



Mistra Sport
& Outdoors

ANNUAL REPORT 2023

Contents

Introduction

About us	3
”Half time, halfway”	4
“We want to be part of the solution”	5
Highlights of 2023	6
Co-creation – The key to success	8
Report from the first phase of Mistra Sport & Outdoors	9

Results

Model for change that aims to help sports and outdoor recreation become more sustainable	11
Researchers and students working closely together	12
Book on the tension between sport, performance and sustainability	13
Equal access to sports facilities is important to increase sustainability	14
Recipe book for multifunctional landscapes – how we can coexist in and with nature	15
Do circular actions always result in environmental savings?	17
How to make events more eco-friendly	18
Training on eco-friendly canoeing – “Something we can work on in practice”	19

Knowledge transfer

Publications and presentations	20
Webinars, success stories and blog posts	22

General information on the programme

Mistra Sport & Outdoors in figures	23
Programme participants	24
Financial overview	25

Looking ahead

Application for the second phase of Mistra Sport & Outdoors	26
Network-based centre	26

About us

Mistra Sport & Outdoors is a research and co-creation programme designed to create knowledge and solutions for enhanced sustainability in sport and outdoor recreation. Researchers working in various fields at different universities are working closely with organisations, authorities and companies that focus on sport and outdoor recreation in order to achieve the programme's goals.

This programme is being hosted by Mid Sweden University. 80 per cent of the funding was provided by Mistra, the Swedish Foundation for Strategic Environmental Research, and the rest was provided by participating universities and organisations.

Programme goals

- 1** To co-create world-leading research in order to identify and implement sustainable solutions in practice
- 2** To start a movement for sustainable development in sport and outdoor recreation
- 3** To work on establishing a network-based development centre for sustainable solutions

In 2023, the programme spent a lot of time working on the application for the second phase, alongside ongoing research and work in the learning groups.



[Find out more about Mistra Sport & Outdoors »](#)



Half time, halfway

2023 was the year in which Mistra Sport & Outdoors stepped up its activities. More and more publications from researchers, proposed solutions trialled in the learning groups, and presentations of the programme's results that are reaching out to more and more people. But perhaps most importantly, this was the year in which the experiences from the first half of the programme were compiled, laying the foundation for the application for the second half of Mistra Sport & Outdoors.

Half time – according to the dictionary, this is when the total time played in a match is divided into two equal halves, with a half-time break in between. For outdoor enthusiasts, this could relate more to reaching the halfway point – the point halfway between the start and end of the journey. After 2020, our initial year heavily impacted by the pandemic, Mistra Sport & Outdoors made up lost ground in 2021. In 2022, the initiative had caught up with the original schedule, paving the way for acceleration of activities in 2023. This has brought us to half time, the halfway point in the programme.

But no Mistra programme takes a break just because half time is approaching. On the contrary, actually: this is the point at which we evaluate everything that has been done so far and plan for the future. Mistra Sport & Outdoors has three long-term goals: To conduct internationally leading research by 2028, to help create a movement for sustainable development in sport and outdoor recreation, and to establish a network-based centre to take over when the programme comes to an end. Half time means that we should be well on the way to achieving these goals. Moreover, we have learned a lot in the almost four years since the

programme began. Experiences we want to draw on in the second half of the programme. Twisting, turning and bending whatever we do. And that is the actual point of the half-time evaluation – to be able to make improvements to the programme on the basis of both our own experience and the recommendations of the evaluation team.

2023 has involved systematic efforts to sum up our experiences and compile our application, while researchers and learning groups have continued working as planned. The book "Sport, Performance and Sustainability", compiled with the assistance of several researchers, was published after a number of years of effort. 2023 was also the year in which we implemented some interesting collaborations with the European Network of Outdoor Sports (on environmental education), the Royal Swedish Academy of Agriculture and Forestry (on multifunctional landscapes) and Mistra Digital Forest (on recreational values in forests). Researchers from Mistra Sport & Outdoors also assisted with a successful EU application (the Marie Curie programme) on digital technology in the field of visitor management; one of a number of spin-off projects to which the programme has contributed.

A summary of the report describing our work in the first half of the programme is presented later on in this annual report. This document also includes highlights of the year, such as our participation in Träffpunkt idrott, Almedalen and Tankesmedja för friluftsliv. We describe our experience of working with co-creation in the ten learning groups and how this could lead to new ideas and approaches that can be scaled up. These include educational learning, guidance for travel, a sustainable sites handbook, functionality labelling of shell jackets, behavioural change through events, and training on eco-friendly canoeing. And we start to open the door to the second half of the programme.

// PETER FREDMAN, PROGRAMME DIRECTOR
& EVA THÖRNELÖF, CHAIR OF THE
PROGRAMME BOARD



“We want to be part of the solution”

Sport and outdoor recreation – like society as a whole – are facing major sustainability challenges that will require coordination, cooperation and patience to resolve. The Swedish Sports Confederation and the Swedish Association of Outdoor Organizations are now intensifying their sustainability efforts, particularly with cooperation with Mistra Sport & Outdoors.

We are positive forces for social sustainability and contribute to societal benefits – superb activities in our associations help to prevent ill health and a sedentary lifestyle and provide a sense of social community and evolution. We have not made as much progress when it comes to environmental and climate issues, although many activities and parts of our operations are already sustainable.

Outdoor recreation and sport in Sweden are multifaceted. They are characterised by simplicity and emphasis on “local” activities that can be accessed on foot and by bike and public transport, and also by more advanced and complex activities that often require specialised equipment, money, expertise and, frequently, long journeys that are reliant on fossil fuels. So both sport and outdoor recreation include both sustainable and less sustainable elements. One thing we have in common is that we and a large majority of our members want to be part of the solution, which requires knowledge, courage and a willingness to alter our behaviour.

A number of our associations and member organisations are now stepping up their sustainability efforts. We have several sustainability networks: both RF and Swedish Association of Outdoor Organizations have a general sustainability policy, and a number of associations and organisations are involved in the important work that Mistra Sport & Outdoors is doing. Our partnerships – with close cooperation with

practice-based researchers – are absolutely key to implementing changes and finding new ways forward.

Working together will make us stronger so that we can tackle some of our biggest challenges, such as reducing fossil fuel emissions from travel and transport, increasing circular processes and reducing consumption of clothing, materials and goods. These are issues that have been part of Mistra Sport & Outdoors since the very beginning, and we are looking forward to making further progress on this together in phase 2.

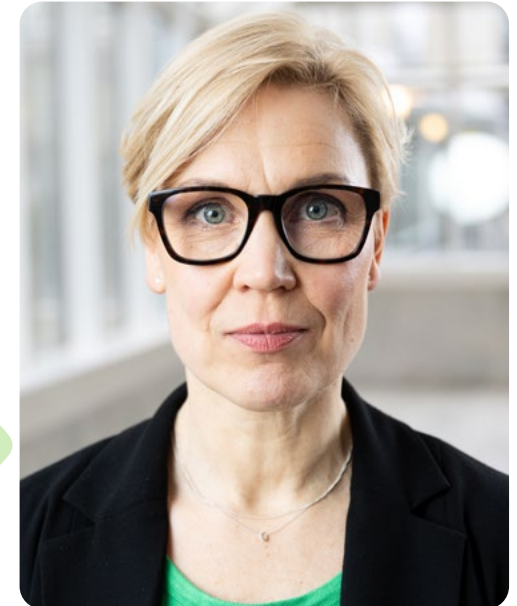
Creating change with emphasis on behaviour and policy instruments are key areas for Mistra Sport & Outdoors, and we are looking forward to developing and contributing to these going forward. The great transition will involve the knowledge and willingness of people and organisations to change and be changed, and to develop useful tools and methods for such work.

// MALIN JÄRF, CHIEF OF STAFF AT THE SWEDISH SPORTS CONFEDERATION & JOSEFINE ÅHRMAN, SECRETARY GENERAL OF THE SWEDISH ASSOCIATION OF OUTDOOR ORGANIZATION

Malin and Josefine are members of the Mistra Sport & Outdoors programme board.

“Close cooperation with practice-based researchers is absolutely key”

MALIN JÄRF



“We are positive forces for social sustainability and contribute to societal benefits”

JOSEFINE ÅHRMAN



Highlights of 2023



7–9 March

Mistra Sport & Outdoors gives a number of lectures and seminars on ways to increase sustainability in sport and outdoor recreation at Träffpunkt Idrott at the Swedish Exhibition & Congress Centre in Gothenburg.

24–25 March

Mistra Sport & Outdoors co-organises the Idrottslärarstämman event in Falun together with the Dalarna University and the Swedish Sports Confederation.

16 May

We arrange a webinar focusing on how to achieve sustainable use of land and water in sports and outdoor recreation: Which trends are affecting the use of land and water, and which actors have the opportunities and responsibilities to achieve sustainability?

20–21 March

The programme board meets for two days in Östersund for discussion on the second phase of the programme, a meeting with the management of Mid Sweden University and study visits to the Sports Tech Research Centre and the European Tourism Research Institute (ETOUR).

19 May

The book entitled “Sport, Performance and Sustainability” is published by Routledge (open access download).

28 June

Programme Director Peter Fredman takes part in Mistra’s Träffpunkt during Almedalen Week on the island of Gotland and, together with several other Mistra programmes, makes contributions to policy in Sweden and ahead of the COP28 conference.

11–14 September

Programme researchers give lectures and take part in workshops at Klimattoppmöte Kebnekaise (the Kebnekaise Climate Summit), where a number of outdoor recreation organisations sign the Kebnekaise Protocol to reduce climate emissions from outdoor recreation.

19 October

The programme co-organises and participates with a session on behavioural change and sustainability for guided tours of nature at the Sustainable Outdoor Professionals industry conference in Östersund.

22 November

We organise a webinar on the future of environmentally sustainable sports and outdoor facilities together with the Swedish Research Council for Sport Science (a knowledge platform for sports and outdoor facilities) and the Swedish Association of Local Authorities and Regions (SALAR).

19–21 September

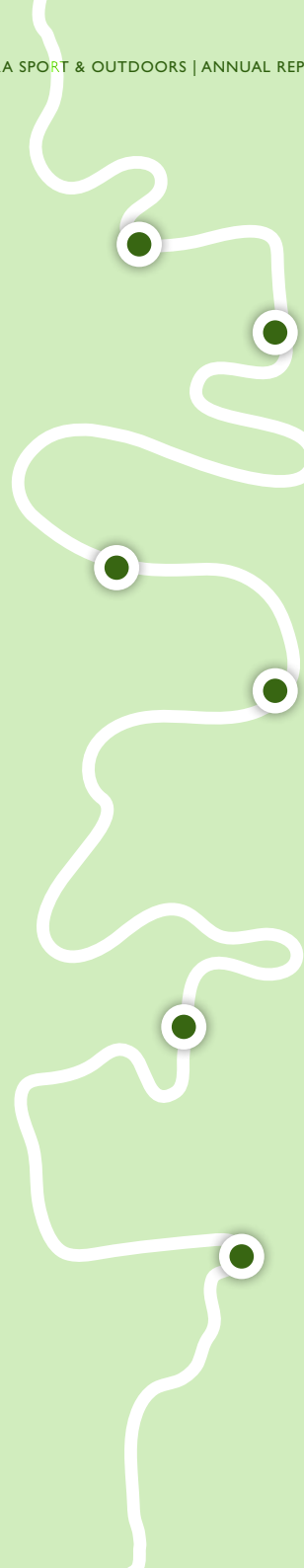
Several researchers take part in the 31st Nordic Symposium on Tourism and Hospitality Research, arranged by ETOUR in Östersund.

7–8 November

Mistra Sport & Outdoors is co-organiser of Tankesmedja för friluftsliv 2023 (Think Tank for Outdoor Recreation) together with the Swedish Environmental Protection Agency. Sverker Sörlin lectures on the need to start thinking differently about knowledge. We arrange sessions on ways forward for ecologically sustainable, multifunctional landscapes and behavioural change for sustainable outdoor recreation.

11 December

We submit the report from the first phase of Mistra Sport & Outdoors (April 2020 to June 2024) and the application for phase 2 (July 2024 to June 2029) to Mistra.



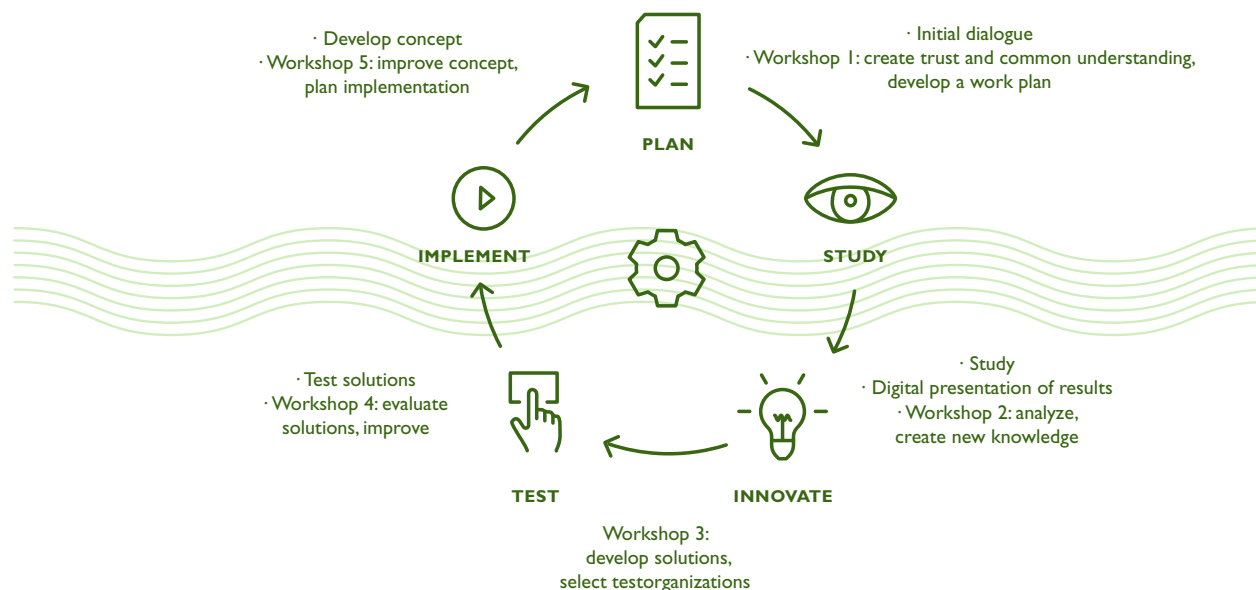
Co-creation – The key to success

As part of Mistra Sport & Outdoors, we have worked actively with co-creation between researchers and representatives from sports and outdoor recreation organisations from day one.

Environmental challenges have been identified through the programme's collaborative process, and programme participants have worked together to produce new knowledge linked to the challenges, as well as developing solutions that support and facilitate sustainable development in Swedish sport and outdoor recreation.

A great deal of progress was made on the latter, developing solutions, in 2023: this is particularly pleasing as solutions are a key factor in achieving one of the programme's goals: creating a movement for more sustainable sport and outdoor recreation!

To develop solutions, Mistra Sport & Outdoors has worked on the basis of a 5-step process, which includes planning, studying, innovating, testing and, ultimately, implementing ideas and solutions. A number of ideas and solutions have been developed in the programme's learning groups on the basis of this approach. Here are a few examples.



TEST

- An educational model for behavioural change in sports and outdoor recreation organisations in order to achieve greater environmental sustainability (see page 11).
- Handbook for co-creation in multifunctional landscapes – *Sustainable places: A recipe book for local co-creation in multifunctional landscapes* (see page 15).
- Functionality labelling of used shell jackets (see page 17).
- Training and teaching materials on environmental sustainability for leaders of outdoor recreation activities – *Eco-friendly canoeing* (see page 19).

INNOVATE

- *Placement – Sustainable leisure: Navigating towards sustainable sport and outdoor recreation*. A publication summarising the results of themes 2 and 3, including specific methods, approaches and good examples.
- Course and study material on environmental sustainability in physical education for PE teachers.
- Mistra Sport & Outdoors Report (2023:2) *Scenario modelling: Towards sustainable use of land and water for sport and outdoor recreation by 2030?*
- Assessment criteria for nature-based events: Description of research findings and dialogue on decision and assessment criteria in the permit process with Jämtland County Administrative Board.
- Toolkit for sustainable events, including recommendations, policy instruments and environmental impact calculator.

STUDY

- Index of sustainable accessibility to sport and outdoor recreation facilities from residential areas, for mapping and supporting municipal planning, through spatial analysis of open data and with open source tools.
- The accessibility of sports facilities in Uppsala has been analysed with a view to investigating the availability of sustainable transport such as walking, cycling or public transport to activities (see page 14).

Report from the first phase of Mistra Sport & Outdoors

When Mistra evaluates its programmes at half time, two documents take centre stage: a report on the results achieved in the first phase, and an application for phase two. Board minutes, publications and other documentation also form the basis of the evaluation. The main points of the report from phase I are summarised here.

In the opening sections, we describe the vision and goals of the programme and how the pandemic affected us. The programme was launched on 1 April 2020, just two weeks after the coronavirus outbreak. This had a major impact on the first year of the programme. Like so many others, we had to go digital (a big start-up meeting was scheduled for Stockholm), and a decision was made at the first Programme Board meeting in May 2020 to allocate funding from the Board's reserve to study the impact of the pandemic on sport and outdoor recreation. The results are available in a number of reports. The ensuing crisis revealed in particular the consequences of and capacity for change, important intelligence that we included in our further research.

One important aspect of the half time evaluation is the transition from phase I to phase 2, as it allows for adjustments to be made to the content and focus of the programme. A lot of this is captured in the phase 2 application, which forms the basis of the programme plan for the second phase. Among other things, we have revised our view of "creating a movement" for greater environmental sustainability so that this ambition is now linked more clearly to ongoing sustainability processes taking place in the sport and outdoor recreation movements.

Cooperation and co-creation are key approaches for Mistra Sport & Outdoors, and our experiences of these are described in the report. The importance of engagement and facilitation of learning groups are key lessons learned from the work on co-creation. This

report presents the progress made by the various learning groups on testing different solutions with the aim of creating new innovations. These include a curriculum for environmental sustainability in programmes for PE teachers, a guide to sustainable travel, a recipe book for multifunctional landscapes and a compass for sustainable events.

Our experiences from the co-creation initiatives were analysed by an external consultant in 2023, which is also presented in the report. This reveals a number of strengths in the organisation of the process, but also opportunities for improvement in the distribution of roles, focus on innovation and links between the various learning groups, for instance. The role of internal communication for the programme is highlighted as a strength.

The first phase of the programme is characterised by active communication work focusing on our priority target groups (people active in the programme and sports and outdoor recreation organisations). These include our graphic profile, website and the many webinars we have arranged together with our partners. The annual report, with a clear education and outreach profile, is also a highly appreciated product of the programme.

More detailed descriptions of the methods and results of the programme's six themes, and associated learning groups, form a large part of the report from phase I. Highlights of our research findings on knowledge and transformation, sustainable transport

solutions, sustainable use of land and water, materials and equipment, sustainable events and behaviours and policies are presented later on in this annual report.

Besides all the activities within the framework of Mistra Sport & Outdoors, the programme has assisted with a large number of related projects which we refer to as "spin-offs". There is a great deal of interesting information concealed behind terms such as "Roadmap to Paris", "Durability project", "VIMAS", "COASTREC", "SEE", "SustainGov" and "ReConnect". We also highlight the programme's contribution to the sustainability policy on which the Swedish Association of Outdoor Organizations are now working. »



Ongoing licentiate and doctoral studies:

- On the environmental paradox of outdoor recreation
Oskar Abrahamsson, human geography
- The development of padel in Sweden, with a focus on management and facilities, and its relation to opportunities and challenges of environmental sustainability
Johan Carlsson, sport and fitness sciences
- Understanding Behind Acceptance of Environmental Impacts from Tourism Events
Axel Eriksson, tourism studies
- How is digital technology and environmental sustainability enacted in physical education and physical education teacher education
Andreas Isgren Karlsson, pedagogical work
- Combining recreation and nature conservation in practice. Voices from local and regional practitioners in Stockholm, Sweden.
Kristin Malmcrona Friberg, Strategic sustainability studies
- Functionality over time for sports and outdoor recreation products
Louisa Nilsson, Mechanical Engineering specialising in sports technology and additive manufacture
- Sustainable Mobility Behaviours of Mountain Bike Tourists
Samudika Perera, tourism studies
- Swedish Friluftsliv in an intersectional perspective
Liubov Timonina, historical studies



Programme meeting at Bosön in April 2023.

The building of “scholarly capacity” in sport and outdoor recreation is one important contribution of the programme’s activities. This is mainly achieved by training licentiate and doctoral students, who, after completing their degrees, take their expertise into the workplace, both within and outside the academic community. However, doctoral studies take time, at least four years, and the first public defences of doctoral theses are due to take place in 2024. Mistra Sport & Outdoors has fully or partly funded eight licentiates and doctoral students during the first phase.

The major, long-term programmes that characterise Mistra also pave the way for researchers to build networks and create attractive careers in the academic community. During the first phase, the programme has funded more than 30 researchers at seven higher education institutions in Sweden, with Mid Sweden University hosting the programme.

The report also presents the content of the 14 projects funded by the Board’s strategic reserve during the first phase. These include studies on the impact

of the pandemic on sport and outdoor recreation, analyses of the ageing of plastic materials, educational models for behavioural change, functional labelling of jackets and analyses of the work done by outdoor recreation organisations on environmental sustainability. The Board has also funded the open access publication of the book *Sport, Performance & Sustainability*. About one-third of the Board’s reserve was used to fund the facilitation of the programme’s learning groups.

The report highlights in particular some of the programme’s scholarly publications, and all deliverables are presented in annexes. This is an impressive collection that includes articles, reports and books, as well as many presentations, seminars and webinars.

If you would like to read the report entitled “Towards Sustainable Solutions, Progress report phase I, 2020–2024. Report 2024:1” in full, it is available to download from the programme’s website: www.mistrasportandoutdoors.se/publikationer

Projects granted funding from the Board’s strategic reserve

Impact of COVID-19 on sport, physical activity and outdoor recreation

Survey and better understand the impact of the COVID-19 pandemic in Sweden on sport, physical activity and outdoor recreation.

COVID-19 and events

Describe the impact of the pandemic on sporting events, how organisers adapted to the situation and potential innovations that emerged out of this period when events could not take place.

Survey of visits to the countryside during COVID-19

Capture in-depth and spatial information on leisure activities and trends during the pandemic.

Co-creation between schools, sport and environment

Examine how environmental sustainability is expressed in Swedish schools in general, and the conditions for implementing environmental sustainability in physical education.

Sustainable events at the point where sport and outdoor recreation meet

Explore how the O-Ringen orienteering event adapts to its environment and passes on local knowledge during preparations ahead of the event.

Ageing of plastics used in sports and outdoor equipment

Characterise plastics used in outdoor and sports equipment, both new and old, fossil-based and bio-based, in order to determine the potential degradation of the polymer materials under different conditions such as UV, temperature and wear.

Educational model for behavioural change in sport and outdoor recreation organisations

Develop and test tools to enable and facilitate changes for more sustainable development of sport and outdoor recreation organisations.

Open access publication of the scholarly book *Sport, Performance & Sustainability*

Analysing not only how sportification may have contributed to the growing environmental impact of sport, but also whether it can be used as a tool for positive social change.

Functionality labelling for used shell jackets

Conduct a pilot study to implement research findings in innovation by means of functional labelling for used shell jackets.

Initiate changes in travel behaviour in connection with the 2023 O-Ringen event in Åre

Examine the importance of identity and efficacy processes at individual and collective level in order to enhance understanding of the drivers of environmental behaviour among event participants.

Drivers of eco-friendly behaviours and attitudes both within and outside the organised sport and outdoor recreation sector in Sweden

Examine how the interplay of psychological and contextual factors shapes the general public’s pro-environmental actions and attitudes related to the sport and outdoor sectors.

Ecological sustainability in outdoor recreation organisations

Enhance knowledge of the work on ecological sustainability in a selection of organisations affiliated with the umbrella organisation Swedish Association of Outdoor Organizations.

External evaluation of the Mistra Sport & Outdoors co-creation process

Department of People and Society, Swedish University of Agricultural Sciences, SLU.

Discussion paper on network-based centre

Discussion paper for further work on the Mistra Sport & Outdoors network.

Model for change that aims to help sports and outdoor recreation become more sustainable

How do we create change for environmentally sustainable development? The knowledge and transformation learning group asked itself this question. They have now developed a model that will be trialled by the Swedish Association of Outdoor Organizations and others in 2023.

“It is actually two different models that we have simplified and combined to make them work at all different levels of an organisation,” explains Susanna Hedenborg, one of the learning group’s researchers.

The notion of developing a change model comes from the learning group, where many different organisations are represented. Participants worked together closely to identify challenges and gather knowledge. They then looked at what models already existed, and which ones worked. Following an inventory and discussions, they realised that what they

were looking for did not exist, and that they needed to combine two models – the transtheoretical model and the COM-B model.

The transtheoretical model is all about identifying the point reached by the organisation in the change process and thus being able to see what steps have to be taken in order to achieve change. The COM-B model specifically involves behavioural change and was developed for use in healthcare.

Workshop on the present situation

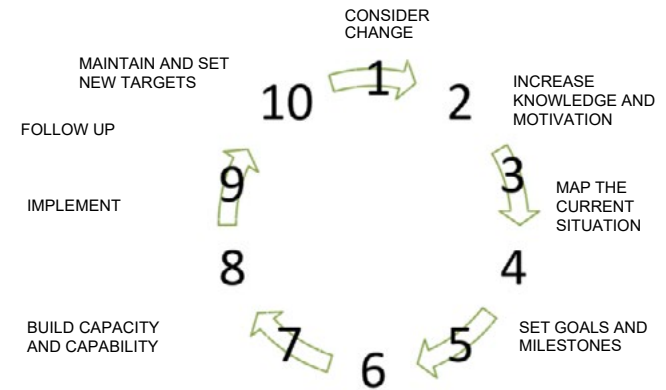
The new combined model has been tested in a variety of contexts in 2023. This is pretty much how it happened.

Participants are invited to reflect on the amount of progress they have made on becoming an environmentally sustainable organisation. The answer is formulated as a number on a scale of 1 to 10, where 1 means that they are far »

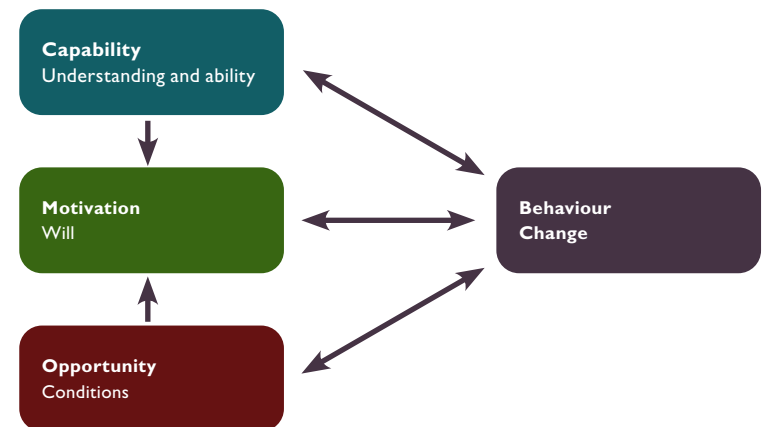


“Change is hard, it is easier to do things the way you have always done them.”
SUSANNA HEDENBORG

The transtheoretical model



The COM-B model



from fulfilling the change goals and 10 means that the goal is/goals are already fulfilled.

The figures selected by different people can differ widely, which leads to important reflections and discussions. During the workshop, participants work together to identify where the organisation is in the change process and what they need to do in order to take a step forward.

Identify barriers

The second part of the workshop switches to the COM-B model, which is a psychologically based behavioural change model. Here, participants are able to build on the goals set in Part I and consider what is needed for real change.

In simple terms, the COM-B model assumes that behavioural change stems from three factors: capability, motivation and opportunity. Barriers to change can be identified by analysing these three elements. One example would be to encourage people to cycle to their sports centre instead of driving. The conditions are not in place if everyone can and wants to cycle but there are no cycle lanes. In that case, you might have to talk to the municipality. But that said, if there are cycle paths and people want to cycle but are unable to, i.e. they lack the skills, cycling courses have to be organised.

“Many change strategies start off with the notion ‘we have to pass on knowledge’. The knowledge is often there, but still no change takes place,” says Susanna Hedenborg. When it is broken down in this way, it is clear that information is not enough to make people change their behaviour.

The people who participated in the tests are positive about the model. They feel the workshop was rewarding and that the model could be applied in many areas. But they would like to have more time for discussion, and Susanna agrees with them.

“We would need more time to work on the targets they need to set and help them concretise the way forward. The pilot is a taster, a way of getting them thinking.”

Development continuing in 2024

A number of researchers were on hand to listen and observe during the tests that were carried out. More tests will now be carried out, and the researchers will go on refining the model.

As long as Mistra Sport & Outdoors is ongoing, people from the learning group will be able to facilitate workshops, but in the longer term the organisations will gradually have to take more responsibility for the change process and their own willingness to change. One idea is to collaborate with innovation centres at universities for support on how to package the model.

“I am guessing we will produce some teaching material that maybe SISU – the sports education association – can take over and work with,” concludes Susanna.

Knowledge and transformation learning group

Swedish Outdoor Association, Carl Craaford
Swedish Sports Confederation/SISU, Andreas Linderyd
Bernadottegymnasiet, City of Gothenburg, Robin Rudelius
Swedish Association of Outdoor Organizations, Johan Faskunger
Researchers: Marie Larneby, Malmö University, Eric Backman, Dalarna University and Susanna Hedenborg, Malmö University
Facilitator: Karin Berg

Researchers and students working closely together

Lusine Margaryan is a Mistra Sport & Outdoors researcher, responsible for the Master's programme in Tourism Studies at Mid Sweden University. Here, she talks about how our researchers collaborate with students and why this is important.



I teach a course called “Tourism and Sustainability”, where students encounter different topics and methods relating to sustainability. As part of this course, I usually invite my colleagues to give guest lectures on projects that they are working on. It is important to me to ensure that my students benefit from our research environment and learn about ongoing research. Students are often so interested and inspired that they develop the ideas into their thesis topics and work together on ongoing research projects. Mistra Sport & Outdoors is one such example.

Why is working with students so important?

It is important on many levels. Firstly, students are always more interested in learning if they know that the examples come not from textbooks, but from genuine projects that their teachers are involved in. Many students are also more motivated to work on their academic papers if they know that the results might be useful for resolving real-life issues. And of course, it is a bit of a cliché, but students are our future decision-makers and agents for change, so we teach them in the hope of achieving a more sustainable future. At the same time, we also learn a lot from our students – they come up with new ideas and make sure our work stays relevant.

Tell us what happened when a student's academic paper was turned into a research publication.

This is a good example of what I was describing above. Our Master's student Tami Lanzendorf was inspired by Mistra Sport & Outdoors and decided to create her degree project on sustainable sports and outdoor events, using Östersund as a case study area. She later did a placement at the European Tourism Research Institute (ETOUR), and together we transformed her academic paper into the book chapter “Environmental Leverage through Sport Event Portfolios”, which was published in “The Routledge Handbook of Events and Sustainability”.

Can you give us some examples of other collaboration with students?

During her placement at ETOUR, Tami Lanzendorf and her classmate Henk Högemann also worked on a literature review on the environmental impact of events. This was later published in our report series under the title “Review of Environmental Impacts of Outdoor Events with a Focus on Orienteering”.

Recently, another Master's student, Marie Lerho, successfully defended her thesis entitled “Elite Athletes' Travel Behaviour to/from Events”, on sustainability barriers and opportunities in biathlon events. While working on her academic paper, Marie received advice not only from her supervisor, but also from other Mistra Sport & Outdoors researchers. Marie is currently working on her placement at the International Biathlon Union, specifically helping them to make biathlon events more sustainable. We are also working on turning her thesis into an article. I think this is an excellent example of synergy between education, research and practice!

Book on the tension between sport, performance and sustainability

After several years of work, “Sport, Performance and Sustainability” was published by international publisher Routledge in March 2023. The editors and most of the authors are involved in Mistra Sport & Outdoors.

Daniel Svensson, sports science researcher at Malmö University, is one of the editors of Mistra Sport & Outdoors. He explains the overall theme of the book.

“How can we balance sportification and the endeavour for increased performance with other values? This clash becomes very clear in relation to environmental

sustainability, and at present there are no books that focus clearly on it,” he says.

The researchers aim to provide a historical perspective on the issue in the book while looking to the future. What potential does sport have today to move towards more sustainable sporting practices?

Daniel provides a few examples of chapters in the book:

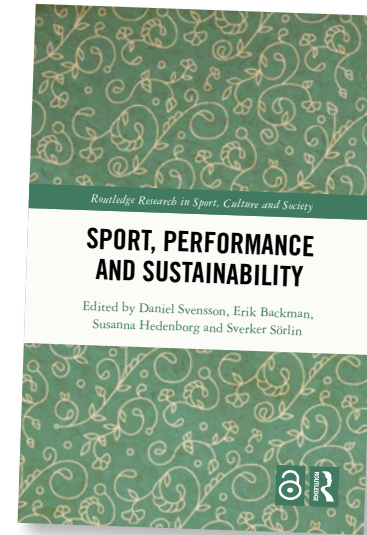
The potential of Generation Z

The younger generation, Generation Z, are habitual users of social media and social networks – as well as being more aware of sustainability issues (just look at

Greta Thunberg!). Many sports celebrities – mountain runners, ultrarunners, trail runners, cyclists, etc. – use their own channels to promote environmental issues. Can social media be used to provide mobilisation platforms for sustainability? One of the chapters discusses the enormous potential of influencer athletes.

History of shifting focus

Adopting new knowledge, new techniques and new methods in order to maximise performance is a strong habit in sport. Measuring, monitoring and developing at a fast pace. Could we use this habit and ability, alongside the pursuit of performance in sport, to make a transition around environmental impact as well? In this case, the historical approach would become potential for a shift in focus.



Natural performance

Another chapter deals with “natural performance” in sport, i.e. performance with less emphasis on technique and aids. Appreciating the natural “ideal” and problematising what is natural and what is not could influence the way in which sport and performance are viewed. For instance, we have decided that doping is unnatural – something we do not want in sport. Are there any other tools we could tone down in order to make sport more sustainable?

Other chapters in the book look at sustainability in physical education in schools, the trend of moving outdoor sports to indoor facilities, and the impact of the COVID-19 pandemic on the transition to more sustainable sport. The authors come from a variety of disciplines – sport and fitness sciences, history, sociology, educational sciences and philosophy, for instance.

“Sport, Performance and Sustainability” is available as a downloadable file from publisher [Routledge](#).



“This clash becomes very clear in relation to environmental sustainability”

DANIEL SVENSSON

Equal access to sports facilities is key to increased sustainability

Access to sports and physical activity is key to opportunities for physical activity, and to be able to participate in a social context. How people get to sports facilities also impacts the climate. Moreover, a lack of accessibility can drive inequality and segregation in instances where people with fewer resources are disadvantaged.

Day-to-day mobility and close proximity to recreation options are becoming increasingly important for well-being and public health in general. Exercise is important on the one hand; and on the other, the sports movement and outdoor recreation are a vital social arena, a place where people can develop together and build communities that have an impact far beyond the sphere of sports.

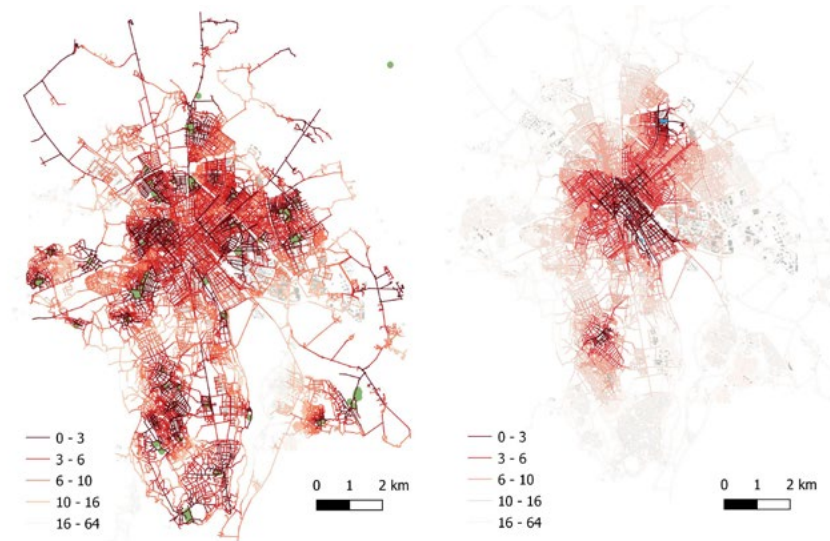
The Swedish Sports Confederation has around 3.3 million members, and estimates that 150,000 organised sports activities take place every day. The share of non-sustainable transport is a growing problem because it generates emissions, but also because it risks increasing inequality and social polarisation. There is every reason to look more closely at how to transfer more sports trips to sustainable transport options, such as walking and cycling or combinations with public transport. Car sharing is also preferable to travelling alone. This is why the location of sports facilities in relation to where people live and the extent to which they are accessible by public transport is an increasingly important issue if we are to meet our climate goals. At present, leisure travel accounts for 22% of all trips made within Sweden; and of these, as

many as 62% of trips are made by car and only 25% by walking or cycling.

Study in Uppsala

In the municipality of Uppsala, Ann Legeby, a researcher at KTH Royal Institute of Technology, has conducted a study on the localisation of sports facilities and the accessibility of these places in different parts of the city. This has been compared with information on the socio-economic situation of the population in order to link to social sustainability issues, segregation and unequal living conditions.

Ann Legeby has also studied the visibility and presence of various sports facilities around the city and mapped how much of the city they cover, which indicates the opportunities for various sports to transition to sustainable transport. She also studies the catchment area of the sports facilities with regard to socio-economic aspects, which makes it possible to see how different groups are advantaged or disadvantaged as a result of the way in which the municipality plans for sports. In Uppsala, she has also looked at various policy documents and compared them with how reality lives up to the goals defined.



Reach through the urban space for two different sports facilities: football pitches (left) and ice rinks (right). The distance measured as the number of changes of direction in the street system. The reach of the football pitches covers a significantly larger part of Uppsala than the ice rinks.

Major inequalities

The analyses indicate that there are major inequalities in terms of access to sports facilities; but also that there are major differences when comparing different sports.

Some sports have a localised catchment area, with facilities scattered around the city, which makes it easier to increase walking and cycling; compared to sports that are confined to one or very few facilities in a city. The distances are often long, which affects the mode of transport selected, and the ability to participate may depend on the availability of a car in the household.

The study shows that a number of socio-economically deprived areas are disadvantaged in terms of access to sports facilities. This means that the way in which the municipality plans and invests in sports facilities has

resulted in a situation that is characterised by unequal living conditions, with a risk of propagating and reinforcing segregation.

How the study was carried out

The analyses are based on the municipality's data on sports facilities and socio-economic factors among the population. Accessibility analyses measure proximity to facilities from the places where people live in a way that takes into account the built environment and how the street network links different parts of the city.

Recipe book for multifunctional landscapes – how we can coexist in and with nature

The areas that are not used for accommodation, work, services and transport are increasingly being used for other purposes. One of the Mistra Sport & Outdoors learning groups cogitated on how everyone can coexist sustainably and developed a method for this.



“The steps and tools in the book can be used as they are or developed, replaced or maybe skipped”

SARA BORGSTRÖM

Urban green spaces should provide an oasis for human recovery, a source of and support for biodiversity, and help to mitigate climate change and environmental problems by absorbing carbon dioxide and treating water, for example. But just how multifunctional can an area be? What is the limit on how many different users can coexist without congestion and conflicts? What is the limit when an area's ecological structures and processes are no longer working?

These are the questions asked by the learning group on sustainable use of land and water in urban landscapes. This is why they devised a methodology for sustainable places – a recipe book for cooperation that aims to result in multifunctional landscapes where stakeholders help to respect and support nature and one another. The recipe book emerged out of extensive efforts to develop and test a range of tools for cooperation in a local, urban, multifunctional green space.

Challenges in the Vitberget area

The method has been trialled in 2023; including in the municipality of Skellefteå, where the Vitberget area, an urban green space covering 600 hectares, is a multifunctional landscape. Already some 20 sports and outdoor recreation associations and private companies working with sports and outdoor recreation coexist with forestry and reindeer husbandry. Future plans include creating a nature reserve and constructing a new roller ski track and new ski slopes. Moreover, the



A joint site visit to Vitberget was on the agenda for the first meeting in Skellefteå.

population of the municipality is expected to increase by 16,000 people by 2030, which means that many more people will be wanting to use the Vitberget area. As it is facing these challenges, the municipality agreed to trial the sustainable places approach.

“The goal is for the organisations to see what they can contribute and feel that this is something we can easily collaborate on!” says Stefan Wallgren, project manager for the development of the Vitberget area in the municipality of Skellefteå. »

Stefan Wallgren has been working with researchers and a facilitator from the learning group in order to make the most of the methodology, which is built around three meetings with representatives of relevant organisations:

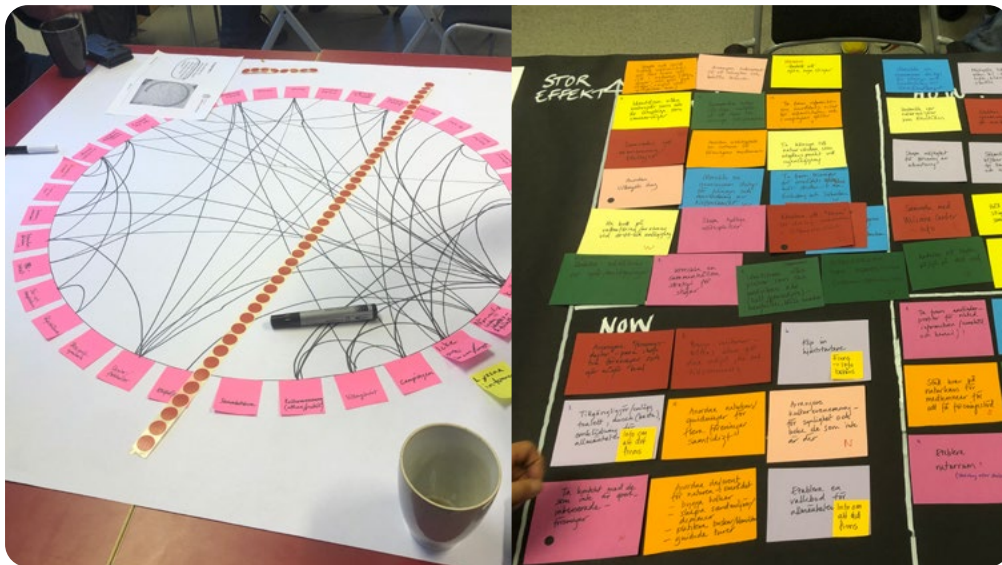
- The first meeting involves identifying the stakeholders in the area and what they do, as well as the common interests.
- The second meeting focuses on the geography of the area – where are the important places, in what way are they important, and who uses them?
- At the third meeting, the shared knowledge is compiled and potential activities to reinforce both ecological and social sustainability are identified.

As with all recipes, each meeting is presented along with its purpose, how long it could potentially take, the ingredients needed, and how to proceed. “The steps and tools in the book can be viewed as suggestions. They can be used as they are or developed, replaced or maybe skipped,” says Sara Borgström, who is leading the work of the learning group.

Tests provided new knowledge

The researchers gradually adjusted and developed the model during the tests. The preparations are extremely important, and the people leading the process have to work hard between the three meetings.

Participants work with paper, pencils and pieces of paper during the meetings. On the left is a circle showing all the stakeholders in the Vitberget area and lines indicating common interests. On the right is a matrix of the measures identified, ranked according to the level of difficulty of implementation and the effect of the measure.



“A great deal of facilitation is required at present,” says Sara. We need to develop the method to make it more self-explanatory, and perhaps offer training for process managers as well in the organisations wishing to use it.

All meetings to date have been face-to-face, and there has been almost no use of digital tools. Visiting the area together, writing and drawing by hand, marking things up with post-it notes and presenting the ideas graphically has been highly appreciated and assisted with the dialogue and exchange of knowledge between participants. This is a must for cooperation when so many different interests are involved in multifunctional landscapes.

The researchers have learned a great deal during the tests and will go on developing the method in spring 2024. Stefan Wallgren in the municipality of Skellefteå is pleased with the outcome of the work on the recipe book.

“I am pleasantly surprised that there was so much commitment to it! We could never have done such a good job without you.

“We are developing a common, comprehensible approach to how a number of different interests, with different needs, can coexist in a landscape while maintaining and enhancing ecological processes and functions over time.

It should also be possible to use this method for sustainable introduction of a new stakeholder whose interests are met while also safeguarding other interests, including ecological processes and functions.”

THE LEARNING GROUP'S OBJECTIVES

Sustainable use of land and water learning group – urban landscapes

Friluftsrådet Region Mälardalen, Ylva Schöldberg
Municipality of Järfälla, Erik Häff and Peder Curman
LRF Mälardalen, Håkan Lindström
Stockholm County Administrative Board, Kristin Ekblom
Region Stockholm, Elisabeth Mårell
Swedish Sports Confederation/SISU, Pasi Rosenqvist
STERF, Maria Strandberg
City of Stockholm, Helene Pettersson
Swedish Equestrian Federation, Elin Gustavsson
Researchers: Sara Borgström, KTH Royal Institute of Technology, and Erik Andersson, Stockholm University
Facilitators: Karin Svärd Hertel and Emma Weilefors

Do circular actions always result in environmental savings?

Exploring and surveying how we can do things in more sustainable, eco-friendly ways has rarely been as exciting as it is now. Researcher Hampus André has devised a new framework to analyse how our consumption habits are affecting the environment, and used it to study shell jackets.

Circular actions such as reusing clothes and buying second-hand items to reduce our environmental impact are very topical at the moment. But do circular actions always lead to environmental savings, and what is it that actually drives consumption? To answer these questions, Hampus André, a researcher at KTH Royal Institute of Technology and Mistra Sport & Outdoors, has developed a new framework for life cycle assessments.

“A life cycle assessment calculates the environmental impact of a product throughout its lifetime. This allows us to compare the environmental impact of garments that are used by at least two people during their life cycle by being sold second-hand, with garments that are used by one person before being thrown away,” explains Hampus.

According to Hampus, one problem with life cycle assessments of circular actions is that the use phase is often not surveyed sufficiently. Many aspects have a part to play in the environmental performance of circular actions.

“Life cycle assessments rarely consider what drives new consumption. This was one of the things that motivated me to create a framework that aims to incorporate such aspects,” says Hampus.

Hampus is studying shell jackets because this is a product that is used in connection with lots of different sports and outdoor recreation activities. This makes the research relevant to many types of stakeholders and practitioners. To maximise shell jacket lifespan, it is important to understand why users dispose of their shell jackets. Only then will we be able to identify what kind of actions are needed to reduce the environmental impact of consumption; either technical improvements to extend the lifespan of products, or a change in user behaviour.

To gain a broader understanding of how shell jackets are used, interviews were conducted with owners of second-hand shops and shell jacket users were surveyed. The questions asked included aspects such as how often the shell jackets are used and how long they usually last.

The study compared two different types of use phases. One looked at shell jackets that were sold through second-hand shops and were thus generally owned and used by two users. The second looked at shell jackets owned and used by a single user. One intriguing discovery was that even though shell jackets bought from second-hand shops have a marginally longer lifespan than those owned by just one person, they are used on fewer occasions overall during their lifetime.



Left: Hampus and his dog Keb outside a second-hand shop for outdoor products. Right: second-hand shell jackets.

“Many people think a circular economy means using products more than once, but we have seen that this is not always the case. This was surprising at first, but then we understood the reason. Shell jackets often end up in second-hand shops because the first user was dissatisfied with something, and this dissatisfaction probably means that the jacket is not used all that often. We believe this could apply to other products as well. We reckon that the fact we were able to discover and be surprised by such a reasonable result indicates just how useful the framework is – it can provide new intelligence about how the environmental impact is altered by circular actions,” says Hampus. The data collected was used in a life cycle assessment in order to examine the environmental impact of the

two use phase types compared and see how it is affected by different use patterns. In conclusion, the study shows that circular actions are not as effective as many people think, although they are definitely better than throwing things away prematurely. Nevertheless, circular actions come second when comparing the alternative, where the same user uses the product for a long time.

The next step for Hampus, together with other Mistra Sport & Outdoors researchers, is to calculate the environmental impact of different consumption patterns in connection with exercise events.

How to make events more eco-friendly

This summer's O-Ringen, a 5-day orienteering competition, took place in Åre, Jämtland. Mistra Sport and Outdoors researchers conducted a number of studies in connection with the competition, looking at the behaviour of both organisers and participants in terms of environmental impact.

Axel Eriksson, doctoral student in tourism studies at Mid Sweden University, studied the cooperation between the organiser of O-Ringen and local stakeholders with knowledge of the area where the competitions were held.

“It is important to understand how local knowledge is applied, particularly when you are working on land that is used on a daily basis by a number of stakeholders and when lots of tourists turn up in the same place, which can place the local ecosystem at risk,” says Axel.

Axel conducted research interviews with management teams and other co-organisers, such as the municipality, ahead of the 2023 O-Ringen event. He also chatted to local stakeholders living and working in the area. Moreover, he spent a month studying the construction of the arenas.

Lack of cooperation

The studies show that O-Ringen organisers exclude certain stakeholders in the area and are not particularly interested in local knowledge outside their own sport. That said, local stakeholders are also reluctant to get involved as they feel excluded and that they lack influence, but they are concerned about the wear and tear that could be caused by so many people.

O-Ringen, on the other hand, does not view itself as a tourism organiser: it organises an event and does not view itself as part of an ecosystem of tourism products.

Axel Eriksson views his research as one piece of the puzzle in a wider research field on how participation and cooperation can help to bring about multifunctional landscapes.

“Organisers have to be made to perceive their events as just one of many tourist destinations. “The footprint left by major events can challenge other people's ways of living in the area,” says Axel.

Environmental behaviour difficult to influence

Louise Eriksson at Mid Sweden University conducted a study in order to examine whether information can be used to increase participants' environmental behaviour, and how participants' perception of the organiser's environmental ambitions was impacted by the information. This study was conducted together with colleagues John Armbricht and Erik Lundberg, researchers at the University of Gothenburg.

The researchers looked in particular at participants' transport options, consumption and recycling. They conducted a survey study with an experimental design,



sending out questionnaires to participants prior to the event. The experimental group then received information encouraging them to behave in an eco-friendly fashion in connection with the event. And finally, the researchers followed up with a post-event survey.

“This allowed us to determine whether the environmental information impacted on environmental behaviour and participants' perception of the organisers' environmental ambitions,” says Louise Eriksson.

The study indicated that it is very difficult to influence people's environmental behaviour, which are also reliant on the opportunities for eco-friendly action as provided by the event. However, information can influence participants' perception of the organiser's environmental ambitions. This has been shown in previous studies to be of significance as regards participants' willingness to behave in eco-friendly ways. It is also important to encourage people to work together to make a difference, and to point out that people can make a difference both as individuals and as a team in the long term.

Travel a major source of emissions

Studying events is particularly important, because travelling to and from events, for instance, results in relatively major climate emissions. Altering travel behaviour could help reduce environmental impact. But events also present an opportunity for initiating behavioural change.

“Events are a platform making it possible to influence people's attitudes, values and behaviours outside of everyday life. The behavioural change can then continue after the event has ended,” says Erik Lundberg.

Tools for change

In the long run, the researchers hope that the results will help to enhance understanding of how events, event organisers and event participants can drive sport and outdoor recreation towards becoming more eco-friendly.

“Both this and future studies could provide the people involved with better tools to use events as a platform for change,” concludes Erik.

Training on eco-friendly canoeing – “Something we can work on in practice”

Svenska Kanotförbundet, the Swedish Canoe Federation, wanted to implement a canoeing programme integrating environmental perspectives. This became reality in 2023 thanks to cooperation with researchers at Mistra Sport & Outdoors.

Daniel Wolf-Watz, researcher at Mistra Sport & Outdoors, together with Thomas Beery at Kristianstad University and Emilia Fägerstam and Jonas Forsmark at Linköping University, has developed the course “Eco-friendly canoeing” together with the Swedish Canoe Federation. It all began with a request from the federation, which for a long time had wanted a training programme that focused on the environment.

“Raising awareness of environmental issues has always been important to us. If future generations are to be able to canoe and enjoy nature in the simple way that canoeing offers, those of us who spend time on the water need to be aware of what preserves and

protects it. That is why this course is needed,” says Katinka Ingves, a business developer specialising in outdoor canoeing at the Swedish Canoe Federation.

A dozen leaders already trained

The course is aimed at kayak leaders and aims to provide them with the knowledge and tools they need to encourage greater environmental awareness among canoeists. About a dozen leaders from Friluftsrämjandet, canoeing associations, training companies and canoeing centres took part when the course was launched in May 2023. They learned about the theoretical foundation, tried out exercises and created their own sessions, which they tested on one another.

“The course does not involve listing environmental threats or pointing fingers. Instead, we try to work out how we can pave the way for eco-friendly behaviour. This involves canoe safety and the social context for people, and also a relationship with the water that paves the way for thoughts about the environment and how we can protect it,” explains Daniel Wolf-Watz.

Research and monitoring

The development and implementation of the training programme were merely the first steps. The impact of the course has subsequently been researched. Interviews with participants have been conducted both before and after the following canoeing season.



Jonas Forsmark, Åsa Andersson and Daniel Wolf-Watz, photographed by Thomas Beery.

“We want to understand what people got out of the course, and what happened next. Did the course make them better equipped as canoe leaders, and how did the commitment and the lessons they learned translate into practice? We are interested in what could be achieved and what might have hindered canoe leaders’ ambitions to integrate environmental perspectives into their activities. The results can show what actually works and what we need to tweak in order to make sure the programme has the impact we want,” explains Daniel Wolf-Watz.

Canoe Federation planning ahead

The Swedish Canoe Federation has continued its efforts on eco-friendly canoeing since the programme. They are now planning ahead; and the next step is to train instructor trainers who can take over the roles held by Daniel, Thomas, Jonas and Emilia during the pilot training programme.

“We have planned an instructor training programme for Stockholm in May 2024, and we hope to have a group of eight or so people all over the country,” says Katinka Ingves.

The federation is pleased with the outcome of the cooperation between themselves and the programme researchers.

“This is exactly what we want to get out of our involvement in Mistra Sport & Outdoors. Something we can work with in specific terms. We can formulate sustainability policies and strategies, but ultimately it comes down to what our associations and individuals do in their day-to-day lives and in their reality,” says Åsa Andersson, developer at the Swedish Canoe Federation.

A selection of Mistra Sport & Outdoors deliverables in 2023

Scholarly publications

André, H., Björklund, A., 2023. **A framework to open the black box of the use phase in circular economy life cycle assessments: the case of shell jacket reuse.** Journal of Industrial Ecology 27(4).

Backman, Erik, Svensson, Daniel and Itai Danielski. (2023). **“The Changing Landscape of Sport Facilities: Consequences for Practitioners and the Environment.”** (2023): 50–65.

Erik Backman & Daniel Svensson (2023). **Where does environmental sustainability fit in the changing landscapes of outdoor sports? An analysis of logics of practice in artificial sport landscapes,** Sport, Education and Society, 28:6, 727–740.

Eriksson, A. (2023). **“If they touch our cloudberries, that means war”: Rural liveability and acceptance of environmental impacts from event tourism.** In: Tourist Studies, 14687976231200902, pp 1–18.

Eriksson, A., R. Pettersson and S. Wall-Reinius (2023). **“Environmental concerns in nature-based events: the permit process for organized outdoor recreation and sport”**, in: Scandinavian Journal of Hospitality and Tourism, pp 1–19.

Isgren Karlsson A, Alatalo T, Nyberg G & Backman E (2023) **Exploring physical education teachers’ perceptions and attitudes towards digital technology in outdoor education,** Journal of Adventure Education and Outdoor Learning, 23:4, 510–524.

Lanzendorf, T., & Margaryan, L. (2023). **Environmental Leverage through Sport Event Portfolios.** In J. Whitfield, M. Gouthro, & M. Moital (Eds.). The Routledge Handbook of Events and Sustainability. Routledge.

Margaryan, L., & Eriksson, A. (2023). **Chapter 7 ‘Invisible’ impacts and hybrid spaces of nature-based events: The case of.** Cases For Event Management and Event Tourism, 87.

Svensson, D., Backman, E., Hedenborg, S. & Sörlin, S. (eds.) (2023). **Sport, Performance and Sustainability.** London: Routledge. Open access at Routledge.

Svensson, D., Saltzman, K. & Sörlin, S. (2023). **Stigarna leder oss till dem vi en gång var.** Forskning & Framsteg, no. 4, 2023, p. 50–53.

Winell, E., Armbrecht, J., Lundberg, E. and Nilsson, J. (2023), **“How are fans affected by the commercialization of elite sports? A review of the literature and a research agenda”**, in: Sport, Business and Management, Vol. 13 No. 1, pp. 118–137.

Oral presentations

Andersson, T.D., Armbrecht, J. & Lundberg, E. (2023). **Advancements in Event & Festival Research – a sustainable future,** session at 31st Nordic Symposium on Tourism and Hospitality Research.

Bäckström, M. (2023). **“Durability from different angles”** Presentation and panel discussion on functionality and durability in rainwear at European Outdoor Summit, Berlin.

Borgström, S. & K. Svärd Hertel. (2023). Royal Swedish Academy of Agriculture and Forestry, KSLA, **Caseutmaning, stad och land – oändliga anspråk och ändliga resurser.**

Borgström, S. (2023). **Hur når vi en hållbar användning av mark och vatten inom idrott och friluftsliv i ett förtätande landskap som Stockholm?** Conference for municipal outdoor recreation strategists arranged by Stockholm County Administrative Board.

»

More deliverables
can be found on the next page, and at
www.mistrasportandoutdoors.se/publikationer

Borgström, S., Andersson, E., Fredman, P., Wall-Reinius, S. and O. Jacobsson. (2023). **Naturvård + Friluftsliv = Sant? Vägar framåt för ekologiskt hållbara, mångfunktionella landskap.** Session at Tankesmedja för friluftsliv, Swedish Environmental Protection Agency, Stockholm.

Eriksson, A. & Abrahamsson, O. (2023). **Phenomenology of environmental impact during nature-based events.** 31th Nordic Symposium on Tourism and Hospitality Research, Östersund.

Fredman, P., Hedenborg, S., Svensson, D. (2023) **Mistra Sport & Outdoors, Vägar till ökad hållbarhet inom idrotten och friluftslivet.** Träffpunkt idrott, Göteborg.

Fredman, P. (2023) **Besöksförvaltning – En spaning inåt och utåt.** Presentation at Tankesmedja för friluftsliv, Swedish Environmental Protection Agency, Stockholm.

Hedenborg, S. (2023) **Idrotten och miljöfrågan – en fråga för (idrotts)lärare?** Idrottslärarstämman Högskolan Dalarna Falun den 24–25 mars.

Isgren Karlsson, A. (2023). **Environmental sustainability in physical education. A study of physical education teachers' perceptions and attitudes towards environmental sustainability in physical education.** Presented at ECER, Glasgow.

Sörlin, S. (2023). **Egenskaper hos snö – Sverige en vintersaga.** Sveriges radio, Vinter i PI.

Sörlin, S. (2023). **Hur blir friluftslivet hållbart? Nödvändighet att tänka nytt om kunskap.** Tankesmedja för friluftsliv, Stockholm.

Stenseke, M. (2023). **Managing landscape values and nature's contributions to people. Changing heritage landscapes. Contemporary challenges confronting conservation and tourism beyond the nature-culture dichotomy,** Seminar series at the University of Padua.

Svensson, D. (2023). **Sport and climate change: challenges and opportunities,** European College of Sport Science (ECSS) Congress, 5 July 2023, Paris, France.

Wolf-Watz, D., Eriksson, L., Faskunger, J., Beery, T., Zhang, J. & Ingves, K. (2023). **Beteendeförändringar för hållbart friluftsliv.** Session at Tankesmedja för friluftsliv, Swedish Environmental Protection Agency, Stockholm.

Reports from Mistra Sport & Outdoors

Larneby, M., Fredman, P., Radmann, J. & Hedenborg, S. (2023). **Från naturvård till klimat hot. Friluftsförbundens arbete med ekologisk hållbarhet.** Mistra Sport & Outdoors, Report 2023:1.

Stenseke et al. (2023). **På väg mot en hållbar användning av mark och vatten inom idrotten och friluftslivet år 2030? Ett scenarioarbete med åtgärdsförslag.** Mistra Sport & Outdoors, Report 2023:2.

de Bernardi, C., Linde, S. & Ioannides, D. (2023). **Pro-environmental behaviour in sport and outdoor activities: A literature review.** Mistra Sport & Outdoors, Report 2023:3.

Ankre, R., Olausson, F. & Wall-Reinius, S. (2023). **Strategisk planering för friluftsliv och hållbarhet i Jämtlands län och dess fjällkommuner. En analys av planerings- och strategidokument samt intervjuer med olika aktörer på regional och lokal nivå.** Mistra Sport & Outdoors, Report 2023:4.

Wall-Reinius, S., & van den Brink, P. (2023). **Rekreation och miljöpåverkan i fjällen. En sammanfattning av forskning om ekologiska effekter av friluftsliv, turism och sport.** Mistra Sport & Outdoors, Report 2023:5.

Lanzendorf, T., Högemann, H. & Margaryan, L. (2023). **Environmental impacts of events with a focus on orienteering.** Mistra Sport & Outdoors, Report 2023:6.



Knowledge transfer and cooperation webinars

In 2023, we organised two webinars to distribute knowledge and inspire discussions on challenges and solutions for enhancing environmental sustainability.

How will we achieve sustainable use of land and water for sport and outdoor recreation by 2030?

The webinar on 16 May was based on the report entitled "Towards sustainable use of land and water for sport and outdoor recreation by 2030? A scenario study with proposals for action."

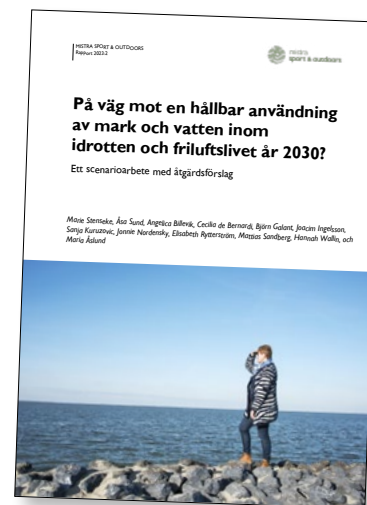
This webinar discussed and explained the sustainable use of land and water in sport and outdoor recreation. The authors of the report presented the thought processes from their various perspectives.

The report includes predictions for the future, as well as actions and proposals for guidance towards sustainable land and water use, and is intended to provide a foundation for strategic discussions and development among various social stakeholders in sport, outdoor recreation, nature conservation and spatial planning.

The future of environmentally sustainable sports and leisure facilities

This webinar on 22 November lifted the lid on the key issues of the future relating to facilities and environmental sustainability. What characterises an environmentally sustainable sports and recreation facility, and how do we achieve that?

The webinar was made up of a mix of research presentations and exciting perspectives from the Swedish Research Council for Sport Science, the Swedish Association of Local Authorities and Region, the Swedish Sports Confederation, Swedish Association of Outdoor Organizations, Ecoloop and Arena Vattnet.



The report entitled "Towards sustainable use of land and water for sport and outdoor recreation by 2030? A scenario study with proposals for action." is available to view at www.mistrasportandoutdoors.se/publikationer



Recordings of the webinars are available to view at www.mistrasportandoutdoors.se/webbinarier

Blog posts 2023

Co-creation – a sustainability researcher’s perspective

Sara Borgström, Docent in Sustainable Urban Development at KTH Royal Institute of Technology and researcher at Mistra Sport & Outdoors

Why do people leave litter in the countryside?

Mikael Drackner, Head of Knowledge Development at Keep Sweden Tidy

Pieces of the puzzle for more sustainable clothing consumption

David Gunnarsson, Head of Bra Miljöval Ecolabel Unit, Swedish Society for Nature Conservation

Running, Happiness and the Environment

John Ambrecht, Docent in Business Administration at the University of Gothenburg and researcher at Mistra Sport & Outdoors

Oh, crap! Latrine and waste management in the archipelago

Linus Kron, CEO of West Coast Foundation

Success stories 2023

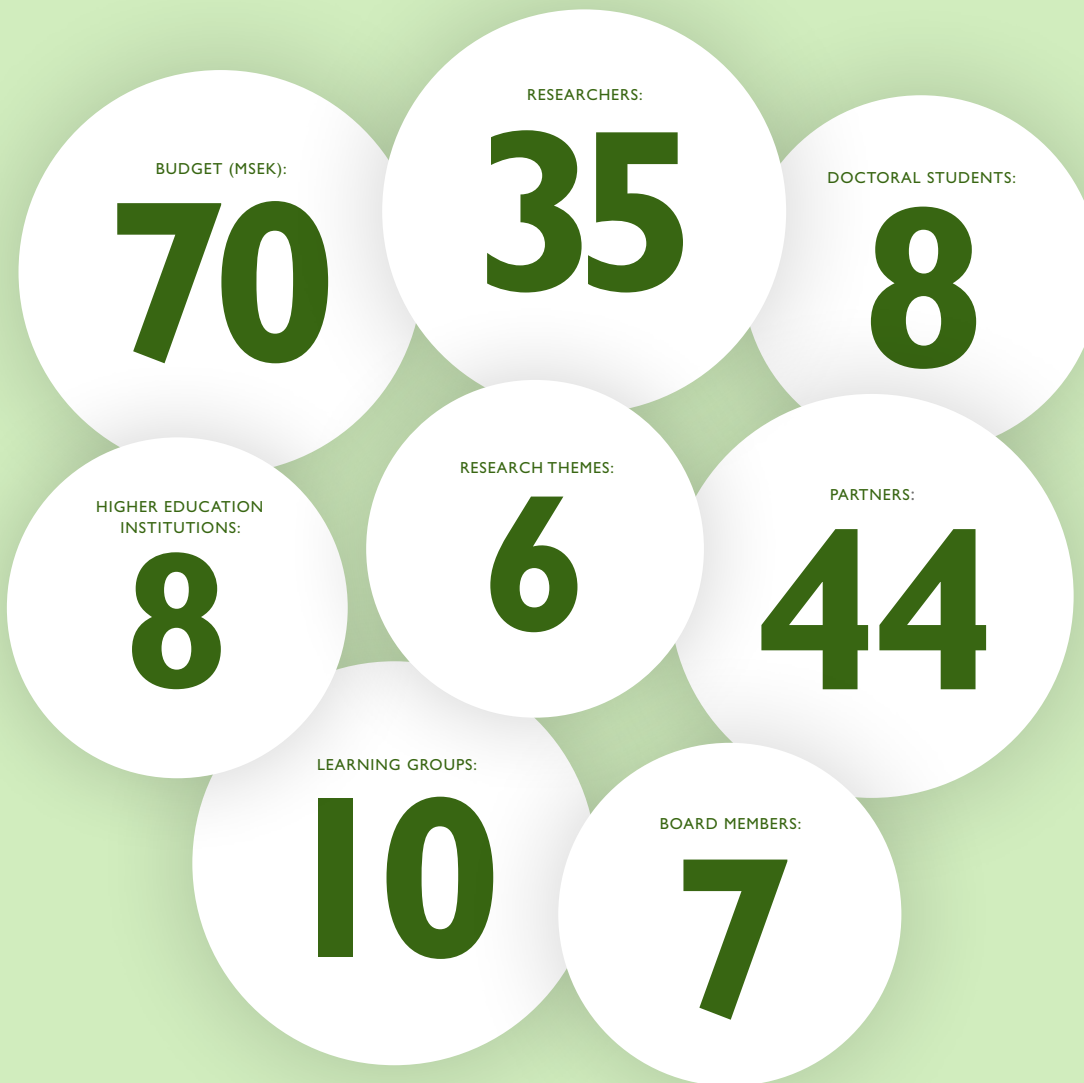
Swedish Orienteering Association –

The orienteering community wants to be a leading player in sustainability

“Keeping an eye out while hiking” –

Digital service attracts more people into countryside

Mistra Sport & Outdoors in figures



Programme participants

Office/administrative support

Peter Fredman, Programme Director
Karin Berg, Co-creation Manager
Sandra Wåger, Communications Officer
Märit Christensson, Administrator
Per-Richard Lindgren, Economist
Åsa Sund, Facilitator
Karin Svärd Hertel, Facilitator
Hanna Liljendahl, Communications Officer
Emelie Arctaedius, Communications Officer

Board of Directors

Eva Thörnelöf, Chairman
Peter Mattsson, Swedish Sports Confederation (until 31 October 2023)
Malin Järf, Swedish Sports Confederation (from 1 Nov 2023)
Ulf Silwander, outdoor recreation expert
Christiane Dolva Törnberg, HM Foundation
Maria Johansson, Lund University of Technology
Ludde Edgren, Mid Sweden University
Josefine Åhrman, Swedish Association of Outdoor Organizations (from 1 March 2023)
Johan Edman, Mistra (co-opted to the Board)

Participating universities

KTH Royal Institute of Technology
Malmö University
Chalmers University of Technology
Mid Sweden University
Stockholm University
University of Gothenburg
Dalarna University
Umeå University

Researchers

Knowledge and transformation

Sverker Sörlin, KTH Royal Institute of Technology, theme leader
Susanna Hedeborg, Malmö University, deputy theme leader
Daniel Svensson, Malmö University
Erik Backman, Dalarna University
Andreas Karlsson Isgren, Dalarna University
Marie Larneby, Malmö University
Liubov Timonina, KTH Royal Institute of Technology
Johan Carlsson, Malmö University

Sustainable transport

Anders Larsson, University of Gothenburg, theme leader
Ann Legeby, Royal Institute of Technology, deputy theme leader
Jorge Gil, Chalmers University of Technology
Oskar Abrahamsson, University of Gothenburg

Sustainable use of land and water

Marie Stenseke, University of Gothenburg, theme leader
Sara Borgström, KTH Royal Institute of Technology
Sandra Wall-Reinius, Mid Sweden University
Erik Andersson, Stockholm University
Rosemarie Ankre, Mid Sweden University
Axel Eriksson, Mid Sweden University
Oskar Abrahamsson, University of Gothenburg
Peter Fredman, Mid Sweden University
Kristin Malmcrona Friberg, KTH Royal Institute of Technology
Olga Milinchuk, Mid Sweden University
Oscar Jacobsson, University of Gothenburg
Amin Rastandeh, KTH Royal Institute of Technology

Materials and durable equipment

Mikael Bäckström, Mid Sweden University, theme leader
Itai Danielski, Umeå University, deputy theme leader
Anna Björklund, KTH Royal Institute of Technology
Kajsa Nilsson, Mid Sweden University
Judith Waller, Mid Sweden University
Hampus André, KTH Royal Institute of Technology
Louisa Nilsson (née Swenne), Mid Sweden University

Sustainable events

Robert Pettersson, Mid Sweden University, theme leader
John Armbrrecht, University of Gothenburg, deputy theme leader
Erik Lundberg, University of Gothenburg
Lusine Margaryan, Mid Sweden University
Axel Eriksson, Mid Sweden University
Malin Zillinger, Mid Sweden University
Tommy Andersson, University of Gothenburg

Behaviour, policy instruments and development

Dimitri Ioannides, Mid Sweden University, theme leader
Peter Fredman, Mid Sweden University
Cecilia de Bernardi, Mid Sweden University
Daniel Wolf-Watz, Mid Sweden University
Louise Eriksson, Mid Sweden University
Samudika Weliiweriyage, Mid Sweden University

Movement

Stefan Linde, Mid Sweden University
Karin Berg, Co-creation Manager

Participating organisations, authorities and companies

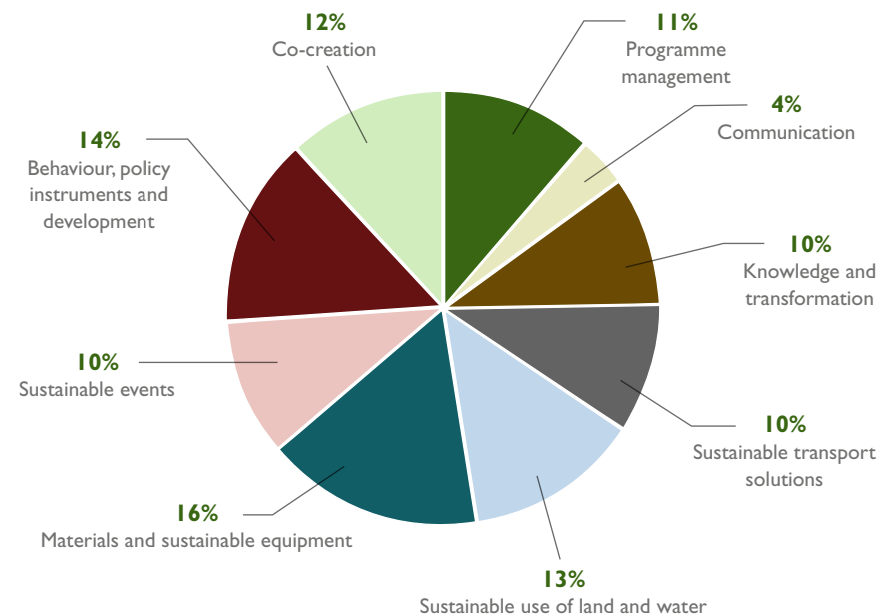
Municipality of Berg
Ecoloop
En Svensk Klassiker AB
Friluftsrämjandet
Friluftsrämjandet Region Mälardalen
Fritidsbanken
Got Events
City of Gothenburg, Idrott- och föreningsförvaltningen (Sports and Associations Administration)
City of Gothenburg, Stadsmiljöförvaltningen (Urban Environment Administration)
Swedish Agency for Marine and Water Management
Keep Swedish Tidy
Municipality of Järfälla
Municipality of Kungälv
Municipality of Lilla Edet

LRF
LRF Mälardalen
Halland County Administrative Board
Västra Götaland County Administrative Board
Jämtland County Administrative Board
Stockholm County Administrative Board
Swedish Environmental Protection Agency
Outdoormap AB
Patagonia
Region Stockholm
Region Västerbotten
Swedish Sports Confederation
Scandinavian Outdoor Group
Swedish Forest Agency
STERF
Swedish Football Association

Svenska Kanotförbundet (Swedish Canoe Federation)
Swedish Society for Nature Conservation
Swedish Orienteering Federation
Swedish Parasports Federation
Swedish Equestrian Federation
Swedish Skiing Federation
Swedish Tourist Association
Swedish Association of Outdoor Organizations
Swedish University Sports Federation
Sveriges Fritids- och kulturchefsörening (Swedish Association of Leisure and Cultural Managers)
Thule Group AB
West Coast Foundation
Västtrafik
Municipality of Åre

Financial overview 2023

	kSEK
Capitalised funds from 2022	14,298
Revenue	
Mistra	11,773
Co-funding from consortium partners	1,522
Other revenue	35
Total revenue	13,330
Costs	
Salaries	13,570
Travel	614
Consumables	33
Depreciation	3
Other direct costs	847
Purchased services	1,570
Indirect costs	2,783
Total costs	19,420
Closing balance, 2023	8,208



Breakdown of costs according to various programme items	kSEK
Programme management	2,194
Communication	713
Knowledge and transformation	1,885
Sustainable transport solutions	1,904
Sustainable use of land and water	2,506
Materials and durable equipment	3,182
Sustainable events	1,989
Behaviour, policy instruments and development	2,751
Co-creation	2,297
Total	19,420

Application for the second phase of Mistra Sport & Outdoors

Significant work has been done in 2023 on the application for the second phase of the programme. Programme Director Peter Fredman talks about the process and his thoughts about the future of Mistra Sport & Outdoors.

The process began at the start of the year, when everyone working on the programme was given the opportunity to provide input. Major issues have been discussed within a dialogue group made up of both researchers and partners. The direction of the second phase was discussed during the programme meeting held at Bosön in April and the digital programme meeting in October. Transformation through communication, successful co-creation through learning groups and focus areas for the second phase were all items on the agendas of these meetings. The application has also been a recurring topic for the Programme Board.

The application was submitted to Mistra, our funding body, in mid-December. An international evaluation team of five people has reviewed the application and written a statement for Mistra. A consultation was held at Mistra's office in Stockholm in late January 2024, where representatives from the programme met the evaluators and answered questions. The application, together with the evaluators' report and the programme's comments on the report, are then to be sent to Mistra's Board, which will make a decision on the second phase.

From the content of the application, we can specifically indicate that we are proposing clearer impact goals

for the programme: to increase environmental knowledge, ability and commitment among programme participants and other stakeholders. We propose that six themes in the first phase are turned into four focus areas: Transformative sport and outdoor recreation, Resource use and circular flows, Visitor management and the physical environment, and Sustainable events. We are planning an ideas lab to trial and implement

solutions with the potential to be scaled up, expanded or deepened in order to improve sustainability in practice. We also want to place greater emphasis on international cooperation and knowledge transfer.

Consultation in Stockholm, 25 January 2024.



Network-based centre

One of the three Mistra Sport & Outdoors goals for the first phase is to develop a plan for a network-based centre for research, development and policy support for sustainable sport and outdoor recreation solutions. This activity will commence when Mistra's funding of the programme is phased out in 2028/29.

A discussion paper was prepared in 2023 which forms the basis for further work. This highlights factors such as the importance of communicating knowledge (distributing existing information), knowledge management (accommodating and managing knowledge produced previously), and knowledge production (producing new knowledge).

Different forms of centres are discussed, ranging from one centre to networks of research centres, networks of centres for communication and knowledge management, and a broad network for knowledge production in a specific field.

Working on the basis of the discussion paper, the application for phase 2 outlines two possible options – a centre for outdoor recreation and a centre for sustainable sport, recreation and leisure. The plan will be completed in spring 2024 and then implemented during the second phase of the programme after we receive the go-ahead from Mistra, our funding body.



mistra
sport & outdoors



PHOTOS: MOSTPHOTOS | UNSPLASH | MID SWEDEN UNIVERSITY | SWEDISH SPORTS CONFEDERATION |
SWEDISH ASSOCIATION OF OUTDOOR ORGANIZATIONS | SVENSKA KANOTFÖRBUNDET | PRIVATE
DESIGN: MID SWEDEN UNIVERSITY

FUNDED BY



Stiftelsen för miljöstrategisk forskning