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Annual Report for 2017

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2017 in a nutshell

Norecopa is a consensus platform working to promote “the 3 R’s” (Replacement, Reduction, Refinement)¹ within animal research in Norway. You can read more about Norecopa's structure and mission in the Appendix.

Norecopa celebrated its 10th Anniversary on 10 October 2017. The organisation made considerable progress in 2017.

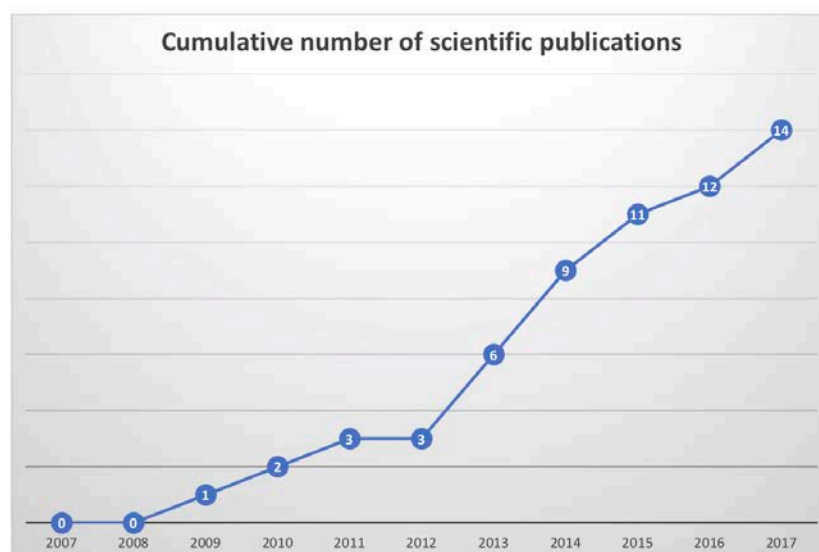
What have we achieved?

Norecopa's most important milestones in 2017 have been:

- Publication of the PREPARE guidelines for planning animal research
- An increase in the international use of Norecopa's website
- Continued development of the website, in collaboration with the US Department of Agriculture
- A new consensus meeting on the use of animals in field studies
- The award of Norecopa's 3R prize
- The completion of the ENRICH Fish project
- Scientific seminars in connection with the Annual General Meeting and 10th Anniversary
- Publication of an Anniversary Book describing Norecopa's first 10 years

These milestones are described in the main part of this Report. Other activities are described in the Appendix.

Norecopa has continued to publish scientific papers, in addition to expanding its website:



¹ <https://norecopa.no/alternatives/the-three-rs>

Norecopa's publications are described in more detail in the Appendix.

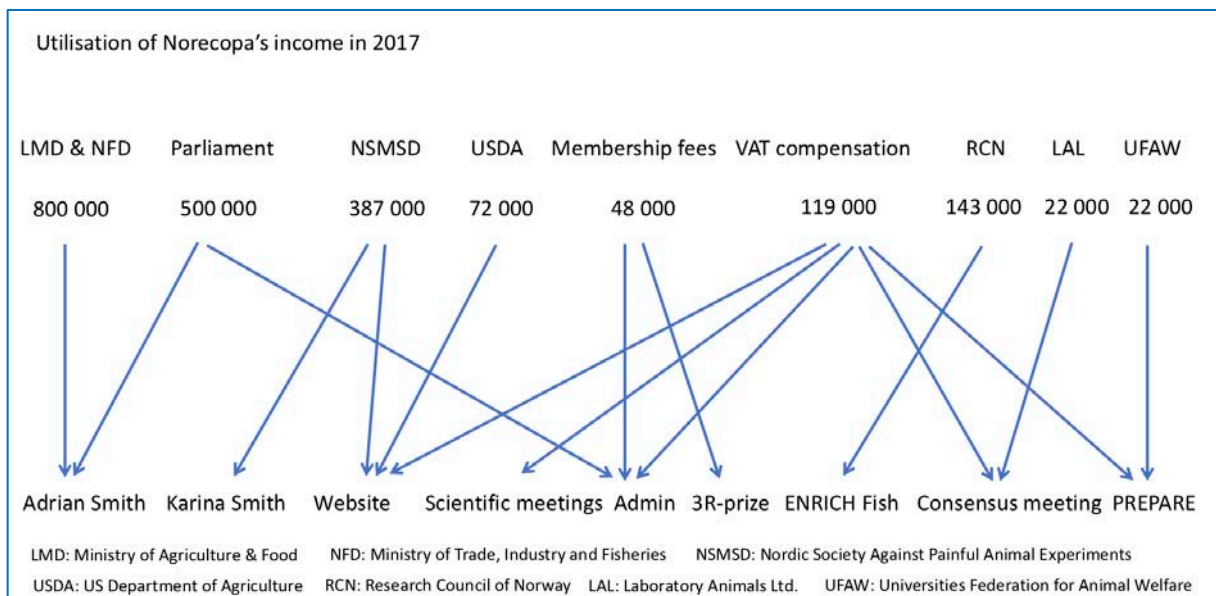
Where has the money come from?

Norecopa receives core funding from two Ministries, which in 2017 financed two thirds of the expenses for Norecopa's Secretary. The rest of Norecopa's activity was financed by external funds which Norecopa applied for. This is described in the Appendix.

What has the money been used for?

The diagram below gives a rough overview of how Norecopa's income in 2017 was deployed. Norecopa had two employees in 2017:

- Adrian Smith is Norecopa's Secretary, and worked in a 80% position in 2017
- Karina Smith has worked in a 60% position on maintenance and further development of Norecopa's databases, in particular the NORINA database (see the Appendix for more information).



Norecopa's accounts and publications are described in more detail in the Appendix.

Milestone: Norecopa's guidelines for planning animal experiments (PREPARE)

Animal welfare organisations are not the only ones who are worried about animal experiments. In recent years, scientists have expressed increasing concern about failures to reproduce experiments, even in the same laboratory, let alone in other facilities. In addition, results from animal studies are often not transferable to humans, which in many cases ruins the purpose of the experiments.

To improve the situation, Norecopa published comprehensive guidelines in 2017 for planning animal experiments. They are called PREPARE (*Planning Research and Experimental*

Procedures on Animals: Recommendations for Excellence). PREPARE consists of a 15-point checklist which has been translated into 13 languages, with webpages for each of the 15 topics. The webpages contain links to quality-controlled guidelines which we have collected from the international laboratory animal science community.

PREPARE

The PREPARE Guidelines Checklist
Planning research and experimental procedures on animals: recommendations for excellence
 Adam J. Smith, A. Eddie Cuthbert, Oliver Liley, Kristina A. Harner & Trond Bratberg

PREPARE consists of planning guidelines which are complementary to reporting guidelines, such as ARRIVE¹. PREPARE covers the three broad areas which determine the quality of the preparation for animal studies:

- Formulation of the study**
- Dialogue between scientists and the animal facility**
- Quality control of the components in the study**

The topics will not always be addressed in the order in which they are presented here, and some topics overlap. The PREPARE checklist can be adapted to meet special needs, such as field studies. PREPARE includes guidance on the management of animal facilities, in-house experiments are designed upon their quality. The full version of the guidelines is available on the Norecopa website, with links to global resources at <http://norecopa.eu/PREPARE>. The PREPARE guidelines are a dynamic set which will evolve as more species- and situation-specific guidelines are produced, and as best practice within Laboratory Animal Science progresses.

Topic	Recommendation
(A) Formulation of the study	
1. Literature searches	<input type="checkbox"/> Form a clear hypothesis, with primary and secondary outcomes. <input type="checkbox"/> Consider the use of systematic reviews. <input type="checkbox"/> Decide upon databases and information specialists to be consulted, and construct search terms. <input type="checkbox"/> Assess the relevance of the species to be used, its biology and suitability to answer the experimental questions with the least suffering, and its welfare needs. <input type="checkbox"/> Assess the reproducibility and transferability of the project.
2. Legal issues	<input type="checkbox"/> Consider how the research is affected by relevant legislation for animal research and other areas, e.g. animal transport, occupational health and safety. <input type="checkbox"/> Locate relevant guidance documents (e.g. EU guidance on project evaluation).
3. Ethical issues, harm-benefit assessment and humane endpoints	<input type="checkbox"/> Conduct a lay summary. <input type="checkbox"/> In dialogue with ethics committees, consider whether statements about this type of research have already been produced. <input type="checkbox"/> Address the 3Rs (replacement, reduction, refinement) and the 5As (good science, good sense, good sense/benefit). <input type="checkbox"/> Consider pre-approval and the publication of negative results. <input type="checkbox"/> Perform a harm-benefit assessment and justify any likely animal harm. <input type="checkbox"/> Discuss the meaning objectives, if the animal use is for educational or training purposes. <input type="checkbox"/> Allocate a severity classification to the project. <input type="checkbox"/> Define objective, easily measurable and unequivocal humane endpoints. <input type="checkbox"/> Discuss the justification, if any, for death as an endpoint.
4. Experimental design and statistical analysis	<input type="checkbox"/> Consider pilot studies, statistical power and significance levels. <input type="checkbox"/> Define the experimental unit and decide upon animal numbers. <input type="checkbox"/> Choose methods of randomisation, prevent observer bias, and decide upon inclusion and exclusion criteria.
(B) Dialogue between scientists and the animal facility	
5. Objectives and financial, funding and division of labour	<input type="checkbox"/> Arrange meetings with all relevant staff when early plans for the project exist. <input type="checkbox"/> Construct an appropriate timeline for the project, indicating the need for assistance with preparation, animal care, procedures and waste disposal/experimentation. <input type="checkbox"/> Discuss and disclose all expected and potential costs. <input type="checkbox"/> Construct a detailed plan for division of labour and expenses at all stages of the study.
6. Facility evaluation	<input type="checkbox"/> Conduct a physical inspection of the facilities, to evaluate building and equipment standards and needs. <input type="checkbox"/> Discuss staffing levels at times of extra risk.
7. Education and training	<input type="checkbox"/> Assess the current competence of staff members and the need for further education or training prior to the study.
8. Health risks, welfare and euthanasia	<input type="checkbox"/> Perform a risk assessment, in collaboration with the animal facility, for all persons and animals affected directly or indirectly by the study. <input type="checkbox"/> Assess, and if necessary produce, specific guidance for all stages of the project. <input type="checkbox"/> Discuss means for containment, decontamination, and disposal of all items in the study.
(C) Quality control of the components in the study	
9. Test substances and procedures	<input type="checkbox"/> Provide as much information as possible about test substances. <input type="checkbox"/> Consider the feasibility and validity of test procedures and the skills needed to perform them.
10. Experimental animals	<input type="checkbox"/> Decide upon the characteristics of the animals that are essential for the study and for reporting. <input type="checkbox"/> Avoid generation of surplus animals.
11. Quarantine and health monitoring	<input type="checkbox"/> Discuss the animals' likely health status, any needs for transport, quarantine and isolation, and health monitoring and consequences for the personnel.
12. Housing and husbandry	<input type="checkbox"/> Adapt to the animals' specific instincts and needs, in collaboration with expert staff. <input type="checkbox"/> Discuss acclimatisation, optimal housing conditions and procedures, environmental factors and any experimental limitations on these (e.g. food deprivation, solitary housing).
13. Experimental procedures	<input type="checkbox"/> Develop refined procedures for capture, immobilisation, marking, and release or rehoming. <input type="checkbox"/> Develop refined procedures for substance administration, sampling, sedation and anaesthesia, surgery and other techniques.
14. Humane killing, necropsy, reuse or rehoming	<input type="checkbox"/> Consult relevant legislation and guidelines well in advance of the study. <input type="checkbox"/> Define primary and emergency methods for humane killing. <input type="checkbox"/> Assess the competence of those who may have to perform these tasks.
15. Necropsy	<input type="checkbox"/> Construct a systematic plan for all stages of necropsy, including location, and identification of all animals and samples.

References

- Smith AJ, Cuthbert AE, Liley OJ, Harner KA, Bratberg T. PREPARE: Guidelines for Planning Animal Research and Testing. *Lab Anim* 2017; 52(1): 10-17. doi:10.1111/lab.12743
- Alfaro C, Brown RJ, Carril JC et al. Improving Biomedical Research Reporting: The ARRIVE Guidelines for Reporting Animal Research. *PLoS One* 2014; 9(12): e112132. doi:10.1371/journal.pone.0112132

Further information: <http://norecopa.eu/PREPARE> | prepare@norecopa.eu | [@norecopa](https://twitter.com/norecopa)

PREPARE has already had a warm reception internationally. The number of hits on Norecopa's website rose by 30% during the first 6 months after publication, compared to the same period before. Norecopa presented PREPARE at the World Congress on Alternatives and Animal Use in the Life Sciences in Seattle in August 2017, and at three other large scientific meetings during the Autumn.

Here are some of the reactions to PREPARE so far:

- The Board of the laboratory animal science organisation in Australia og New Zealand, ANZCCART², endorsed PREPARE in December 2017
- PREPARE was included in the Australian guidelines *Best Practice Methodology in the Use of Animals for Scientific Purposes*, published by the National Health and Medical Research Council (NHMRC) in December 2017
- PREPARE was given ample room in a paper entitled *Promoting and improving 3Rs practice: the Korean guidelines*, published in the journal *BMB Reports* in December 2017
- The Swiss 3R Network wrote an article on its website in September 2017 entitled *Are you aware of PREPARE?*³

² <https://www.adelaide.edu.au/ANZCCART>

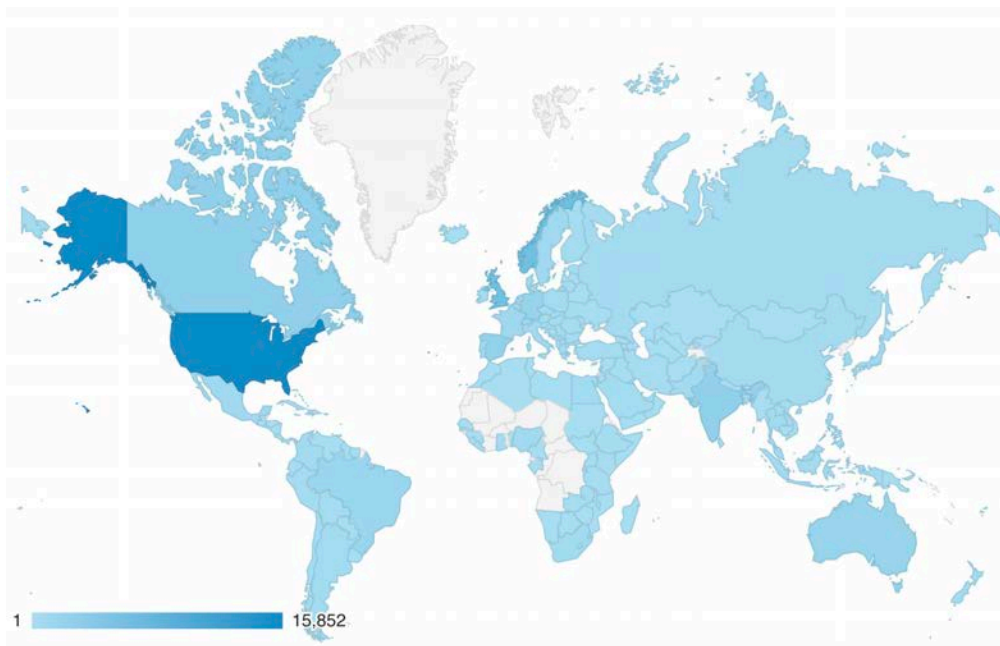
³ <https://swiss3rnetwork.org/are-you-aware-of-prepare>

- Norecopa's Secretary has been invited to present PREPARE to the Royal Society of Biology in London and to the Swedish Research Council in Stockholm.

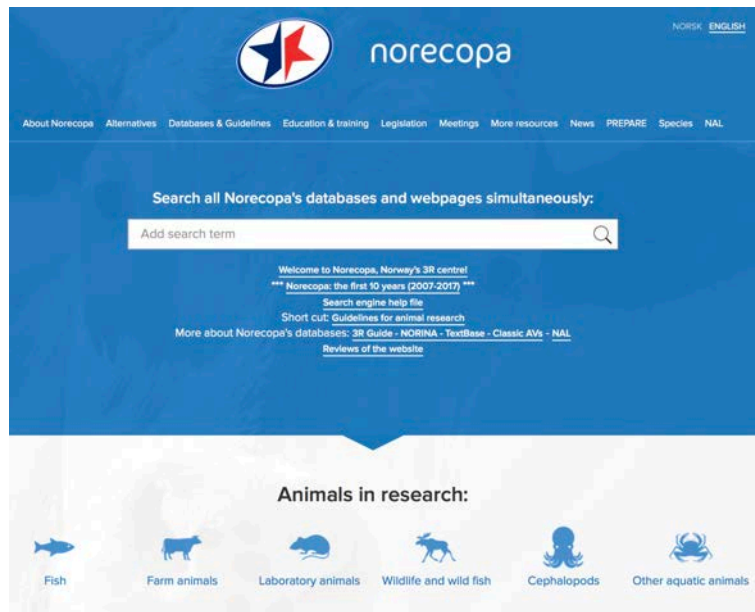
PREPARE is described in more detail in the Appendix.

Milestone: Norecopa's international website

The website norecopa.no is Norecopa's largest resource, and it is available free of charge for everyone. The statistics for 2017 show that it is in use in the majority of countries in the world:



All the material which Norecopa produces is published there, including the presentations held by speakers at Norecopa's scientific meetings. Everything is organised in one large database, which by the end of 2017 had over 7,600 records. We have installed a powerful search engine with our own synonym list and many other functions, to ensure the best possible results when searching. Norecopa has spent approx. NOK 700,000 on the latest version of the website, which was launched in June 2016.

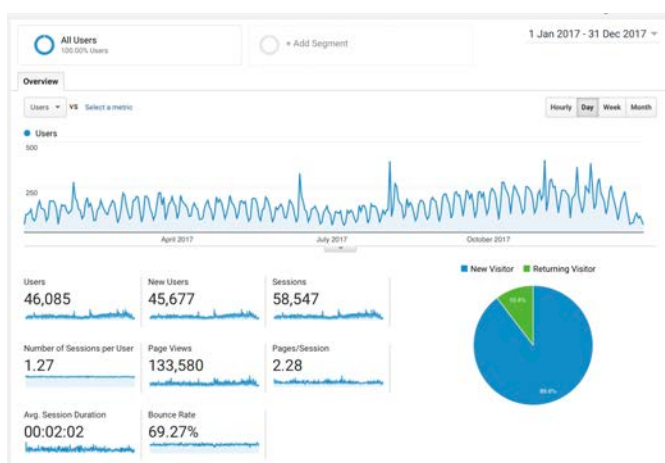


norecopa.no

In 2017 Norecopa completed a collaboration with the Animal Welfare Information Center (AWIC) at the US Department of Agriculture (USDA). A total of 1,600 new records were added, with literature references from a large American database.

Number of visitors to the website

In 2017 there were 133,580 hits, from a total of 46,085 unique visitors. Since Norecopa's new website was not launched until June 2016, it is not possible to compare figures directly with the previous year. Based upon the statistics for the second half of 2016, the number of visitors in 2017 has probably increased by over 10% compared to the year before. The decrease in hits in December is probably due to the approaching Christmas holidays:



Of those countries that can be identified, the following are at the top of the table:

1.	United States
2.	United Kingdom
3.	Norway
4.	India
5.	Canada
6.	Spain
7.	Australia
8.	Germany
9.	Brazil
10.	France

In addition to the website, Norecopa runs a closed **discussion forum** via email for persons with specific responsibilities for animal research at the country's research animal facilities. This is the only possibility that this group has to discuss matters of interest.

There is more information about the website in the Appendix.

Milestone: Norecopa's consensus meeting on field research

Norecopa arranges frequent international consensus meetings⁴ where all the stakeholders around animal research are invited. The fifth in this series was held at Gardermoen in October 2017. This time the focus was in particular on wildlife research. There has been a lot of publicity around this in recent years, not least in connection with tagging of wolves and reindeer.

The titles of the meeting in 2017 was:

***Harmonisation of the Care and Use of Wild and Domestic
Mammals and Birds in Field Research***⁵

Participants from Norway, Sweden, the U.K. and the Netherlands discussed the challenges with performing animal experiments in the wild, and not least: where does the dividing line go between marking for management purposes (where permission is not required at present by the animal research authorities) and an animal experiment?

All the presentations from the meeting are available on Norecopa's website. The participants are in the process of writing a consensus statement following discussions during and after the meeting. The statement will be published when it is completed.



photo: colourbox.com

The meeting was sponsored by Laboratory Animals Ltd.

⁴ <https://norecopa.no/no/møtekalendar>

⁵ <https://norecopa.no/meetings/field-research-2017>

Milestone: Norecopas 3R Prize



Norecopa's 3R prize was awarded for the eighth time at Adamstua in Oslo on 7 June 2017. The prize consists of NOK 30,000 and a diploma. The winner in 2017 was Research Leader Adam Lillicrap at NIVA (Norwegian Institute for Water Research), for his exceptional work in developing alternatives to animal tests in connection with monitoring of environmental poisons (ecotoxicology). He has worked both in Norway and internationally to develop alternatives.

There is more information about Adam Lillicrap's work in the Appendix.

Milestone: Environmental enrichment for salmon (ENRICH Fish)

Salmon are Norway's most used research animal. Norecopa, in collaboration with Nofima and the Institute for Marine Research, have been looking for ways to give salmon in laboratory experiments better condition. The Research Council of Norway has financed a two-year project called **ENRICH Fish**, which we completed in March 2017. We have looked at methods for both physical and social enrichment. Norecopa arranged open meetings in Bergen and Tromsø in February 2017 to promote the results.



Photo: Jan Erik Fosseidengen

The results so far show that there is less damage to the fins if the fish can seek cover somewhere in the tank. Welfare increases as well if photographs of stones are glued to the bottom of the tank. ENRICH Fish also demonstrated that it is extremely important to choose the right number of fish per tank, to reduce aggression, particularly among the youngest fish. If these small fish are moved to new tanks, they take longer to adapt to their new surroundings if the tank is smaller than the one they come from. It is, therefore, extremely important to think of environmental factors when studies on salmon are being planned.

Norecopa runs a website for the project: www.enrich-fish.net. The results of ENRICH Fish are described in more detail in the Appendix.

Milestone: Norecopa celebrated its 10th Anniversary in 2017

Norecopa celebrated its 10th Anniversary on 10 October 2017 with a scientific meeting at Adamstua in Oslo⁶. Norecopa published a 34-page Anniversary Book in that connection, which was produced in both paper and electronic versions⁷. The Book can also be downloaded as a pdf file⁸.

The following speakers addressed the meeting:

- Leopold Koenig, TissUse, Berlin
- Gøril Eide Flaten, Tromsø (Norecopa's 3R Prizewinner in 2013)
- Elliot Lilley, RSPCA, U.K.
- Tom Bengtsen, Denmark's 3R-center
- Harald Gjein, Norwegian Food Safety Authority
- Norecopa's Secretary, Adrian Smith

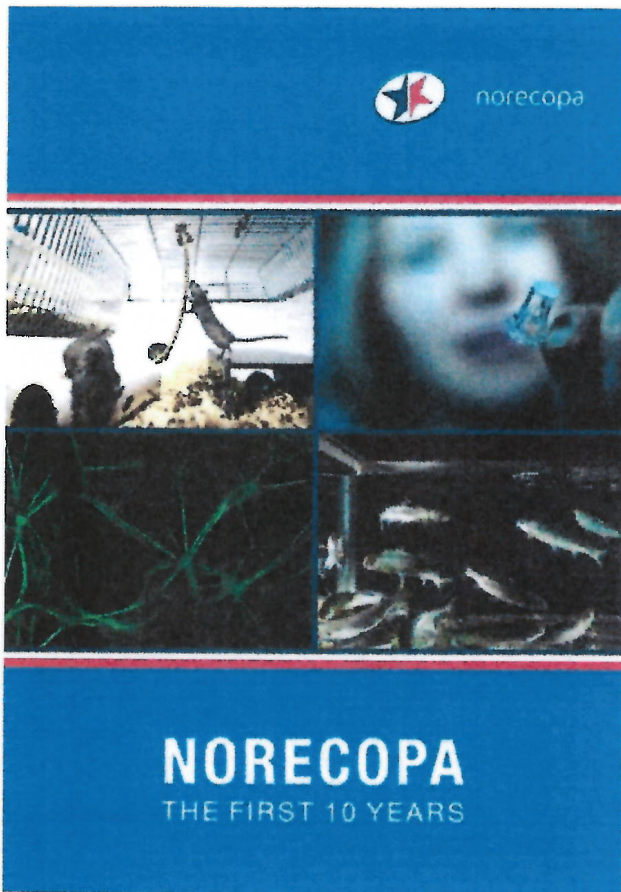
All the presentations from the meeting are available on Norecopa's website⁹.

⁶ <https://norecopa.no/about-norecopa/the-first-10-years>

⁷ http://epapir.info/Norecopa/The%5Ffirst%5F10%5Fyears/page_1.html

⁸ <https://norecopa.no/media/7972/norecopa-the-first-10-years.pdf>

⁹ <https://norecopa.no/about-norecopa/the-first-10-years>



Oslo, 13 April 2018

B. Bergersen
Bente Bergersen
(Head of the Board)

S. Knudsen
Siri Knudsen
(Board Member)

Børge N. Fredriksen
Børge N. Fredriksen
(Board Member)

Anton Krag
Anton Krag
(Board Member)

Adrian Smith
Adrian Smith
(Secretary)

Appendix

1) About the Organisation

Norecopa's structure and missions

Norecopa is an independent member organisation, with a Board which represents four of the stakeholders in animal research:

- Regulators
- Industry
- Academia
- Animal welfare organisations

Norecopa is registered in Brønnøysund Register Centre, with its own statutes¹⁰, and the Annual General Meeting as its highest authority¹¹. Norecopa is also a member of the European umbrella organisation for National Consensus Platforms, *ecopa (European Consensus-Platform on Alternatives)*¹².

Norecopa has an Activity Plan¹³ which is approved at the Annual General Meetings.

Norecopas Board and Annual General Meeting

The Board consisted of the following members up until the Annual General Meeting in 2017¹⁴:

Bente Bergersen (Head of the Board), Norwegian Food Safety Authority

deputy: Johan Teige, Norwegian Food Safety Authority

Glenn Arve Sundnes, MSD Animal Health Innovation AS

deputy: Terje Tingbø, Pharmaq AS

Siri Knudsen, University of Tromsø

deputy: Aurora Brønstad, University of Bergen

Anton Krag, Norwegian Animal Protection Alliance

deputy: Harald Small, Norwegian Society for Protection of Animals'
Fund for Alternatives

Glenn Arve Sundnes had informed the Board that he wished to resign at the Annual General Meeting on 7 June.

Norecopa's Annual General Meeting was held on 7 June 2017 on Adamstua in Oslo, together with a scientific seminar. Norecopa's Annual Report and accounts for 2016, as well as the Board's budget proposal for 2017, were approved. There were only 3 members eligible to vote

¹⁰ <https://norecopa.no/vedtekter>

¹¹ <https://norecopa.no/no/om-norecopa/årsmøter>

¹² <http://www.ecopa.eu>

¹³ <https://norecopa.no/aktivitetsplan>

¹⁴ <https://norecopa.no/styre-og-sekretariat>

at the Meeting, in addition to the Board Members. Considering that the Annual General Meeting is Norway's highest organ, this number is extremely disappointing.

All the papers and minutes from the meeting are available on Norecopa's website¹⁵.

The Meeting approved the Election Committee's proposal that Børge N. Fredriksen, Pharmaq AS, should represent industry for the next 4 years, with Ann Cathrin Einen, MSD Animal Health Innovation AS as his deputy.

After the Annual General Meeting the Board of Norecopa for 2017-2018 therefore consists of:

Bente Bergersen, Head of the Board (deputy: Johan Teige)**

Børge N. Fredriksen (deputy: Ann Cathrin Einen)*

Siri Knudsen* (deputy: Aurora Brønstad***)

Anton Krag (deputy: Harald Small)**

until 2020 **until 2018 *requests resignation at the Annual General Meeting in 2018*

Paragraph 11 of Norecopa's statutes states that 'the responsibility for administrative and personnel matters lies with the National Veterinary Institute'. Paragraph of the statutes states that changes in its statutes can only be conducted by the Board if there is a two-thirds majority at two consecutive regular Annual General Meetings. Norecopa's Board asked the Annual General Meeting in 2016 to consider a possible change to the statutes so that the secretariat could, if Norecopa wished it, be relocated elsewhere. The Meeting voted unanimously for the Board's proposal¹⁶. At the Annual General Meeting in 2017, however, the Board announced that they had decided not to make the same proposal again, but that they would continue to evaluate the situation¹⁷.

There have been three Board Meetings in 2017 (21 March, 23 May and 13 October). The minutes are available on Norecopa's website¹⁸.

Norecopa's Election Committee

The Election Committee until the Annual General Meeting in 2018 consists of:

- Bjørn Groven, Norwegian Food Safety Authority (leader, representative for the regulators)
- Adeleid Haugen, Norwegian Animal Protection Alliance (representative for animal welfare organisations)
- Simon Wadsworth, Cargill Aqua Nutrition (representative for industry)

¹⁵ <https://norecopa.no/arsmoter>

¹⁶ <https://norecopa.no/media/7450/referat-240516.pdf>

¹⁷ <https://norecopa.no/media/7842/referat-070617.pdf>

¹⁸ <https://norecopa.no/styrereferater>

- Tore Kristiansen, Institute of Marine Research (representative for research and teaching)

The Secretariat

Norecopa's secretariat is affiliated to the Norwegian Veterinary Institute, who thus have the responsibility for personnel and financial aspects. The position as Secretary was located at the Section for Disease Prevention and Animal Welfare at the Department of Animal Health in 2002. Following re-organisation of the Institute in 2016, the secretariat is now under the Section for Animal Health, Wildlife and Welfare. The Secretary receives support from the Institute's Administration, among other things to issue invoices.

Adrian Smith has been permanently employed as Norecopa's Secretary in a 50% position since 2008. In agreement with Norecopa's Board, he works from home. In 2017 he worked in an 80% position. The additional salary costs were covered by part of the extra funds (NOK 500,000) allocated to Norecopa by Parliament in December 2016.

Work conditions, equality and environmental impact

In 2017 Norecopa had one male employee in a 80% position and one female employee in a 60% position. Both had agreements with the Norwegian Veterinary Institute permitting them to work from home. Norecopa's Board consists of equal numbers of men and women (one of the latter being Head of the Board). No injuries or accidents to the employees were registered in 2017, nor were complaints about the working environment registered. Norecopa does not perform tasks which can cause significantly detrimental effects to the environment.

Norecopa's members

At the end of 2017, 47 institutions or departments had full membership of Norecopa, and 30 private persons were associate members. These figures were, respectively, 47 and 26 in 2016. The majority of the large research institutions in Norway are members of Norecopa. The Annual General Meeting voted to retain the same membership fees as in 2015: NOK 1,000 for institutions and NOK 200 for private persons. The membership fees for private persons has therefore been the same since Norecopa was established in 2007. Despite efforts via Norecopa's newsletters and social media, Norecopa has not managed to increase significantly the number of associate members in 2017.

2) Finances

Accounts for 2017

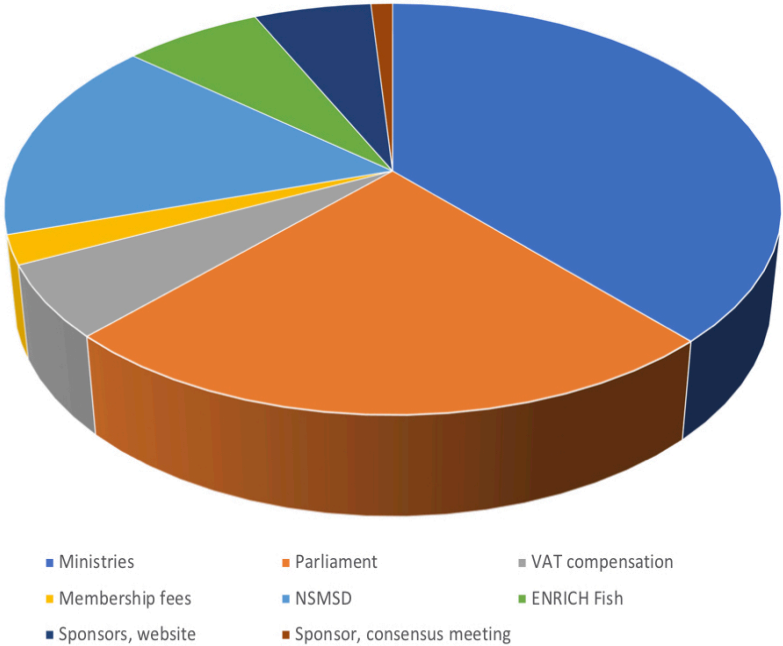
Norecopa's core funding comes from the Ministry of Agriculture and Food (Landbruks- og matdepartementet) and the Ministry of Trade, Industry and Fisheries (Nærings- og fiskeridepartementet). The funding is allocated via funds given to the Veterinary Institute to enable them to carry out tasks for the Government. Since Norecopa was established in 2007,

the Ministries have allocated funds for a 50% secretarial position and approx. NOK 200,000 to run the secretariat. In 2017 (as in the years 2013-2016), Norecopa received, however, extra funds of NOK 500,000 as a result of the debate in Parliament in December 2016 on the State Budget for the following year.

The accounts for 2017 show a deficit of NOK 236,968. This was caused by technical adjustments of the Veterinary Institute's accounts, during which, among other things, the salary costs for Karina Smith were increased with an amount which was more than NOK 300,000 higher than that agreed upon earlier in the year. As compensation for this, the Veterinary Institute has transferred NOK 80,000 to Norecopa's account for 2018.

The accounts for 2017 were controlled by Norecopa's own accountant, Jon Tjørsvaag Nilsen. Norecopa's accounts form part of the Veterinary Institute's accounts, and they are therefore also controlled by the Office of the General Auditor of Norway. The necessary conditions for the continued existence of Norecopa are present.

Distribution of income in 2017



Accounts and budget, Norecopa

	Accounts 2017	Budget 2017
Expenses		
1	Participation in ecopa's annual meeting	0,00
		10 000,00
Secretariat		
2	Salary, Adrian Smith 80%	1 201 000,20
3	Salary, Karina Smith 60%	647 290,80
		337 425,00
4	Office expenses	63 068,95
		41 946,56
4a	Office materials	6 866,60
4b	Purchase and upgrading, computer and software	56 202,35
4c	Telephone and broadband	
Printing expenses		
5	Material for the Annual General Meeting	
		10 000,00
6	Other publicity material	3 949,16
		10 000,00
7	Membership fees, ecopa	898,55
		1 000,00
8	Scientific meetings, including Anniversary book	165 398,54
		80 000,00
Website		
9	Development, maintenance, licences*	112 806,40
		60 000,00
10	Domain registration	7 670,50
		15 000,00
Board meetings and Annual General Meeting		
	Travel expenses	23 248,57
		28 000,00
11	Annual General Meeting	23 248,57
		20 000,00
12	Public hearings	
		8 000,00
	Food	
13	Annual General Meeting	7 278,90
		10 000,00
Other scientific activities		
		258 779,71
		361 000,00
14	3R Prize	30 000,00
		36 000,00
15	Meeting on fish vaccines	
16	Other	
		85 000,00
17	Voss	
18	ENRICH-Fish	48 646,30
		140 000,00
19	New webpages**	82 812,50
		100 000,00
20	PREPARE***	57 104,84
21	Consensus meeting****	40 216,07
Total expenses	2 491 390,28	2 102 849,56
Income		
22	State funding	-1 300 000,00
		-1 300 000,00
23	VAT compensation	-118 814,00
		-90 000,00
24	Sponsorship from Silansens Stiftelse/LAL/SAB/Dyrebeskyttelsens Fond	-22 538,88
		0,00
25	Sponsorship from NSMSD (Karina Smith)	-337 425,00
		-337 425,00
26	ENRICH-Fish	-143 352,92
		-140 000,00
27	New webpages (Novo Nordisk + NSMSD+SAB+LAL+USDA)	-122 003,88
		-50 000,00
28	PREPARE	-22 262,73
29	Membership fees, full members	-43 000,00
		-40 000,00
30	Membership fees, associate members	-4 600,00
		-5 000,00
31	Surplus from previous year	-140 424,56
		-140 424,56
Total income	-2 254 421,97	-2 102 849,56
Result	-236 968,31	0,00

*Sponsored by NSMSD: 50.000 (under no. 27)

**Agreement with USDA, who paid 72.003,88 (under no. 27)

***Open Access publishing sponsored by UFAW: 22.262,73 (under no. 28)

****Sponsored by LAL: 22.538,88 (under no. 24)

Norecopa's experience is that it is extremely difficult to run an organisation on the 50% position which is provided by the Ministries' core funding. Any extra funding has had to come from other sources. The extra funds (NOK 500,000) provided annually from 2013 onwards by the Standing Parliamentary Committee on Business and Industry (Næringskomitéen) have given Norecopa much greater scope for its activities.

The salary costs for Karina Smith, who managed the NORINA, TextBase og Classic AVs databases¹⁹, were sponsored in 2017 by the Nordic Society Against Painful Animal Experiments, as they have done since 2012. The work of developing the NORINA database was started at the Norwegian School of Veterinary Science in 1991, but this was taken over by Norecopa in 2011.

Eksternal funding of Norecopa's activities in 2017

1. In 2012 Norecopa signed a 3-year agreement with the Nordic Society Against Painful Animal Experiments²⁰ (NSMSD) whereby they financed the work of maintaining the NORINA database²¹. Karina Smith was employed with these funds, in a 50% position. The Society extended their agreement in 2015 for a new 3-year period (until the end of 2017), this time with funds for a 60% position.
2. Norecopa applied to UFAW²² (Universities Federation of Animal Welfare, UK) for Open Access publication of its paper about the PREPARE guidelines, as well as printing information material about PREPARE. UFAW gave Norecopa £2,068 for this work.
3. Norecopa applied to the Nordic Society Against Painful Animal Experiments²³ (NSMSD) for funds to further develop the website, and received NOK 50,000.
4. Norecopa applied to Laboratory Animals Ltd. for support for its consensus meeting on field studies which was arranged in October 2017²⁴, and received 2,500 euros.
5. Norecopa applied to the Norwegian Gaming and Foundation Authority for compensation for Value Added Tax payments in 2016, and received NOK 118,814 in December 2017.
6. In the proposals for the State Budget for 2017 from the Standing Parliamentary Committee for Business and Industry²⁵, Norecopa's core funding was increased by NOK 500,000 to NOK 1.3 million.

3) Activities designed to achieve Norecopa's aims

Norecopa's scientific meeting

Norecopa arranged its annual scientific meeting on Adamstua in Oslo after the Annual General Meeting on 7 June 2017.

The meeting consisted of the following presentations:

¹⁹ <https://norecopa.no/databases-guidelines>

²⁰ <http://www.nsmsd.no>

²¹ <https://norecopa.no/NORINA>

²² <http://ufaw.org.uk>

²³ <http://www.nsmsd.no>

²⁴ <https://norecopa.no/meetings/field-research-2017>

²⁵ <https://www.stortinget.no/no/Saker-og-publikasjoner/Publikasjoner/Innstillinger/Stortinget/2015-2016/inns-201516-008>

- *Assessing welfare: how, why and when?* Dr. Elliot Lilley, RSPCA Science Group, UK
- *How to assess welfare in genetically altered animals?* Anne Zintzsch, Animal Welfare Officer, Max-Delbrück-Center for Molecular Medicine, Berlin
- *PREPARE: new guidelines for planning animal experiments.* Adrian Smith, Norecopa

Approximately 50 people were present. The presentations are available on Norecopa's website²⁶.



Veterinarian Anne Zintzsch from Berlin presented guidelines for evaluating the welfare of genetically altered rodents, during Norecopa's scientific meeting after the Annual General Meeting on 7 June 2017.

PREPARE: Norecopa's guidelines for planning animal experiments

Despite the existence of many guidelines for reporting the results of animal experiments in scientific publications, there is considerable consensus that many studies have been poorly designed, and that the results are not reproducible. Many are also concerned about the low translatability of results from animal experiments to humans.

Norecopa has for a long time been of the opinion that these problems are partly due to inadequate planning. Norecopa's Secretary, in collaboration with colleagues in Great Britain and Norway, started therefore the work of producing detailed guidelines for planning animal experiments. The guidelines were given the name *PREPARE (Planning Research and Experimental Procedures on Animals: Recommendations for Excellence)*. A paper about PREPARE was accepted by the journal *Laboratory Animals*, and was pre-published on the Internet on 3 August 2017. The paper will be published in the paper version of the journal in April 2018. The guidelines consist of a checklist with 15 topics, which has been translated into 13 languages, as well as comprehensive webpages for each for the topics²⁷.

²⁶ <https://norecopa.no/arsmoter>

²⁷ <https://norecopa.no/PREPARE>

The screenshot shows the Norecopa website's PREPARE section. At the top, there is a blue header with the Norecopa logo (a stylized star) and the text 'norecopa'. To the right, there are language options for 'NORSK' and 'ENGLISH', and a search bar. Below the header is a navigation menu with links for 'About Norecopa', 'Alternatives', 'Databases & Guidelines', 'Education & training', 'Legislation', 'Meetings', 'More resources', 'News', 'PREPARE', 'Species', and 'NAL'. The main content area features a list of 15 topics: 'PREPARE Checklist', '1-Literature searches', '2-Legal issues', '3-Ethical issues, Harm-Benefit Assessment and humane endpoints', '4-Experimental design and statistical analysis', '5-Objectives and timescale, funding and division of labour', '6-Facility evaluation', '7-Education and training', '8-Health risks, waste disposal and decontamination', '9-Test substances and procedures', '10-Experimental animals', '11-Quarantine and health monitoring', '12-Housing and husbandry', '13-Experimental procedures', '14-Humane killing, release, re-use or re-homing', and '15-Necropsy | Comparison with ARRIVE'. Below this list, there is a breadcrumb trail 'norecopa.no / PREPARE' and social media icons for Facebook, Twitter, Email, and a plus sign. The main text reads: 'As part of ongoing efforts to reduce waste and increase the reproducibility of animal research and testing, a group of experts led by the Secretary of Norecopa has produced a set of guidelines for planning animal experiments: PREPARE (Planning Research and Experimental Procedures on Animals: Recommendations for Excellence)'.

In addition to the checklist and webpages for each topic, PREPARE contains a suggestion for a contract between the scientists and the animal facility which they plan to use. It is the authors' experience that there is often inadequate contact between these parties at the planning stage. This can lead to misunderstandings or important items being forgotten when the animals are being cared for, or samples taken. This can lead to discussions later about who is going to pay for the experiment's extra costs, such as waste disposal and decontamination.

PREPARE is available at <https://norecopa.no/PREPARE>

The costs of publishing PREPARE under Open Access, and printing costs for publicity material, were sponsored by the Universities Federation for Animal Welfare (UFAW)²⁸.

Norecopa's website

Norecopa has had its own website, norecopa.no, since February 2008. The suffices .info, .com, .eu, .net, .org and .cn are also registered for the domain name. The website has been updated continually in 2017 by the Secretary and Karina Smith. Norecopa uses the application Google Analytics to monitor the use of the website.

External contributions to the website

1. In 2017 Norecopa added over 1,600 new pages related to the 3Rs, which had been selected by the US Animal Welfare Information Center (AWIC)²⁹ from the database of

²⁸ <http://www.ufaw.org.uk>

²⁹ <http://awic.nal.usda.gov>

the National Agricultural Library. Most of the expenses for this work were paid by the US Department of Agriculture. The records are searchable, in the same way as the other 6,000 pages in Norecopa's database.

2. Norecopa's Secretary has continued to develop the database 3R Guide³⁰ which is integrated in Norecopa's website. 3R Guide was started as a collaboration with Information Specialist Tim Allen at AWIC.
3. Norecopa applied to the Nordic Society Against Painful Animal Experiments (NSMSD)³¹ for support to develop the website further. The Society awarded Norecopa NOK 50,000 to this work in 2017.

Norecopa used the companies NetLab and Bitfarm to develop the new website. Norecopa has a support and licensing agreement with Bitfarm. The companies Webhuset and Webconsult are used to register the domains and to run the discussion forum.

The ENRICH Fish Project

Norecopa sponsored Nofima Tromsø with NOK 100,000 so that they could send an application to the Research Council in 2014 entitled *“Using optimised environmental enrichment to improve the rearing conditions and welfare of Atlantic salmon in relation to the 3Rs”*, abbreviated to ENRICH Fish. The application was successful, and was one of three projects funded by the Council that year under a special section for 3R projects within marine research. Norecopa had responsibility for one of the work packages, which involved arranging seminars and dissemination of the results. The project started in March 2015 and ended on 28 March 2017.

The main objective of ENRICH Fish was to improve the implementation of the 3Rs in laboratory studies on Atlantic salmon *Salmo salar* L. (the most widely used research animal in Norway) by optimising their rearing environment. ENRICH Fish specifically addressed the Reduction and Refinement goals of the 3Rs and also addressed a 4th R, Relevance. To achieve this, ENRICH Fish utilized environmental and social enrichment.

ENRICH Fish had the following specific objectives:

- i) Review the suitability of differing environmental enrichment materials and assess their effects upon the welfare and performance of tank-held juvenile salmon and their further impacts upon data variability and quality.
- ii) Assess whether simulated 2-D enrichment materials (such as patterning of the tank wall or substrate) can provide similar welfare and performance benefits to 3-D enrichment materials.

³⁰ <http://www.3RGuide.info>

³¹ <http://www.nsmsd.no>

- iii) Investigate whether dynamic manipulation of environmental factors such as water level and direction can have a positive effect upon fish welfare, performance and data quality.
- iv) Evaluate the effects of social enrichment, by optimising group size, upon fish welfare and performance across various lifestages (pre-smolts and post-smolts).
- v) Investigate the effects of changing rearing unit volume on the acclimation and behaviour of tank-held juvenile salmon.

Summary of results:

- i) To test the effectiveness of different types of enrichment materials, fish in treatment tanks were offered overhead, floating or benthic shelters from light and conspecifics and were compared to a best-practice control group without any enrichment (see Figure 1). Tanks with shelters improved the fin condition of fish. Floating shelters also reduced inter-individual variability in growth in comparison to control fish.

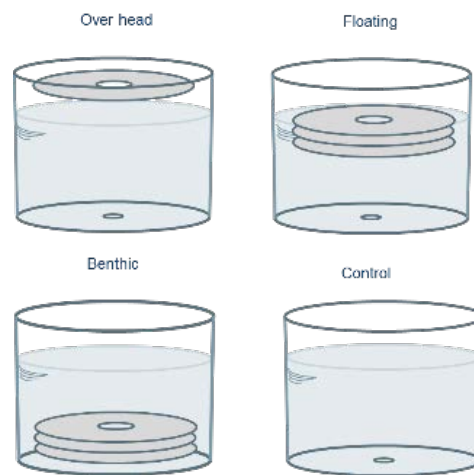


Figure 1. Positioning of shelters in the tanks

- ii) To test the effects of simulated versus actual enrichment on fish welfare and performance, fish were held in tanks that had either 2-D simulated enrichment materials (photographic films applied to tank bottoms and sides that mimic complex habitats) or 3-D enrichment materials (actual benthic and floating substrates), see Figures 2 and 3.



Figure 2. The different types of physical enrichment-structures in salmon tanks. The two treatments were also repeated with 1:1 2-D pictures of either the floating or benthic substrates.

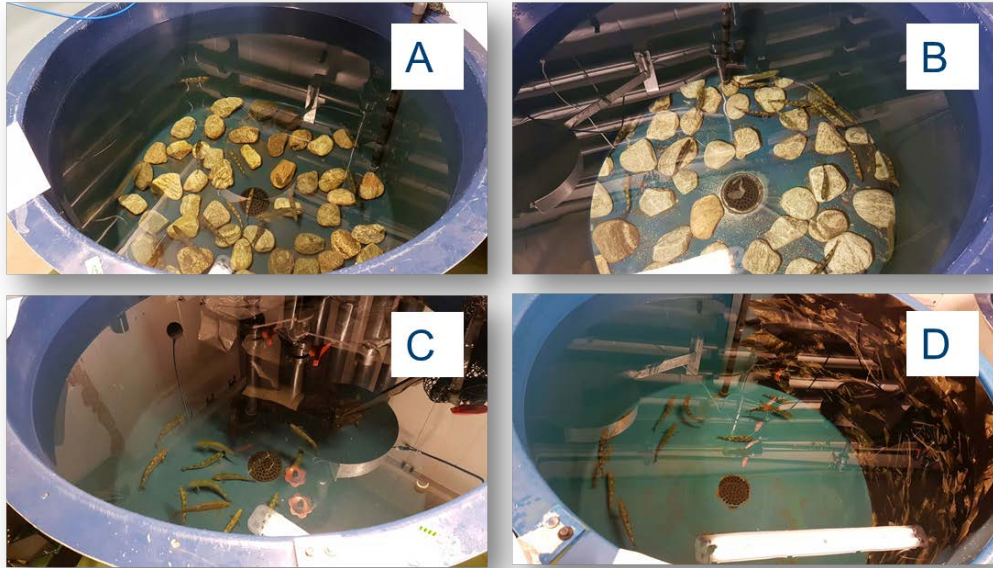


Figure 3. The different types of enrichment materials. A) benthic substrate of stones, B) picture of stones stuck to the bottom of the tank, C) floating artificial algae, D) picture of floating algae stuck to the side of the tank. Figure: Chris Noble, Photos: Tor H. Evensen and David Izquierdo-Gomez

The group with floating algae in the tanks had significantly poorer growth compared to all other groups. The lowest inter-tank variability between treatments occurred in the control, 3D and 2D –benthic groups. The algae and benthic physical enrichments affected self-cleaning of tanks, which means there will be more frequent, and possibly disturbing, cleaning procedures during experiments. Initial results suggest that 2D photographic films on the bottom of the tanks could bring improved performance and welfare benefits to juvenile salmon rearing in the lab.

- iii) To investigate whether dynamic changes in the rearing environment could improve fish performance and welfare, fish were subjected to dynamic changes in water direction or water level.
Dynamic enrichment did not show any positive effects on the growth performance of salmon, but there may be benefits for development of fin condition.
- iv) To assess optimal group size and density across various lifestages of salmon, ENRICH Fish partners carried out experiments utilizing pre-smolts (8 group sizes), small post-smolts (5 group sizes) and large post-smolts (4 group sizes). Experiments showed that group size had a large influence on the level of aggression and the

between-tank variation of aggression in salmon, especially in pre-smolts. Aggression was generally lower in recently transferred small post-smolts but this increased as the group sizes became smaller. Little aggression was seen in larger post-smolts. Scale loss, presumably resulting from aggressive interactions, was higher and more variable between tanks in the smaller groups. A stocking density of 10 kg m⁻³ is recommended as a balance between the Reduction and Refinement goals of the 3Rs; reducing fish number and density too much can lead to increased aggression and reduced welfare in pre- and post-smolts.

To assess the effects of changes in tank volume on acclimation and behaviour, salmon pre-smolts that were previously acclimated to 1 m (400 L) tanks were transferred to experimental tanks (in triplicate) of smaller (0.5 m, 75 L), identical (1 m, 400 L) or larger (1.5 m, 900 L) size and held at 10 kg for 9 weeks. Appetite after transfer recovered faster in the 1.5 m tank groups than in the 1 m tank groups, which also recovered faster than the 0.5 m tank group. Mean scale loss was highest and most variable between tanks in the 0.5 m tank size group, and lowest and least variable in the 1.5 m tank size group. The results clearly show that salmon pre-smolts acclimate slower and have worse performance during acclimation when transferred to smaller tanks than to similar or larger tanks.

Norecopa manages a separate webpage for ENRICH Fish, at the domain www.enrich-fish.net.

Norecopa's 3R Prize

Norecopa awarded its 3R Prize in 2017 to Adam Lillicrap at the Norwegian Institute of Water Research (NIVA). Adam Lillicrap has led work at European level to develop *in vitro* tests on cells and embryos to replace the present acute toxicity test using fish. Adam Lillicrap has also been involved in work to change the requirements for tests used to measure the accumulation of chemicals in the environment, so that fewer animals are used.

Adam Lillicrap is also the leader of a global advisory group on alternatives to animal studies, and leads a project designed to develop a new ISO standard for toxicity testing based upon use of cells³². His presentation during the award ceremony is available on Norecopa's website³³. A representative of the 3R Prize Committee, Torill Malmstrøm, handed over the award.

Other nominees:

In addition to the prizewinner, Professor Jarl Giske at the University of Bergen was also nominated for the prize. Professor Giske conducts research on the behaviour, lifecycle and

³² <http://onlinelibrary.wiley.com/doi/10.1002/etc.3603/full>

³³ <https://norecopa.no/media/7837/lillicrap.pdf>

distribution of aquatic species. He has developed mathematical models to understand the behaviour of a range of species, and thus also the dynamics of the ecosystem in which they live. Such models of the mechanisms controlling physiology and behaviour increase our understanding of animals' life patterns and motivations, without the need to conduct animal experiments.

The Committee for Norecopa's prize for the advancement of the 3Rs (the 3R Prize)³⁴ for 2016-2017 was:

Lasse Skoglund, University of Oslo (leader)
Torill Malmstrøm, Dyreetikk.no
Heidi Bugge, Norwegian Food Safety Authority
Christian Wallace, VESO Vikan

The Committee is appointed by Norecopa's Board for two years at a time.

Norecopa's publications in 2017

Newsletters

Since 2008, Norecopa's Secretary has issued electronic newsletters to its members and other interested parties. Seven newsletters were issued in 2017³⁵. The number of subscribers has for the last few years been relatively stable, at around 1,200 people. When it became clear that more and more foreign colleagues wished to subscribe to the newsletter, a decision was taken at the Board meeting in May 2017 to publish them in English as from number 3-2017. All of Norecopa's newsletters are archived on the website³⁶, so they are searchable, which increases their value.

Scientific papers

Norecopa's Secretary has published the following scientific papers in 2017:

1. Reed B, Beatham S, Carter S, Clubb R, Garrod K, Gale M, Gomm M, Knight K, Lane J, Mathews F, Pimlott P, Smith A, Wilson R, Weyer U & Hawkins P (2017): Report of a RSPCA/APHA Meeting on the welfare of wild animals used in research. *Animal Technology and Welfare*, 16/1: 13-25.

The paper is a report from the third in a series of meetings arranged by APHA (Animal and Plant Health Agency) og RSPCA (Royal Society for the Prevention of Cruelty to Animals) in the UK, on 8 September 2015. The meeting was entitled "Welfare of wild animals used in regulated procedures". This series of meetings was a direct result of

³⁴ <https://norecopa.no/norecopas-3r-pris>

³⁵ <https://norecopa.no/nyhetsbrev>

³⁶ <https://norecopa.no/news/newsletters>

Norecopa's international consensus meeting in September 2012 on the *Harmonisation of the Care and Use of Agricultural Animals in Research*³⁷. Norecopa's Secretary participated in the meeting and held a presentation about guidelines and other resources within field research. The reports from the previous meetings are published on Norecopa's website, with permission.³⁸

2. Smith AJ, Clutton RE, Lilley E, Hansen KEA & Brattelid T (2017): PREPARE: guidelines for planning animal research and testing. *Laboratory Animals*, pre-published under Open Access on 3 August 2017 (DOI: 10.1177/0023677217724823). The paper will be published in the paper version of the journal in April 2018. The paper is already available on both the journal's website and Norecopa's website³⁹, together with a checklist in 13 languages and comprehensive webpages for each topic on the PREPARE checklist. The checklist was downloaded over 550 times between its launch in August and 31 December 2017.
3. Osborne NJ, Ritskes-Hoitinga M, Ahluwalia A, Alam S, Brown M, Henderson H, de Leuw W, Marsh M, Moher D, van Oort E, Rawle F, Riederer BM, Sanchez-Morgado J, Sena ES, Struthers C, Westmore M, Avey MT, Kalman R, O'Connor A, Sargeant J, Petrie A & Smith A (2017): Letter to the editor: round table unites to tackle culture change in an effort to improve animal research reporting. *BMC Veterinary Research* 13:314.⁴⁰

Chronicles and letters to the media

Norecopa has not had the capacity to write chronicles or letters in 2017. Among other things, the production of the consensus statement from the meeting on field research, and presentations of PREPARE at scientific meetings, have taken much time.

Participation in scientific meetings

The following describes only the scientific meetings in which Norecopa's Secretary has participated, or where Norecopa has been profiled. Several of Norecopa's Board members have participated at similar meetings.

1. Norecopa had an electronic poster at the *Lab Roots webinar* on 8-9 February 2017
2. The organisers placed a flyer about Norecopa and PREPARE in the bags of all the participants at the annual meeting of GV-SOLAS in Cologne on 11-13 September 2017, and Anne Zintzsch, Berlin, undertook to display a poster about PREPARE.
3. Norecopa had a poster at the annual meeting of LASA in Birmingham on 28-30 November 2017.

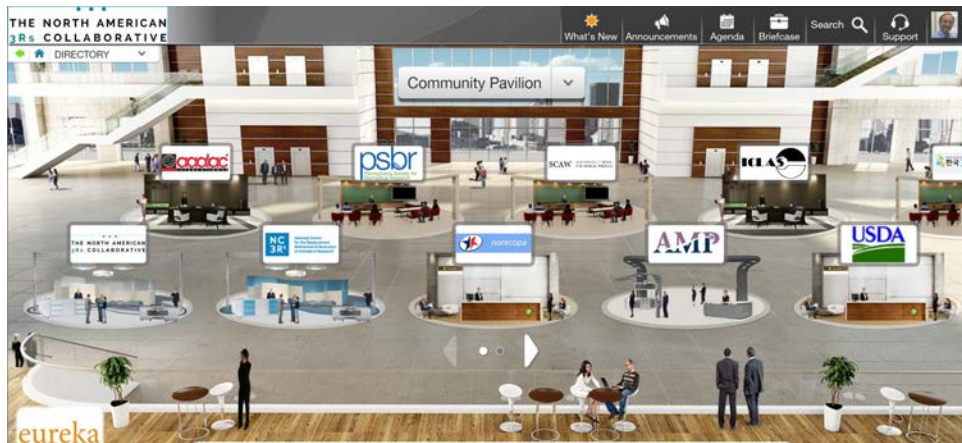
³⁷ <https://norecopa.no/agricultural-animals>

³⁸ <https://norecopa.no/files/RSPCA-AHVLA2014.pdf>

³⁹ <https://norecopa.no/PREPARE>

⁴⁰ <https://link.springer.com/epdf/10.1186/s12917-017-1235-9>

4. Norecopa's Secretary gave a presentation about PREPARE at the conference organised by LAVA, ESLAV and ECLAM entitled *Reproducibility of Animal Studies*⁴¹ in Edinburgh on 25-26 September 2017. Han had also a poster about PREPARE. After the conference, he was invited to sign a Letter to the Editor of the journal *BMC Veterinary Research*, written by participants of a round-table meeting during the conference⁴².
5. Norecopa's Secretary participated in the *10th World Congress on Alternatives and Animal Use in the Life Sciences* in Seattle⁴³ on 20-24 August 2017. He had two oral presentations, one on PREPARE and one about Norecopa⁴⁴. During the congress, he established connections with the newly started NA3RsC (North American 3Rs Collaborative)⁴⁵, which had made a virtual community of 3R organisations. NA3RsC was very interested in profiling Norecopa in this community. During the months after the congress, Norecopa has been given a booth to display information about its resources and activities⁴⁶.



Norecopa's Secretary has held lectures on alternatives to animal research and about Norecopa's work on courses in laboratory animal science for researchers at the Universities of Bergen (7 February and 4 September) and Tromsø (6 March).

Contact meetings

Parliament

Norecopa's Secretary has continued to maintain contact with Parliament, in order to increase the political interest for the 3Rs, and to achieve an understanding of the need for further resources to the work on alternatives to animal experiments.

On 24 and 26 October 2017 respectively, the Secretary presented Norecopa during the open

⁴¹ <http://lavaeslaveclam.efconference.co.uk>

⁴² <https://link.springer.com/epdf/10.1186/s12917-017-1235-9>

⁴³ <http://wc10seattle.org>

⁴⁴ <http://www.altex.ch/altex-proceedings/wc-10-seattle>

⁴⁵ <http://www.na3rsc.org>

⁴⁶ <https://engage.vevent.com/index.jsp?eid=6269&seid=14&id=10>

hearings for the Parliamentary Standing Committees for Finance and Economic Affairs, and Business and Industry, about the proposal for the State Budget for 2018. The Committee for Business and Industry is the one which handles the part of the budget from which Norecopa's funds come.

On 11 December 2017 the Committee's proposal, *Innstilling nr. 8 S (2017-2018)*⁴⁷ was published, and it was approved by Parliament on 6 December. The proposal contained the following unanimous statement (*our translation*):

The Committee is of the opinion that, within the framework of the Government's proposal for the State Budget, the economic framework for Norecopa must be kept at least at the same level as in 2017. The Committee is of the opinion that it is necessary to secure funds for a 100% position to Norecopa's secretariat.

The Research Council and NENT

Norecopa continues to have contact with the Research Council of Norway (see also the section on ENRICH Fish).

In October 2017 NENT (the National Committee for Research Ethics in Science and Technology) published new guidelines for the use of animals in research⁴⁸, with a deadline of 11 December to comment upon them. Norecopa has delivered comments on the guidelines⁴⁹.

In 2016 the Research Council invited applications for funds within a programme called INFRASTRUKTUR, which had approximately 1 billion NOK available. Norecopa applied for funds to strengthen the secretariat, secure long-term funding of its website, and to create an electronic system (Wiki) to share information about methods to refine animal research. The Council received 92 applications for a total of 5 billion NOK. Norecopa's application received very favourable comments from the foreign scientific committee which evaluated it, but the application was unsuccessful, and Norecopa received notice of this in June 2017.

Norwegian Food Safety Authority

In 2017 Norecopa was invited to begin to participate in regular collaborative meetings with the Authority's research animal team. These meetings will probably be biannually. The first meeting was held in Oslo on 20 October.

Board member Anton Krag and Secretary Adrian Smith are *ad hoc* scientific experts for the Authority, when evaluating applications for animal experiments.

⁴⁷<https://www.stortinget.no/no/Saker-og-publikasjoner/Publikasjoner/Innstillinger/Stortinget/2017-2018/inns-201718-008s>

⁴⁸ <https://www.etikkom.no/Aktuelt/Nyheter/2017/nye-retninglinjer-for-dyreforsok>

⁴⁹ <https://norecopa.no/media/8032/norecopa-uttalelse-nent-retningslinjer-081217.pdf>

Updating the NORINA and TextBase databases

The NORINA database was started in August 1991⁵⁰ by Karina Smith while she worked at the Norwegian School of Veterinary Science (NVH). NORINA⁵¹ contains information about products which can be used as alternatives or supplements to animals in teaching and training. A few years later, she started a second database, TextBase⁵², with information on literature within laboratory animal science. When she left the School in 2011, Norecopa signed an agreement with NVH whereby Norecopa took over responsibility for the work of maintaining both databases, and Karina was given a position at Norecopa, with funds from the Nordic Society Against Painful Animal Experiments (NSMSD). The databases were integrated into Norecopa's website when Norecopa's new site was launched on 1 June 2016.

The knowledge of alternatives which was gained during the work of compiling NORINA resulted in the creation of a multimediaroom and training clinic at NVH⁵³, where students can train using such products.

Karina retired on 31 December 2017, having working on the databases nearly continuously for 26 år. NORINA has now over 3,200 records, and TextBase has over 1,700 records.

We thank Karina for excellent work over many years, and the NSMSD for their enduring support.



Collaboration with the other Nordic 3R centres

Denmarks 3R-Center

Norecopa's Secretary has had close contact with the Danish 3R-Center⁵⁴ since 2013 when he was elected onto its Board. In 2017 the whole Board was re-elected for 4 more years. The Board functions also as the Danish *National Committee for Laboratory Animals and Alternatives*, the creation of which is a requirement according to EU's Directive 2010/63. He participates in these meetings as a private individual, not as a representative of Norecopa, but the experience from this work is valuable for Norecopa as well. In 2017 he participated in 6 Board meetings in Copenhagen. He was also the moderator at the Center's annual 3R

⁵⁰ <https://norecopa.no/norina-database/awards/history-of-norina>

⁵¹ <https://norecopa.no/norina-database>

⁵² <https://norecopa.no/textbase-database>

⁵³ <https://norecopa.no/norina-database/multimediarom>

⁵⁴ <http://www.3rcenter.dk>

symposium, which was arranged in Copenhagen on 7-8 November⁵⁵ with 185 participants. At the symposium, a poster about Norecopa was on display.

Sweden's 3R-Center

Norecopa's Secretary was present at the opening of Sweden's 3R-Center⁵⁶ in Jönköping on 21 November 2017. He was invited to hold a presentation on Refinement, for which he used the title *Raffinering av dyreforsøk: Askungen blant de 3 R'ene*⁵⁷.

The Center has a staff of 8 persons and has been promised 15 million SEK annually the first three years. This money is in addition to the 13-14 million SEK which are already allocated annually to research projects within the 3Rs by the Swedish Research Council⁵⁸. Sweden's national committee for the protection of research animals⁵⁹ functions as the steering committee for the Center.



Lectures in Germany

The Secretary presented Norecopa's work in general, and the PREPARE guidelines in particular, at 4 meetings during a 4-day visit to Germany in December 2017. First stop was a lecture to approximately 100 researchers at the Max Delbrück Center for Molecular Medicine⁶⁰ in Berlin. This was followed the same day by a meeting with representatives of the national committee for protection of research animals and employees of the Federal Institute for Risk Assessment (BfR)⁶¹. The next day he held a lecture at the Department of Veterinary Medicine at the Freie Universität in Berlin⁶². On the last day he travelled to Hamburg and presented PREPARE to approximately 60 researchers at the University Medical Center (UKE)⁶³.

Norecopa and social media

Norecopa has had a Facebook profile⁶⁴ since May 2013. The number of "likes" rounded 500 in January 2017 og by the end of 2017 the figure was exactly 600.

Norecopa created a Twitter profile in 2016 with the name @norecopa.

⁵⁵ <https://3rcenter.dk/arrangementer/symposium-2017>

⁵⁶ <http://www.jordbruksverket.se/3R>

⁵⁷ <https://norecopa.no/211117.pdf>

⁵⁸ <https://www.vr.se/forskningsfinansiering/sokabidrag/vetenskapsradetsutlysningar/stangdautlysningar/projektbidragalternativametodertilldjurforsokenligt3rprincipen.5.25e86c0f1350e9e545deee.html>

⁵⁹ <http://www.jordbruksverket.se/swedishboardofagriculture/engelskasidor/animals/swedish3rscenter/aboutus/nationalcommittee.4.5593fa9915fcd5f0f543e12b.html>

⁶⁰ <https://www.mdc-berlin.de>

⁶¹ <http://www.bfr.bund.de/en/home.html>

⁶² <http://www.vetmed.fu-berlin.de/en/index.html>

⁶³ <https://www.uke.de/english/index.html>

⁶⁴ <https://www.facebook.com/Norecopa>

Activity on Facebook and Twitter is not among Norecopa's prioritised tasks.

Other activities in 2017

Norecopa's Secretary has also performed the following tasks:

- participated in a meeting arranged by the EU Commission in Brussels on 31 March 2017 where the preliminary results of an evaluation of Directive 2010/63 were presented. Such an evaluation is mandatory according to Article 58 of the Directive. Prior to the meeting, Norecopa had responded to a survey from the Commission about the Directive.
- participated in a network of *Culture of Care*, which was established after the FELASA congress in Brussels in June 2016. Norecopa's Secretary has constructed the website for the network⁶⁵. He was the co-author of a poster about the network at the Scand-LAS symposium in Copenhagen in May/June 2017.
- on his own initiative assisted the ASAB (Association for the Study of Animal Behaviour) and ABS (Animal Behavior Society) in updating the links in their communal guidelines for the use of animals in behavioural research.⁶⁶
- given input to the National Committee (NCad)⁶⁷ in the Netherlands in connection with the development of a manuscript about *Strength of Evidence* when planning animal research.
- been co-author of a chapter entitled *Fish as laboratory animals* in a book to be published in 2018 with the title *The Welfare of Fish*.
- functioned as a referee for one manuscript in each of the journals *Laboratory Animals*, *Plos One* and *ALTEX (Alternatives zu Tierexperimenten)*
- delivered material about Norecopa's activities to *ecopas* column in the journal *Alternatives zu Tierexperimenten (ALTEX, June 2017)* and to Francopa's newsletter.
- been a member of the organising committee for the Scand-LAS symposium to be held in Kristiansand in April 2018. Board member Siri Knudsen is head of the committee.
- given advice about the contents of the Animal Nurse course at Nord University, Bodø.
- lectured on alternatives to animal research for two classes at Kristiansand Katedralskole in January 2017
- received the *Sir Patrick Moore award*⁶⁸ from the Royal Society for the Prevention of Cruelty to Animals (RSPCA) at a reception in London on 17 June. The award was for 'outstanding contributions to animal welfare science'⁶⁹.

⁶⁵ <https://norecopa.no/alternatives/culture-of-care>

⁶⁶ <https://norecopa.no/3r-guide/guidelines-for-the-treatment-of-animals-in-behavioural-research-and-teaching>

⁶⁷ <https://english.ncadierproevenbeleid.nl>

⁶⁸ <https://www.rspca.org.uk/getinvolved/honours/categories>

⁶⁹ <http://norecopa.no/media/7833/press-release.pdf>