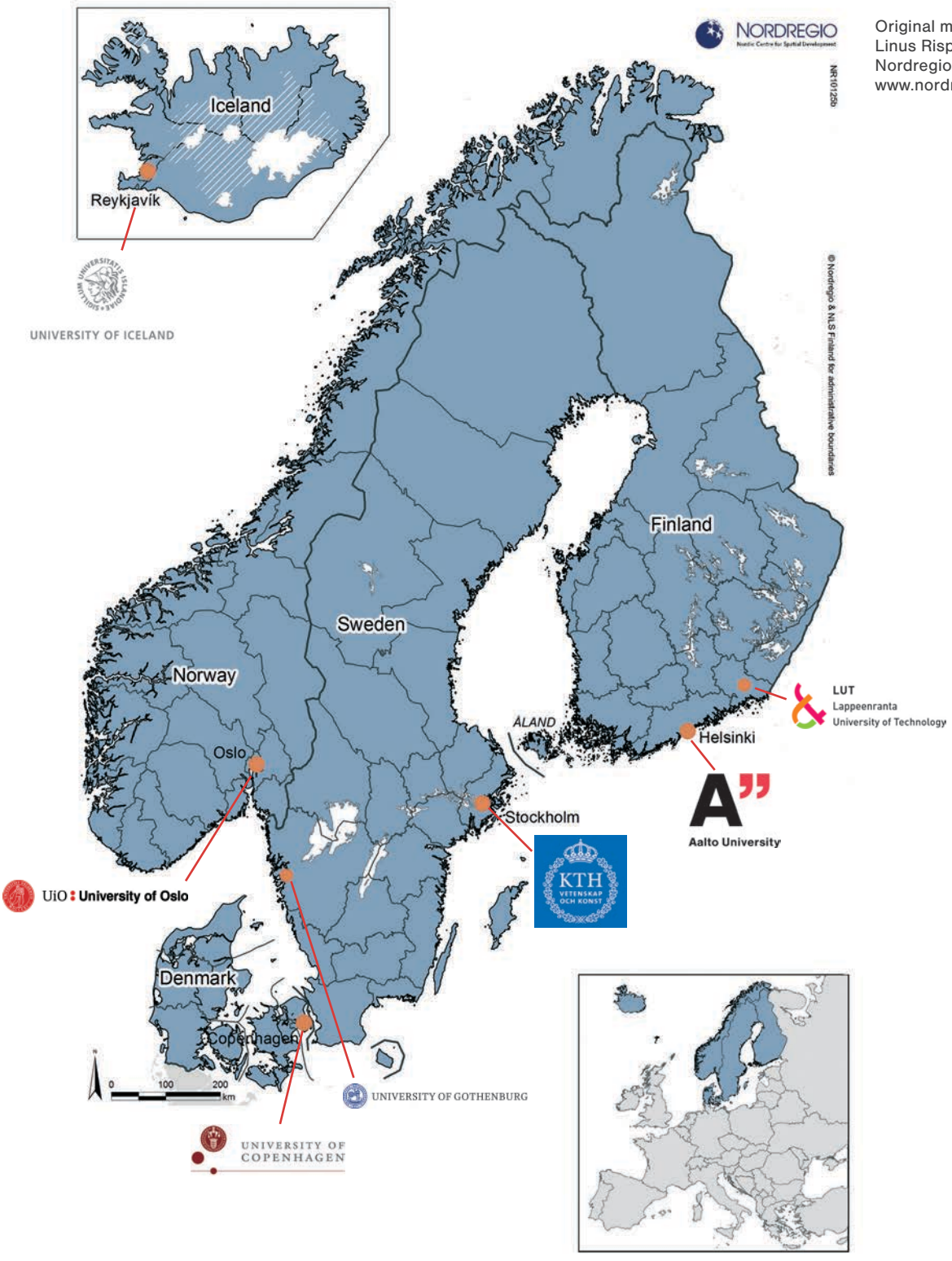
nordicsustainablecampusnetwork.wordpress.com

The Rio+20 project was implemented by seven Nordic universities.



Original map by Linus Rispling, Nordregio, www.nordregio.se

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Executive summary

The United Nations Rio+20 World Summit in 2012 brought together academics and university leaders from all over the world, committing to take action on sustainability issues. During the last years, the Nordic Higher Education Institutions (HEIs) have also been active in integrating sustainability into their operations. The efforts reached a new collaborative level after the Nordic Sustainable Campus Network, NSCN, was established in 2012.

The network initiated a project, Rio+20 in the Nordic HEIs, to follow up the Rio+20 Higher Education Sustainability Initiative (HESI) established at the World Summit in 2012. The project aimed, through a wide survey and interactive workshops, at inventorying the recent level of sustainability in the Nordic HEIs, and the key drivers and barriers in the implementation. In addition, the project surveyed steering of sustainability implementation in the Nordic universities and the progress made in teaching during the UN Decade of Education for Sustainable Development (DESD 2005–2014).

The project survey, consisting of 40 questions, was conducted in October-November 2014. 152 teachers/researchers, administrative and sustainability staff working in the Nordic HEIs responded. The results suggest that sustainability is on average at a good level, and only minor differences exist between the Nordic universities in how they implement sustainability. Additionally, variation among the institutions was found higher than the differences between the countries. Swedish HEIs on average stand out, having a higher degree of integration of sustainability on a broader basis than the other Nordic HEIs.

Nordic HEIs seem to emphasize campus greening activities more than sustainability in teaching or outreach. Especially highlighted are energy efficiency and recycling, but also research on sustainable solutions, whereas campus biodiversity or sustainability-labeling of courses remain less important. This reflects directly to the indicators and target-setting reported, found to relate most commonly to energy, water, use of paper and CO^2-emission equivalents.

By contrast, indicators or targets on sustainability in teaching, research or outreach, are absent in many institutions, though these aspects are frequently mentioned in the strategies of the Nordic HEIs. The Nordic universities seem to settle for reducing their ecological footprint, downplaying the educational role they could and would be expected to have in reaching for a more sustainable future. Yet, the progress during the past ten years has been positive, but for example the amount of teacher training has remained almost the same – thus, the teachers have no support or encouragement for integrating sustainability into education.

According to the survey, staff in the Nordic HEIs considers decision-making procedure, low level of commitment, unclear strategy and targets, and lack of resources to hinder sustainability integration, whereas engaged students and skilled, motivated personnel enable the efforts. Norway and Iceland emphasize student engagement and collaboration as measures to enhance the implementation, in Finland awareness-raising is highlighted. In Denmark awareness-raising, clearer targets and strategy are found important. Swedish universities, already in the Nordic front in integrating sustainability, call for more resources as the next step forward.Steering mechanisms have a substantial role in realizing sustainable development in universities. *University legislation and internal governance providing strategies are the mechanisms effecting most the integration of sustainability.* Additionally, striving for a green university image, and the opinions of students and staff influence strongly the integration. When asked, Nordic university staff finds the current steering mechanisms unsatisfactory and having little effect on sustainability efforts and performance. Furthermore, university strategies of many institutions are reported to fail to deliver on sustainability.

Maybe surprisingly, university staff wishes for more external steering, namely in the form of legislation – which has had a positive effect on sustainability in the Swedish HEIs - or in the form of financial, results-based incentives from the ministries. Furthermore, reported demand for more intensive interdisciplinary collaboration and a clear tendency towards seeking a more holistic thinking on the institutional level could bring sustainability awareness and level of engagement to new levels in the Nordic universities.

1. Background

This survey report is one part of the "Rio+20 in the Nordic Higher Education Institutions (HEIs)"-project. The project was funded by the Nordic Council of Ministers during 2014-2105, and implemented by Aalto University, Finland, together with 6 partners from the Nordic Sustainable Campus Network, NSCN.

The targets of the Rio+20 project related closely to the outcomes of UN Rio+20 Conference on Sustainable Development in 2012. In the Rio+20 Outcome document, The Future We Want, the effect of transparent and effective governance on the implementation of sustainable development principles in organizations was strongly emphasized. However, good management practices require adequate information on the implementation of sustainable development, and furthermore, change in attitudes and engagement of managers and decision makers to the principles of sustainable development.

Additionally, the Rio+20 project followed up The Higher Education Sustainability Initiative for Rio+20 (HESI), a declaration created in a side event of Rio+20 Conference: The World Summit on Sustainable Development – Universities (WSSD-U). The Rio+20 Initiative consists of 5 main targets, also including educational aspects, which have widely been recognized as the framework for 'a sustainable university', and which were hence taken as the basis for our Nordic survey:

1. Teach sustainable development concepts
2. Encourage research on sustainable development issues
3. Green campuses
4. Support sustainable development efforts in the communities in which the universities reside
5. Engage with and share results through international frameworks

Following these global agreements in striving for more sustainable societies, the Nordic Rio+20 project targeted to inventory how the Nordic HEIs have integrated sustainable development into their activities, what the steering mechanisms are that direct sustainable development in the Nordic HEIs, and which enablers and obstacles are affecting the implementation of sustainability actions. Apart from the survey discussed in this report, the measures of the project included several workshops targeted to Nordic and international university staff working with sustainable development and the environment.

More information on

- The Nordic Rio+20 -project: **nordicsustainablecampusnetwork.wordpress.com**
- Rio+20 Higher Education Initiative (HESI): **rio20.euromed-management.com/Declaration-for-HEI.pdf**
- Rio+20 Outcome document, The Future We Want: **http://www.un.org/en/sustainablefuture/**

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Photo 1: Rio+20-project's partners. From up left: Ólafur Páll Jónsson (Iceland, steering committee member), Maryam Faghihimani (University of Oslo, NO, substituing Jorulf B. Silde), Teresia Sandberg (KTH, SE), Meeri Karvinen (Aalto Univ., FI), Sigurlaug I. Lövdahl (Iceland), Tomas R. Poulsen (Univ. of Copenhagen, DK), Meri Löyttyniemi (Aalto Univ., FI), Ullika Lundgren (Univ. of Gothenburg, SE), Marko Kasurinen (Lappeenranta LUT, FI) and Eddi Omrcen (Univ. of Gothenburg, SE, steering committee member). Missing from the picture: Essi Römpötti, Lappeenranta LUT, FI. (Photo: Meeri Karvinen)

2. Introduction to the survey

The survey was targeted to all university staff working in the Nordic HEIs, and it was conducted during October-November 2014. The survey consisted of 40 multiple-choice and open questions, which were distributed into following parts:

- Background information
- Steering mechanisms
- Strategy and commitment to sustainability
- Enablers and obstacles in implementing sustainability
- Implementing sustainability into all operations
- Decade of Education for Sustainable Education, DESD

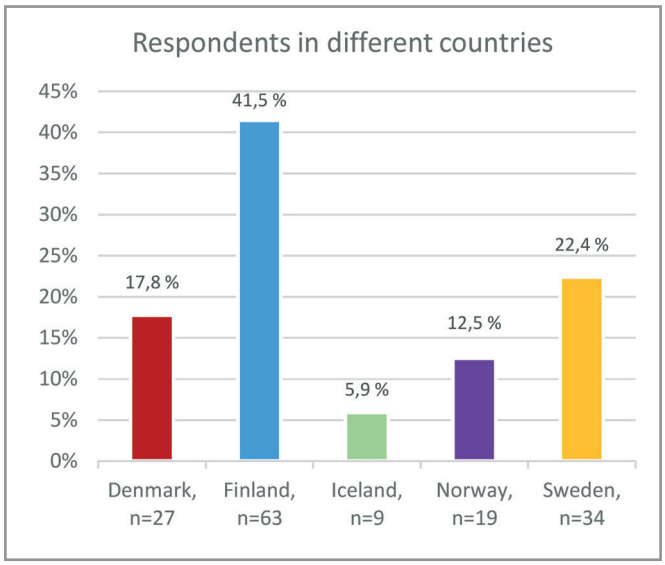
The survey was responded anonymously and the results are reported keeping the institutions unidentified. Distribution of the survey to all Nordic HEIs was made through national sustainability-networks, rectors of the HEIs, Nordic Sustainable Campus Network (NSCN) mailing-list and website, NUAS channels (Nordic University Administrations network) and the Nordic Council of Ministers.

In this report the results from the survey are discussed in 4 main parts indicated with different colors. The parts include: 1) Sustainability performance, 2) Enablers and obstacles, 3) Steering mechanisms and 4) Progress made during the DESD, with each having their own table of contents in the beginning. Country-specific summaries are found after the Part 4 and Conclusions as appendices.

3. Results

Basic information of the respondents

The survey gained responses from 152 respondents from all the Nordic countries, except for the autonomous areas (The Faroe Islands, Greenland and Åland Islands). The majority of respondents were Finnish (63 respondents), whereas in Iceland only 9 staff members responded the survey. The distribution of the respondents into different countries is presented in Picture 1.



Picture 1. Respondents of the survey from different Nordic countries. N=the number of respondents.

Gender distribution of the respondents was quite equal, with a slight bias to women in the Nordic level. In Iceland and Finland, however, clear majority of the respondents were women. Age classes of 40 – 49 and 50 – 59 years were most common among the respondents, though the survey reached also some younger respondents, especially in Denmark. However, the effect of gender or age on the results was excluded from the analysis of the survey. The detailed information on the gender and age classes is presented in Table 1.

Table 1. The age and gender distributions of the respondent from each Nordic country.

	Age (yrs):	24-29	30-39	40-49	50-59	60-66
Denmark,	Male	0 %	36 %	21 %	43 %	0 %
n=27	Female	0 %	23 %	38 %	38 %	0 %
	Total	0 %	30 %	30 %	41 %	0 %
Finland,	Male	0 %	11 %	28 %	44 %	17 %
n=63	Female	7 %	21 %	33 %	26 %	12 %
	Total	5 %	18 %	32 %	32 %	13 %
Iceland,	Male	0 %	0 %	67 %	0 %	33 %
n=9	Female	0 %	33 %	33 %	0 %	33 %
	Total	0 %	22 %	44 %	0 %	33 %
Norway,	Male	0 %	20 %	20 %	30 %	30 %
n=19	Female	0 %	13 %	38 %	50 %	0 %
	Total	0 %	17 %	28 %	39 %	17 %
Sweden,	Male	0 %	0 %	13 %	47 %	40 %
n=24	Female	5 %	21 %	37 %	26 %	11 %
	Total	3 %	12 %	26 %	35 %	24 %
All countries	Male	0 %	15 %	23 %	40 %	22 %
	Female	5 %	22 %	35 %	28 %	10 %
	Total	**3 %**	**19 %**	**30 %**	**33 %**	**15 %**

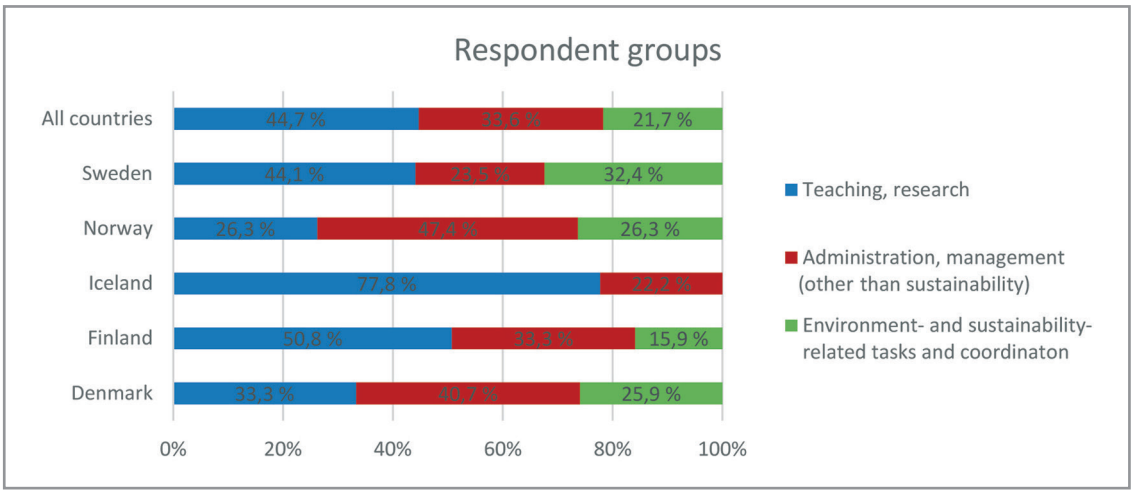
Respondent groups

The respondents were divided into three groups according to their main working responsibilities (Picture 2.), which they were asked to indicate in the beginning of the survey. Staff working with administrational tasks responded the shortest version of the survey, excluding the following parts: Sustainability performance, Enablers and obstacles and Progress made during the DESD. Teachers and researchers were also excluded from Sustainability performance -part, whereas staff working mainly with sustainability and environment-relating tasks gave their views into every part of the survey.

Teachers and researchers were most active in responding the survey, especially in Finland and Iceland. In Norway, however, the majority of the respondents were administrative staff. Unfortunately the survey gained zero respondents representing Icelandic sustainability staff, thus, Iceland is lacking from the results of Sustainability performance in Part 1.

Teacher/researcher group consisted mainly of teachers, researchers and professors of various disciplines, sustainability staff and environmental managers, teachers in sustainability, and sustainability coordinators, and administrative staff of managers and planning officers in communications, finance, and the environment, and even of some deans, vice-rectors and rectors of HEIs.

Some differences were found among the respondent groups in the analyses, but due to the low number of respondents, and also the relatively wide focus of the Rio+20 project, the analyses concerning these comparisons were made only in the Nordic level, thus combining the results of each respondent group from all countries. More data would have been needed to compare for example the views of teachers or sustainability staff in different Nordic countries.



Picture 2. Distribution of respondents into three respondent groups in each Nordic country.

Part I

Sustainability performance of the Nordic higher education institutions (HEIs)

Part I: Sustainability performance of the Nordic higher education institutions (HEIs)

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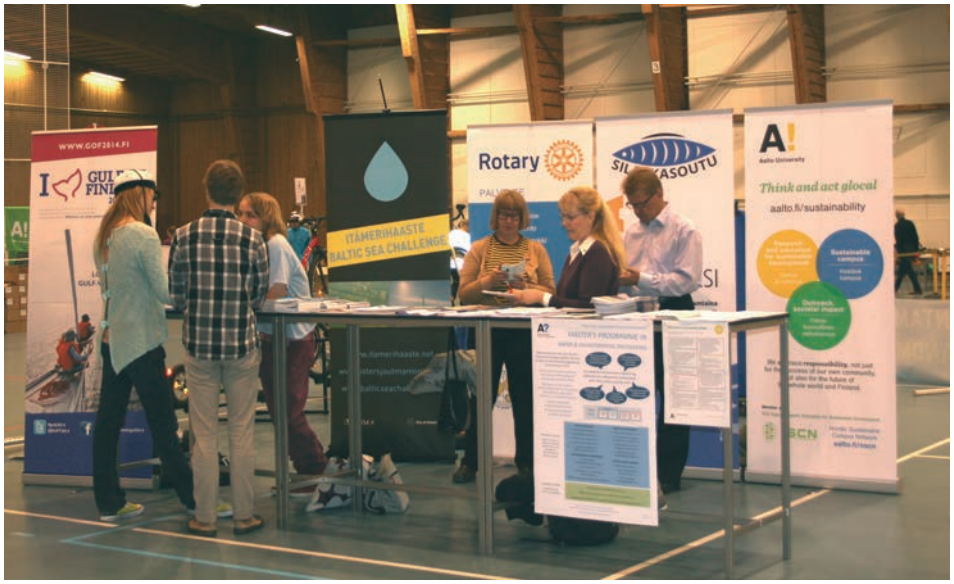


Photo 2: Campus greening activities are more emphasized in the Nordic HEIs compared to sustainability in teaching and outreach. Aalto University promoted clean water and the Baltic Sea together with some stakeholders in the expo of Espoo strand-marathon 2014. (Photo: Meeri Karvinen)

Summary of Part I

Comparing sustainability performance of different higher education institutions is a challenging task. Thus, instead of comparing only indicators relating to sustainability performance, our survey approached the issue also by comparing different focus areas of institutions. Firstly we asked on the key focus areas of HEIs in different Nordic countries, secondly, how well certain campus- or teaching-related details are implemented, and finally, how resources are allocated and how the work relating to sustainability is managed and reported.

The Nordic countries seem to focus most commonly on energy efficiency, research relating to sustainable solutions, and recycling, whereas biodiversity and improving sustainability competences of teachers are considered less important. Iceland is exceptional by emphasizing teacher training more than energy efficiency. The Norwegians are more biased to renewable energy and sustainable transportation than the others, whereas in Sweden several focus areas are considered equally important.

Sustainable development is quite well included in the strategies of Nordic HEIs, when exploring the issue in Rio+20 framework. All the different parts of Rio+20 targets are best included in the strategies of Swedish HEIs. The Icelandic HEIs emphasize especially societal outreach and teaching, and the Norwegians have a strong emphasis to campus greening.

Sustainability aspects seem to be moderately or well integrated into campus greening activities. In Denmark, however, the level of implementation is evaluated neutral or even poor. In Sweden the integration seems to be at the highest level of the Nordic countries. Despite the fairly good state of campus greening activities, sustainability aspects are poorly taken into account in teaching and teacher training. However, in Denmark, Sweden and Norway, it is quite likely to be able to graduate from a degree program on sustainability. By contrast, sustainable development is still left out from the learning outcome definitions in almost all countries.

The amount of permanent staff taking care of sustainability issues is in average 3, 5 in the Nordic HEIs, added with almost 4 part-time staff members. In the Swedish HEIs the average is the highest, but the number of staff varies substantially also between institutions in one country. ISO 14001 is the most commonly used system for managing and reporting on sustainable development in the Nordic HEIs, especially in Sweden. The Swedish HEIs are more actively using also other environmental management systems compared to the other countries. Additionally, ISCN Charter and national guidelines are used in almost all Nordic countries to manage the implementation of sustainable development.

The Nordic universities measure commonly their energy, water and paper consumption, CO_2-emissions and travel. The Norwegian and Swedish institutions are in average measuring more than the Finnish and Danish, and they additionally set more targets, too. In all the countries HEIs measure much more than they set targets, the difference between the amount of measured indicators and targets set being the smallest in Denmark, but instead, especially notable in Finland. Making recycling possible at work, video conferences and paperless administration are the most common ways to support the Nordic university staff in sustainability. The staff in the Nordic HEIs seems additionally to be equally satisfied and unsatisfied with the level sustainability is implemented in their institution, the Icelandic being the most critical.

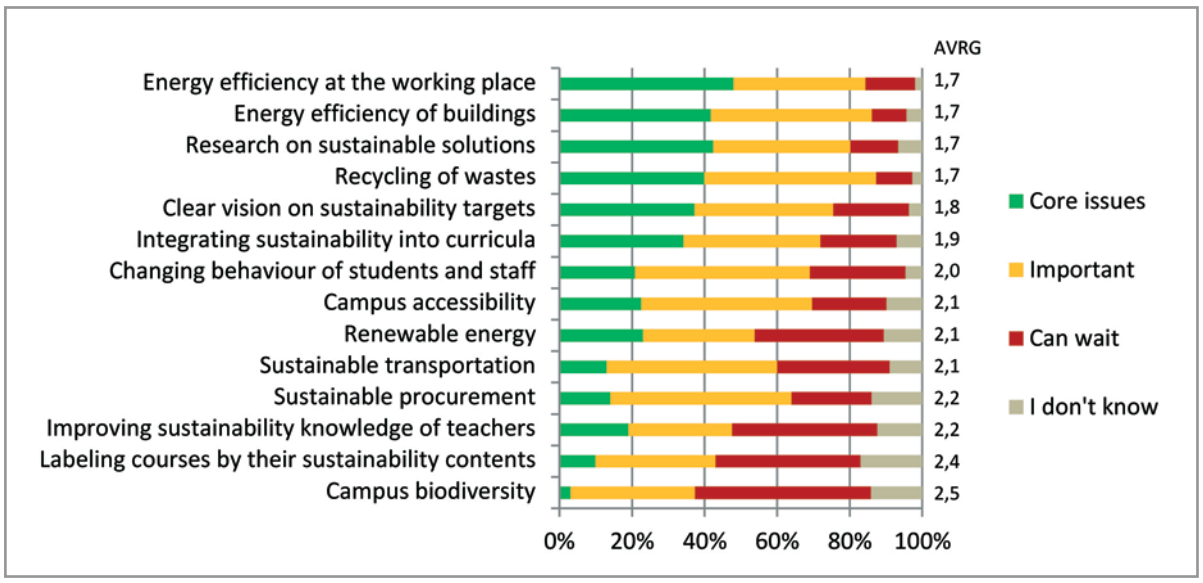
According to the data gained from the survey, the Nordic countries have only minor differences in their focus areas and sustainability performance. Instead, the results suggest that establishing the environmental management system ISO 14001 has an effect on how resources are allocated to sustainability-related actions. However, since this survey monitored sustainability performance at a very general level, much more research is needed to draw adequate conclusions on the correlation between environmental management systems and sustainability performance.

Introduction of Part I

In this chapter we present the results concerning the recent situation of the Nordic HEIs in integrating sustainable development into their operations. Firstly, the focus areas concerning sustainability are discussed, and secondly sustainability integration levels in general, added with details concerning selected campus operations, teaching and strategy. Thirdly, we show the basic figures of the organization and management of sustainable development, as well as measuring and reporting practices. Finally, the level of commitment and networking is discussed, as well as ways with which the Nordic HEIs are supporting their staff in making sustainable choices, and how satisfied Nordic university staff is with the implementation of sustainable development. The third chapter of Part 1 was responded only by sustainability staff, and the responses represent information concerning the institutions (n of institutions=25), not the views of the staff.

1. Focus areas relating to sustainable development

The Nordic university staff considers energy efficiency as the most important of all the sustainability-related focus areas. In addition, research on sustainable solutions and recycling are at the core of the Nordic HEIs' activities. By contrast, campus biodiversity and for example educating teachers in sustainability are among issues that can wait according to the respondents. See all the focus areas in Picture 1.1.



Picture 1.1. Focus areas of the Nordic HEIs according to 110 respondents from all the Nordic countries. The averages on the right are counted from the following: 1=core issue, 2=important issue, 3=can wait.

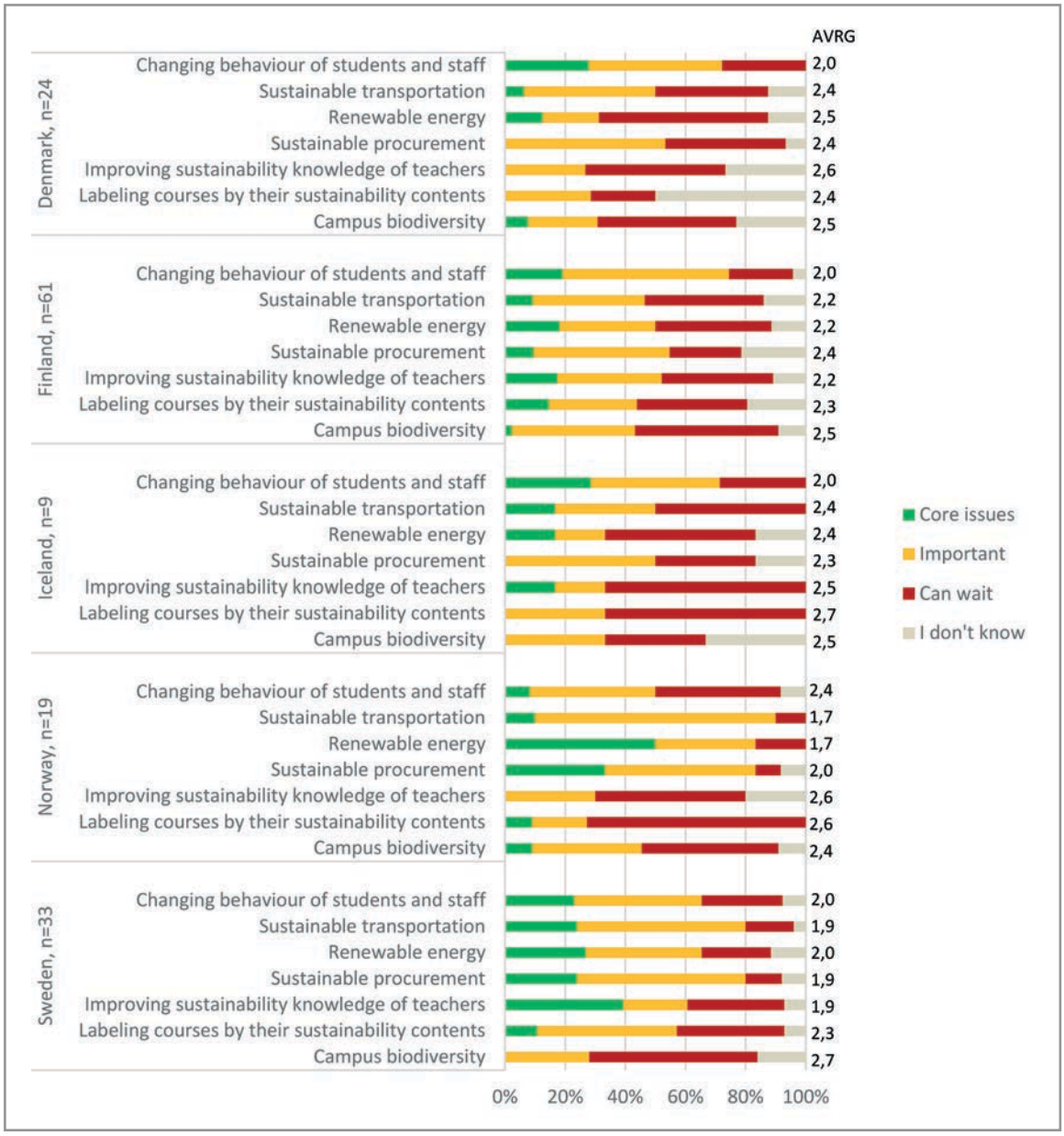
1.1. Differences between the Nordic countries

Almost all the countries found energy efficiency among the most important sustainability-related issues, except for Iceland, where it was categorized between "can wait" and "important". In addition, in Iceland integrating sustainability into curricula was less important than in the other countries.

The Danish respondents evaluated clear visions on sustainable development being less important than the other nationalities. The Swedish evaluated teachers' sustainability training and sustainable transportation being more in focus than the other nationalities. In average, the Swedish evaluated almost all the options being at least important, whereas the others had more areas than still can wait for their implementation. For Norwegians, sustainable transportation and renewable energy seemed to be more important than for the other nationalities, whereas changing behavior was found less important.

The results of the focus areas are found in Pictures 1.2. (focus areas 1–7) and 1.3. (focus areas 8–14). The focus areas are sorted in the graphs according to their importance in the Nordic level (see Picture 1.1.).

Picture 1.2. Focus areas 1–7 of different Nordic countries. The averages on the right are counted from the following: 1=core issue, 2=important issue, 3=can wait. N=number of respondents.



Picture 1.3. Focus areas 8–14 of different Nordic countries. The averages on the right are counted from the following: 1=core issue, 2=important issue, 3=can wait. N=number of respondents.

1.2. Differences between the respondent groups

The different respondent groups – teachers/researchers, administrational and sustainability staff – evaluated the order of given focus areas being almost the same as presented in Picture 1.1. The clearest difference between the groups was that teachers/researchers had the most critical views, evaluating all the given focus areas being less in the core compared to the Nordic means. Sustainability staff instead, had more positive views, finding the focus areas being more in the core of university operations, or at least important.

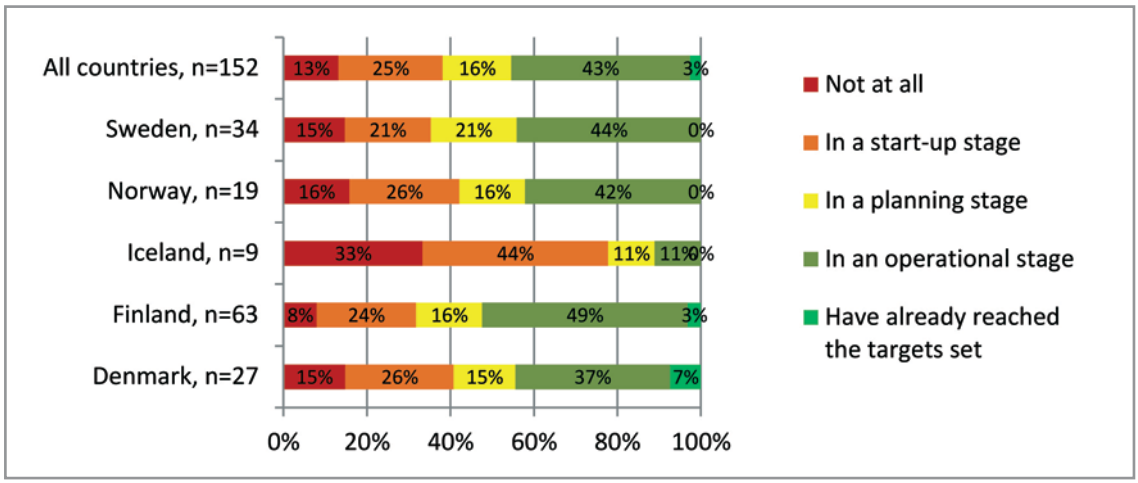
2. Integration levels of sustainable development in the Nordic HEIs

The integration of sustainable development into university operations was evaluated as follows: First the overall level was estimated by all the respondents (not at all, start-up stage, planning stage, operational stage, reached targets-stage). Second, sustainability and administrational staff evaluated the implementation level in selected campus operations, and finally, the sustainability and teaching staff considered how sustainability is integrated into teaching.

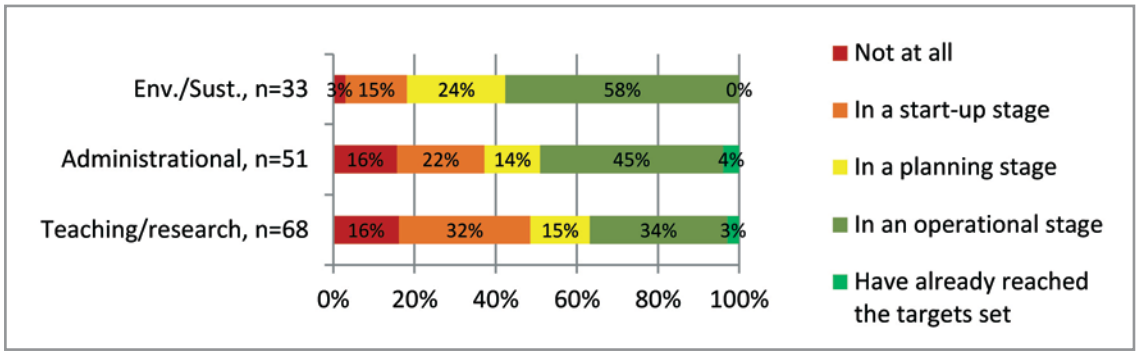
2.1. Overall Integration level

According to the survey results, sustainable development is integrated at an operational level (4/5) in many Nordic HEIs (Picture 1.4). Over 40% estimated, that their institution is at an operational stage, or has even reached their targets set relating to sustainability. However, almost 40% of respondents considered their institutions being only at the starting stage, or even that they have not integrated sustainable development at all.

Especially the Icelandic respondents found their institutions being at the two weakest levels of integration, whereas the other countries were quite unanimous with their estimations, Finnish giving the most positive estimates. However, the results varied between the respondent groups in different countries: teachers/ researchers were most critical in their evaluations, whereas sustainability staff gave the most positive responses (Picture 1.5).



Picture 1.4. The levels of integrating sustainable development into all university operations. N=number of respondents.

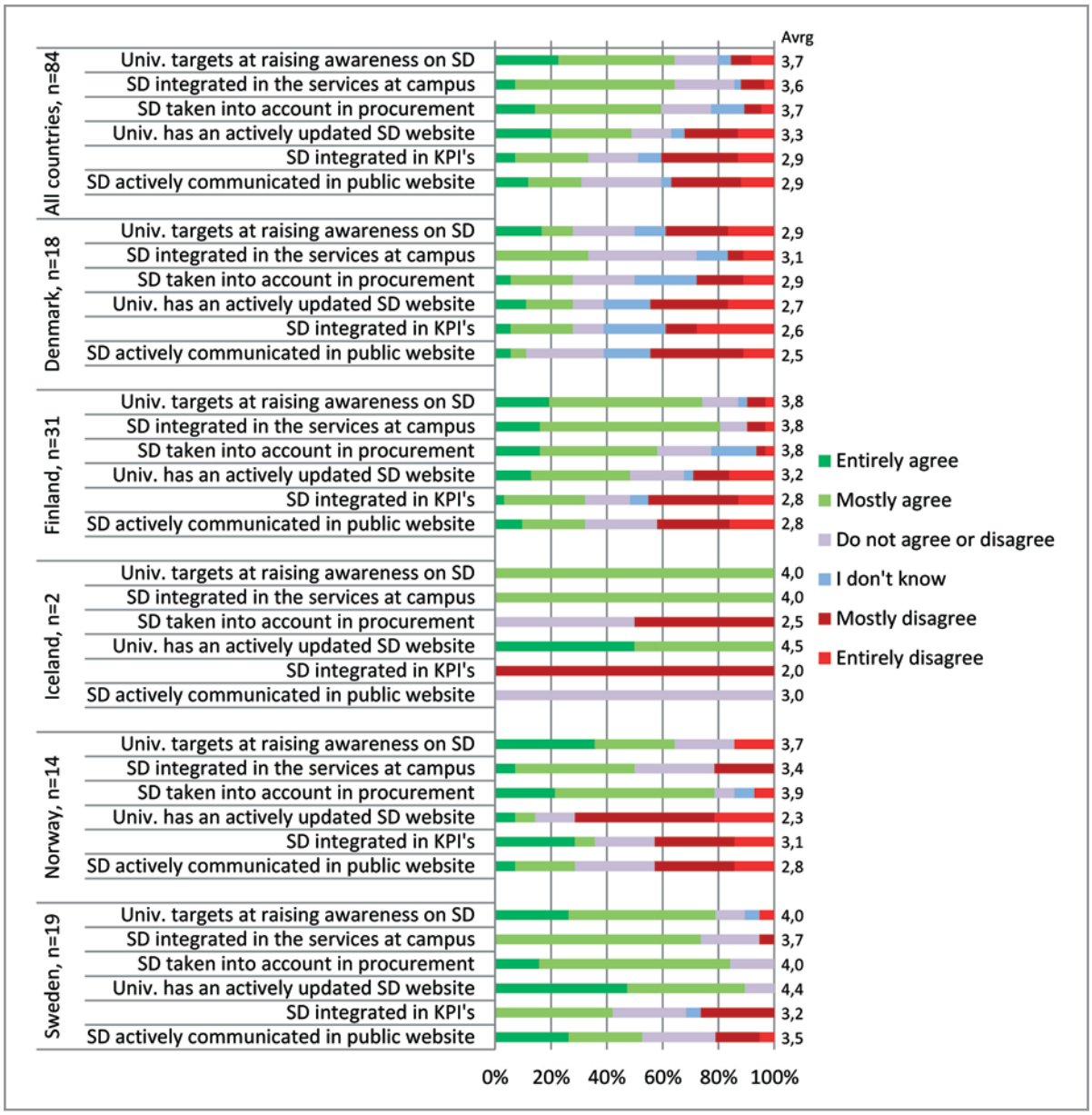


Picture 1.5. Integration level of sustainable development in the Nordic HEIs according to different respondent groups: Environmental / sustainability staff, Administrational staff, Teachers/researchers. N=number of respondents.

2.2. Integration into campus operations

These questions were evaluated by the sustainability and administrative staff. In average, the respondents estimated that sustainability is quite well integrated into the selected operations: awareness-raising, procurement, campus services, communications and key performance indicators (KPIs). The Nordic respondents considered that sustainability is well integrated into procurement and campus services, including facilities, restaurants and IT. However, according to the results, more efforts should be put in integrating sustainability aspects into KPIs, and also into communications – an interesting finding was, that though many evaluated that their university targets at raising awareness on sustainable development, their university seems to communicate poorly on sustainability in their public websites. Especially the Norwegians found that sustainability should be better included into university websites

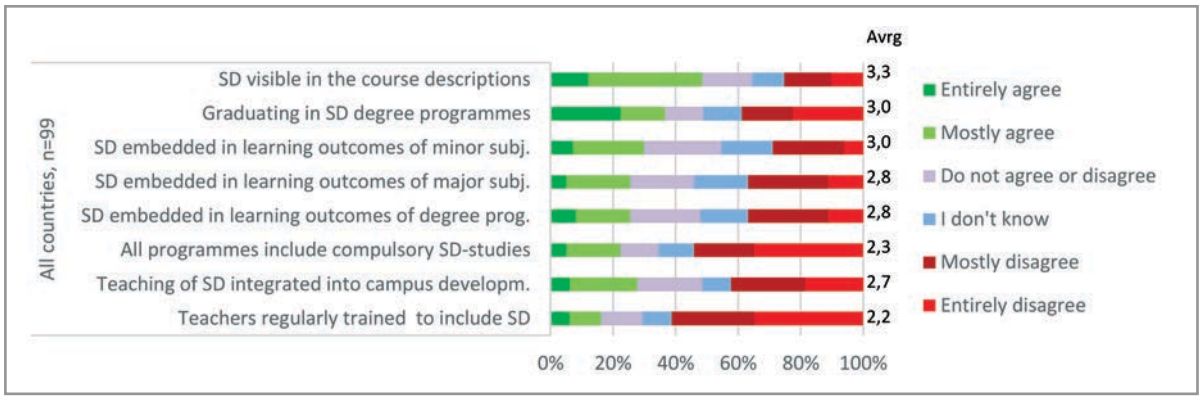
Swedish HEIs have implemented sustainable development best according to the respondents, whereas the Danish considered that none of these selected details were implemented well (Picture 1.6).



Picture 1.6. The estimates of sustainability and administrative staff on integrating sustainable development into campus operations. Averages are on the right (1=Entirely disagree, 5=Entirely agree). N=number of respondents.

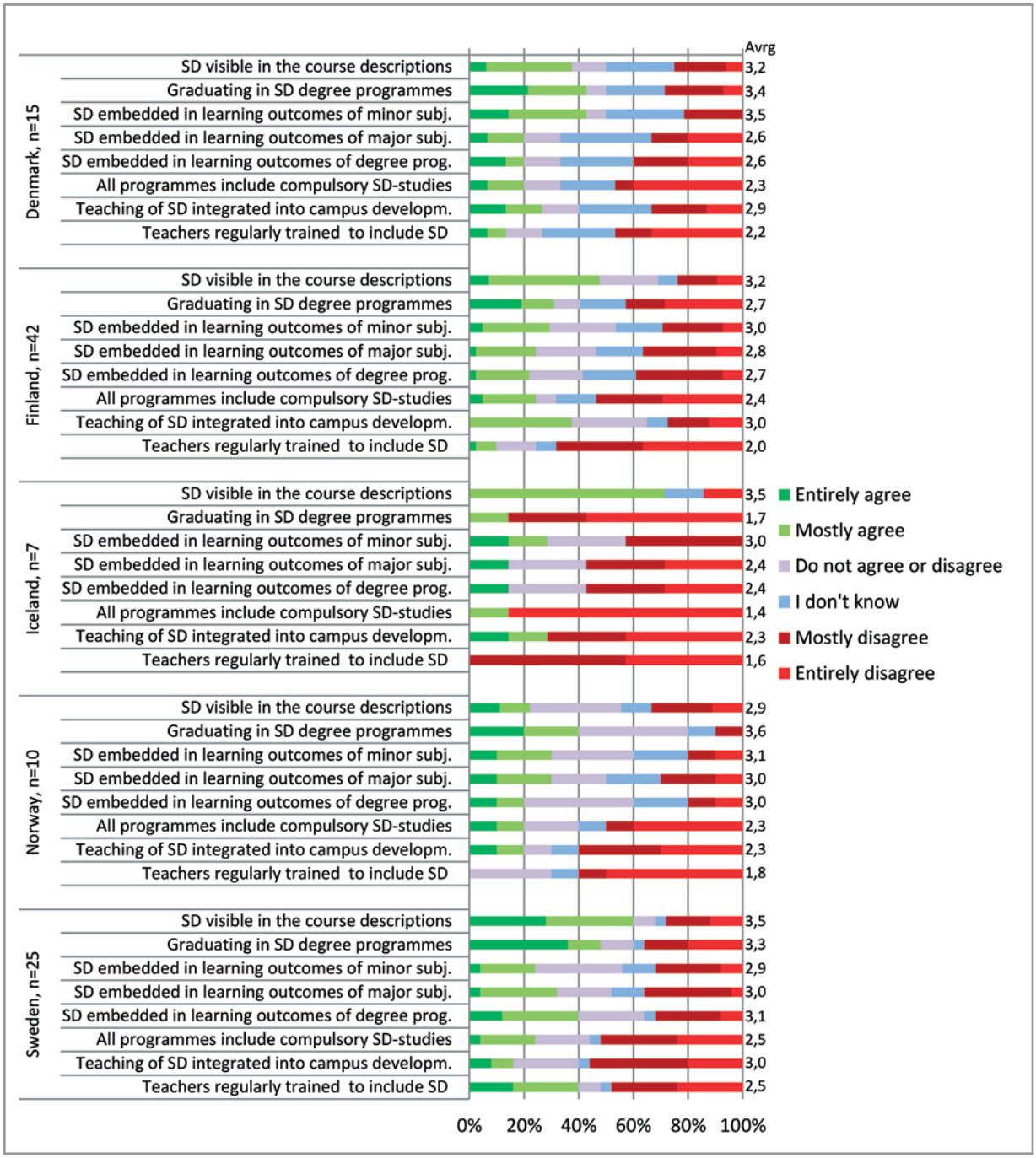
2.3. Integration into teaching

The respondents of these questions were teaching/research and sustainability staff. According to the Nordic respondents, only one issue seems to be moderately implemented: sustainable development is somewhat visible in the course description, when the course contains sustainability aspects. All the other details were evaluated as neutral or weakly implemented. The poorest estimations were given to teacher training (Picture 1.7).



Picture 1.7. Integration of sustainable development into the teaching of Nordic HEIs. The respondents were teaching and sustainability staff. The averages are on the right (1=Entirely disagree, 5=Entirely agree). N=number of respondents.

Course descriptions need to be clarified for sustainability in the Norwegian HEIs according to the respondents. However, in Norway, Denmark and Sweden it seems more likely to be able to graduate from sustainable development degree program (B.Sc., BA, M.Sc., MA, PhD, D.Sc.), than in Finland and Iceland. In addition, in the Danish universities sustainability is better integrated in the learning outcomes of minor subjects compared to the other countries. The same trend is not, however, visible in the case of major subjects, into which sustainability is less than moderately integrated in the Nordic countries. Training of teachers is especially weak in Iceland and Norway, and in Iceland compulsory sustainability studies in all programs are the most uncommon among the Nordic countries (Picture 1.8.).



Picture 1.8. Integration of sustainable development into the teaching of different Nordic countries. The respondents were teaching and sustainability staff. The averages are on the right (1=Entirely disagree, 5=Entirely agree). N=number of respondents.

2.4. Sustainability in the strategies of Nordic HEIs

The respondents were asked to indicate, which parts of the Rio+20 sustainability initiative (2012) or corresponding commitment are mentioned in the strategy of their institution. The main content of the Rio+20 sustainability initiative is as follows: 1) Teach sustainable development concept, 2) Encourage research on sustainable development issues, 3) Green campuses, 4) Support sustainability efforts in the communities in which the universities reside, 5) Engage with and share results through international frameworks.

However, many of the respondents represent the same institution, which must be taken into account in drawing conclusions – the results indicate only the views of university personnel, not the actual distributions of strategy contents.

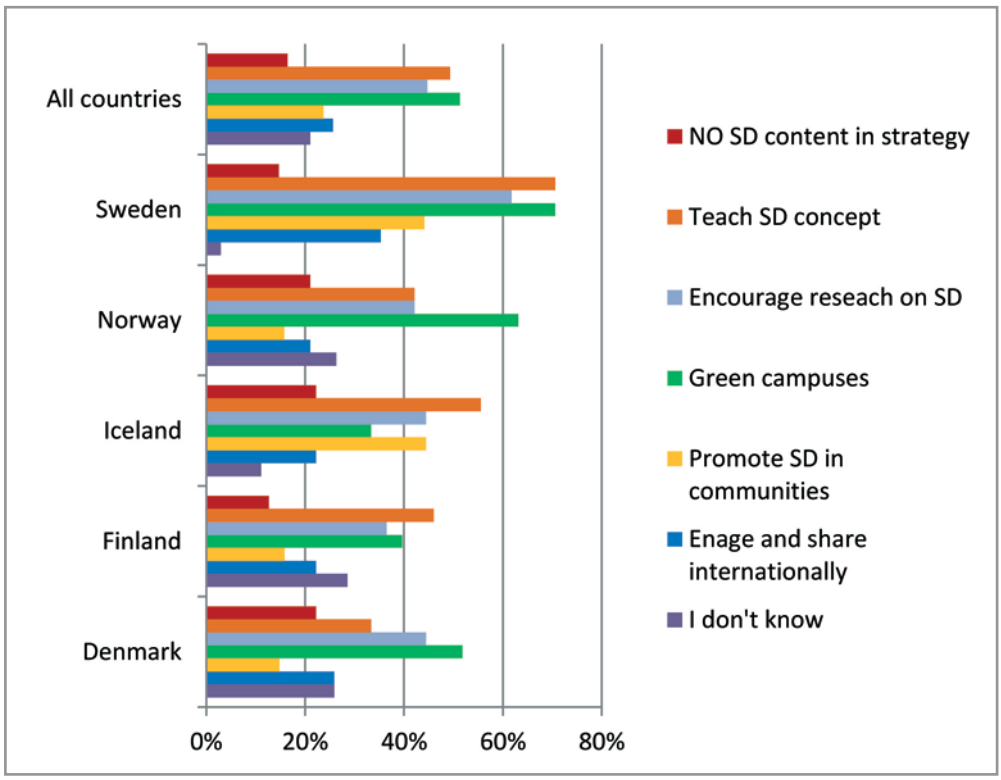
According to the respondents, greening the campus, research and teaching are the most emphasized details of sustainability mentioned in the university strategies in the Nordic level. Only 16% of the respondents indicated that sustainability is not mentioned at all. See the detailed percentages in Table 1.1.

Table 1.1. The amount of different sustainability contents in university strategies according to the respondents.

Strategy content	Denmark	Finland	Iceland	Norway	Sweden	All countries
NO SD content in strategy	22 %	13 %	22 %	21 %	15 %	16 %
Teach SD concept	33 %	46 %	56 %	42 %	71 %	49 %
Encourage reseach on SD	44 %	37 %	44 %	42 %	62 %	45 %
Green campuses	52 %	40 %	33 %	63 %	71 %	51 %
Promote SD in communities	15 %	16 %	44 %	16 %	44 %	24 %
Enage and share internationally	26 %	22 %	22 %	21 %	35 %	26 %
I don't know	26 %	29 %	11 %	26 %	3 %	21 %
n	**27**	**63**	**9**	**19**	**34**	**152**

According to the respondents, all the different parts of Rio+20 targets are best included in the strategy in the Swedish HEIs. The Swedish respondents were also the most aware of their strategy contents with only 3% responding "I don't know". By contrast, almost 30% of the Finnish respondents selected "I don't know".

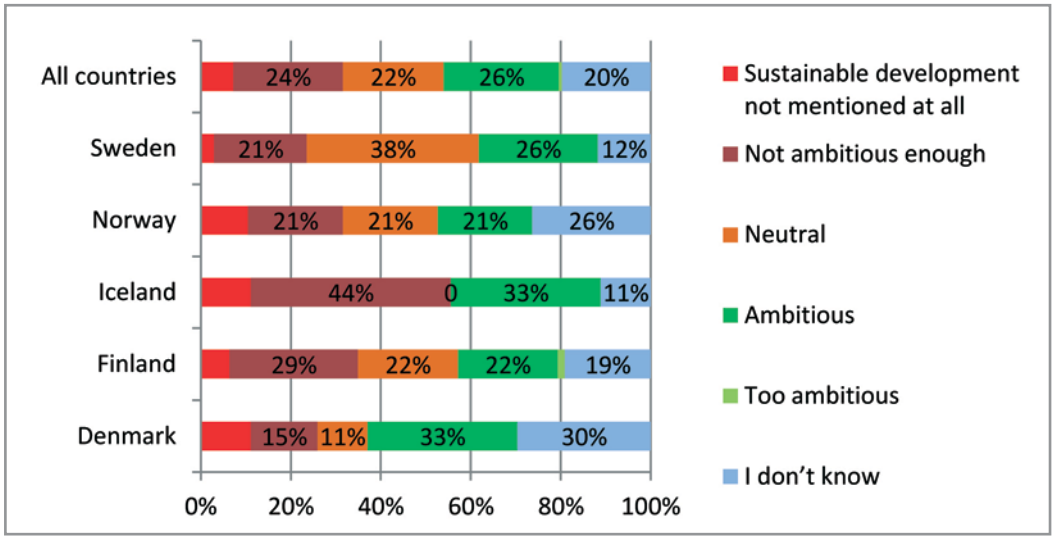
All the countries emphasized teaching, research and greening the campus most. In Norway greening the campus was found being the most general sustainability content in the strategy relative to the other contents. The most substantial difference between the countries was found in how outreach was biased in the responses. In Sweden, Finland and Norway societal impact was included in the strategy in 15%–16% of the responses, whereas in Iceland the result was 44%, societal outreach being even more generally included than greening the campus. In Sweden the percentage was similarly high, but outreach was still only the fourth common sustainability content in the strategy. International engagement was almost equally embedded to the strategy in all countries. The results are shown in Picture 1.9.



Picture 1.9. The different sustainability contents in the strategies of Nordic HEIs according to the respondents. For detailed percentages and n of respondents, see Table 1.1.

2.5. Strategy ambitions

When evaluating how ambitious the sustainability-related contents in the strategy are, the responses were quite equally distributed among the options: not ambitious enough, neutral and ambitious. The Icelandic and Finnish respondents were most critical with their views, whereas the Danish were the most satisfied with the contents. In Sweden, where sustainability is best included in the strategy according to the respondents, the ambitions are considered still neutral. The results are presented in Picture 1.10.



Picture 1.10. The ambitions of sustainability contents in strategy according to Nordic countries. See Table 1.1. for the number of respondents.

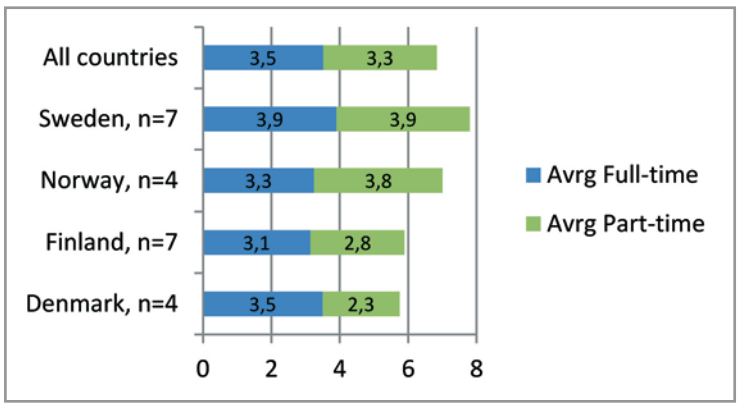
3. Managing sustainable development

The questions in this chapter were responded only by sustainability staff, thus, Iceland is lacking from these results. The results represent the situation of responded institutions (n=25) unlike in other parts of this report, where the results represent subjective views of the respondents.

3.1. Organization and management

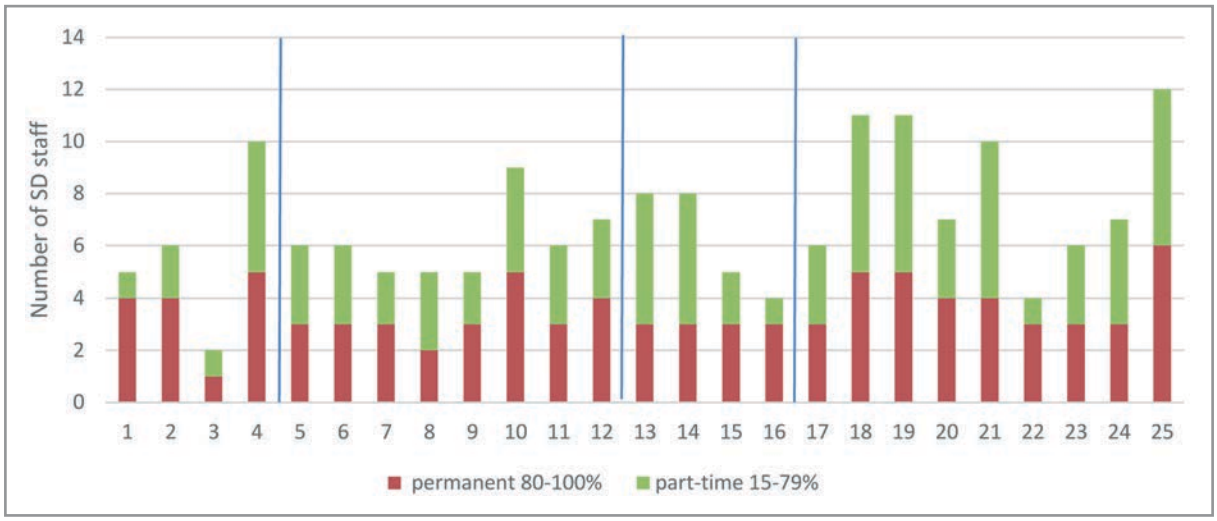
Staff and organization

The Nordic HEIs have in average 3,5 staff members working full-time (80%–100% working time) on sustainability issues, and additionally 3,3 part-time (15%–79%) staff members to assist on these tasks. In Sweden the amount of staff members is in average the highest, whereas in Finland the lowest. See Picture 1.11. for detailed averages.



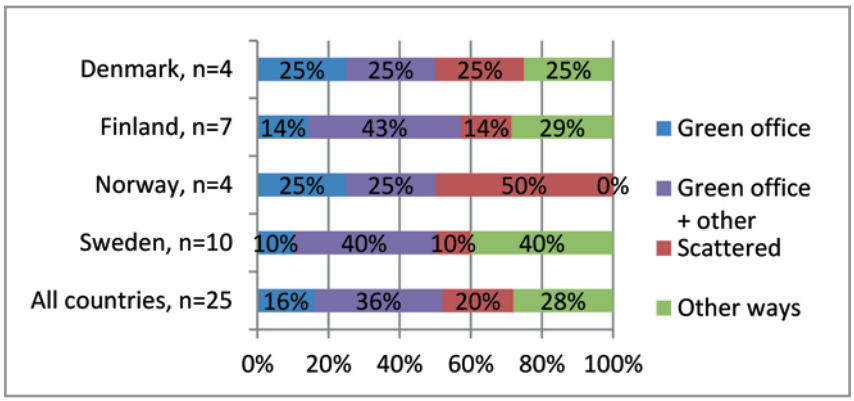
Picture 1.11. The average amount of sustainability (SD) staff members in the Nordic countries. N=number of institutions.

However, the variation between institutions in the different countries was high, as presented in Picture 1.12.



Picture 1.12. The variation in the amount of sustainability staff members in the respondents' institutions. Numbers 1–4 are Danish, 5–12 Finnish, 13–16 Norwegian and 16–25 Swedish institutions.

The staff is organized to comprise a green office – or green office added with some other elements – in 52% of the responded institutions. The other organizational setups are scattering the staff to different units and faculties, and other individual ways, such as having a coordinator for campus and teaching separately, or placing sustainability staff in facilities unit (Picture 1.13).

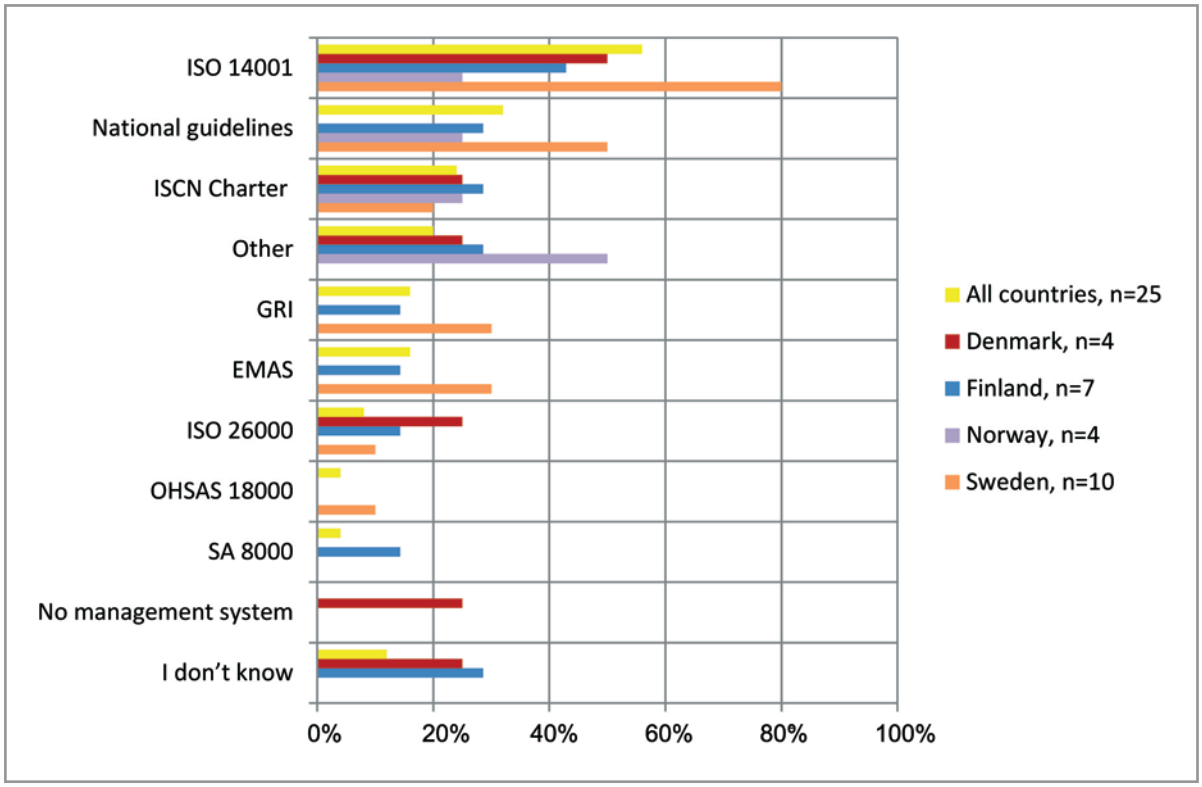


Picture 1.13. The organization of sustainability (SD) staff in the Nordic countries. N=number of institutions.

Management systems

In the Nordic level, the most popular way of managing the integration of sustainable development is to establish an environmental management system ISO 14001; over 50% of the responded institutions have the ISO 14001 established (Picture 1.14). Many manage the work also according to national guidelines and the Charter of the International Sustainable Campus Network (ISCN), with around 20–30% having these in use. National guidelines include the following: in Finland the Social Responsibility Initiative, in Norway the Environmental, health and safety regulations, and requiring overview and action plans, and in Sweden yearly reporting to the Swedish Environmental Protection Agency. Also other ways of managing were mentioned, including the Nordic ecolabel Swan, the WWF Green office especially in Finland, and the Norwegian Eco-lighthouse and Miljöfyrtarn.

In Sweden almost all the 10 responded institutions have established the ISO 14001. The Swedish use additionally most the other managing systems relating to sustainability, compared to the other countries. In Denmark the ISO 26000, a management system for social responsibility, is clearly the most common among the Nordic countries.



Picture 1.14. Environmental management systems used to manage sustainability in the different Nordic countries. N=number of institutions.

3.2. Measuring, target-setting and reporting practices

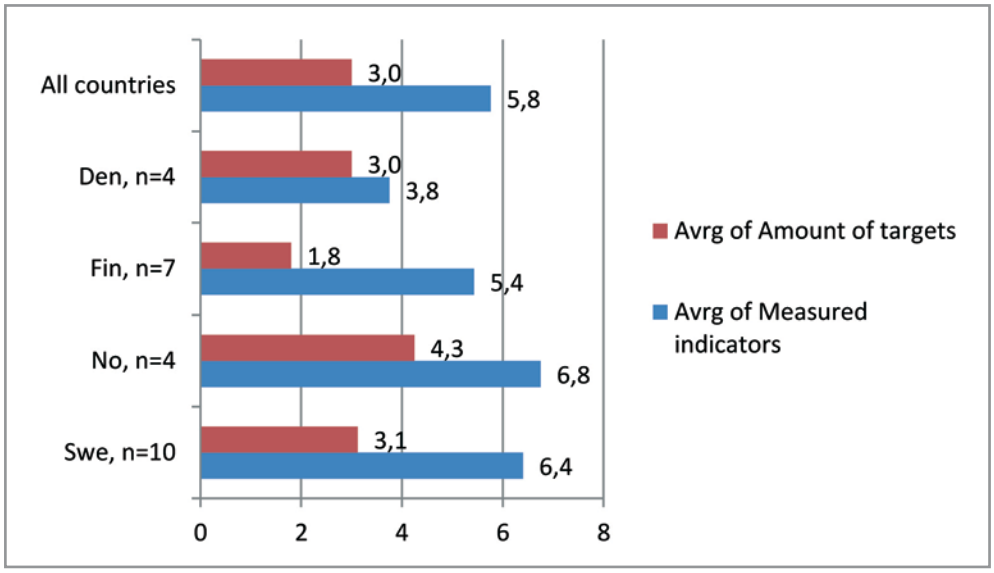
Measuring and target-setting

The most commonly measured sustainability indicators in the Nordic HEIs are energy, water and paper consumption, CO_2-emissions, and travel. Some institutions measure also the amount of purchasing made under eco-labels, courses and publications relating to sustainable development, but only few have measures relating to the amount of projects outside the university or sustainability-related thesis. An often mentioned indicator was the amount of recycled waste, which was missing from the listed alternatives.

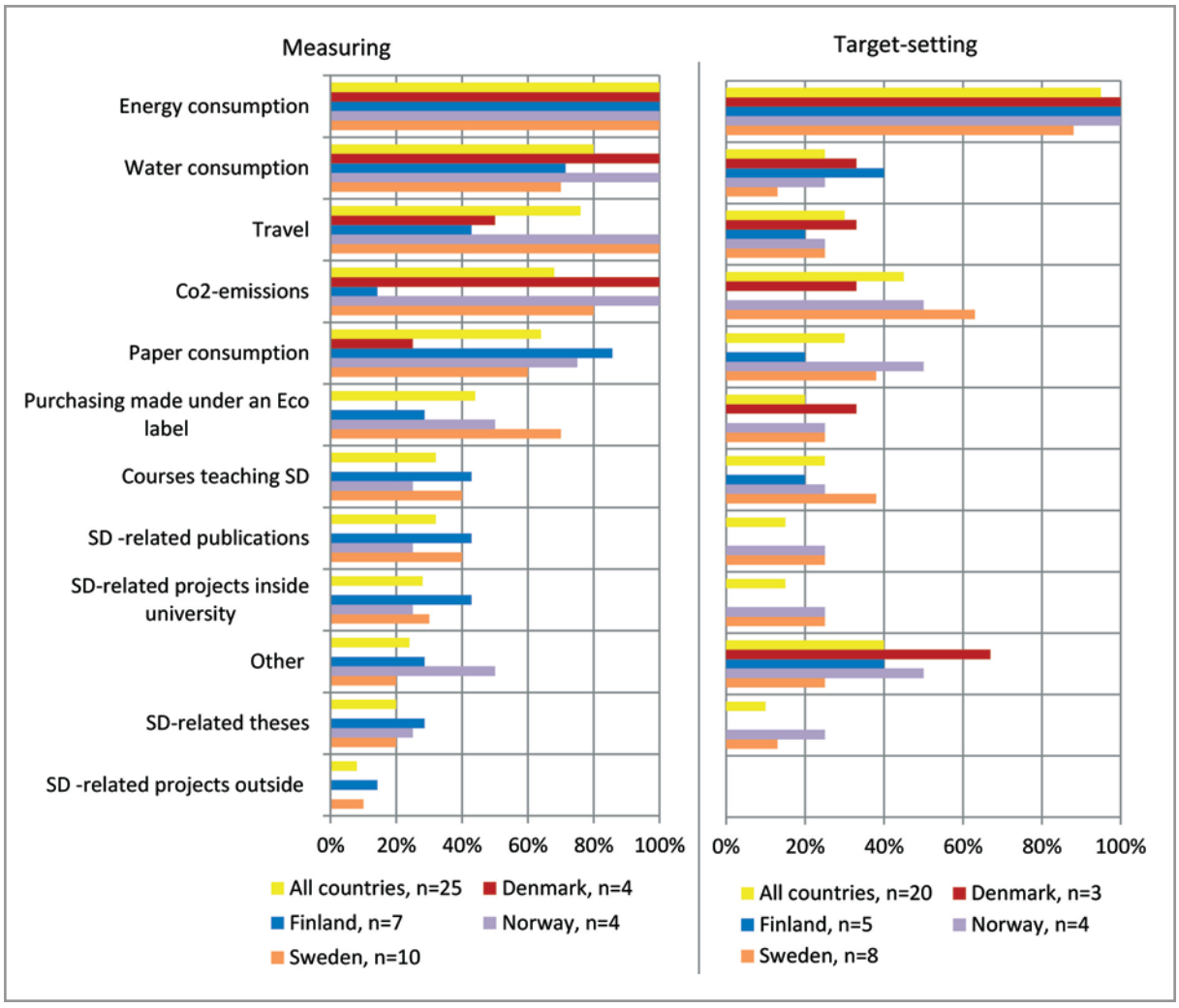
The amount of targets set relating to sustainable development was, however, much lower in average than the amount of measured indicators. The difference between the averages is presented in Picture 1.15. Energy consumption was the only indicator that almost all of the institutions had set targets to. All the other indicators seemed to be measured more or less without relative target-setting. The indicators and target-setting in the different Nordic countries are presented in Picture 1.16.

Differences between the countries

According to the respondents, the Norwegian and Swedish institutions are the most active in measuring sustainability -related indicators. The difference between measuring and target-setting was the lowest in Denmark and Norway, but the number of respondents was also very low in both countries. In Finnish institutions the amount of set targets was the lowest. The Finnish HEIs differentiated additionally most from the others by measuring paper consumption more actively than water or travel, and by not measuring CO_2 -emissions and purchasing as much as Swedish and Norwegian HEIs. The Danish instead, measure their paper consumption less actively than the others, and according to the results, they monitor only 4 indicators, whereas the others indicated some measuring to all of the given alternatives.



Picture 1.15. The difference between measured sustainability indicators and the amount of targets set in the Nordic HEIs. N=number of institutions.



Picture 1.16. Sustainability-related indicators measured in the Nordic HEIs (left), and targets set relating to the same indicators (right). The numbers in the legend indicate the amount of responded institutions. Other targets and measuring mentioned by the respondents are presented in Table 1.2. N=number of institutions.

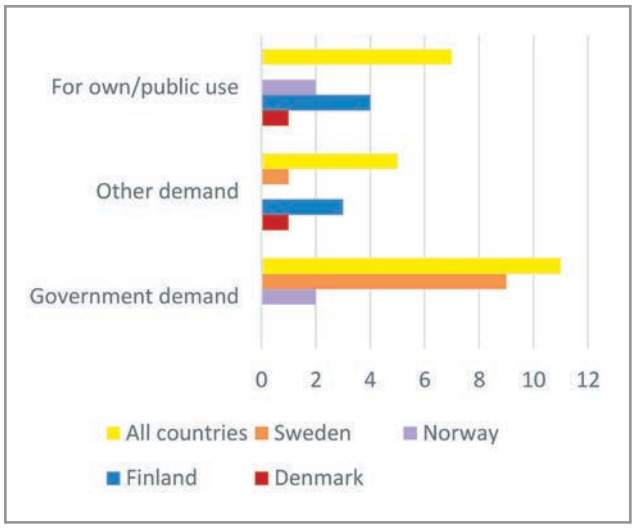
Table 1.2. Target-setting brought up by the respondents.

	Other mentioned targets
Denmark	Recycling rate
	Reduce waste
	Organizational and behaviour-related targets
Finland	Space use efficiency
Norway	Reduce amount of fossil fuels
	Biodiversity plan
	Reduce waste
Sweden	Integrate sustainability into teaching, research, outreach
	Waste management
	Sustainable procurement
	Staff training
	Student engagement

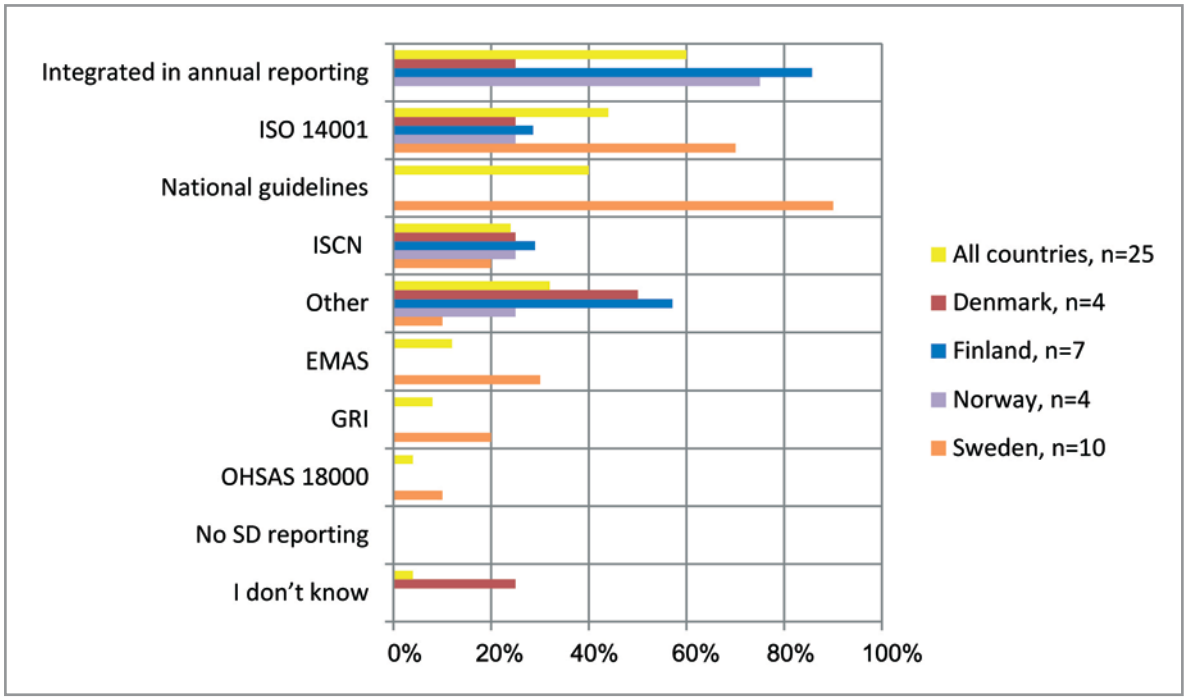
Reporting practices

The Nordic HEIs are in average obliged to report on sustainability at least partly, according to the respondents (Picture 1.17). Almost 50% of the responded institutions had committed to a network that demands for sustainability reporting, or had alternatively a certified reporting system demanding for annual reports. Only in Sweden, 90% of institutions indicated they are obliged to report to national authorities (Swedish Environmental Protection Agency & ministry of Education).

In Sweden 70% of the responded institutions indicated additionally, that they report according to ISO 14001 system, added also with other reporting systems presented in Picture 1.18. The Finnish institutions were the most committed to the International Sustainable Campus Network reporting, whereas in Norway sustainability issues are most frequently integrated in the annual reporting.



Picture 1.17. The obligatoriness of reporting in the Nordic HEIs. X-axis=number of institutions.



Picture 1.18. Reporting systems relating to sustainable development used in the Nordic HEIs. N=number of institutions.

4. Networks and commitment to sustainable development

4.1. Networks

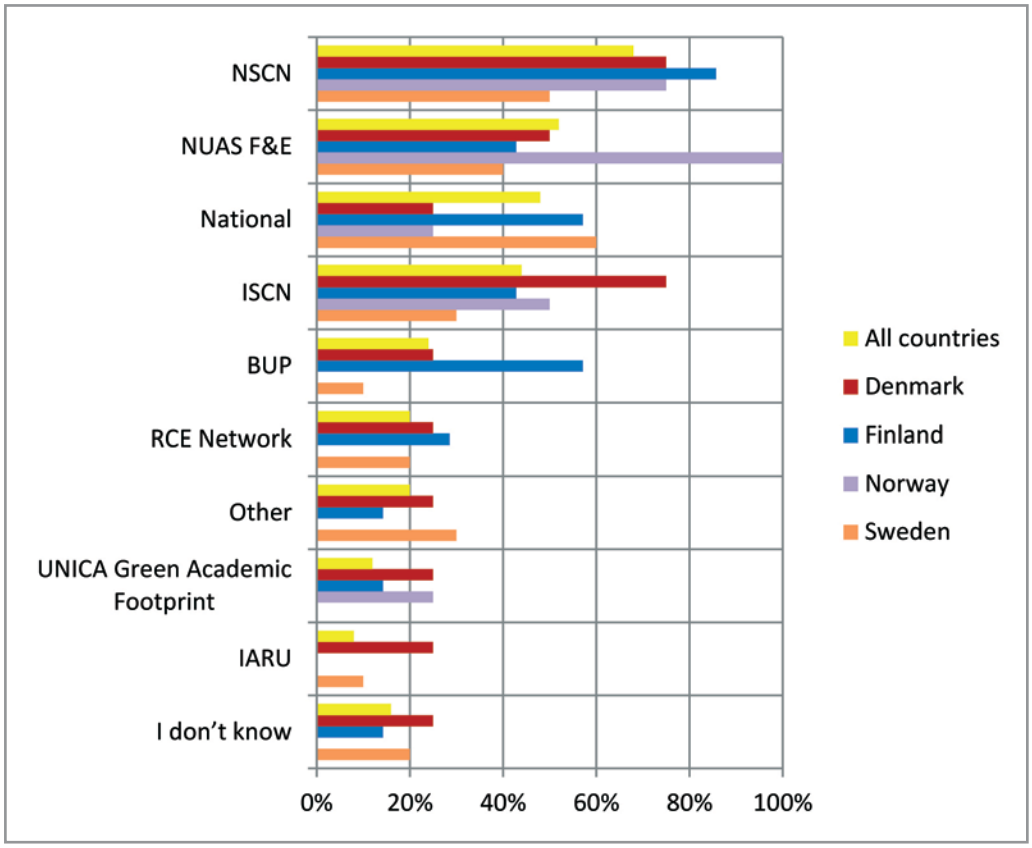
The Nordic HEIs are in average participating in 3 sustainability-related networks. The variation between the countries and institutions was high, but all the responded institutions were members of at least one network. The averages are found in Table 1.3.

Table 1.3. The average amount of memberships in sustainability-related networks. Min and Max indicate the minimum and maximum amount of networks in institutions of one country. N=number of responded institutions.

	Denmark	Finland	Norway	Sweden	All countries
Avrg No of networks	3,5	3,4	2,8	2,5	3,0
Max	6	7	4	5	7
Min	1	1	2	1	1
n	**4**	**7**	**4**	**10**	**25**

The most popular of SD-related networks was the Nordic Sustainable Campus Network, NSCN, but over 50% indicated being also members of NUAS Facilities and Environment-group (F&E), and almost 50% were involved in a national network and the International Sustainable Campus Network, ISCN. The national networks mentioned by the respondents are presented in Table 1.4.

Denmark and Finland had most network memberships, and Sweden least. However, the Swedish institutions were active in attending national networks as well as the Finnish institutions, which were also the most active in attending the Baltic University Program, BUP. The Norwegian institutions, instead, were all members of NUAS F&E, and the Danish were attending ISCN most. All the networks are presented in Picture 1.19.



Picture 1.19. Memberships in sustainable development-related networks. Number of respondents, see Table 1.3. Other networks mentioned by the respondents are found in Table 1.4.

Table 1.4. National and other sustainability-related networks mentioned by the respondents.

	National networks mentioned
Denmark	Energy controller experience network
Finland	So called SD forum of the universities
	Finnish environmental coordinators network
Norway	New network with other Norwegian universities
Sweden	Miljöledning vid universitet och högskolor (MLUH) (Environmental leaders in universities)
	Other networks mentioned
Denmark	ECIU sustainable campus sotning group
Sweden	University network regarding environmental management system
	Regional CSR-network

4.2. Formal commitment

The administrational and sustainability staff responded to a question on the number of signed international sustainability declarations and commitments. All the alternatives to choose from, and other commitments mentioned by the respondents, are found in Tables 1.5–1.7, as well as the average number of signed declarations in different countries.

In average, the Nordic HEIs have signed one international declaration. In Sweden the average was slightly higher than in the other countries. The majority, 46%, of all the respondents were unaware of the declarations signed by their institution.

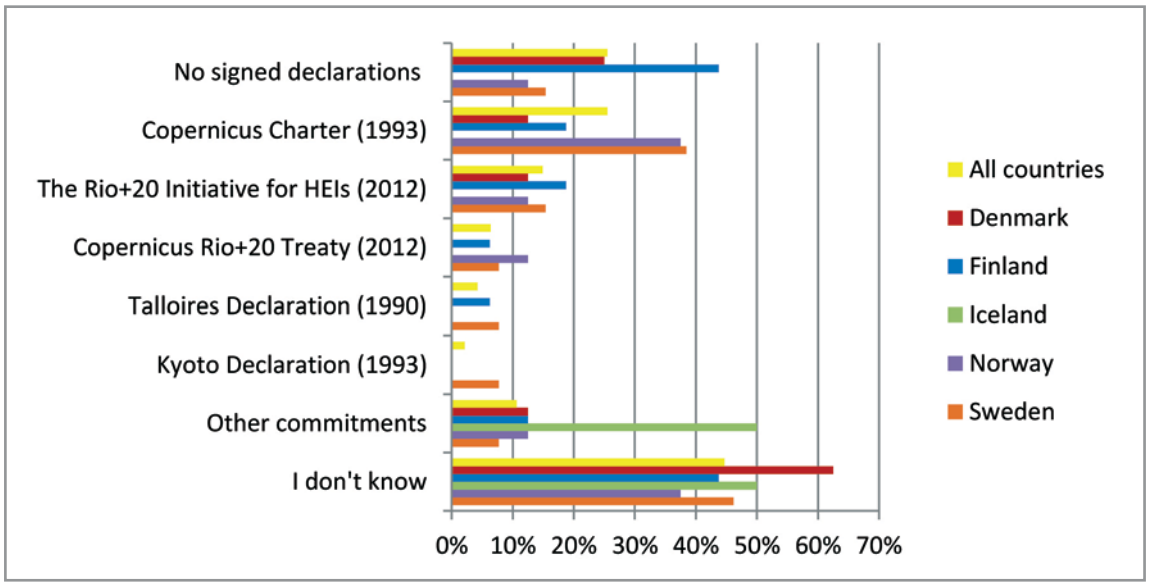
Tables 1.5–1.7. International declaration alternatives in the survey (left) and the other mentioned commitments (right below). The average number of signed declarations in the Nordic HEIs (right above). N indicates the number of responded institutions, not respondents.

Declarations
No signed declarations
Copernicus Charter (1993)
The Rio+20 Initiative (2012)
Copernicus Rio+20 Treaty (2012)
Talloires Declaration (1990)
Kyoto Declaration (1993)
Halifax Declaration (1991)
Swansea Declaration (1993)
Lüneburg Declaration (2001)
Barcelona Declaration(2004)
Graz Declaration (2004)
Torino Declaration (2009)
Other cmmitments

Country	Denmark	Finland	Iceland	Norway	Sweden	All countries
Avrg No of signed declarations	0,8	0,9	0,5	1,3	1,4	1,1
Max	2	3	1	3	4	4
Min	0	0	0	0	0	1
n	**4**	**11**	**2**	**4**	**8**	**29**

	Other declarations and commitments mentioned
Denmark	Principles for responsible management education, PRME
Finland	Sociological committment to sustainable devolopment
Iceland	Principles for responsible management education, PRME
Sweden	ISCN charter, Global Compact

The most popular declaration among the Nordic HEIs, especially in Norway and Sweden, was Copernicus charter from the year 1993 with over 20% of responded institutions indicating to have signed it. The most recent declaration, the Rio+20 Initiative for HEIs was signed by 15% of the institutions, according to the respondents. See Picture 1.20. for details.



Picture 1.20. The international declarations signed by the Nordic HEIs. See Tables 1.5–1.7 for more details.

The institutions had similar motivations in signing a declaration: it was found as a way to differentiate from the other universities, a way to strengthen collaboration and also as a way to communicate their commitment to sustainable development. However, the concrete effects of signing a declaration have remained quite low according to the respondents. Only around 30% of the respondents found that the declaration had affected the implementation of sustainable development in their institution, or the level of awareness. Additionally, the respondents found evaluating the effects very challenging, since only 11 responded the question concerning the effects.

4.3. Supporting the staff in sustainable choices

All the respondents had the opportunity to indicate the ways with which their institution supports the staff in making sustainable choices. The options are presented in picture 1.21.

In average, the Nordic HEIs support their staff with almost 6 different ways, the Swedish being the most active in this sector, and the Icelandic the most inactive. However, the variation in the responses was high even among the respondents from one institution, thus, the averages represent the subjective views of university staff and cannot be considered as facts. The averages are shown in Table 1.8.

Table 1.8. The average amount of ways to support the staff in making sustainable choices. The averages were counted for each institution, and the institution averages comprise the country averages presented here. N=number of institutions.

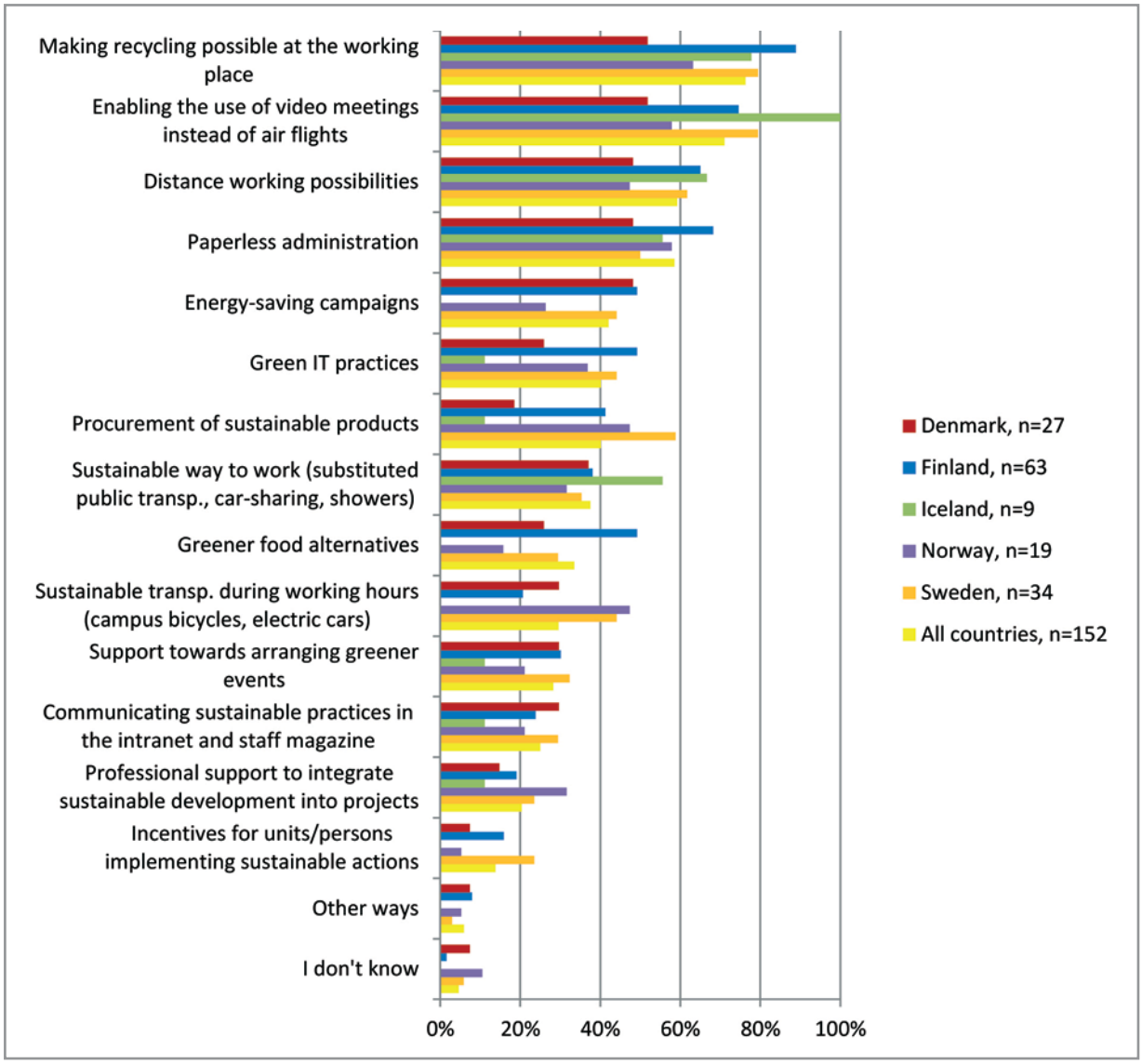
Country	Denmark	Finland	Iceland	Norway	Sweden	**All countries**
Avrg No of ways	5,7	6,7	4,4	4,5	7,2	5,7
Max	10	13	5,5	6,2	12	13
Min	2	2	4	1	0	0
n	**9**	**26**	**5**	**6**	**20**	**66**

In the Nordic level many ways are used to support the staff, but most commonly used measures seem to be possibilities to recycle, video conferences, distance working possibilities and supporting paperless administration. The Danish and Norwegian respondents, however, found these more uncommon than the others, except for paperless administration.

Very few, instead, offered their staff incentives for sustainable actions. This was most common in Sweden, where over 20% of respondents indicated incentives to be used as a driver for more sustainable behavior. The Swedish were additionally having more sustainable opportunities in transportation during working hours together with the Norwegians. Sustainable procurement was more commonly used in Sweden compared to the others.

In Iceland the institutions seem to support most a sustainable way to work and video connections compared to the other countries, but green IT, green procurement, green events and communicating on sustainability issues were much less common than in the other countries. Additionally, greener food alternatives, sustainable transportation during working hours and energy-saving campaigns, which were commonly used in the other countries, were absent in the Icelandic responses.

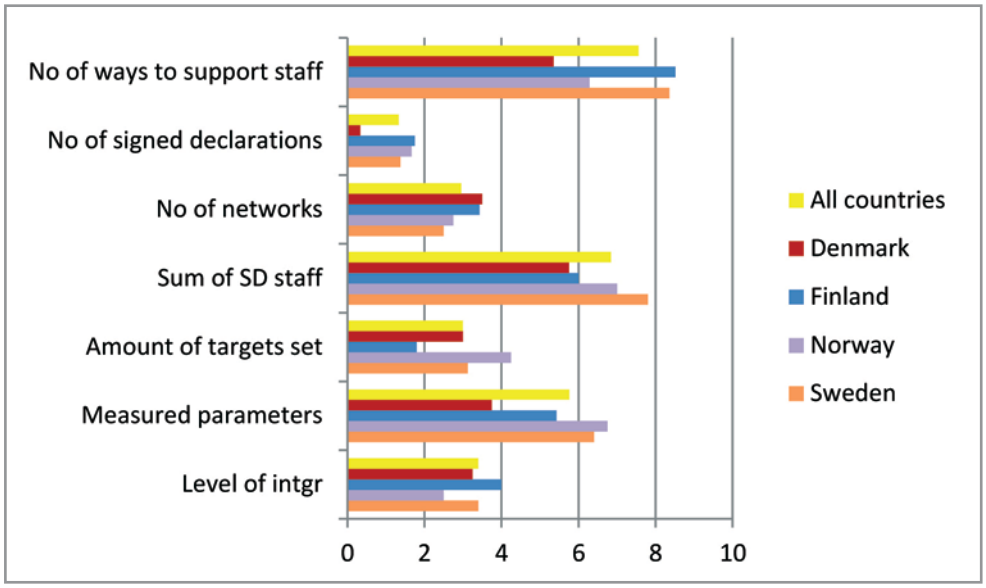
The Finnish institutions put effort on greener food and paperless administration more than the others. In addition, green IT and procurement were found important according to Finnish respondents.



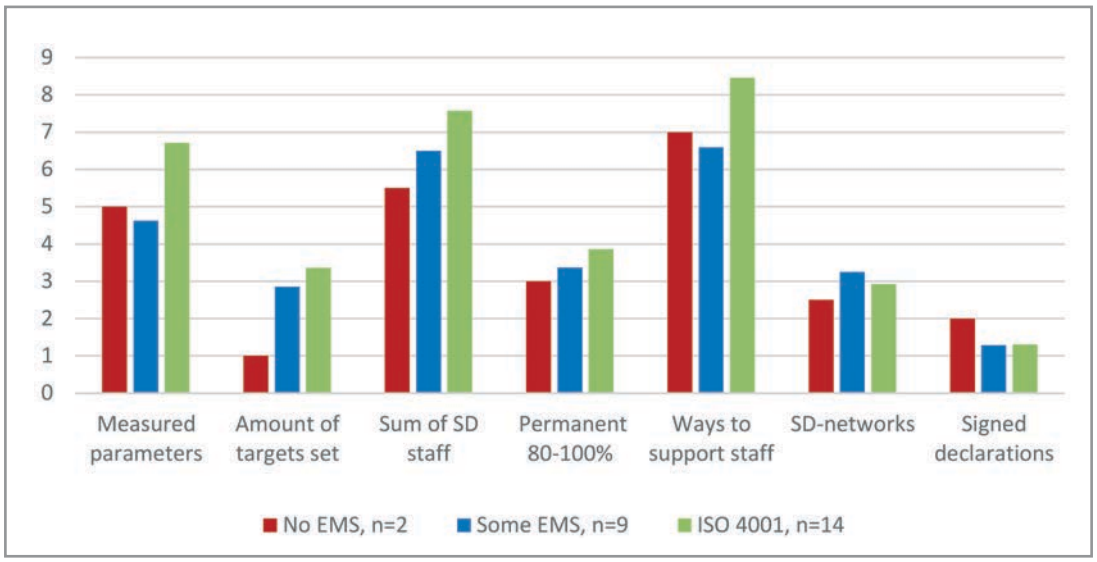
Picture 1.21. The views of Nordic university staff on how their institutions support the staff in making sustainable choices. N indicates the number of respondents.

5. Conclusions on the implementation levels of sustainable development

According to the results presented in chapters 3 and 4, the Nordic countries are very similar in how well they have integrated sustainable development – none of the countries is implementing everything at a higher level than the others (Picture 1.22). However, when analyzing the results according to the use of environmental management systems, a minor trend can be found. Institutions having established the ISO 14001 performed slightly better compared to the ones using some other system, for example ISCN Charter, or to those having no environmental management system in use (Picture 1.23).



Picture 1.22. The summarizing graph on the implementation of sustainable development in different countries. "Level of intgr" refers to the evaluations made by the respondents on the level to which their institution has integrated sustainable development (1=not at all, 2=starting stage, 3=planning stage, 4=operational stage, 5=has reached the targets set). The other measures are average amounts of respective variables. Note, that this graph presents the results concerning only the 25 institutions that responded to the management-part of the survey (chapter 3).



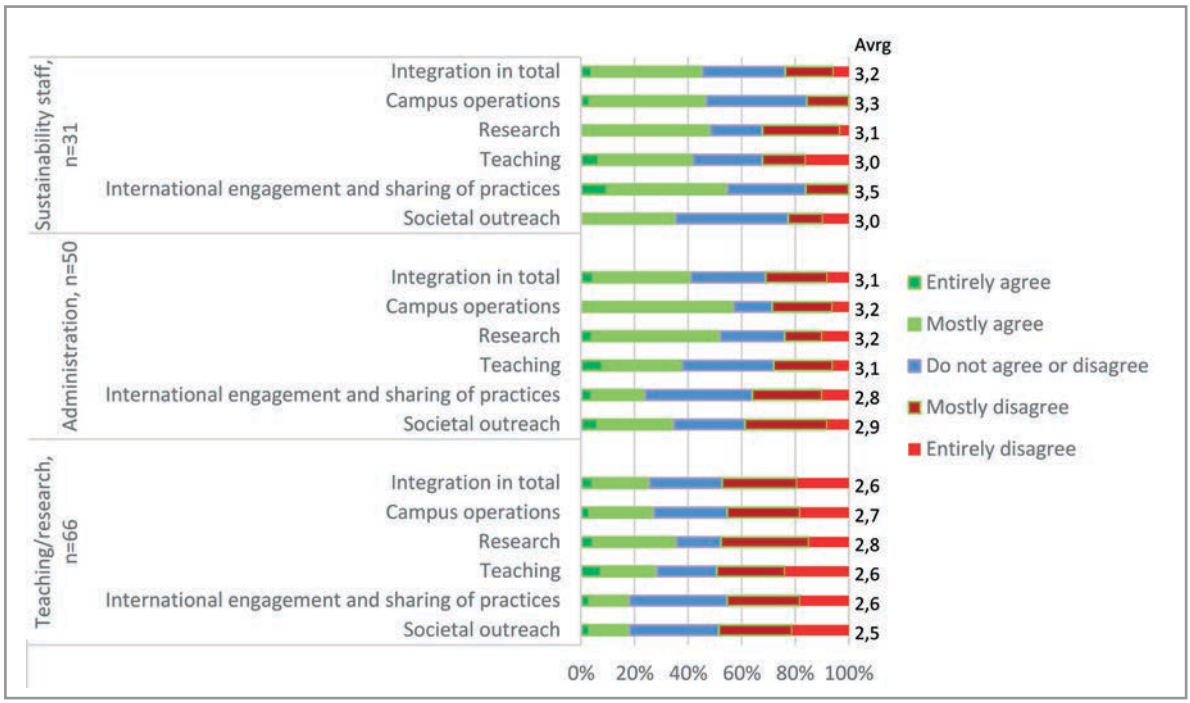
Picture 1.23. The sustainability performance of Nordic HEIs using different environmental management systems. "Some EMS" = ISCN Charter, GRI, other ISO-systems and national guidelines. The measures in Y-axes represent the amounts of respective variables. N=number of institutions.

6. Satisfaction towards the implementation of sustainable development

The Nordic university staff was in average not very satisfied with the recent situation in implementing sustainable development. The respondents gave their views in 6 categories, shown in Picture 1.24. However, the averages are close to neutral (3), especially in the case of Finland and Sweden, where equally many were unsatisfied and satisfied. In Iceland the staff was clearly the most unsatisfied. An interesting finding was, that the staff was almost equally satisfied and unsatisfied with the level of sustainability in teaching, though teaching gained clearly the most critical responses in the detailed questions in chapter 2.3.

Picture 1.24. The satisfaction of the respondents with the implementation of sustainable development in their institution. N=number of respondents.

Teachers/researchers were the most unsatisfied of the respondent groups, whereas sustainability staff seemed to be slightly more satisfied to the recent situation, especially with international engagement, than the other groups (Picture 1.25.). However, also the administrational staff found the level of integration slightly more satisfactory compared to the Nordic means in Picture 1.24.



Picture 1.25. The satisfaction of different respondent groups with the implementation of sustainable development in their institution. N=number of respondents.

Part II

Enablers and obstacles in implementing sustainable development

Part 2: Enablers and obstacles in implementing sustainable development

Table of Contents

Photo 3: Many different things enable, but also hinder the implementation of sustainable development in the Nordic HEIs. The main building of the University of Iceland in Spring 2014. (Photo: Meri Löyttyniemi)

Summary of Part II

The results from our survey suggest, that in the Nordic level few factors clearly enhance the integration of sustainable development into university operations: collaborative actions with students and municipalities, the attitudes of students, and university strategy. By contrast, decision-making procedure, as well as financial and staff resources, hinder the integration. However, the results vary between the countries and also between the respondent groups.

Nordic teachers emphasize the role of resources in enhancing sustainability, and would educate the staff and leaders to reach better competences. Sustainability staff instead, highlight more the effect of clear organization and strategy on the implementation, and would raise the awareness through better communications.

The Danish universities seem to highlight especially policy and management -related factors to promote sustainability. The Danish universities are in average lacking prioritizing, clearer decision-making and strategy on sustainable development, but also resources. The Danish seem to trust in supportive leaders in solving the problem – they emphasize the role of leadership, and would also enhance the communications and raise awareness on sustainable development. In Finland decision-making, prioritizing and organizational factors hinder the implementation of sustainable development the most, as well as lack of resources, general ignorance and fear of change. In Finland the implementation could be enhanced first of all through better communications and awareness-raising, but also by allocating more resources to sustainability, clarifying the strategy and educating the staff. The role of students is also emphasized in Finland.

The number of Icelandic respondents was too low to draw adequate conclusions. However, according to the few respondents, universities in Iceland are having problems with financial resources, decision-making, supportive leadership and staff competencies. The problems would be solved by having more external, financial incentives, initiating more sustainability -related student projects and research, and overall awareness-rising among the staff and community – not that much through policy and management.

In Norway the number of respondents was also very low, especially in the open questions. The Norwegian universities lack adequate sustainability organization and clear decision-making, as well as clear strategy and priorities. The drivers to make a change in Norway are collaboration, motivated personnel, more engaged leaders with clearer targets, better communications and student engagement. In Sweden the policy and management-related factors seem to be in a better stage than in the other countries, the respondents evaluating them more enabling than hindering the implementation of sustainable development. By contrast, the Swedish universities are lacking time and staff resources, but also funds and truly committed managers. The problems would be solved by educating the staff and leaders, getting more resources and committed leaders.

The overall amount of recognized enablers and obstacles was substantial, suggesting that problems in integrating sustainability are multifold and cannot be solved with the same measures in every country or institution. **Instead, the institution-specific drivers and barriers should be recognized separately in teaching, research and campus operation, and act based on those findings.** However, in the Nordic level it seems that students should be taken more into account in developing the ways to enhance the implementation of sustainable development. In addition, according to all the Nordic respondents, universities could have more pressure from the funders (ministries' incentives, research sponsors) to engage the leaders into sustainable actions. The supportive leaders could establish more supportive strategies, which would lead into clearer targets and sustainability better included in key performance indicators (KPIs), as well as creating a more coordinated sustainability organization. The strategies should be put into action through educating the staff and teachers, allocating more resources, and establishing more sustainability-related research and especially collaborative projects with students and municipalities.

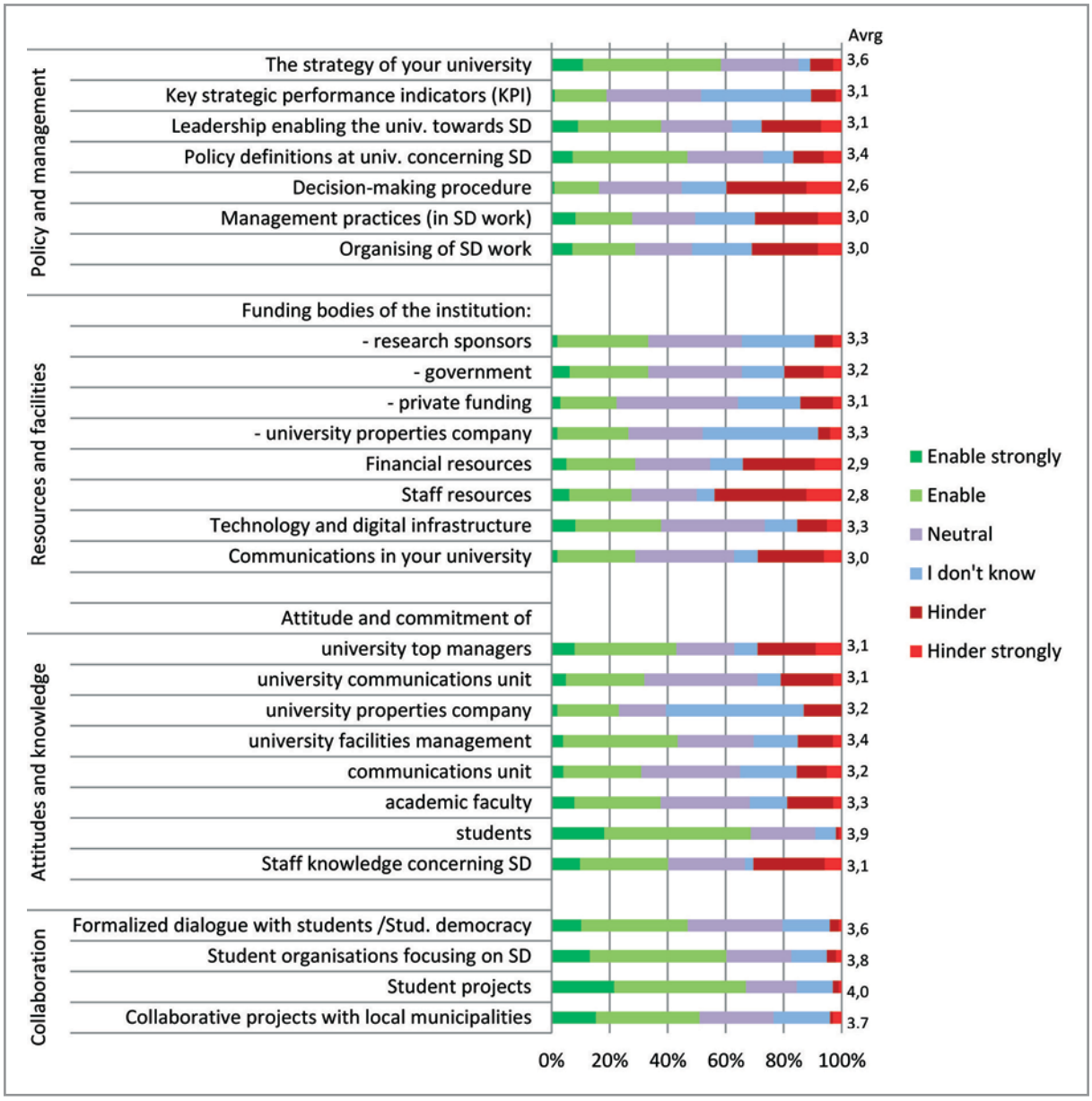
Introduction of Part II

In this part of the survey, the respondents were asked to evaluate the enabling or hindering role of several factors in implementing sustainable development. The questions were targeted to only teachers/researchers and sustainability staff. In a multiple-choice question the factors were divided into the following four categories: 1) Policy and management, 2) Resources and facilities, 3) Attitudes and knowledge, and 4) Collaboration. The options to choose from were 1=Hinder strongly, 2=Hinder, 3=Neutral, 4=Enable, 5=Enable strongly, 6= I don't know, from which the respondents could choose several. After the multiple-choice question, the respondents were asked by open questions to name three most enabling and hindering factors in their view, and to suggest three ways to promote sustainable development, and three ways to overcome the obstacles. The open question responses were classified under the same four categories mentioned above, under which the enablers formed altogether 11, and hinders 10 classes, respectively.

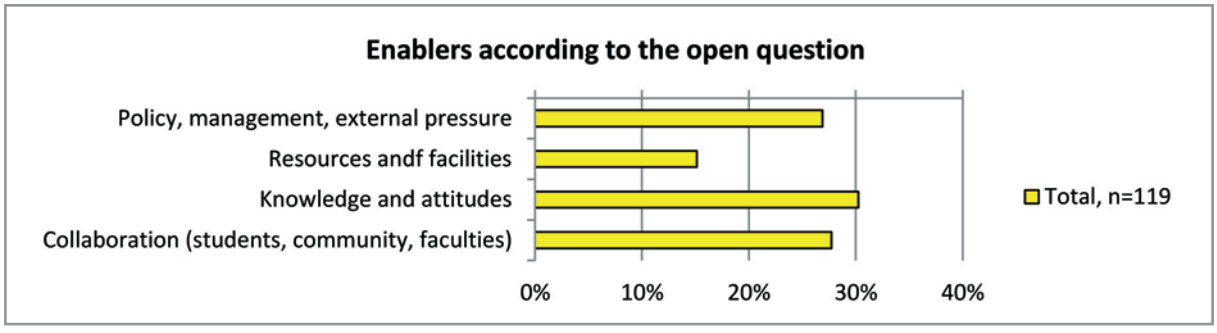
1. Factors enabling and hindering the implementation of sustainable development in the Nordic level

In the Nordic level some of the given factors clearly seem to enhance the implementation of sustainable development, especially collaborative actions with students and municipalities, the attitudes of students, and university strategy. In addition, several factors are in average moderately enabling the implementation, including policy concerning sustainable development, research sponsors, technology, and attitudes of facilities management and academic faculty. By contrast, decision-making procedure, as well as financial and staff resources, were found more hindering than enabling factors. The results are presented in Picture 2.1.

In the open questions the responses were well in line with the multiple-choice responses, highlighting a clear university strategy concerning sustainable development, and student engagement. However, the respondents brought frequently up also the role of skilled and motivated personnel as a strong driver for sustainability. Additionally, good leadership and supportive managers were found very important in having concrete sustainable actions in the institution. However, the challenge in interpreting the open responses of enablers was that the respondent may have answered either according to how they find the situation at the moment, or according to what they find would enable the implementation. The distribution of responses into four categories is presented in Picture 2.2, and the detailed classification of open question enablers in Table 2.1.



Picture 2.1. Factors hindering and enabling the implementation of sustainable development in the Nordic HEIs, according to the multiple-choice question. The averages are found in the right, and were evaluated as follows: 1=Hinder strongly, 2=Hinder, 3=Neutral, 4=Enable, 5=Enable strongly. The total number of respondents was in average 95-102, depending on the individual factor. In the averages "6=I don't know" -responses were excluded, and the number of respondents was 59–97, depending on the number of "I don't know" -responses and individual factors.

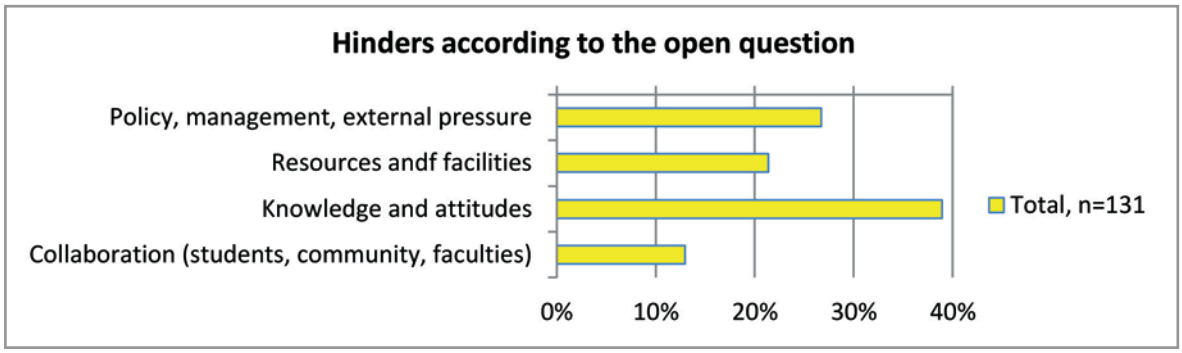


Picture 2.2. Factors that enable the implementation of sustainable development in the Nordic HEIs: The distribution of open question responses into the same four categories used also in the multiple-choice question (Pic 2.1.). N represents the number of given responses (not respondents) – the same respondent may have given suggestions to multiple categories. The n of respondents is indicated in Table 2.1.

Table 2.1. The detailed classification of enablers suggested by the Nordic respondents in the open question.

Enabling factors in SD implementation	Total
Policy, management and external pressure	
Clear SD strategy and targets	32 %
Clear SD organization, good management practices	13 %
External pressure	15 %
Resources and facilities	
Resources (funds, time, staff)	25 %
Good communications	9 %
Attitude and knowledge	
Skilled, motivated personnel	30 %
Good leadership, supportive management	25 %
Encouraging, supportive attitude at univ.	13 %
Collaboration	
Student engagement	28 %
SD projects, programs, research, initiatives	17 %
Collaboration (inside/outside univ.)	17 %
N of respondents	**53**

The respondents named several factors hindering the implementation of sustainable development in the open question, as was the case with enablers, too. The classes of obstacles are presented in Table 2.2. The most frequently mentioned obstacle was lack of resources (time, financial and staff). Attitudes, especially weak engagement of leaders and problems in decision-making, were additionally among the most hindering factors in the Nordic level. Almost equally highlighted were lack of prioritizing and lack of decent measuring and targets, as well as fear of change among the university community. Moderate obstacles seemed to be lack of competences related to sustainability among all staff members, unclear organization, and lack of collaboration. The distribution of responses into four categories is presented in Picture 2.3.



Picture 2.3. Factors that hinder the implementation of sustainable development in the Nordic HEIs: N represents the number of given responses (not respondents) – the same respondent may have given suggestions to multiple categories. The n of respondents is indicated in Table 2.2.

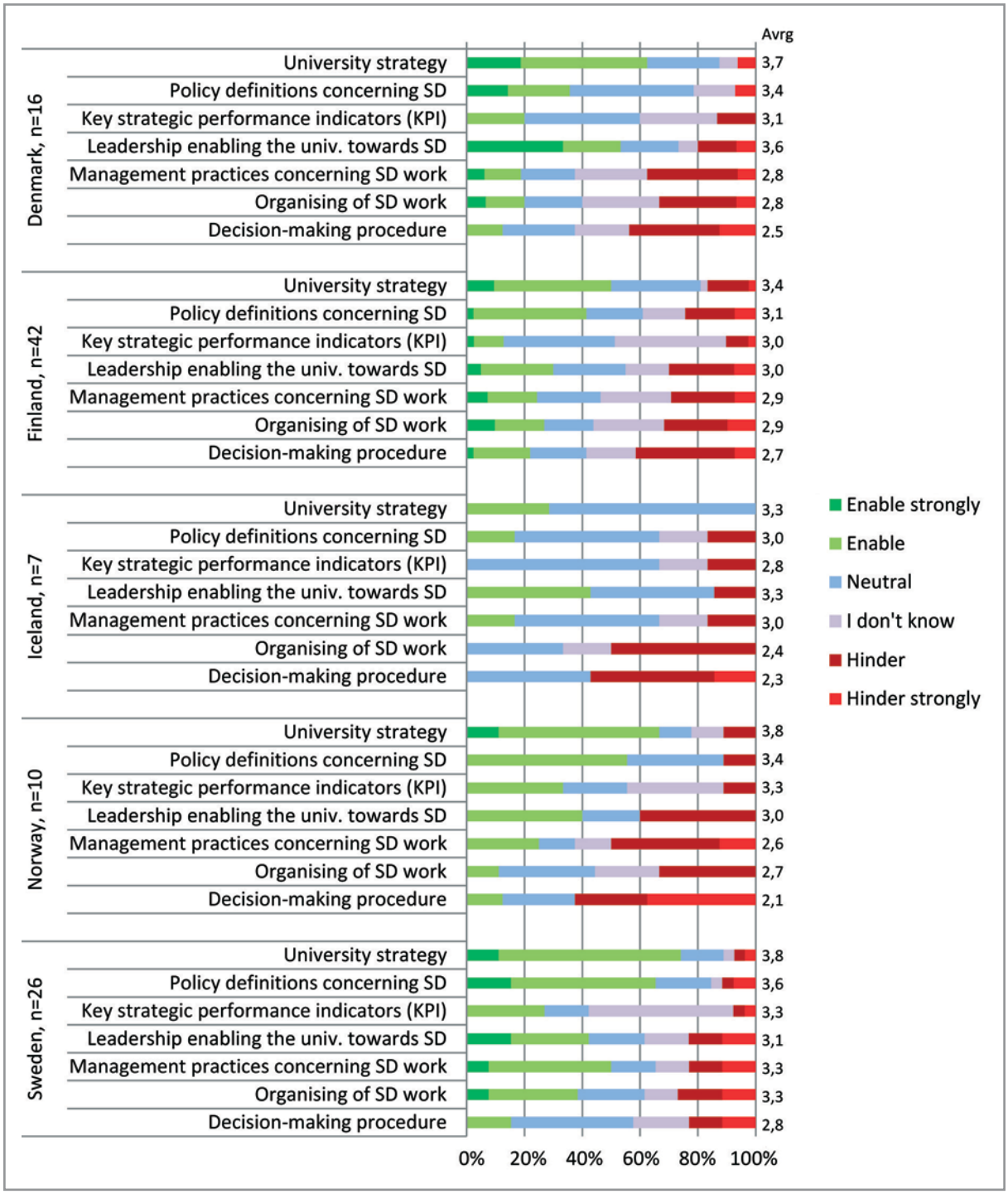
Table 2.2. The detailed classification of obstacles indicated by the Nordic respondents in the open question.

Obstacles in SD implementation	Total
Policy, management and external pressure	
Lack of SD proritizing, clear strategy, KPI's and targets	33 %
Unclear SD organization and responsibilities	23 %
Lack of external pressure	12 %
Resources and facilities	
Lack of resources (funds, staff, time)	54 %
Attitude and knowledge	
Unengaged decision-makers, lack of leadership, decision-making procedure	40 %
Attitude in general, fear of change	37 %
Lack of SD competences (teachers, staff, leaders)	21 %
Collaboration	
Lack of collaboration and interdisciplinarity	23 %
Lack of student involvement	4 %
Too few SD programs, initiatives, reseach	6 %
N of responders	**52**

2. Differences between the Nordic countries

2.1. Policy and management

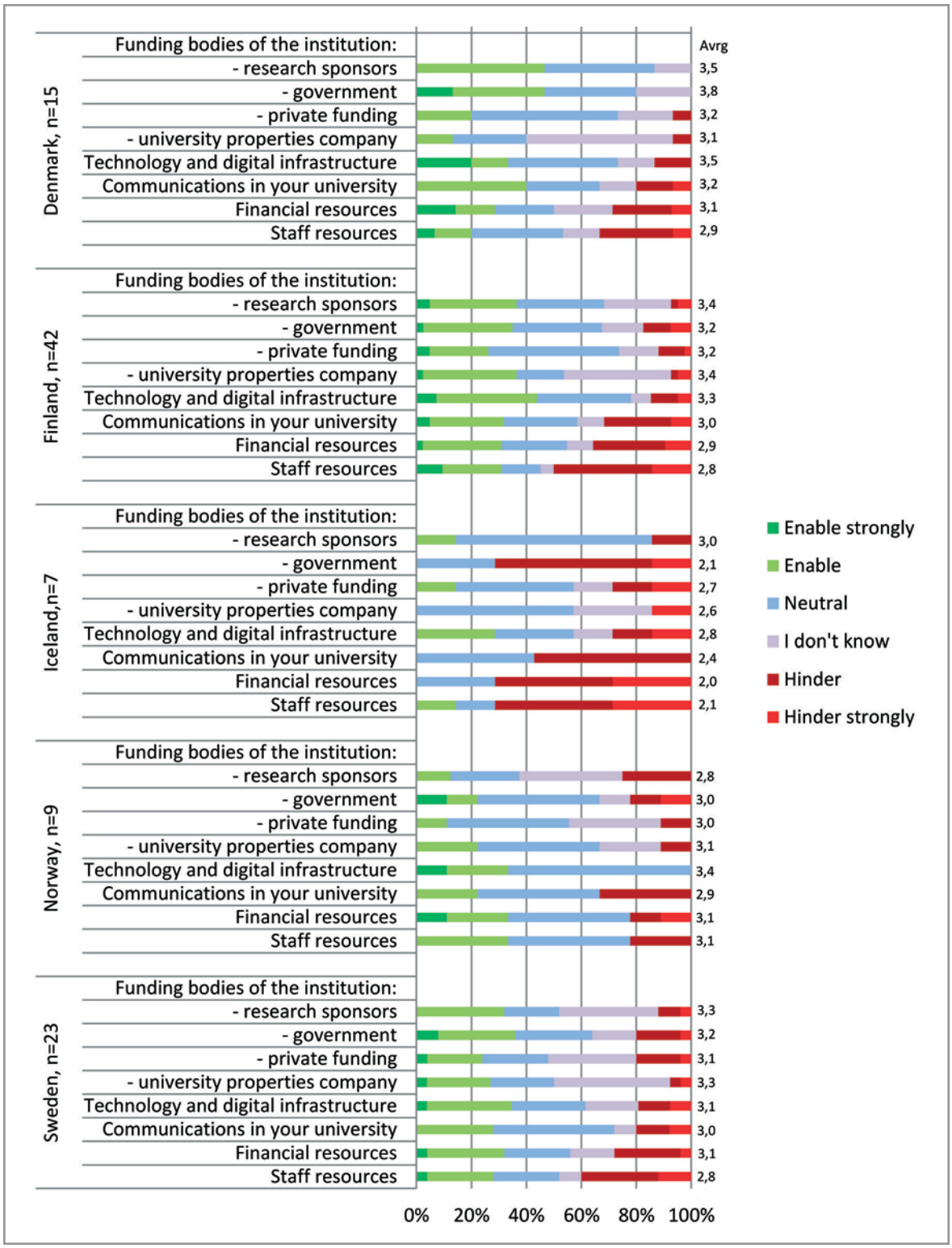
The Swedish respondents found policy and management more enabling than the other countries. Especially management practices and organizing of sustainability-related work seemed to enhance the implementation more compared to the other countries. Minor differences between the countries were found also in leadership, which enables the implementation most in Denmark. The Norwegian respondents found management practices and decision-making procedure clearly more hindering than the other countries. The results are presented in Picture 2.4.



Picture 2.4. Factors hindering and enabling the implementation of sustainable development in the different Nordic countries: The distribution of responses relating to policy and management. The averages are found in the right, and were evaluated as follows: 1=Hinder strongly, 2=Hinder, 3=Neutral, 4=Enable, 5=Enable strongly.

2.2. Resources and facilities

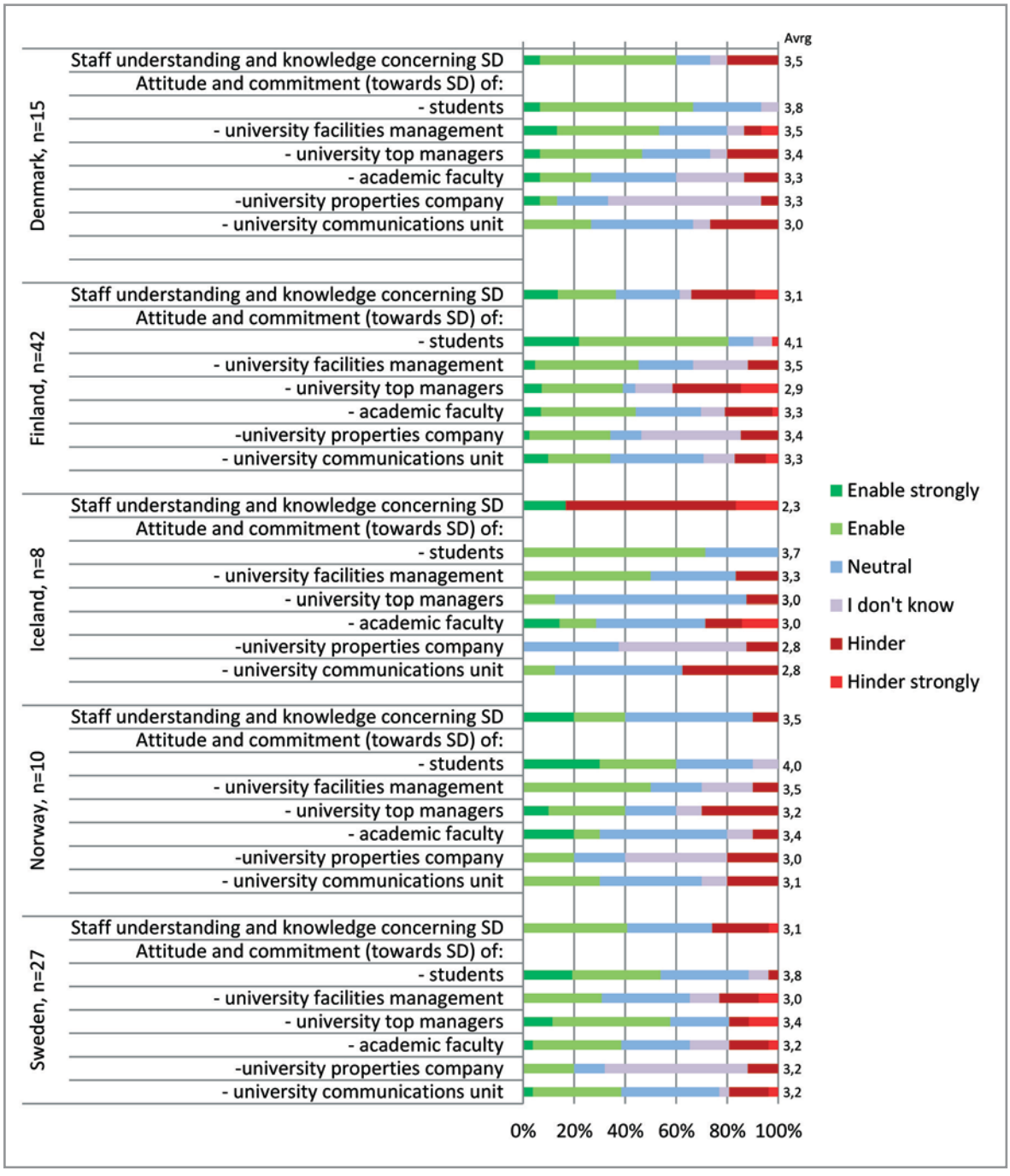
The Icelandic respondents evaluated all resources and facilities as hindering or neutral. Especially funding from government, staff- and financial resources seem to be great obstacles in Iceland. The Norwegians and Icelanders found the role of research sponsors more hindering than the others – otherwise the views were quite similar in different countries (Picture 2.5.).



Picture 2.5. Factors hindering and enabling the implementation of sustainable development in the different Nordic countries: The distribution of responses relating to resources and facilities. The averages are found in the right, and were evaluated as follows: 1=Hinder strongly, 2=Hinder, 3=Neutral, 4=Enable, 5=Enable strongly.

2.3. Attitudes and knowledge

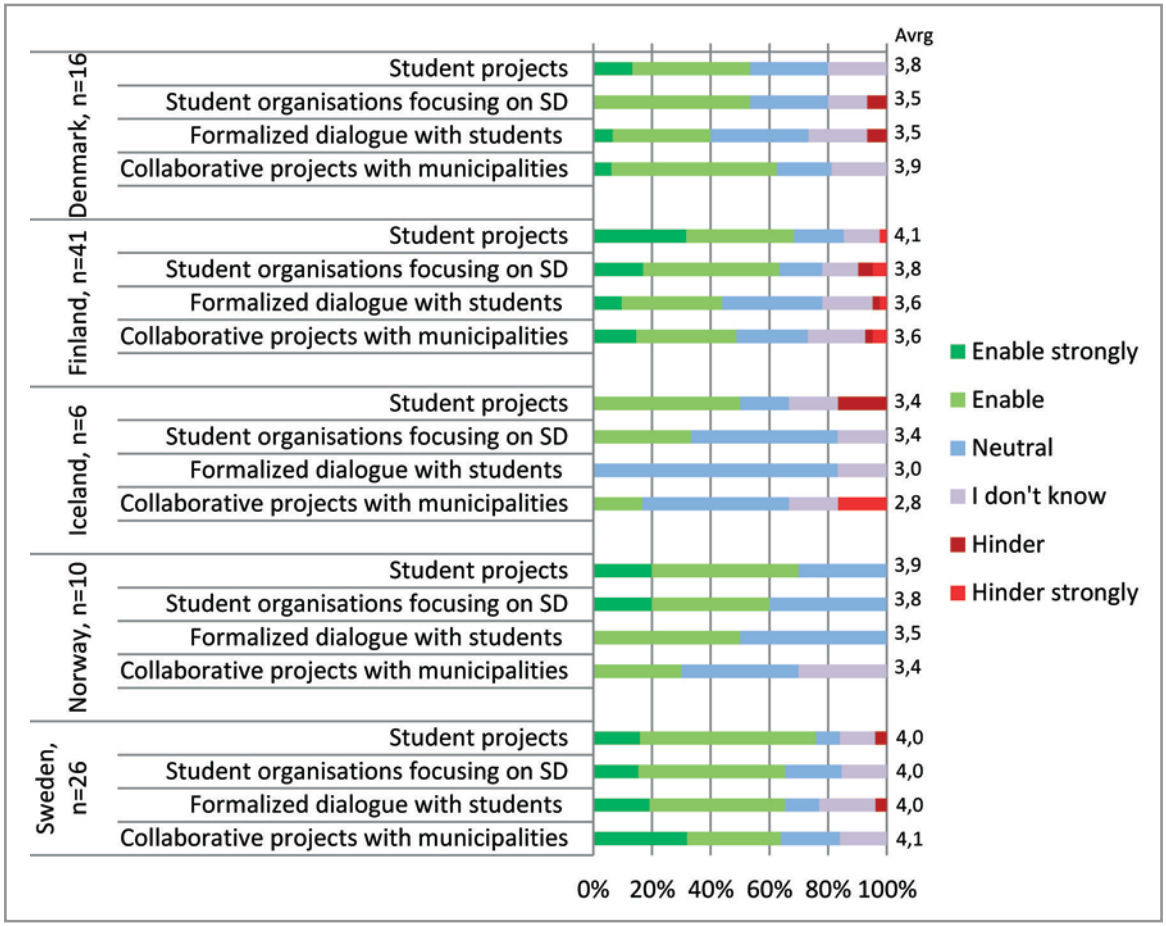
All the Nordic respondents were quite unanimous with their considerations on attitudes and knowledge. Icelandic respondents made the only great exception evaluating staff competences relating to sustainability hindering the implementation clearly, whereas the others found it enabling. In addition, Danish and Norwegian respondents found the attitudes of top management being slightly more enabling than the others. The distribution of responses is presented in Picture 2.6.



Picture 2.6. Factors hindering and enabling the implementation of sustainable development in the different Nordic countries: The distribution of responses relating to attitudes and knowledge. The averages are found in the right, and were evaluated as follows: 1=Hinder strongly, 2=Hinder, 3=Neutral, 4=Enable, 5=Enable strongly.

2.4. Collaboration

Collaboration is clearly the most enabling of all the four categories, with Iceland making the only slight exception. The other countries found all the collaborative factors strongly enabling, whereas the Icelandic respondents evaluated formalized dialogue with students and collaboration with municipalities being neutral.

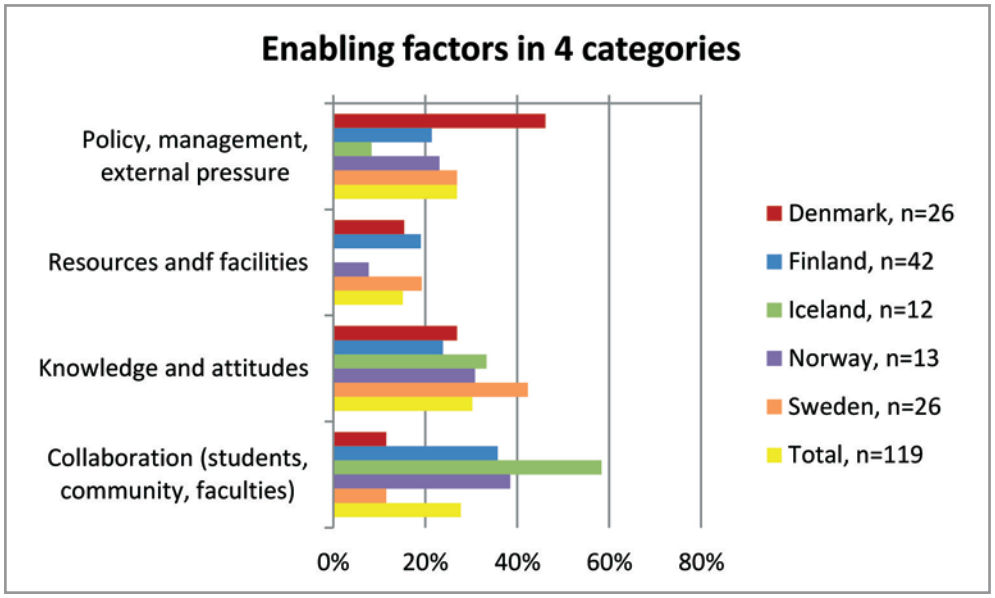


Picture 2.7. Factors hindering and enabling the implementation of sustainable development in the different Nordic countries: The distribution of responses relating to collaboration. The averages are found in the right, and were evaluated as follows: 1=Hinder strongly, 2=Hinder, 3=Neutral, 4=Enable, 5=Enable strongly.

2.5. Open question responses in different countries

2.5.1 Enablers and how to enhance them

The open questions revealed some trends in different Nordic countries. The Danish respondents found policy and management -related issues much more enabling than the other nationalities, especially clear strategy and policies being important. In addition, supportive management and leadership were found more important than in the other countries. The few Icelandic respondents (n=5) highlighted on the contrary the role of knowledge and collaboration, especially skilled, motivated personnel, which was emphasized also by the five Norwegian respondents. The Swedish respondents emphasized skilled personnel and supportive attitudes, and additionally resources more than the others, but did not find collaborative actions as enabling than the others.

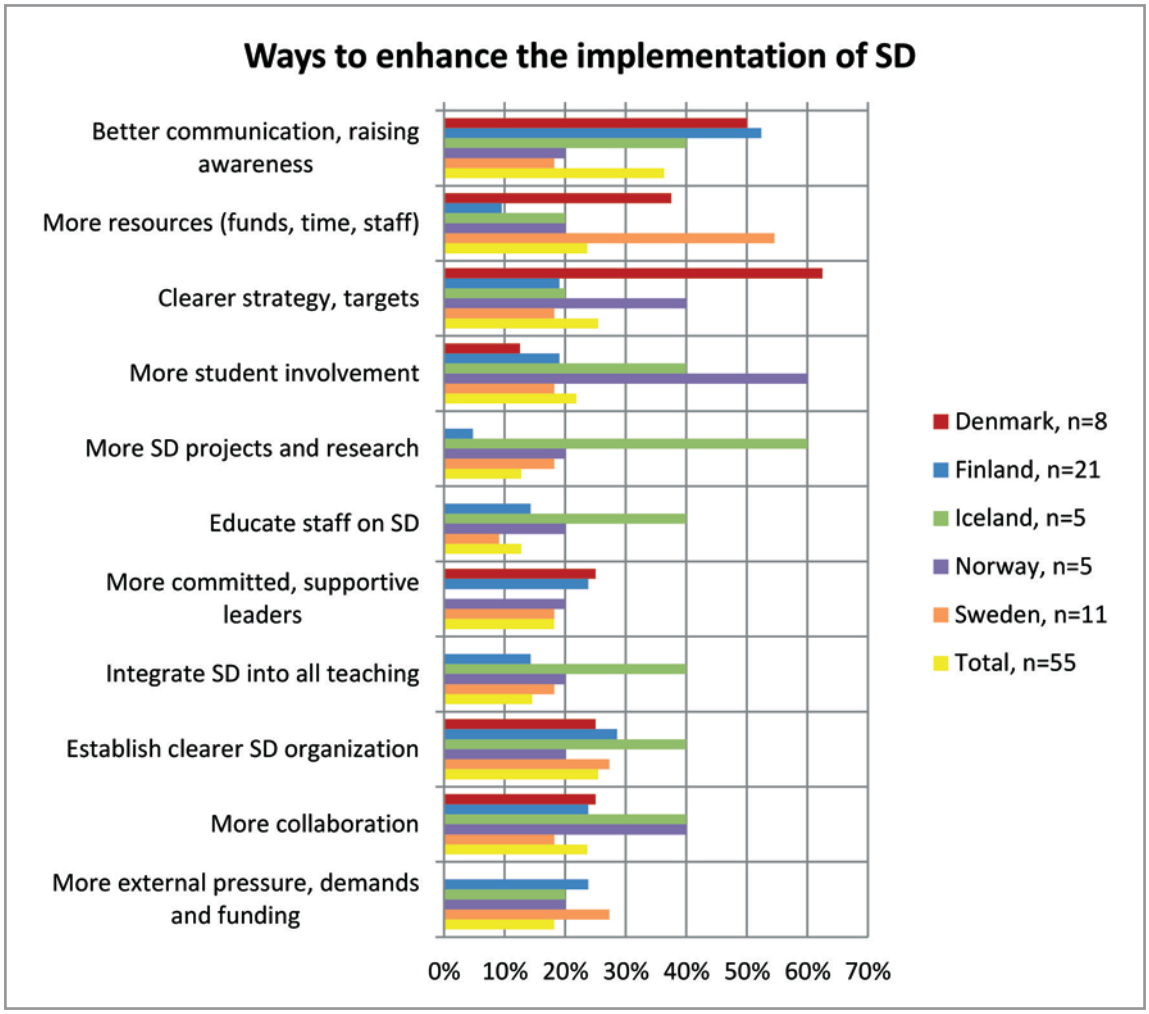


Picture 2.8. Factors that enable the implementation of sustainable development in different Nordic countries: The distribution of open question responses into four categories. N represents the number of given responses (not respondents) of each country – the same respondent may have given suggestions to multiple categories. The n of respondents is indicated in Table 2.3.

Table 2.3. The detailed classification of enablers according to the open question. The numbers are percentages of respondents in each country.

Enabling factors in SD implementation	Denmark	Finland	Iceland	Norway	Sweden	Total
Policy, management and external pressure						
Clear SD strategy and targets	80 %	14 %	20 %	20 %	36 %	32 %
Clear SD organization, good management practices	20 %	9 %	0 %	40 %	9 %	13 %
External pressure	20 %	18 %	0 %	0 %	18 %	15 %
Resources and facilities						
Resources (funds, time, staff)	20 %	27 %	0 %	20 %	36 %	25 %
Good communications	20 %	9 %	0 %	0 %	9 %	9 %
Attitude and knowledge						
Skilled, motivated personnel	0 %	18 %	60 %	80 %	45 %	30 %
Good leadership, supportive management	50 %	23 %	0 %	0 %	27 %	25 %
Encouraging, supportive attitude at univ.	20 %	5 %	20 %	0 %	27 %	13 %
Collaboration						
Student engagement	20 %	36 %	60 %	20 %	9 %	28 %
SD projects, programs, research, initiatives	0 %	18 %	40 %	40 %	9 %	17 %
Collaboration (inside/outside univ.)	10 %	14 %	40 %	40 %	9 %	17 %
N of respondents	**10**	**22**	**5**	**5**	**11**	**53**

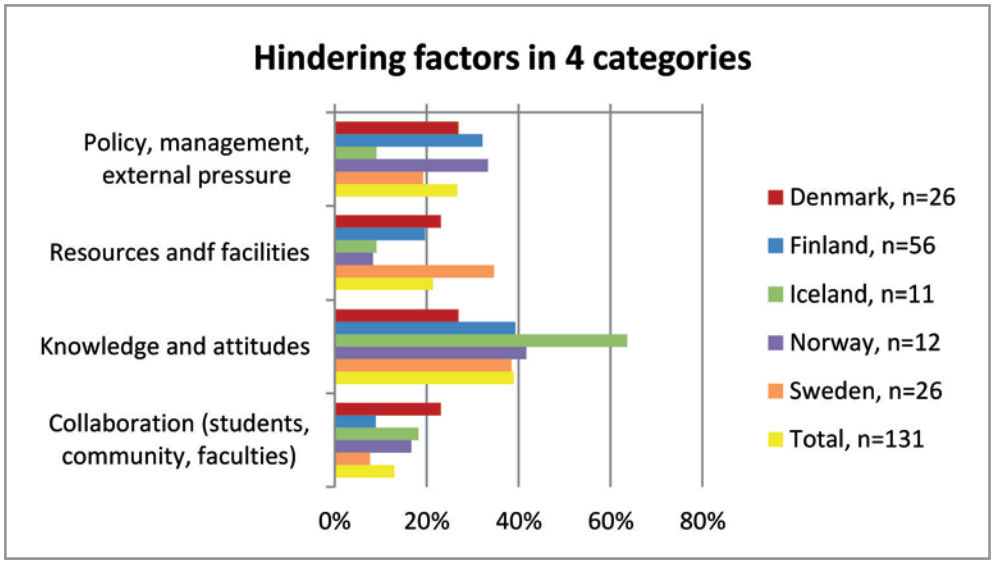
The respondents suggested several ways to enhance the enabling factors. The Swedish respondents would increase the amount of resources – time, funds and staff – rather than enhancing communications, whereas the Norwegians would clarify the strategy and engage students more. The Icelandic respondents would enhance the implementation through establishing more sustainability-related projects and research. In Denmark the enabling factors would be enhanced by clarifying the strategy and targets. The Finnish instead, appreciated the power of sustainability-related initiatives and projects least. The classes and distribution of responses is found in Picture 2.9.



Picture 2.9. The ways to enhance the implementation of sustainable development suggested by the respondents in the open question. SD refers to sustainable development. N represents the number of respondents.

2.5.2. Obstacles and how to overcome them

In Finland the attitude in general seems to be a greater obstacle compared to the other countries. Swedish responses differentiate from the others in the case of resources, which gained mentions from over 80% of Swedish respondents. However, resources were frequently mentioned by the Danish respondents, too. The four Icelandic respondents highlighted the lack of teachers' competences and unengaged leaders, which was also emphasized by the four Norwegians.

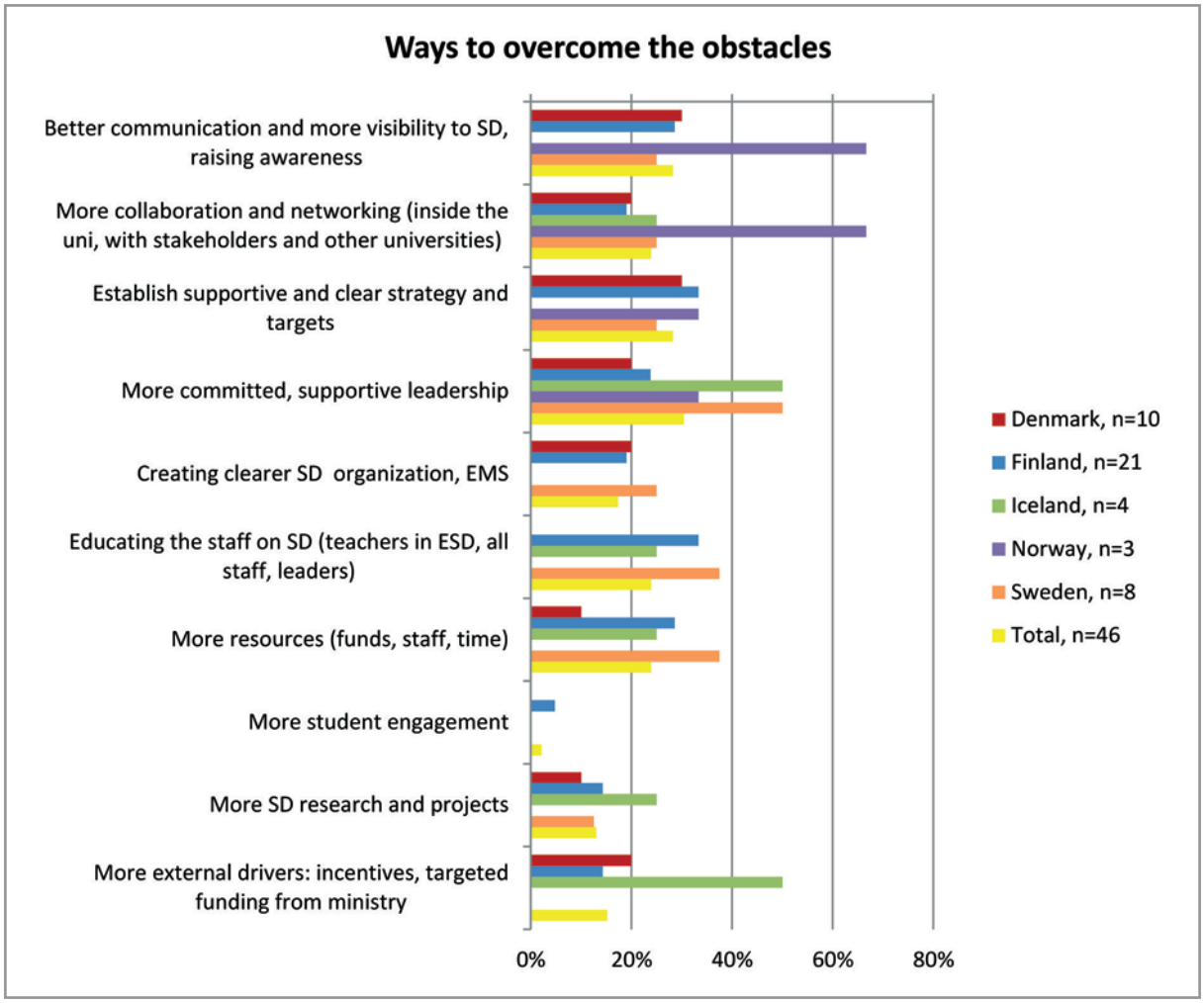


Picture 2.10. Factors that hinder the implementation of sustainable development in the Nordic HEIs: The distribution of open question responses into four categories. N represents the number of given responses (not respondents) of each country - the same respondent may have given suggestions to multiple categories. The n of respondents is indicated in Table 2.4.

Table 2.4. The detailed classification of obstacles named in the open question. The numbers are percentages of respondents in each country.

Obstacles in SD implementation	Denmark	Finland	Iceland	Norway	Sweden	Total
Policy, management and external pressure						
Lack of SD proritizing, clear strategy, KPI's and targets	50 %	43 %	0 %	50 %	0 %	33 %
Unclear SD organization and responsibilities	10 %	30 %	0 %	25 %	27 %	23 %
Lack of external pressure	10 %	4 %	25 %	25 %	18 %	12 %
Resources and facilities						
Lack of resources (funds, staff, time)	60 %	48 %	25 %	25 %	82 %	54 %
Attitude and knowledge						
Unengaged decision-makers, lack of leadership, decision-making procedure	30 %	30 %	75 %	75 %	45 %	40 %
Attitude in general, fear of change	10 %	52 %	25 %	25 %	36 %	37 %
Lack of SD competences (teachers, staff, leaders)	30 %	13 %	75 %	25 %	9 %	21 %
Collaboration						
Lack of collaboration and interdisciplinarity	30 %	22 %	50 %	50 %	0 %	23 %
Lack of student involvement	10 %	0 %	0 %	0 %	9 %	4 %
Too few SD programs, initiatives, reseach	20 %	0 %	0 %	0 %	9 %	6 %
N of responders	**10**	**23**	**4**	**4**	**11**	**52**

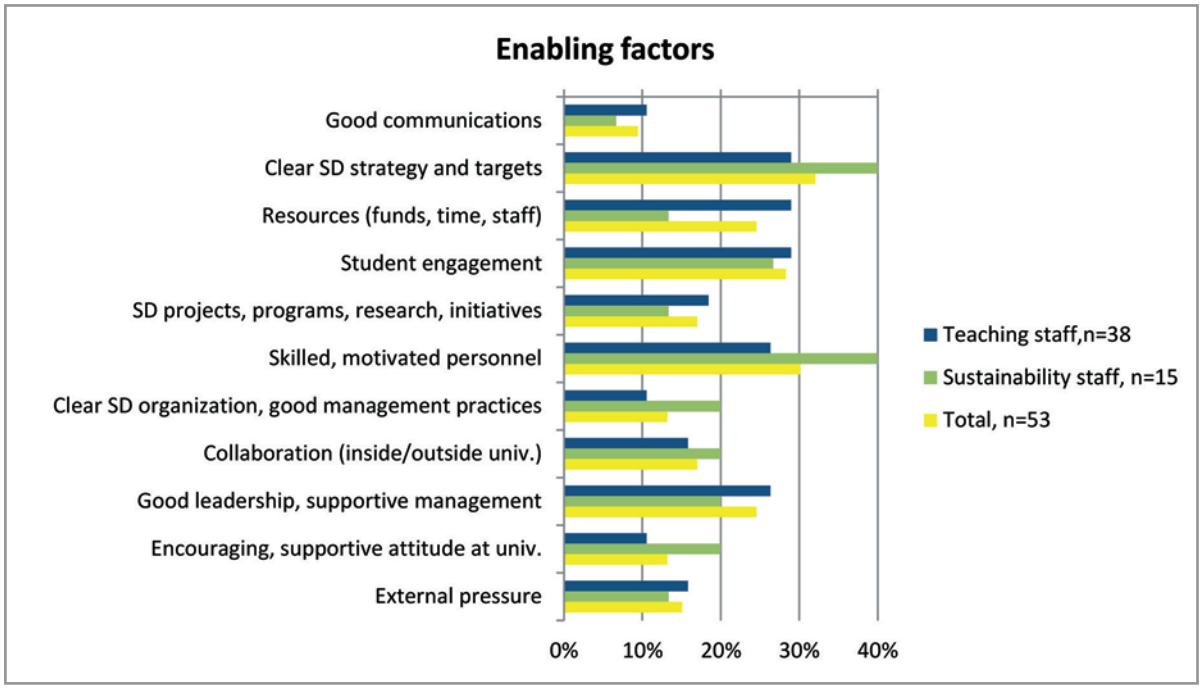
The several obstacles would be overcome through several ways, according to the respondents. In Sweden the solution seems to be in having more supportive leaders, resources and educating the staff, which are important ways for Finnish respondents, too. The Finnish would also enhance the communications and clarify the strategy and targets. The few Norwegians would enhance the communication and collaborative efforts, whereas in Iceland more external drivers in the form of financial incentives were frequently suggested. In Denmark the measures suggested include better communication and collaboration, as well as clearer strategy and targets.



Picture 2.11. The ways to overcome the hindering factors according to the open question. SD refers to sustainable development. N represents the number of respondents.

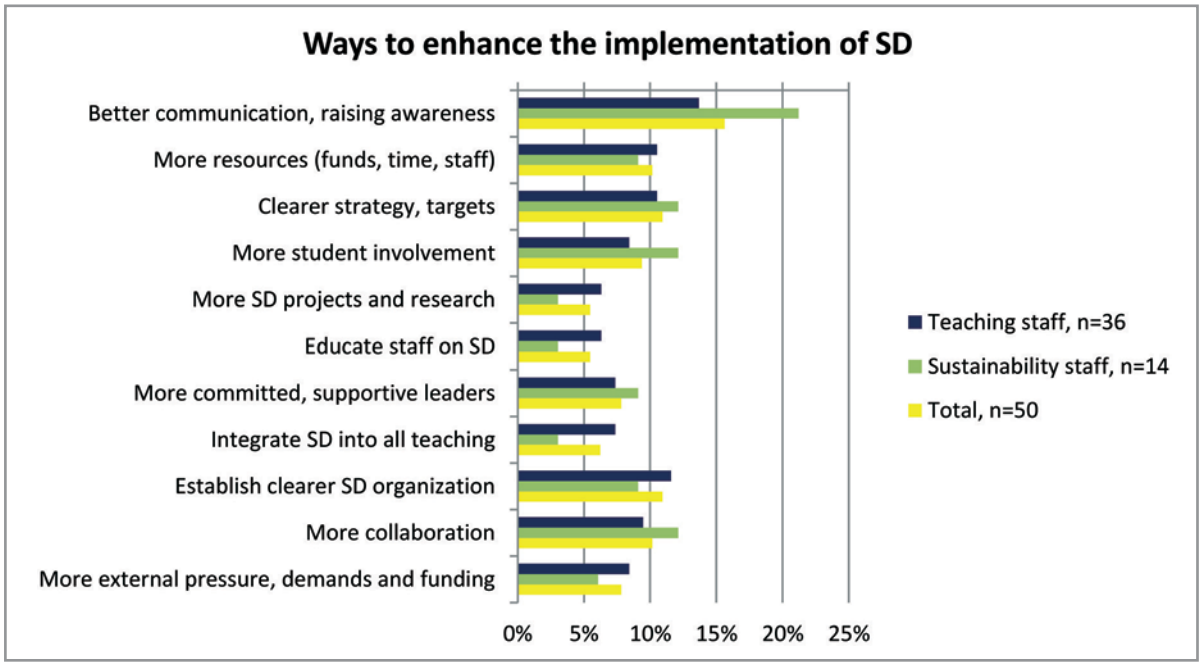
3. Differences in the responses of teachers/researchers and sustainability staff

According to the results, certain factors seem to enable the implementation of sustainable development more in teaching and research than in the overall sustainability work of institutions. For example, sustainability staff considered organizational factors and skilled personnel added with supportive attitudes at the university enabling the implementation more than teachers. However, teachers emphasized more the role of good and supportive leadership. Teachers and researchers found also resources clearly more enabling compared to sustainability staff. In addition, the responses indicated minor differences between the groups in the case of sustainability-related projects, research and initiatives and communications. The results are presented in picture 2.12.



Picture 2.12. Factors that enable the implementation of sustainable development: differences between the respondent groups according to open questions. N represents the number of respondents.

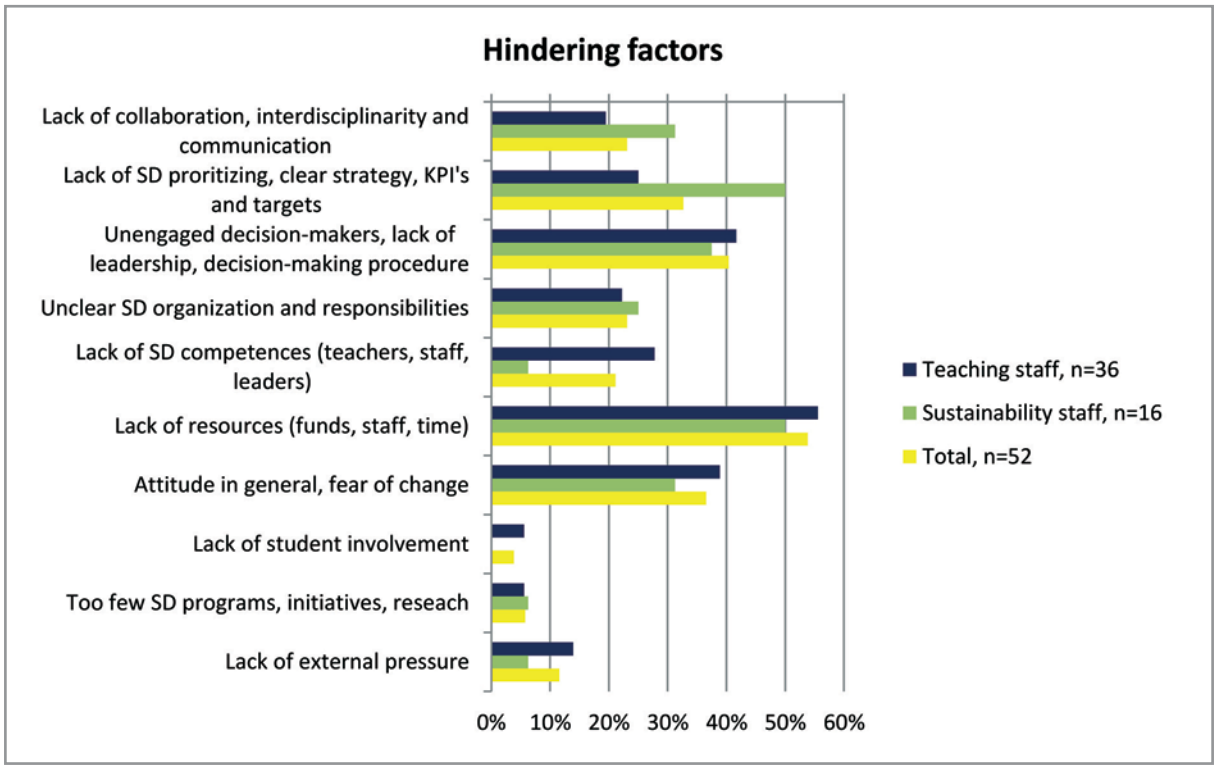
The groups agreed in many ways with their views on enhancing the implementation of sustainable development. The clearest difference between the groups was, that sustainability staff would concentrate much more on better communications and awareness-raising than teachers, who emphasized more educating the teachers and establishing more sustainability-related projects. The teachers found also integrating sustainability into all teaching being a better measure than sustainability staff.



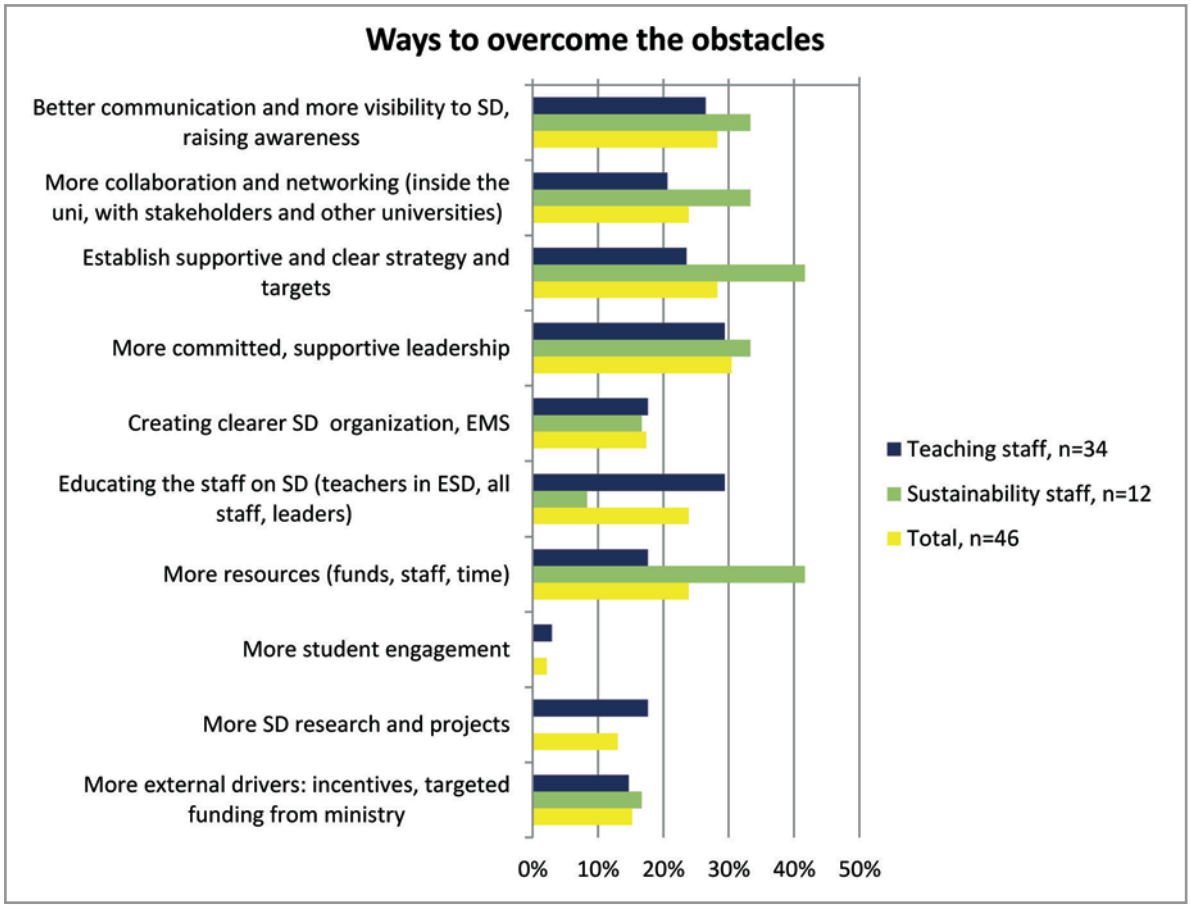
Picture 2.13. The ways to enhance the implementation of sustainable development suggested by the different respondent groups in the open question. SD refers to sustainable development. N represents the number of respondents.

The respondent groups differed in their views on what hinders the implementation of sustainable development. Sustainability staff considered especially administrational ways as hindrances, including lack of prioritizing, clear targets, indicators and strategy. In addition, the lack of collaboration and communications were found as great obstacles. The teachers and researchers instead, highlighted the lack of competences much more than sustainability staff.

Sustainability staff would use more resources and administrational ways to overcome the obstacles, but they highlighted also the role of collaboration and networking. Teachers and researchers suggested more frequently educating the staff and establishing more sustainability projects and programs. The obstacles are presented in Picture 2.14., and overcoming them in Picture 2.15.



Picture 2.14. Factors that hinder the implementation of sustainable development: differences between the respondent groups according to open questions. N represents the number of respondents.



Picture 2.15. The ways to overcome the obstacles suggested by the different respondent groups in open question. SD refers to sustainable development. N represents the number of respondents.

Part III

Steering mechanisms affecting the implementation of sustainable development

Part 3: Steering mechanisms affecting the implementation of sustainable development

Table of Contents

Photo 4: Rio+20 project organized an international workshop on steering mechanisms concerning the implementation of sustainable development in higher education institutions. The workshop was a part of Making Universities Sustainable Conference, organized by IARU network and hosted by the University of Copenhagen 22.–24.10.2014.
(Photo: Meeri Karvinen)

Summary of Part III

Sustainability in the Nordic higher education institutions (HEIs) is effected by many factors and actors, including national and regional regulations, financial issues, societal and working-life influences, as well as opinions of different university community members. In this survey report the different factors are discussed in three categories: external steering mechanisms (legislation and other outside-university regulations), internal steering mechanisms (universities' own measures to guide sustainability), and other drivers.

In the Nordic level university staff considers several steering mechanisms influencing the implementation of sustainable development. Of the external steering mechanisms, university legislation, national strategy for sustainability and EU regulations are found the most efficient, and Nordic strategy for sustainability the most inefficient. In the case of internal mechanisms, university strategy and financial steering have a very clear effect, whereas international declarations and teaching evaluation system are having only minor effect. The other steering mechanisms, including student opinions and university image, are in average the most efficient drivers of all.

University legislation has additionally an effect on sustainability implementation: In Sweden, where environmental management system (EMS) is required by legislation, EMS and reporting system are considered much more effective than in the other countries. University legislation is considered having a clear influence also in Finland. The Swedish university staff emphasizes additionally quality assurance system more than the other nationalities.

Furthermore, it seems that the effects of EU-regulations are independent of EU-memberships in the Nordic countries - the Norwegians find EU regulations more effective than the other nationalities, giving also most weight to national strategy for sustainability. However, EU-regulations are effective also in Finland. The Danish university staff considers almost all the external and internal steering mechanisms having only moderate to minor effects, except for university strategy and financial steering. In Iceland the most influencing mechanisms are EU regulation, university strategy and staff opinions, according to the very few Icelandic respondents.

Sustainability staff seems to give much more weight to EMS, reporting and legislation, but less weight to financial resources compared to the other groups of staff. Teaching staff instead emphasizes teaching evaluation system more than the others, whereas administrative staff finds key performance indicators (KPIs) and EU regulations more important. These differences may explain also some differences found between the countries.

The Nordic university staff is unsatisfied with the power of current steering, suggesting financial instruments, university strategy and KPI's to be used more to guide sustainability implementation. Also external steering and organizational change are considered important - especially sustainability staff suggests that sustainable development should be made mandatory in some way. The other drivers found valuable in enhancing sustainability are 1) the emphasis on action and commitment – more action and less strategy and speech, 2) the importance of following up the sustainability work, 3) the effect of teaching sustainability.

Introduction of Part III

The steering mechanisms are discussed in three sections including external, internal and other steering mechanisms. External steering mechanisms relate to systems that the university cannot influence, for example legislation or systems according to which the university receives funding. Internal steering relates to mechanisms the university is able to manage itself, including university strategy, resource allocation and organizational issues. Other steering mechanisms comprise student and staff influence, societal impact and sponsors.

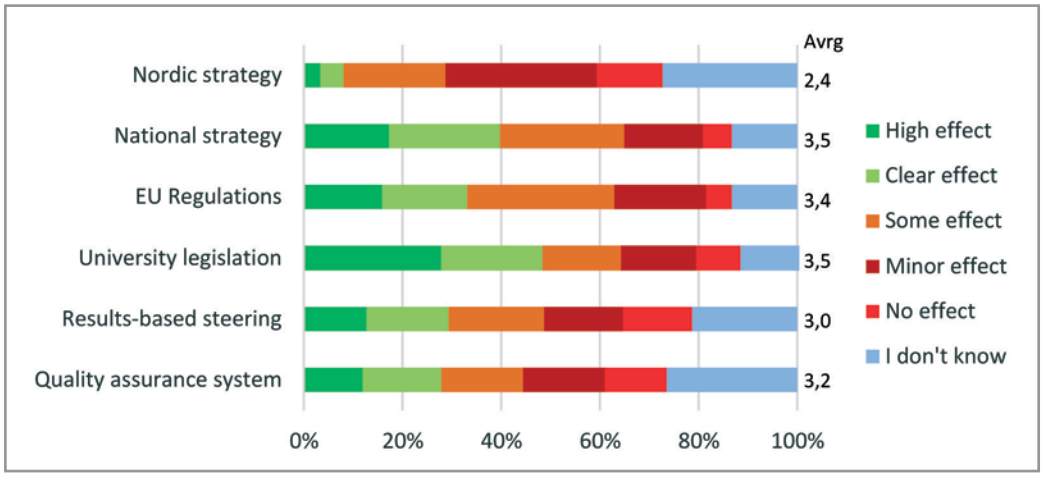
In the survey, the respondents were asked to evaluate, how effectively different steering mechanisms function in implementing sustainable development principles into university activities. The evaluation was made according to the following scale: 1 = no effect, 2 = minor effect, 3 = some effect, 4 = clear effect, 5= high effect, 6 = I don't know. Each respondent group evaluated the mechanisms according to their own expertise: 1) Teaching staff evaluated sustainability steering in teaching, 2) administrative staff the university as a whole, and 3) sustainability staff evaluated how effective the steering mechanisms are in campus operations. However, when comparing the Nordic countries, the data from all the respondent groups was combined to reach an adequate respondent rate. Similarly, the differences between the respondent groups were analyzed by combining the results of each group from all the countries.

1. The effect of different steering mechanisms

1.1. External steering

The external steering mechanisms evaluated were: Nordic strategy for sustainable development, National strategy for sustainable development, EU regulation (e.g. Bologna process, EU directives), National university legislation, Results-based steering and National quality assurance system concerning sustainable development.

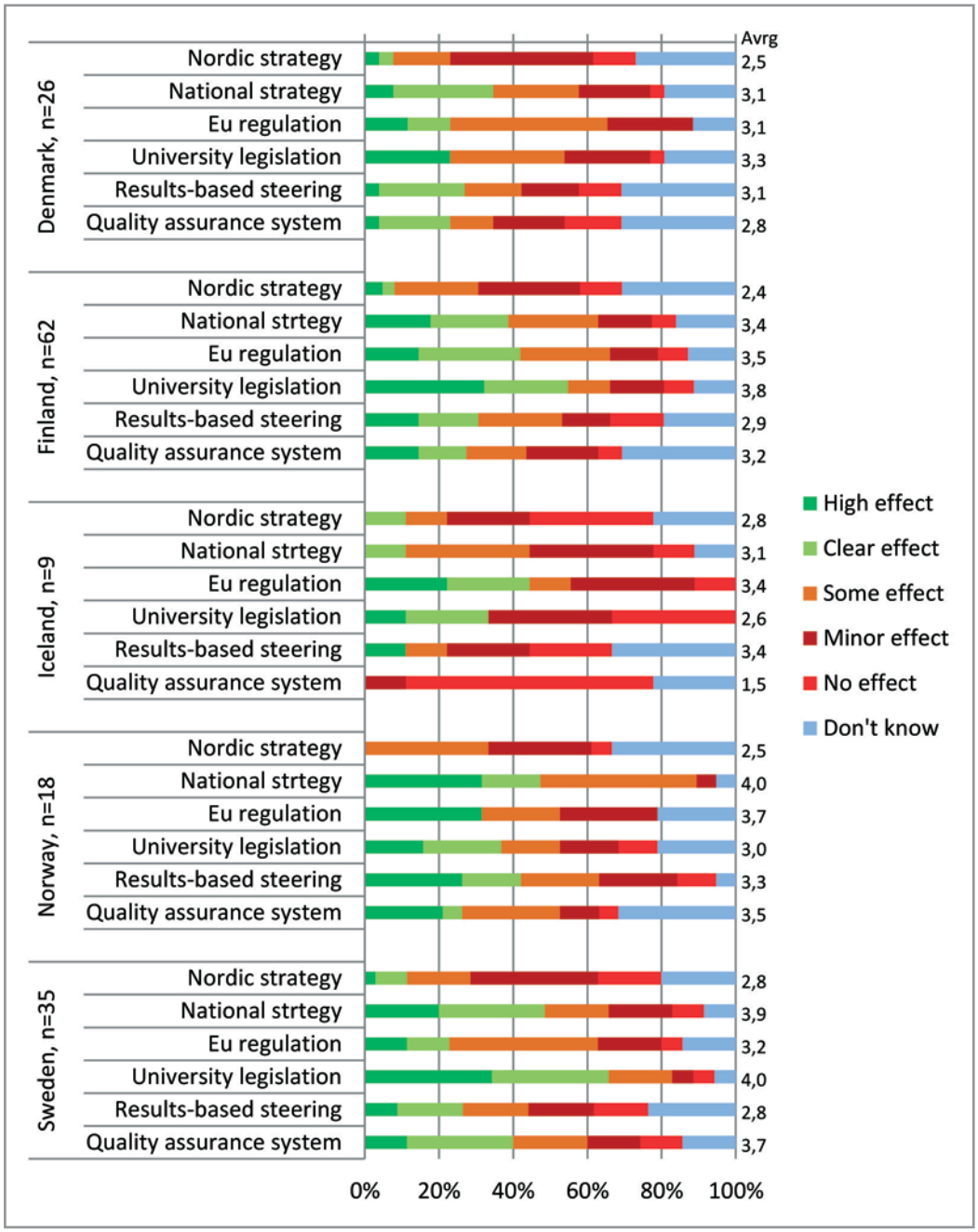
When combining all the responses, 48% of the respondents assessed national university legislation having the clearest effect on the implementation of sustainable development in Nordic HEIs. The most ineffective external steering mechanism according to the respondents was Nordic strategy for sustainable development: only 8% consider it to be clearly or highly effective. In average, the respondents evaluated almost all the external steering mechanisms having quite similar effects. The responses are presented in Picture 3.1.



Picture 3.1. The effect of external steering mechanisms on the implementation of sustainable development in Nordic HEIs. The picture combines the responses from all Nordic countries and all reference groups (n=152). The averages are found on the right, and were counted from the following: 1=No effect, 2=Minor effect, 3=Some effect, 4=Clear effect, 5=High effect.

All the Nordic respondents agreed on the minor effect of Nordic strategy on the implementation of sustainable development in Nordic HEIs. By contrast, all the Nordic respondents found EU-regulations and national strategy among the most efficient ways to steer sustainability in HEIs, Norway and Sweden weighing national strategy the most.

The clearest differences between the countries were found in the assessments concerning national legislation and quality assurance system. The Swedish respondents found both clearly effective, whereas the Icelandic quite ineffective. Also the Finnish respondents highlighted the effects of university legislation, and gave some weight to quality assurance system. The Norwegians emphasized the effects of quality assurance system as well, whereas in Denmark it was found having only minor effect. Results-based steering was found having in average some effect, the Danish and Icelandic respondents biasing it most. The detailed results of all the countries are presented in Picture 3.2.

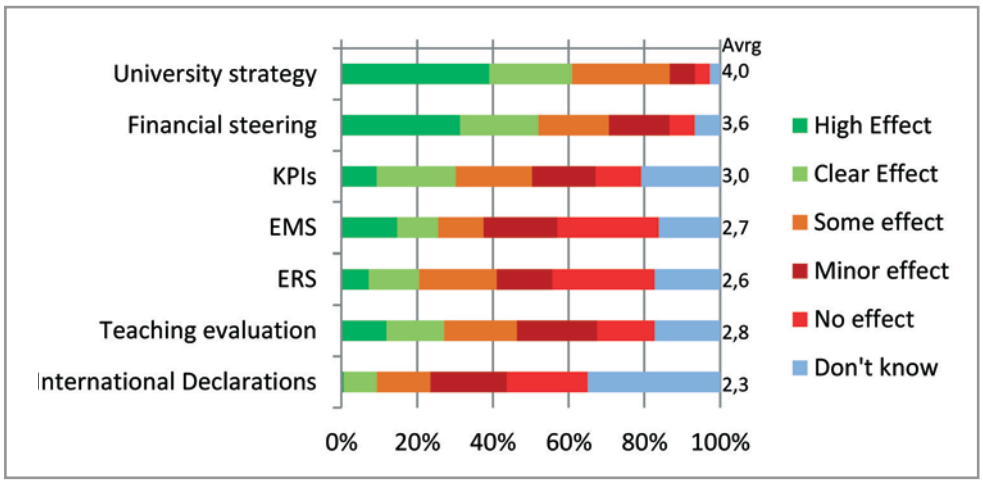


Picture 3.2. The effect of external steering mechanisms in each Nordic country. The averages are found on the right, and were counted from the following: 1=No effect, 2=Minor effect, 3=Some effect, 4=Clear effect, 5=High effect.

1.2. Internal steering mechanisms

Internal steering mechanisms assessed in the survey were University strategy, Financial resources, Key performance indicators (KPI), Environmental management systems (EMS), Environmental reporting systems (ERS), Teaching evaluation system and signed International sustainability declarations or commitments.

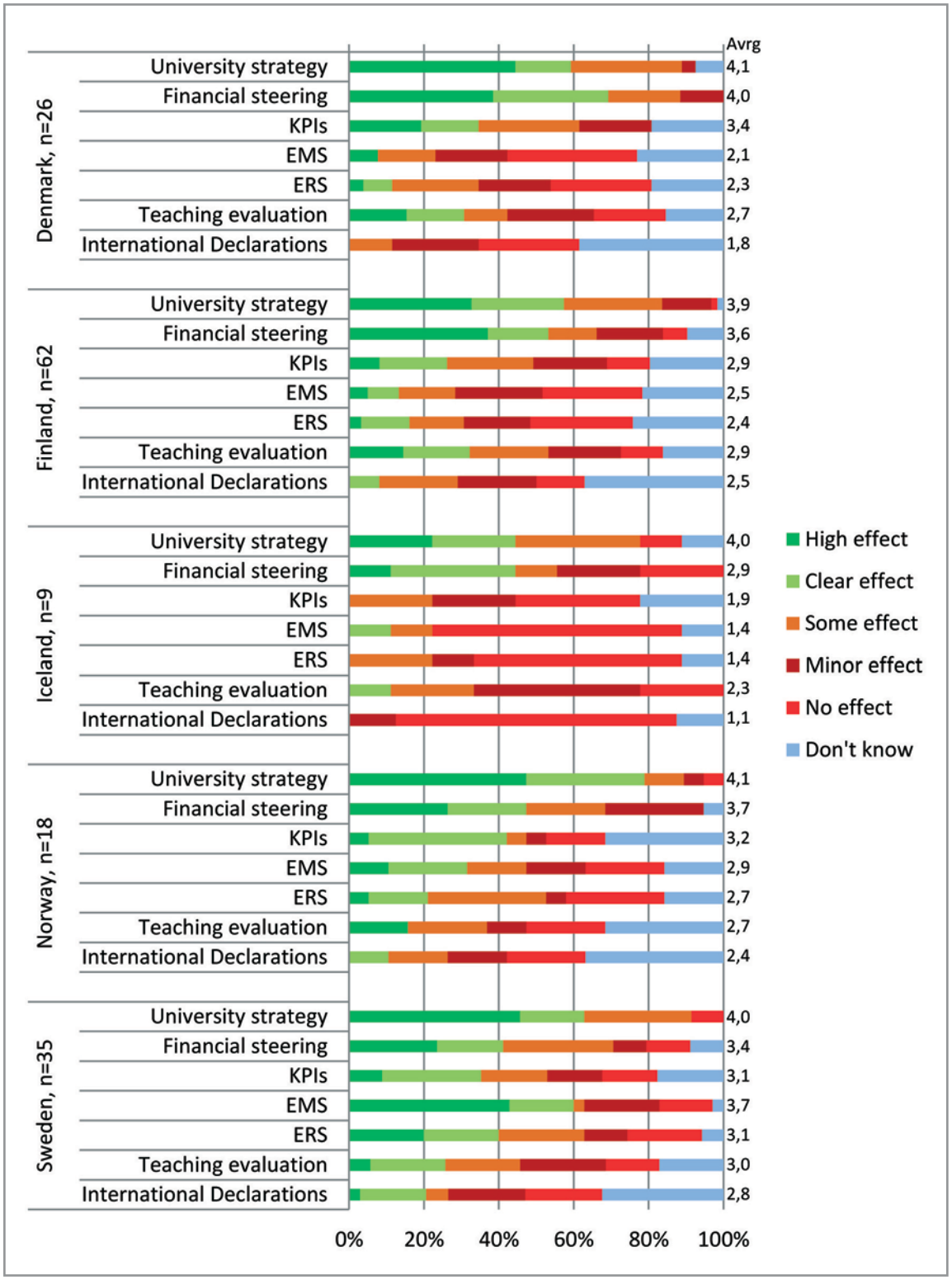
When exploring the combined responses of all the Nordic countries, university strategy and financial resources effected clearly most the implementation of sustainability in the Nordic HEIs, and international declarations least. The respondents were additionally most confident on the effect of university strategy with only 3% of "I don't know" -responses. Key performance indicators were found equally effective and ineffective, whereas environmental management and reporting systems, and teaching evaluation system were evaluated more ineffective than effective.



Picture 3.3. The effects of internal steering mechanisms on the implementation of sustainable development in Nordic HEIs, according to all the Nordic respondents (n=152). KPIs=Key performance indicators, EMS=Environmental management systems, ERS=Environmental reporting systems (ERS). The averages are found on the right, and were counted from the following: 1=No effect, 2=Minor effect, 3=Some effect, 4=Clear effect, 5=High effect.

Almost all the countries gave most weight to university strategy, Norway biasing it the most with 79% evaluating the strategy having clear/high effect. All the countries found financial resources important, too, with over 40% of respondents evaluating it having clear/high effect – although an equal amount of the respondents from Iceland found it ineffective (44%). In addition, the Icelandic respondents considered all the other internal steering mechanisms than strategy quite inefficient.

The clearest differences between the countries were found in how the respondents evaluated the effects of environmental management and reporting systems (EMS, ERS), Sweden giving the most weight to them both. In the other countries, the majority of the respondents found EMS and ERS having moderate to minor effects. Teaching evaluation system was considered having a minor effect on sustainability implementation in all countries, and key performance indicators (KPI) having a moderate effect, with only Danish respondents finding it clearly important. All the responses of different countries are presented in Picture 3.4.

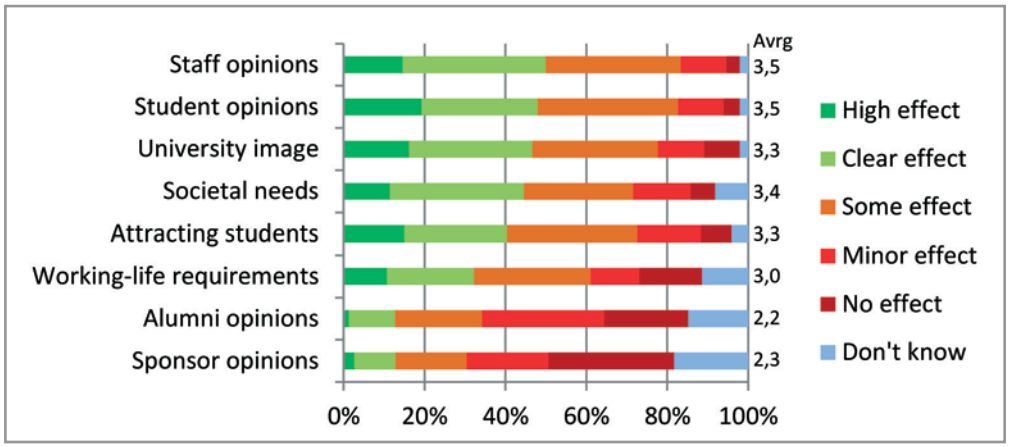


Picture 3.4. The effects of internal steering mechanisms on the implementation of sustainable development in Nordic HEIs, according to the different nationalities. KPIs=Key performance indicators, EMS=Environmental management systems, ERS=Environmental reporting systems (ERS). The averages are found on the right, and were counted from the following: 1=No effect, 2=Minor effect, 3=Some effect, 4=Clear effect, 5=High effect.

1.3. Other steering mechanisms

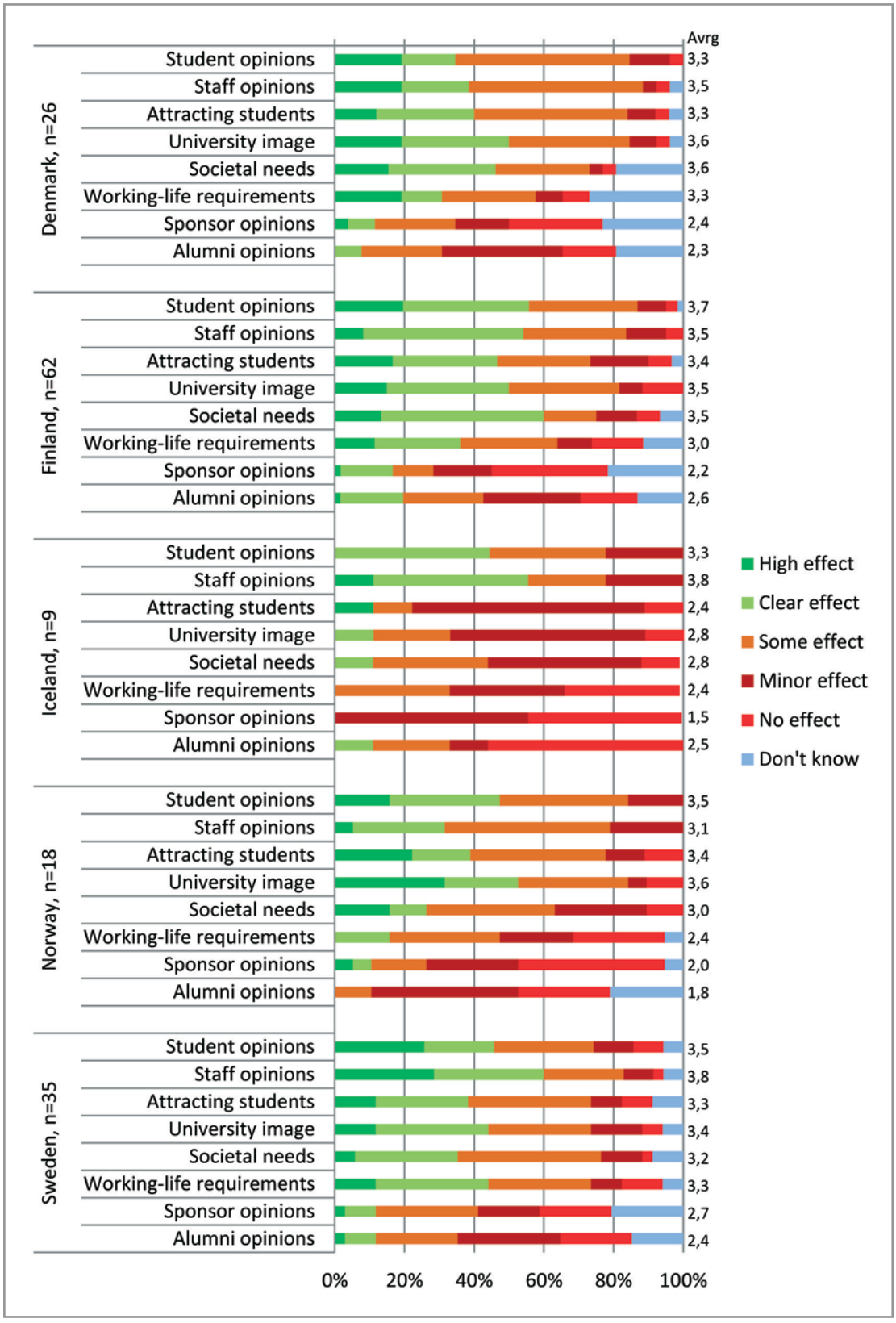
The other mechanisms evaluated in the survey were Student opinion, Staff Opinion, Attracting students, University image, Societal needs, Working-life requirements, Sponsor opinions and Alumni opinions.

In average, these other steering mechanisms were found more effective than the external and internal steering mechanisms. Furthermore, the respondents were more confident with their views giving only a few I don't know -responses. The combined responses from all the countries are presented in Picture 3.5.



Picture 3.5. The effects of other steering mechanisms on sustainability implementation, according to all Nordic respondents (n=152). The averages are found on the right, and were counted from the following: 1=No effect, 2=Minor effect, 3=Some effect, 4=Clear effect, 5=High effect.

Iceland differentiated from the other countries, the Icelandic respondents evaluating only staff and student opinions having clear/some effect on sustainability implementation. The respondents from the other countries were quite unanimous with their assessments. University image, and student and staff opinions were considered clearly effective, as well as attracting students. Danish, Finnish and Swedish respondents evaluated also societal needs being effective and demands from working life having some effects, whereas the respondents from Norway considered these having only minor effects. All the respondents agreed on the minor effects of sponsor and alumni opinions. The responses from each country are presented in Picture 3.6.

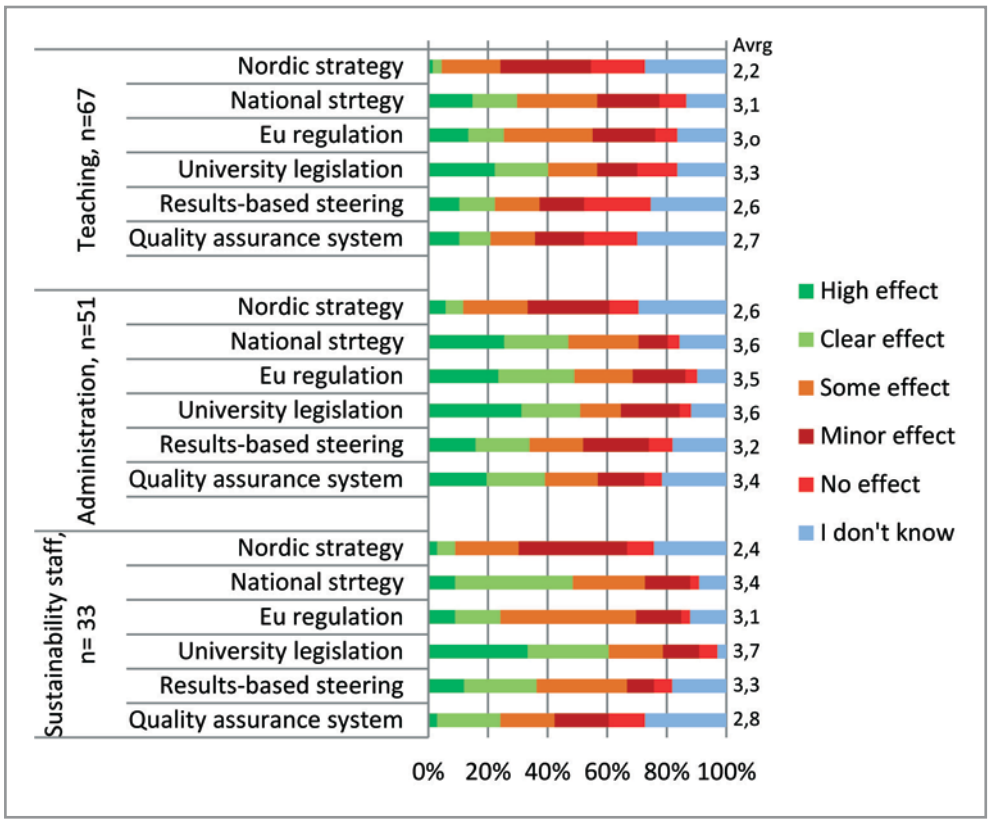


Picture 3.6. The effects of other steering mechanisms in each Nordic country. The averages are found on the right, and were counted from the following: 1=No effect, 2=Minor effect, 3=Some effect, 4=Clear effect, 5=High effect.

1.4. Differences between respondent groups

The majority of respondents in all groups evaluated national university legislation affecting most the implementation of sustainable development. 60% of the sustainability staff assessed that the legislation has clear or high effect on the realization of sustainable development principles, the amount being 50% and 40% in administrative and teaching staff, respectively. The Nordic strategy for sustainable development has the weakest effect on sustainability in HEIs according to all respondent groups.

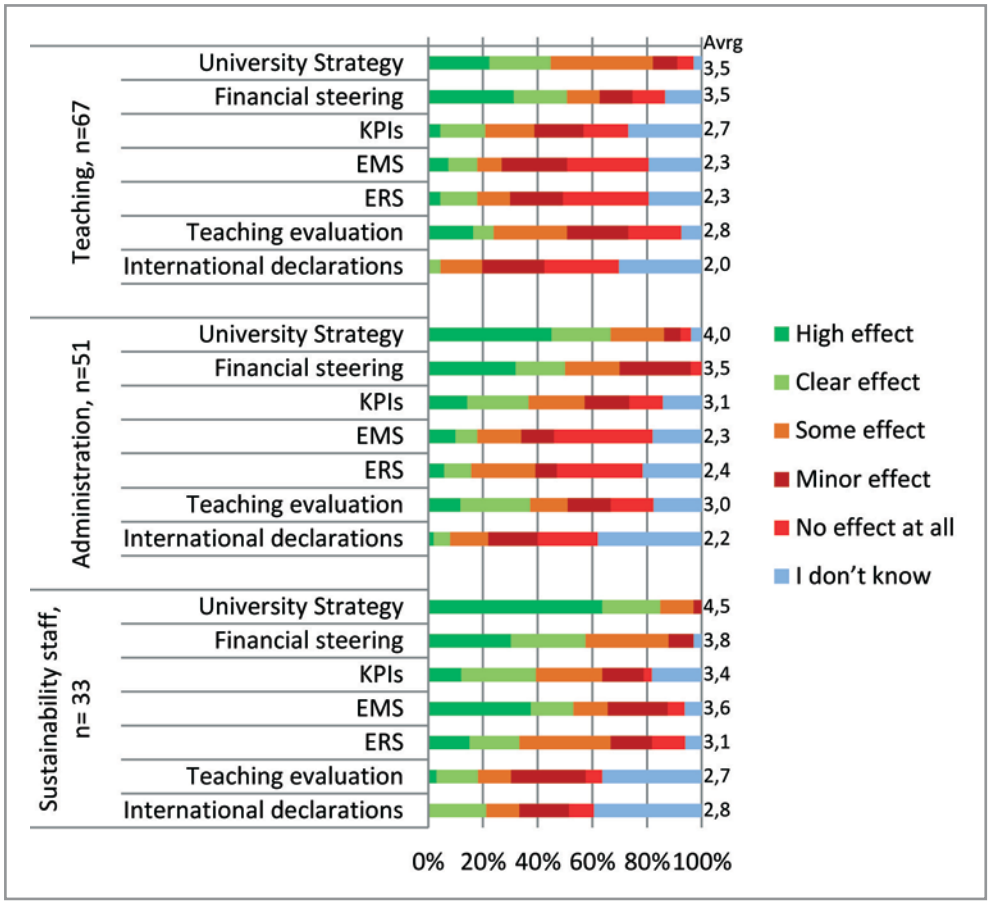
Apart from university legislation and Nordic sustainability strategy, the effects of different external steering mechanisms vary between the different sectors of HEIs, according to the respondents. Teaching staff was in average most hesitant on the effects of all the external steering mechanisms, evaluating the effects being minor or non-existent more than the other groups. Administrational staff was respectively the most positive in its assessments. The clearest differences among the different sectors of HEIs were found in the effects of national strategy and EU regulation. According to teaching staff, national sustainability strategy equally affects (30%) or is ineffective (30%) in realizing sustainability into teaching, whereas administrational and sustainability staff considered national strategy being clearly an effective steering mechanism for university as a whole, and for campus operations. EU regulation has more effect on the university as a whole, than to the teaching and campus operations, according to the respondents. The responses of all the groups are presented in Picture 3.7.



Picture 3.7. The effects of different external steering mechanisms on the implementation of sustainable development into the Nordic HEIs in total. The evaluations were made by three reference groups: Researchers / teaching staff assessed the effects on teaching and research, administrative staff the effects on university as a whole, and sustainability staff the effects on campus operations. The averages are found on the right, and were counted from the following: 1=No effect, 2=Minor effect, 3=Some effect, 4=Clear effect, 5=High effect.

Of the internal steering mechanisms, the respondent groups differentiated the most in their views on EMS, ERS and KPIs. Sustainability staff emphasized those more than the other groups. Sustainability staff highlighted also most the effects of strategy and financial steering, although their importance was almost equally weighted by administrational and teaching staff. The results are presented in Picture 3.8.

The reference groups were quite unanimous with their assessments on the other steering mechanisms – no clear differences were found between the groups.

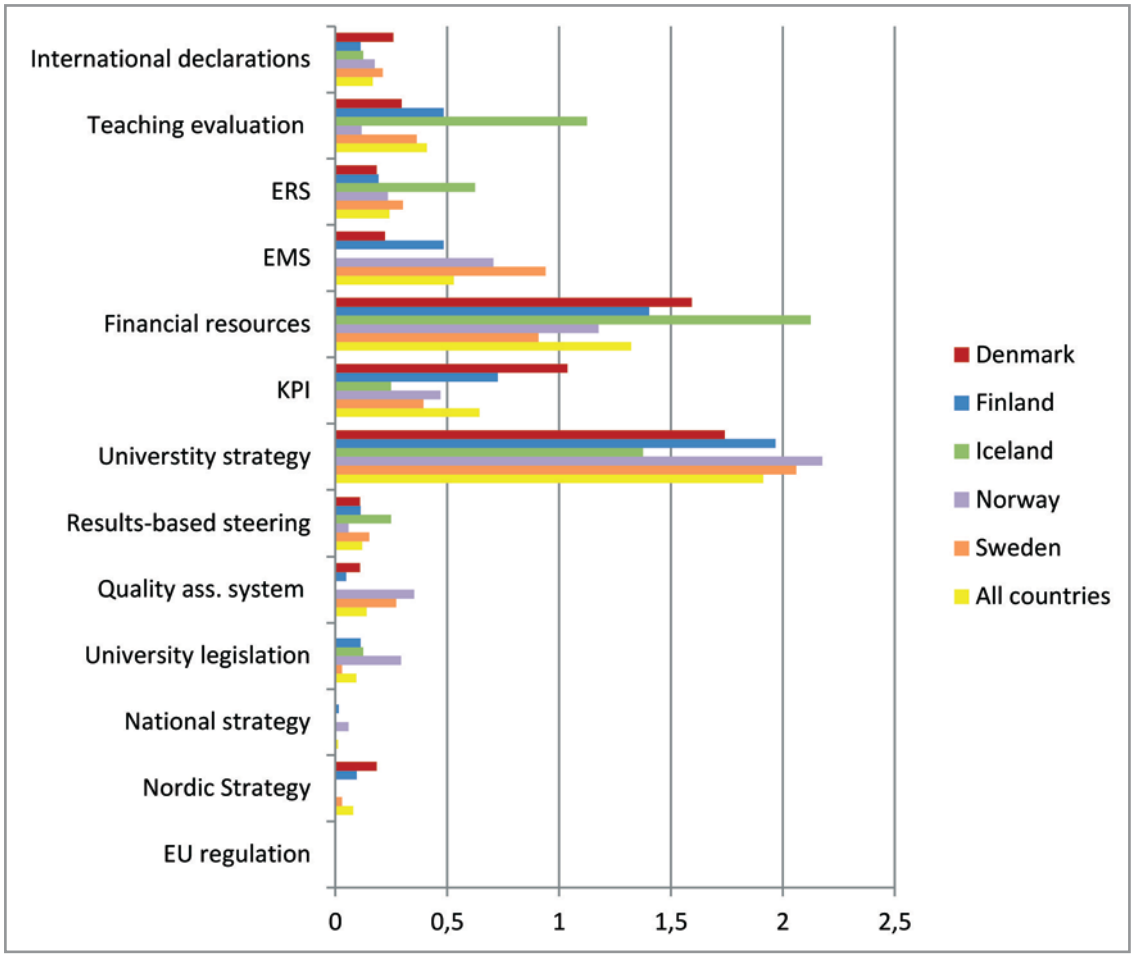


Picture 3.8. The effects of different internal steering mechanisms on the implementation of sustainable development into the Nordic HEIs in total. The evaluations were made by three reference groups: Researchers / teaching staff assessed the effects on teaching and research, administrative staff the effects on university as a whole, and sustainability staff the effects on campus operations. The averages are found on the right, and were counted from the following: 1=No effect, 2=Minor effect, 3=Some effect, 4=Clear effect, 5=High effect.

2. Top 3 steering mechanisms to use in HEIs

When asking the respondents to select and put in order three top steering mechanisms that they would use if they were to decide, the result was clear. In Nordic level the top three steering mechanisms chosen were university strategy, financial resources and environmental management system. Key performance indicators gained additionally many selections.

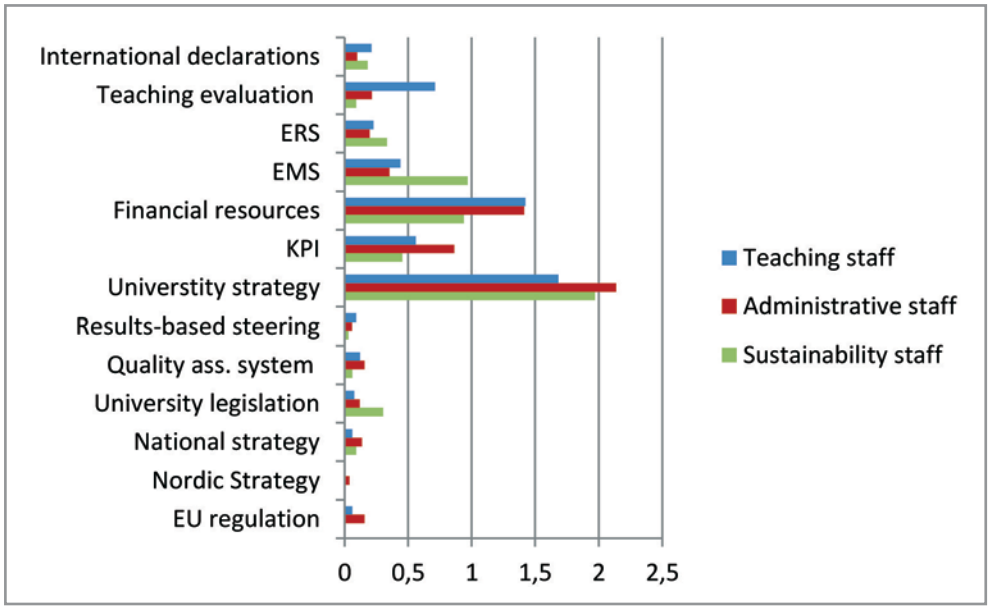
Icelandic respondents made the clearest exceptions from the Nordic mean, biasing financial resources and teaching evaluation system more than university strategy, and giving environmental management system no weight at all. Surprisingly, reporting was anyway frequently selected in Iceland. The Swedish respondents selected EMS more than the other nationalities, and gave financial resources less weight than the others. The results, as well as the way of analyzing the top 3 mechanisms, are presented in Picture 3.9.



Picture 3.9. The ranking of steering mechanisms in different Nordic countries made by the respondents: Top three mechanisms that would be most effective to steer the implementation of sustainable development in HEIs. The results were gained counting weighted averages: The mechanism ranked by the respondent as the first was weighed with 3, the second ranked with 2, and the third ranked with 1. The x-axis presents the weighted averages.

The differences between the respondent groups were most evident in the case of EMS, teaching evaluation system and KPIs. Sustainability staff selected EMS much more frequently as the other groups, giving more weight also to reporting and legislation, but less weight to financial resources. Teaching staff weighted teaching evaluation system more than the others, whereas administrative staff found KPIs and EU regulation more important compared to the other groups. The results are shown in Picture 3.10.

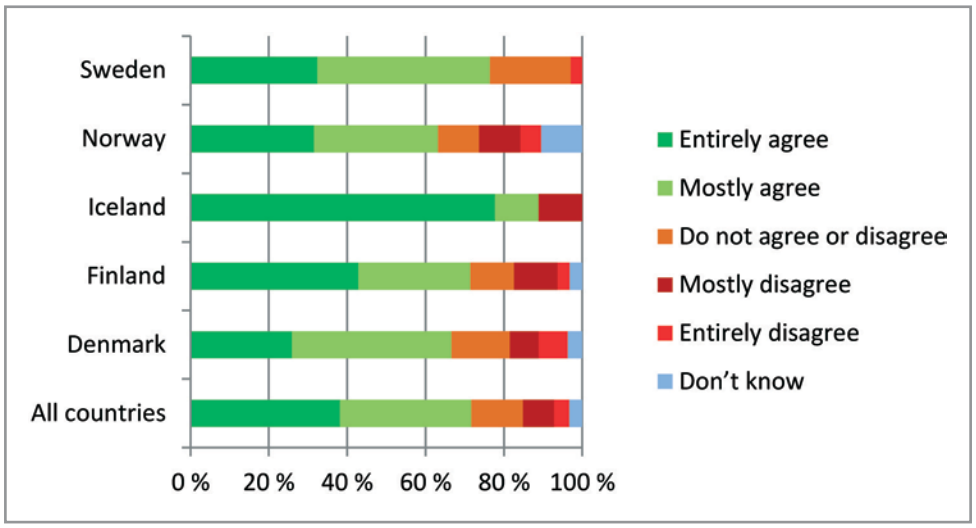
The differences between the respondent groups may explain also some differences found between the Nordic countries: most of the Icelandic respondents were teaching staff biasing the results towards teaching evaluation system, and the amount of responded sustainability staff was higher in Sweden than in the other countries, which may affect EMS being highlighted in Swedish responses. In average the countries and respondent groups gave somewhat similar responses, thus, some conclusions can still be made according to this data.



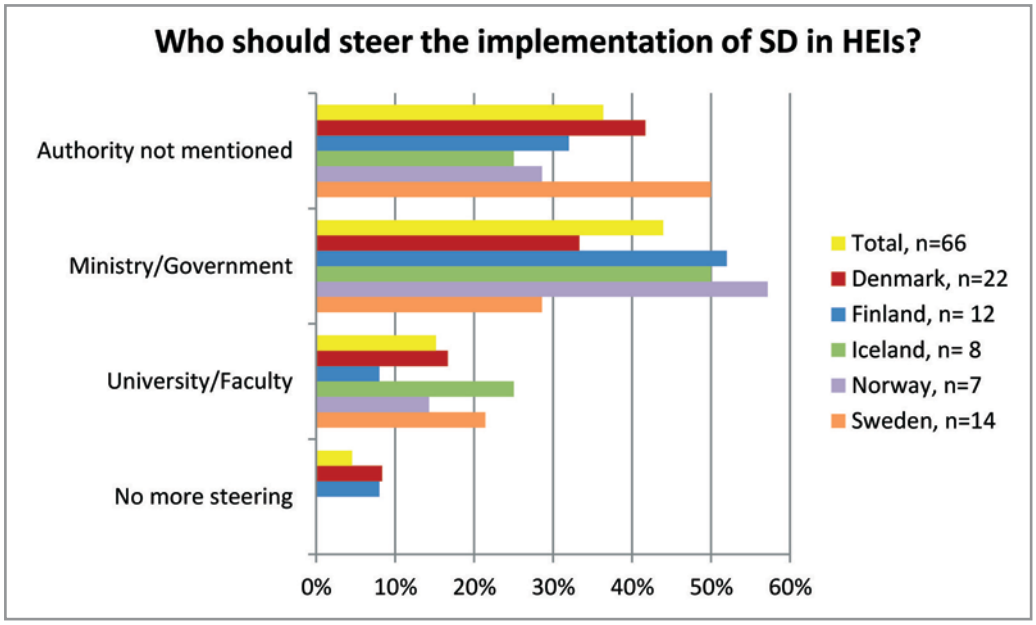
Picture 3.10. The differences between reference groups when selecting the top three steering mechanisms: Top three mechanisms that would be most effective to steer the implementation of sustainable development in HEIs. The results were gained counting weighted averages: The x-axis shows the weighted averages of responses: The mechanism ranked as the first was weighed with 3, the second ranked with 2, and the third ranked with 1.

3. Do we need better steering than today?

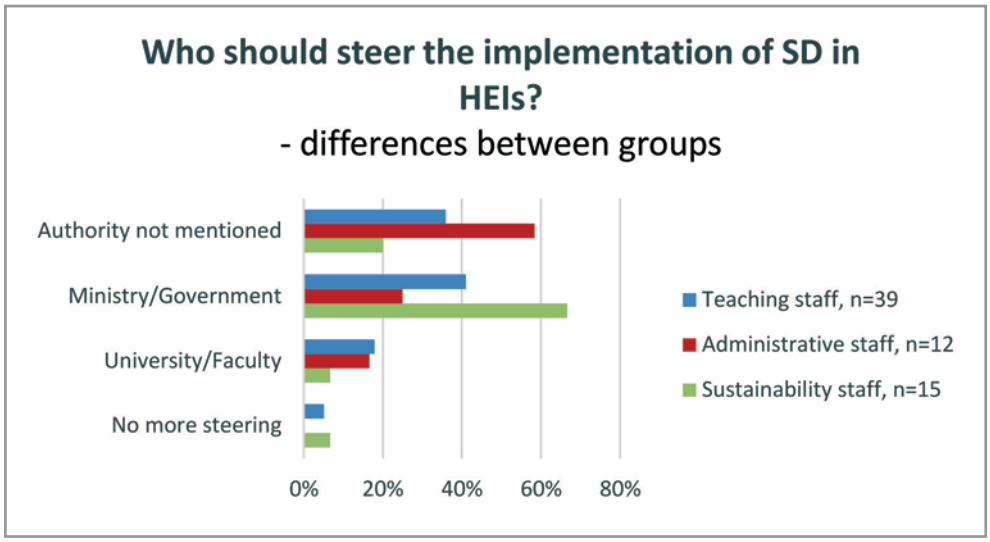
The respondents were asked to evaluate, if the Nordic HEIs would need better steering mechanisms than today. The majority of the respondents in all the countries agreed that the mechanisms currently in use are insufficient in realizing sustainability in the institutions (Picture 3.11.). In addition, in all the countries more steering is wished for from the governmental level and ministries, especially in Finland, Sweden and Iceland (Picture 3.12). Sustainability staff was the most active in suggesting who should steer HEIs in sustainability, but all the respondent groups mentioned government and ministries most frequently (Picture 3.13.).



Picture 3.11. The results from the respondents' opinions on the statement: Better steering mechanisms than today are needed in order to enhance the sustainability of the universities in my country.



Picture 3.12. The results from an open question, in which the respondents mentioned also the authority who should put more effect in steering. N represents the number of respondents.



Picture 3.13. The results from an open question, in which the respondents mentioned also the authority who should put more effect in steering: differences between the respondent groups. N represents the number of respondents.

4. How to develop the steering of sustainability in the Nordic HEIs

The respondents had an opportunity to suggest, how they would develop the steering mechanisms in HEIs, or enhance sustainable development in HEIs. The answers were classified to form 8 categories, which are shown in Table 3.1. The distribution of responses from different countries are presented in Picture 3.14.

Table 3.1. The classification of open question on how to develop the steering of sustainability implementation in HEIs. The most common suggestions are indicated under each class.

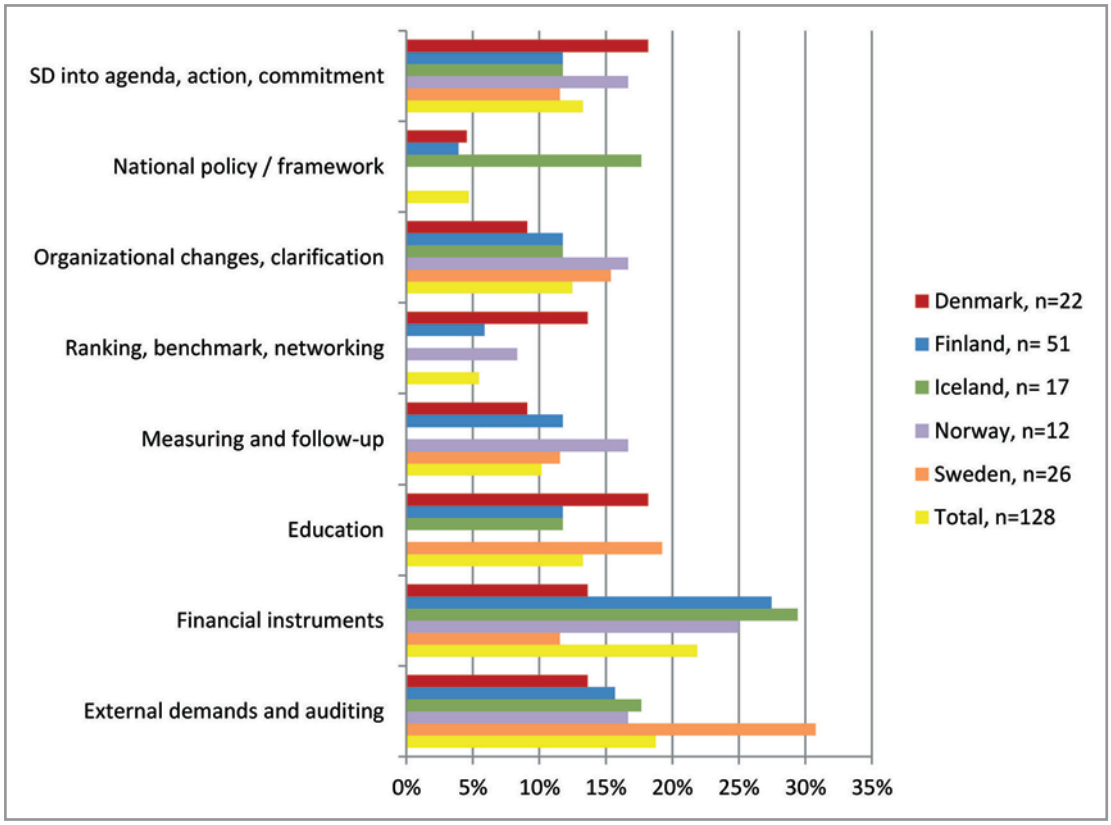
External demands and auditing	Financial instruments	Education	Measuring and follow-up	Ranking, benchmark, networking	Organizational changes, clarification	National policy / framework	SD into agenda, action, commitment
Legislation	Targeted funding	SD into all teaching	Follow-up SD obligations	Networking	University strategy	National framework for SD	Walk the talk - more action
SD as part of auditing systems	Incentives bound to SD results	Awareness-raising	KPIs	Benchmarking	Better organization of work, EMS	Policy reconstruction	Highlight the cost-benefit consequenses of SD
Mandatory SD obligations for HEIs	More funds for SD research	Educating staff and students	Clear targets	Ranking	Clear responsibilities	Value shift	Holistic view, no more silos
Punishments	No more budget cuts	SD into academic promotions	Common indicators		Train academics in teaching SD	SD as a general code of conduct	Commitment of leaders

Financial instruments, especially results-based incentives bound to sustainability implementation, were most commonly recommended by the respondents, as well as more targeted funding from the national ministries of education. External demands including legislation, auditing and making sustainable actions mandatory in some other ways, were commonly emphasized, especially among the Swedish respondents. Some requested even punishments for HEIs not obeying the legislation.

A great number of respondents would like to see sustainable development integrated into teaching in HEIs, either by legislation, national strategies or by universities themselves. Additionally, organizational changes and clarity in sustainability organization was found important. A substantial number of respondents call for putting sustainability truly into agenda - actions instead of strategies and beautiful speeches.

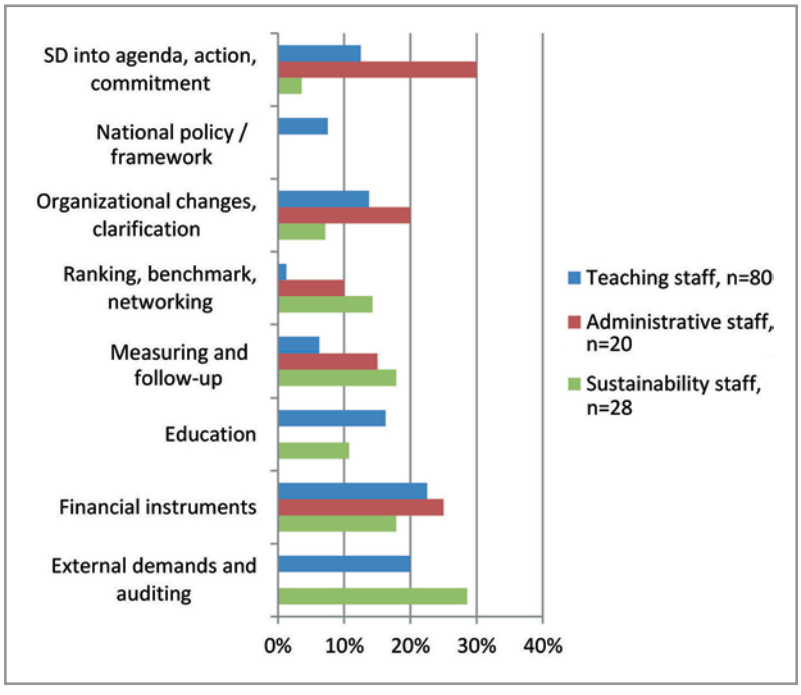
Rankings were mentioned a few times, as well as rankings and competition between universities, clearer target-setting, and especially Norwegian respondents highlighted the importance of measuring and following up the sustainability work. Some weight was given to national policies especially in Iceland, where a national framework for implementing sustainable development was suggested by some respondents.

Other aspects generally brought up by the respondents were holistic view and transdisciplinary teaching and research, value shift and structural change in the society, and making sustainability more simple and understandable to implement.



Picture 3.14. The distributions of views from an open question on how the steering of sustainable development in HEIs could be developed. The responses were classified into 8 categories indicated in y-axis. N represents the number of given responses (not respondents) of each country – the same respondent may have given suggestions to multiple categories.

When comparing the responses between teaching, administrational and sustainability staff, the respondents working with administrative tasks differentiated most from the other groups. Firstly, legislation, auditing and other external steering were completely lacking from their views, as well as integrating sustainability into teaching. By contrast, the importance of action and commitment of leaders, as well as organizing of sustainability work were much more highlighted in their responses than in the other groups. Sustainability staff instead wishes to see more external steering in the forms of legislation, auditing including sustainability, and national strategy. Additionally, they mentioned measuring, target-setting and KPIs as measures to follow-up more often than the other groups. Teaching staff emphasized educational issues more than the others, but gave only little weight to rankings, benchmarking and networking. The detailed views are presented in Picture 3.15.



Picture 3.15. The distribution of views in different respondent groups: How the steering of sustainable development in HEIs could be developed.
The responses were classified into 8 categories indicated in y-axis.
N represents the number of given responses (not respondents) of each group – the same respondent may have given suggestions to multiple categories.

Part IV

Development during the Decade of Education for Sustainable Development, DESD 2005–2014

Part 4: Development during the Decade of Education for Sustainable Development, DESD 2005–2014

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Photo 5: Problem-based, interdisciplinary and international learning took place in the Nordic Case Competition on Sustainable Urban Development in Hanasaari, Espoo 26.–28.10.2015. Nordic innovative students presenting their competition assignment ideas to the tutors.

Photo 6: The Nordic students visiting their competition area in Otaniemi campus, Espoo, Finland, and meeting some residents of the area. Otaniemi campus gardening just behind.

Photo 7: The team 2 has just presented their competition idea to the audience. The team won the second prize.
(Photos: Meeri Karvinen)

Summary of Part IV

Despite the integration of sustainability into teaching has remained in a lower level compared to campus greening activities in the Nordic higher education institutions (HEIs) (see Part 1), clear progress has still been made in bringing sustainability into education.

According to the results from our survey, the level of sustainability has increased in many areas. Especially public awareness on sustainable development, as well as sustainability contents in courses have increased substantially during the Decade for Education for Sustainable Development (ESD). In addition, education has evolved to a more interdisciplinary and collaborative direction in the Nordic HEIs. However, teacher training has remained in the same level for ten years in many institutions, which has an effect on teacher competences on sustainability.

Lack in teacher competences on sustainability may be one explanation to the fact that teaching methods related to ESD have not increased to the same extent as the other details assessed in the survey. Use of ICT and problem-based learning have increased clearly, but more efforts should be put in enhancing participatory learning, as well as monitoring and assessing sustainability contents.

In the Nordic level teacher competences and interdisciplinary education are highlighted as useful measures to promote ESD. Especially sustainability staff emphasizes the education of teachers, while teachers themselves would change the way of teaching to ensure sustainability contents in every course. Additionally, sustainability would be brought to course evaluations if teachers were to decide, and students would be more aware of societal needs to be able to understand what they are expected to learn.

The different Nordic countries weight different measures to enhance ESD. In Finland, where the progress during DESD has been very positive, the bias is in policies and management, with a special emphasis to making sustainability visible in the learning environments by the facilities management. In Sweden instead, the amount of teacher training has increased clearly more than in the other Nordic countries, probably due to the Swedish Act of Higher Education, which demands promotion of sustainable development in all university activities.

Denmark and Norway are most biased to increase the amount of collaboration and interdisciplinary education, though in Norway interdisciplinary education has already increased clearly during the past decade. In Denmark the overall progress during the DESD has been modest compared to the other Nordic countries, yet, the level of awareness related to the assessed details was also week among the Danish respondents.

In Iceland some progress has been made especially in integrating sustainability contents into courses, but the situation of teacher training could be better. However, in Iceland ESD would be promoted by continuing the integration of sustainability into all teaching, by increasing the amount of interdisciplinary education and general awareness on sustainable development.

Introduction of Part IV

In this part 4, teachers and sustainability staff evaluated the progress made during the past decade 2005–2014, which was proclaimed the Decade of Education for Sustainable Development (DESD) by the United Nations. The respondents first assessed how the selected details measuring education for sustainable development (ESD) have developed in their institution, and then, how the teaching methods related to ESD have evolved. Finally, the respondents gave their suggestions on how ESD could be promoted in their institutions.

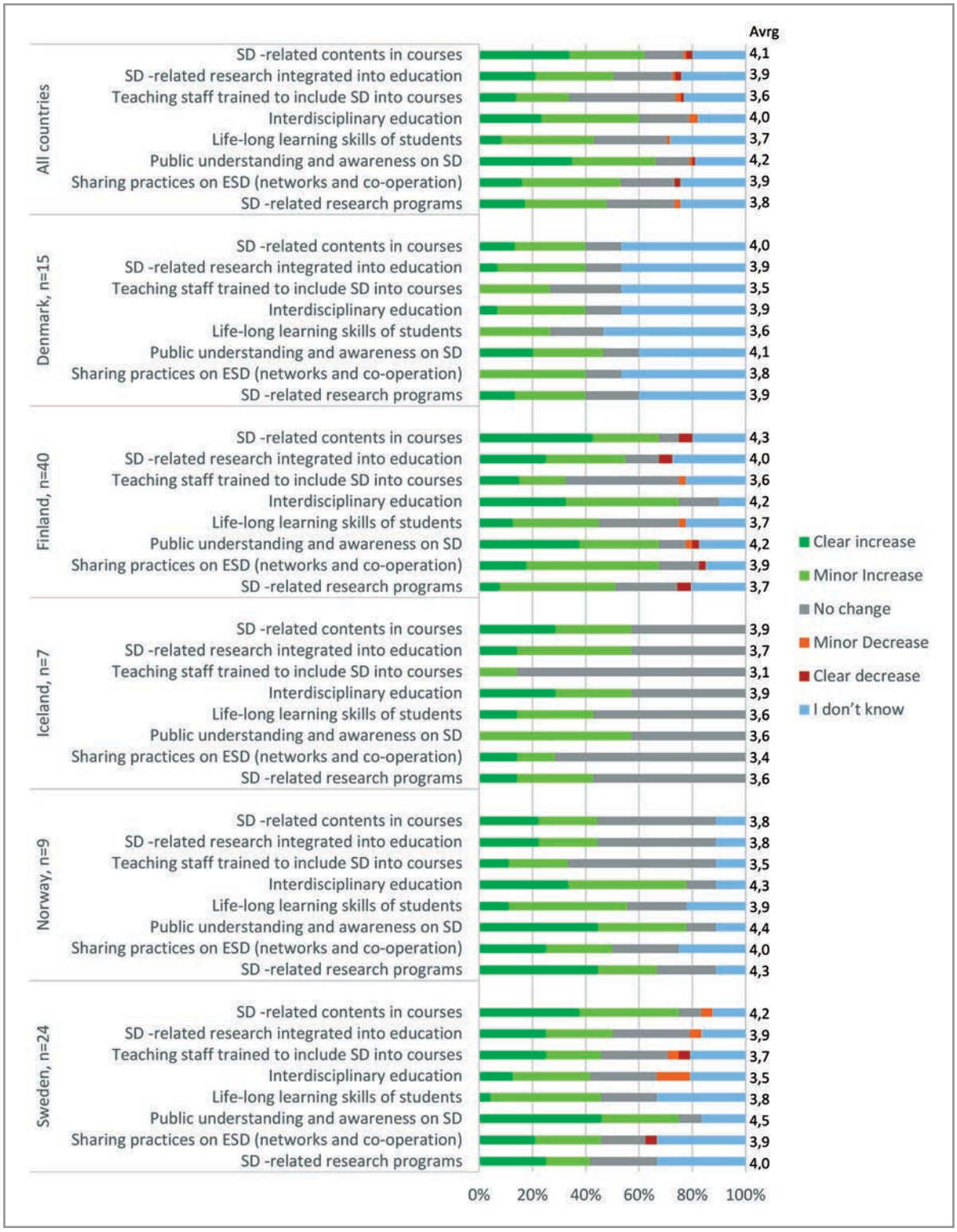
1. Progress made in ESD-related selected details and teaching methods

All the respondents in each Nordic country agreed that the progress during DESD has been positive, and the level of sustainability has increased in teaching and research (Picture 4.1.). In the Nordic level, the increase has been especially clear regarding public awareness on sustainable development (SD), sustainability contents in courses, and interdisciplinary education. The amount of networking and collaboration around sustainability has additionally increased, as well as the amount of research programs related to sustainability. Research is frequently also being integrated into education. However, notable in all the Nordic countries is, that the level of teacher training on integrating SD into courses has increased only slightly, and in many institutions the level has remained the same during the past decade. Almost the same trend could be recognized in the life-long learning skills of students.

Teaching methods related to ESD have additionally developed into a positive direction, though almost 40% responded I don't know (Picture 4.2.). The use of ICT has increased most according to the respondents, but also problem-based and participatory teaching methods are more common today than ten years ago. Monitoring and assessing sustainability-contents in courses has increased least, though 40% of the respondents evaluated at least minor increase in the monitoring.

The Danish respondents were the most hesitant in their views on ESD development, with over 40% responding I don't know in both, ESD-related details and teaching methods (Pictures 4.1. and 4.2.). In addition, the Danish respondents evaluated less increase in all of the given details compared to the Nordic mean values. In Denmark public awareness has increased most, whereas life-long learning skills and teacher training least, as in the Nordic level, too. Only some progress has been made in using teaching methods related to ESD, according to the Danish respondents.

Finland and Norway gained quite similar responses in how the ESD-related details have increased during the DESD (Picture 4.1.). In both countries interdisciplinary education has increased substantially – clearly more than in the other Nordic countries. In Finland, however, sustainability contents are more frequently found in courses, and research is more integrated into teaching than in Norway, where these details have remained the same according to many respondents. Instead, there are more sustainability-related research programs in Norway currently compared to the beginning of DESD. In the case of teaching methods, Finnish respondents were most confident with their views compared to the other nationalities, which gave clearly more I don't know -responses than the Finnish (Picture 4.2.).

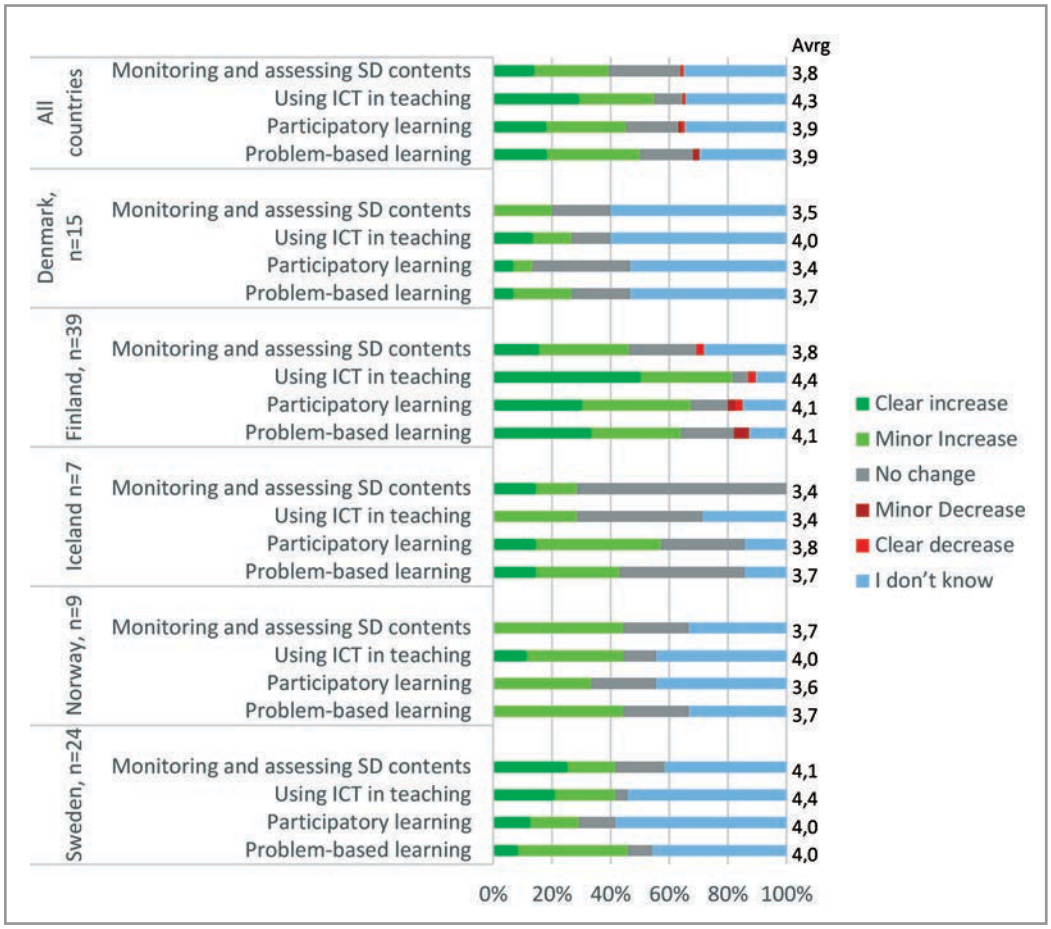


Picture 4.1. The development of ESD-related details in different Nordic countries (ESD=Education for Sustainable Development). N represents the number of respondents. The averages on the right are counted as follows: 1=Clear decrease, 5=Clear increase.

In Finland the teaching methods have increased most compared to the other countries, especially the use of ICT. In Norway the use of sustainability-related teaching methods has increased to a lesser extent.

In Iceland all the respondents had views according to which the ESD-related details assessed have increased slightly, or remained the same. Most progress has been made in integrating sustainability contents into courses, and in interdisciplinary education, and least progress in sharing practices and training teachers. Participatory learning has increased in Iceland as a teaching method, whereas monitoring and assessing sustainability contents has remained more the same.

The Swedish respondents gave the most positive evaluations of the Nordic countries to the development made in teacher training, though the increase was yet quite modest. Additionally, the progress in inter-disciplinary education and life-long learning was modest, too. The evaluations concerning teaching method were surprisingly hesitant, with only around 50% of the Swedish respondents assessing their development. According to their views, the use of all the methods has, however, increased in average more than in most of the other Nordic countries.



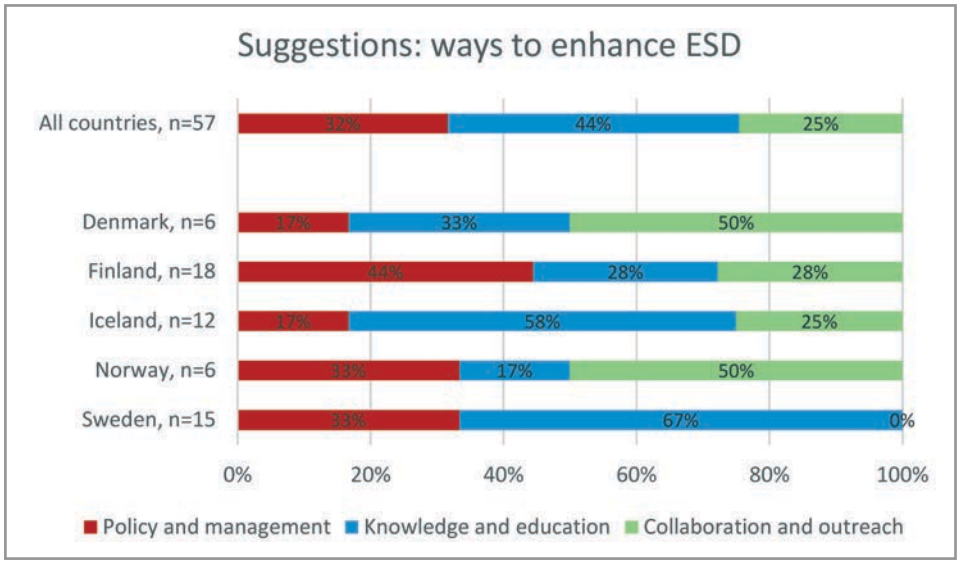
Picture 4.2. The change in ESD-related teaching methods in different Nordic countries (ESD=Education for Sustainable Development). N represents the number of respondents. The averages on the right are counted as follows: 1=Clear decrease, 5=Clear increase. The majority of the I don't know –responses was given by the sustainability staff in each country.

2. Ways to enhance education for sustainable development (ESD)

The respondents were asked to elaborate on how ESD could be better promoted, now that the decade of ESD has ended and new guidelines drawn to comprise the UN Global Action Program, GAP. The suggestions were given to an open question.

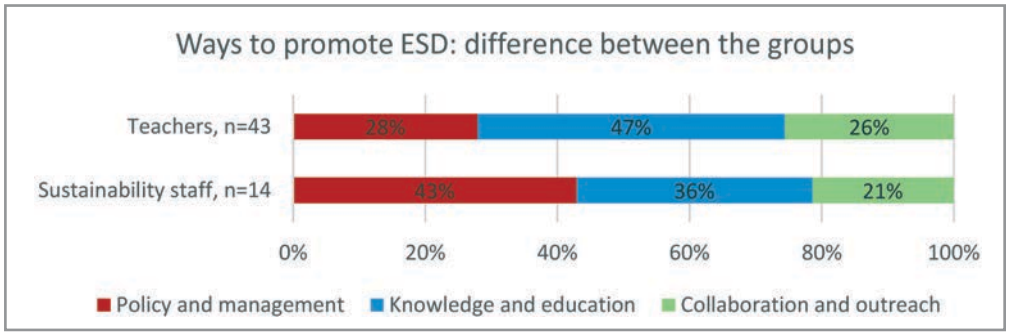
The responses formed three main categories: Policy and management, Knowledge and education, and Collaboration and outreach, shown in Picture 4.3. More detailed classes under these categories are presented in Table 4.1.

In the Nordic level, the majority of the respondents suggested educational ways to promote sustainability, though the other categories gained many proposals, too. However, the countries differed substantially in their views, with Finland biasing clearly most policies and management, and Sweden and Iceland most the educational measures. In Norway and Denmark the number of respondents and their suggestions remained very low, but according to those, collaboration and outreach would be the best ways to promote ESD.



Picture 4.3. Three categories under which the suggestions on promoting the education for sustainable development (ESD) were classified. N represents the number of given responses in each country – the same respondent may have given responses to multiple categories. For the number of respondents and more detailed classification of responses, see Table 4.1.

The respondent groups differed also in their views, teaching staff emphasizing more the educational measures, and sustainability staff more the political ways (Picture 4.4.). The difference was not, however, so significant that it would have affected the results shown in Picture 4.3., where the views of both groups are combined. This is also due to the lower number of respondents representing sustainability staff.



Picture 4.4. Three categories under which the suggestions on promoting the education for sustainable development (ESD) were classified: the differences between the two respondent groups. N represents the number of given responses in each country – the same respondent may have given responses to multiple categories. For the number of respondents and more detailed classification of responses, see Table 4.1.

In more detail, the Finnish respondents emphasized especially the role of university facilities management in offering adequate learning environments and promoting sustainability also in the campuses. According to their view, sustainability should be visible instead of only preaching on it during the lectures. Additionally, training the teachers and integrating sustainability into teaching should be a demand, and much more interdisciplinary projects ought to be organized together with municipalities and other stakeholders.

In Sweden instead, collaboration and outreach were not seen as ways to promote ESD. The Swedish respondents highlighted especially integrating sustainability more efficiently into all teaching by educating the teachers more. This was also the most common view of the Icelandic respondents, as well as of teachers from all the countries. Also sustainability staff emphasized teacher training the most.

Table 4.1. Suggestions to promote ESD classified in more detail.

Ways to promote ESD	Denmark	Finland	Iceland	Norway	Sweden	All countires	Teachers	SD staff
Policy and management								
Obligations and demands	0 %	17 %	20 %	0 %	22 %	15 %	12 %	25 %
University policy, targets and organization	0 %	25 %	20 %	0 %	22 %	18 %	20 %	13 %
Commitment, continuity of sustainability work	25 %	8 %	0 %	33 %	0 %	9 %	8 %	13 %
Support for sustainable learning environment (living lab)	0 %	17 %	0 %	33 %	11 %	12 %	8 %	25 %
Knowledge and education								
Teacher competences and training	0 %	25 %	20 %	0 %	44 %	24 %	20 %	38 %
SD integrated into the way of teaching and evaluations	25 %	8 %	60 %	0 %	33 %	24 %	32 %	0 %
General awareness on SD and defining SD more clearly	25 %	8 %	40 %	0 %	22 %	18 %	20 %	13 %
Student skills (eco-literacy, life-long learning) and voice	0 %	0 %	20 %	33 %	11 %	9 %	8 %	13 %
Collaboration and outreach								
Collaboration, more societal reflection	50 %	17 %	0 %	33 %	0 %	15 %	12 %	25 %
Interdisciplinary research, teaching and projects	25 %	17 %	40 %	67 %	0 %	21 %	24 %	13 %
Everything should be enhanced	0 %	8 %	20 %	0 %	0 %	3 %	8 %	0 %
n of respondents	**4**	**12**	**5**	**3**	**9**	**33**	**25**	**8**

4. Conclusions

The results from the survey revealed the great variation between individual institutions in how they implement sustainable development. However, a clear trend could be found in all Nordic countries: universities emphasize campus greening activities and keep ignoring their key role as educators of future leaders. During the past ten years the progress of integrating sustainability contents into teaching has, however, been positive, but teachers are still lacking adequate support from university decision-makers responsible for implementing the strategies, creating the targets, and establishing training to improve competences of teachers.

Following up the Rio+20 Higher Education Sustainability Initiative, HESI

The classification used in the HESI formed also the basis for the Nordic survey, though the contents were distributed according to survey structure. All the HESI parts presented below were thus discussed throughout the whole survey.

1. Teach sustainable development concepts
2. Encourage research on sustainable development issues
3. Green campuses
4. Support sustainable development efforts in the communities in which the universities reside
5. Engage with and share results through international frameworks

According to the survey results, all Nordic universities should pay attention to how they integrate sustainability aspects in their teaching and research. It seems that sustainability should be a natural part of teaching and research in many Nordic universities, since almost 50% of the respondents found sustainability in teaching from their institution's strategy. In Sweden and Iceland the strategies seemed to emphasize sustainability in teaching especially much, and all the countries highlighted research on sustainable solutions as one of their focus- or importance areas.

However, when evaluating the implementation of the strategy, the respondents found sustainability poorly integrated in teaching, including course descriptions, learning outcomes and the amount of compulsory sustainability courses. Additionally, the teachers are trained to integrate sustainability only in the minority of institutions. The poor integration level may be due to a clear lack of organized implementation of the strategy: the majority of responded institutions measure and report on indicators mainly related to campus greening, while indicators and targets on sustainability contents in courses, thesis or research programs remain absent. Without decent indicators, target-setting and improved sustainability-competences of teachers, the integration may be left for individual teachers personally interested in the subject.

Campus greening activities are in the very core of the Nordic universities, both in terms of strategy contents, and actual implementation of sustainability. All the other Nordic countries emphasize energy-related issues but Iceland, due to Iceland's natural sources for renewable energy. In campus greening the contents of university strategy seem to be more realized in university operations than in the case of teaching and research. In addition to energy efficiency, Nordic universities aim at raising awareness on sustainability, and integrate sustainability aspects in the services they offer at campuses. Sustainability is not, however, communicated as much as it maybe should, if wishing to raise awareness or change behavior of students and staff. Responsibility in procurement is relationally well implemented according to the results, though it was excluded from the most important focus areas by the respondents.

Nordic universities are relatively active in collaborating with their Nordic colleagues, but substantially few universities brought up international sustainability-related networks. In addition, only few Nordic universities include collaboration with municipalities or international community into their strategy, or measure sustainability-related projects inside or outside the university. Collaboration is, however, one of the most important ways to apply the new innovations and knowledge achieved through research, and furthermore, one of the best ways to promote sustainability also inside the institution. Therefore, according to the results, it would be important to establish more projects and multidisciplinary research and collaboration in order to have a real impact on the society.

Suggestions for future

Nordic higher education institutions should strive for more collaboration and sharing of experiences to reach better levels of sustainability. More inter- and multidisciplinary projects would be needed, as well as more student engagement and projects established with municipalities in order to raise awareness and change behavior.

In addition, universities should be demanded for promoting sustainability in their activities. Many respondents wished for more external steering from the government since the strategy, which was also considered as a very effective steering mechanism, seems anyway to fail in ensuring proper integration levels of sustainability. According to the survey, lack of real commitment and prioritizing, and lack of good coordination and organizing of sustainability work hinder the strategy being implemented. All the respondents agreed additionally on the hindering effect of decision-making procedure. If universities would be steered from above for example through legislation and financial, results-based incentives, the strategy could be more effectively realized.

Sweden works as an excellent example of this; the Swedish university legislation demands universities to promote sustainability in all their operations, as well as establishing an environmental management system. The results of this survey clearly suggest that the legislation has raised sustainability levels of the Swedish HEIs above the levels of the other Nordic universities, though it has also brought many challenges related to resources. In addition, examples from other countries, too, suggest, that the establishment of the environmental management system ISO 14001 has a positive effect on the sustainability performance of higher education institutions. However, more research would be needed to better support this finding.

To conclude, the majority of the Nordic universities are on their way in reaching the goals formulated in the Rio+20 summit. However, there are still too many institutions that haven't even started the integration process, or that are lacking proper targets, measures and commitment, at least according to the respondents of this survey. For many institutions it may have been the easiest and the most cost-effective to start with energy efficiency, sustainable transportation and other campus-related activities compared to making a change in teaching culture. Indeed, campus greening is a vital step towards better learning environments, visualizing sustainability, and reducing the footprint of the institutions, but if universities keep being indifferent to their unique role in educating tomorrow's leaders, the future will remain as unsustainable as today. More action and courage to step to the next level of sustainability implementation is clearly needed.

Appendices: Country-specific summaries

DENMARK: Summary

The survey gained responses from 27 respondents representing 6 higher education institutions in Denmark. According to the results, the majority of the Danish HEIs has reached a good level in implementing sustainable development into their operations. However, as in the other Nordic countries, also in Denmark the implementation is clearly more biased to campus greening activities than in integrating sustainable development into teaching.

Despite of the good evaluations given to overall implementation level, the detailed questions in the survey revealed significant criticism towards the real actions: Awareness-raising, communications on sustainability, sustainable campus services and procurement, and sustainable development contents in key performance indicators (KPI) are in a much poorer state than in the other Nordic countries.

Danish HEIs support their staff in sustainable choices as much as institutions in the other Nordic countries, most generally by offering paperless administration, videoconference- and distance working possibilities, making recycling possible at the working place and organizing energy saving campaigns. However, green IT and procurement are less popularly used than in Finland, Norway and Sweden. Strategy has a substantially important role in implementing sustainable actions, and the Danish HEIs seem to set more sustainability-related targets than the HEIs in other Nordic countries. However, clear targets are still considered to be less in focus than in the other countries, therefore the Danish university staff wishes for the clarification of strategies and targets.

Internal steering has more effect on the implementation of sustainable actions in Denmark than external steering. KPI's, strategy and financial resources are the most effective of internal steering measures, whereas environmental management systems (EMS) have less effect than in Norway, Sweden and Finland. Instead, The Danish HEIs take working life requirements and societal needs more into account than the other countries. Societal needs and university image are in addition more important ways to steer sustainability than for example student and staff opinions.

The Danish university staff believes in good leadership together with concrete actions, such as clear targets, to promote sustainability; the Danish HEIs highlight the role of good leadership and support from top management more than the other Nordic HEIs. In addition, general attitudes seem to support the implementation more than for example in Finland. External demands, students, projects and staff education by contrast, are less effective in steering sustainability in the Danish HEIs, unlike in the other Nordic universities.

However, despite of the appreciation of good leadership, the most severe obstacle hindering the implementation of sustainable development in the Danish HEIs is decision-making procedure, as is the case in the other countries, too. In addition, the respondents wish for more benchmarking, collaboration, awareness-rising and commitment.

- 27 respondents (18% of all respondents) from 6 institutions: 33% teachers/researchers, 41% administrational, 26% sustainability staff
- Clear bias to campus greening, but the level of implementation evaluated being quite poor
- SD in teaching less in focus in Danish HEIs compared to the other countries
- Clear university strategy and targets very important in enhancing sustainability
  - Danish appreciate and set targets more than other Nordic countries, but measure less
  - KPI's more important than in the other Nordic countries as a steering measure
- Danish satisfied with national SD policy, but wish for more rankings and benchmarking
- Most enabling factors: Good leadership, clear strategy and targets, staff knowledge on SD, general attitudes
- The most severe obstacles: Decision-making procedure, lack of collaboration and true commitment, lack of resources
- Recommendations: Even clearer SD-strategy and targets, more collaboration and awareness-raising

FINLAND: Summary

Over 40% of the survey respondents were Finnish, and over 50% of them represented teaching staff. The results between different Finnish institutions varied substantially, thus, the Finnish averages were quite neutral and differentiated only slightly or not at all from the Nordic means. Additionally, the Finnish university staff seems to be fairly unaware of their institution's activities within the Rio+20 framework, which may explain a part of the results' neutrality.

The Finnish HEIs picture their sustainability work being at a good level, and equally many staff members are satisfied and unsatisfied with the level sustainability is integrated into university operations. In addition, the Finnish HEIs use many ways to raise awareness and support their staff in sustainable choices, including greener alternatives in food, IT and procurement, and opportunities for distance working and video-conferences. However, the Finnish HEIs are in average still behind Sweden, Norway and Denmark in their sustainability performance, such as staff resources and amount of target-setting relating to sustainable development. The focus is additionally more in campus operations, whereas in Sweden for example, the focus is also in teaching and curricula.

Finnish university strategies have substantially high effect on the implementation of sustainable development, which is in line with the Nordic trend. However, sustainability aspects are quite modestly mentioned in the Finnish university strategies, the respondents wishing for more ambitious statements. Financial steering has also a strong effect in Finland, but results-based steering seems to affect only campus greening activities, not that much teaching.

University legislation is considered having a strong effect like in Sweden, though the Finnish legislation does not oblige universities to implement sustainable development. The result may indicate the same wish that was expressed by many respondents in an open question: using more external demands in the future. Also the establishment of an environmental management system or teaching evaluation system are seen as good ways to develop the steering. All steering mechanisms seem to have some effect on the implementation of sustainable development, thus, the best way to develop the steering in Finland is through enhancing the efficiency of many different mechanisms.

Students and good leaders enable the implementation of sustainable development in the Finnish HEIs, but unlike in the other countries, clear strategy and skilled, motivated staff are not found as clear enablers. Decision-making procedure is found as the most hindering factor, which is typical for the Nordic HEIs. Additionally, unclear organization and lack of prioritizing hinder the implementation, and in Finnish HEIs, fear of change and general attitudes are especially strong barriers. Maybe therefore the emphasis in Finnish HEIs is not in wishing for more resources or clearer strategy, but in changing the attitudes of staff members and decision-makers through education, awareness-raising, better communications, collaboration, and clearer organization.

- 63 respondents (41% of all respondents) from 21 institutions: 51% teachers/researchers, 33% administrational, 16% sustainability staff
- Substantial variation between the institutions
- Lack of awareness among staff on sustainability activities
- Sustainability estimated to be at a good level
- Staff resources and target-setting at a lower level than in Sweden and Denmark
- Focus is more on campus greening than on teaching sustainability aspects
- More external demands wished for (legislation, financial steering) to put sustainability into action
- Environmental management system and teaching evaluation seen as good ways to improve the level of integration
- The most enabling factors: students and good leaders
- The most severe obstacles: decision-making, unclear organization, lack of prioritizing and fear of change
- Recommendations: Changing the attitudes through education and training, better communications and collaboration, and clearer SD-organization

ICELAND: Summary

Iceland accounts for only 1, 3% of the total population in the Nordic countries. Relative to that, Iceland is quite well represented with around 6% of the total respondents in the survey. However, in Iceland many questions were answered only by a handful of people and no questions by more than 9 persons. Thus, the results cannot be generalized to concern the whole university community in Iceland. Additionally, the survey gained no answers from sustainability staff, therefore results from Iceland are lacking detailed information concerning campus operations.

According to the results, the vast majority of HEIs in Iceland are in a start-up stage in integrating sustainable development into all operations, while the majority of the other Nordic HEIs have reached an operational level. In addition, satisfaction among the staff towards their institution's sustainability work is much lower in Iceland compared to the others. The staff would also like to see more ambitions in university strategies concerning sustainable development. According to the respondents, campus greening activities are present in the strategy much less as in the other countries, but teaching sustainable development concept seems to follow the Nordic mean level.

Icelandic universities focus most on clear sustainability targets, recycling and changing behavior of students and staff. By contrast, energy-issues that are very important for all the other Nordic countries, are less in focus in the HEIs in Iceland, for natural resources provide for the moment enough electricity (hydroelectric), and cold and warm water (geothermal). In Iceland universities offer the best possibilities for video conferences of the Nordic countries, but otherwise the institutions are still behind other Nordic HEIs in supporting their staff in sustainable choices. Additionally, teaching staff is offered no regular training in how to include sustainability into their courses, while in the other countries at least some institutions educate their teachers.

Steering mechanisms and other drivers that promote sustainable development are much weaker in Iceland than in the other Nordic countries. In addition, there seems to be a complete lack of national quality assurance systems concerning sustainable development. The only mechanism that has comparable effect in Iceland is the strategy of the university, which is considered only neutral, while in the other Nordic countries the effect is at least moderate. Student and staff opinions have some effect on sustainability. University staff in Iceland wishes for more results-based financial incentives and stronger national strategy on sustainable development.

The factors enabling the integration of sustainable development most in Iceland are student engagement, collaboration, projects with students, and motivated staff. Instead, unengaged leaders, attitudes and resources, especially government funding, have a strongly hindering effect on sustainability in Icelandic HEIs. Also staff understanding and knowledge concerning sustainable development is considered as a great obstacle. Sustainability could be enhanced by educating the staff and committing the leaders more, and by getting more concrete support from national policy through results-based financial incentives.

- 9 respondents (6% of all respondents) from 3 institutions: 78% teachers/researchers, 22% administrational, 0% sustainability staff
- Iceland behind the other Nordic countries in overall sustainability performance
- Institutions evaluated being in a start-up level in integrating sustainable development
- The staff is unsatisfied with the level of sustainability
- Energy-issues not in focus as in the other Nordic countries, bias in targets and recycling
- Almost no steering mechanisms that affect the implementation of sustainable development
- The most enabling factors: Students, motivated staff
- The most severe barriers: Unengaged leaders, staff knowledge and attitudes, financial resources
- Recommendations: Educate the staff on sustainability, more committed leaders, more results-based external steering

NORWAY: Summary

Out of the total number of Nordic respondents 13% of them were Norwegian university staff, a mix of researchers and teachers (26%), administrative personnel including managers (48%) and sustainability staff (26%).

Sustainable development concerns are reported to be moderately well integrated into the campus operations of Norwegian higher education institutions (HEIs), procurement scoring higher. By contrast, sustainability in teaching is clearly less emphasized. Campus greening is biased in the university strategies, whereas societal outreach is less highlighted than in the strategies of other Nordic HEIs.

The overall level of sustainability related activities is reported to have increased less in Norway than in the Nordic HEIs over the last years. While interdisciplinary education, research and public awareness have seen some increase, teacher training in sustainability and integration of actual sustainability contents in courses still have a way to go to come up to the Nordic average.

The Norwegian universities are the most active of the Nordic HEIs in measuring and setting targets to sustainability-related indicators. An annual Sustainability Report is for most cases integrated into the institution's general report, like in the Finnish institutions. Reporting to the Ministry of Education is compulsory but seems to have no or weak sustainability relevance.

The use of renewable energy and energy efficiency in campus operations are issues Norwegian HEIs are more concerned with than any other Nordic country. At the same time the Norwegian HEIs seem to give less weight to influencing the behaviour of their students and staff than their neighbouring countries. Furthermore, the Norwegian HEIs support their staff with a lower amount of measures for being "green" than institutions in Finland, Sweden and Denmark.

When looking at driving forces for sustainability, student opinions and the concerns for the university's own image are reported to have effect on target setting and steering. Staff opinions themselves are reported to have less effect in directing sustainability implementation than in the other Nordic HEIs. Furthermore, the staffs consider that the implementation would be more effective with an environmental management system in place. Financial instruments, measuring and follow-up, and organizational development are seen as good ways to direct the implementation of sustainable strategies. However, more external steering from the ministry and government towards the sustainability agenda is topping the list of what respondents expect would give effects on sustainability performance.

When asked what is hindering sustainability implementation in Norwegian HEIs respondents point at lack of commitment over time from leaders/managers when prioritizing. Poor effects of decision-making procedures and management practices related to sustainability issues come second.

Norway is the country that put most emphasis on collaboration as the best way to enhance sustainability and overcome the barriers. When asked for recommendations more student involvement and collaboration, increased activity of raising awareness towards sustainability and clearer sustainability targets and strategies are highlighted.

- 19 respondents (13% of all respondents) from 6 institutions: 26% teachers/researchers, 48% administrational, 26% sustainability staff
- Sustainability estimated to be at a good level
- Focus clearly more on campus greening than on teaching sustainability aspects
- Renewable energy and sustainable transportation highlighted, but staff supported less in sustainability compared to other Nordic countries
- Target-setting and measuring relating to sustainability at the highest level of the Nordic countries
- More external steering from the government wished for to put sustainability into action
- Financial instruments, measuring and follow-up, and organizational changes seen as good ways to direct the implementation of SD
- The most enabling factors: collaboration, students and university strategy
- The most severe obstacles: decision-making, unclear organization, lack of prioritizing
- Recommendations: More student involvement and collaboration, raising awareness, and clearer strategy and targets

SWEDEN: Summary

Swedish university staff comprise 22% of the total amount of respondents. Sweden had also the highest number of sustainability staff answering the survey. Potentially, Sweden could have had a larger proportion of respondents since both the population and the number of higher education institutions are the largest among all Nordic countries.

Unlike in the other Nordic countries, in Sweden national university legislation demands governmental universities to have an environmental management system and to report on environmental performance to the Swedish Environmental Protection Agency and Ministry of Education. In addition, the Act of Higher Education requires, that Swedish HEIs shall promote sustainable development in their activities. According to the results, these policy definitions have resulted to 80% of the Swedish HEI's having established an environmental management system according to ISO 14001. The overall sustainability performance of the Swedish HEIs is also better compared to the other Nordic countries, including integrating sustainable development into campus operations and into teaching.

Swedish HEIs have the highest amount of staff members working on sustainable development, though the variation is high between the institutions. The Swedish university staff is also the most familiar with the content of their university's strategy and all parts of the Rio+20 commitment. Additionally, Swedish and Norwegian HEIs measure the highest number of indicators related to sustainable development. Target-setting and indicators are important for the credibility of obligatory reporting.

Clear vision on sustainability-related targets seems to be the most important focus area for a great number of Swedish HEIs, as well as improving sustainability knowledge of teachers. In Sweden, the HEIs are also slightly more focusing on integrating sustainable development into curricula than the other countries. By contrast, sustainability issues are less integrated in campus development compared to the other countries, maybe because of the policy definitions: the main focus has been on implementing sustainable development in core activities such as research and teaching, with lower necessity to focus on campus operations. The results suggest that one future focus area should be the living laboratory; to engage students and to work across disciplinary boundaries.

In Sweden national university legislation, environmental management systems, reporting systems and quality assurance systems seem to be much more effective than in the other Nordic countries. The external demands, legislation and auditing, are also wished for among the staff, whereas financial resources seem to be less effective than in the other Nordic countries.

Factors that enable the implementation of sustainable development in the Swedish HEIs are organizing the work, the attitude and commitment of top management, and collaboration through student projects. These three factors are not emphasized to the same degree in the Nordic neighboring countries. Furthermore, skilled personnel, supportive attitude at university, and resources are highlighted more than in the other Nordic countries. Lack of resources is the main obstacle, while lack of collaboration and interdisciplinary are not seen as a problem. To promote sustainable development even more, the Swedish HEIs would like to see more supportive leaders, more resources and educating the staff on sustainable development.

- 34 respondents (22% of all respondents) from 15 institutions: 44% teachers/researchers, 24% administrational, 32% sustainability staff
- Swedish university legislation differs from the other Nordic countries: demands on sustainability
- The majority of the HEIs have established ISO 14001 environmental management system
- Swedish HEIs have in average the most staff working for sustainability, and they measure the most parameters related to sustainable development
- The staff is quite familiar with Rio+20 framework and with their institution's strategy
- Level of integration at a higher level compared to the other countries, especially in curricula and teacher training
- Swedish university staff appreciates external demands in enhancing sustainability
- Factors enabling the most: Organizing of SD work, top management, student projects
- The most severe obstacles: Lack of resources, decision-making procedure
- Recommendations: More supportive leaders, more resources and educating the staff on sustainability