



# Free Flow Conference Programme

## International conference on protecting and restoring free-flowing rivers in Europe

April 15–17, 2024 | Oosterpoort,  
Groningen, The Netherlands  
[Freeflowconference.eu](https://Freeflowconference.eu)



# Sponsors

The Free Flow Conference is made possible by partners and sponsors. We gratefully thank them for their contributions.



# Welcome to the Free Flow Conference

The World Fish Migration Foundation and Institute of Fisheries Management would like to welcome you at the Free Flow Conference here in the wonderful city of Groningen in The Netherlands.

Our rivers are facing unprecedented threats, and freshwater biodiversity is in decline, but by joining together to share best practice and learn from each other we may, collectively, be able to slow this decline and restore the free flowing rivers we all hold so dear.

Together with our Advisory Board members we have selected 125 speakers divided over 27 sessions. Topics range from nature-based solutions, free flowing river policies, dam removal to technical river connectivity solutions.

This event is made possible with the support of partners, exhibitors and sponsors. We are truly grateful for their financial contribution.

To prepare yourself for the conference you can download the abstracts of the presentation from our website [freeflowconference.eu](http://freeflowconference.eu).

We hope your time at the conference is both educational and inspirational and make lots of new connections. When you use social media, please use the hashtag: #FreeFlowConference



**Herman Wanningen**

–

Director,  
World Fish Migration Foundation



**Paul Coulson**

–

Director of Operations,  
Institute of Fisheries  
Management

# Conference Programme

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# Meet our moderator

Ella McSweeney is an Irish journalist and reporter. She is a science (zoology) graduate from Trinity College, Dublin and holds a masters in food policy from City University, London.

She works across radio, television and print for a variety of broadcasters and publications, including RTE, BBC, The Guardian and the Irish Times, amongst others. She's presented a wide range of radio shows for RTE, including Shanks Mare, Documentary on One, Into the Deep, award-winning Mind Matters, Future Tense, Nature's Web, The Green Light, Farm Week and Countrywide. For BBC, she has reported for and presented Farming Today, On Your Farm and The Food Programme on Radio 4, and documentaries on BBC World Service.

## Ella McSweeney

Journalist and  
reporter



# Keynote speakers



## **Pao Fernández Garrido**

***Dam Removal Expert, World Fish Migration Foundation, Segovia, Spain***

“This event gives you the opportunity to meet in-person people from many countries with big experience dealing with river connectivity issues, learning from their real case studies and increasing your network of experts who could collaborate (or give support) in your future projects.”



## **Zeb Hogan**

***Research professor, University of Nevada, Reno, Nevada, USA***

“Around the world, free-flowing rivers support irreplaceable biodiversity, bountiful fisheries, and human well-being and livelihoods. While these critically important waters are under threat and under appreciated, momentum is building for free-flowing river research, preservation, and restoration. This conference is an opportunity for experts and river advocates to join together to share our knowledge and enthusiasm for healthy rivers full of life, and spread the word about the important connection between people, water, and fish.”



## **Jeffrey Duda**

***Research Ecologist, USGS, Western Fisheries Research Center, Seattle, Washington, USA***

“More than ever before, the world is focused on the restoration of rivers. I look forward to joining experts from around the world at Free Flow 2024 giving presentations about lessons learned from dam removal and restoration of river connectivity - what it takes, why it is important and what the outcomes can be for rivers, people and biodiversity.”



## **Gabriel Singer**

***Gabriel Singer, river ecologist, Professor of Aquatic Biogeochemistry, Department of Ecology, Innsbruck University.***

“To some aquatic fauna, free-flow is a critical life condition. To me as a human, there is hardly anything more inspiring than free-flow, as a real-world phenomenon I study, a conservation target I dream of, a natural riverine feature keeping me alive. So maybe it's a critical life condition for me as well, not just for fish!”






Keynote presentations  
are kindly sponsored by:





# Programme overview – Day 1







Monday, 15 April 2024

Time	Programme Overview – Monday 15 April 2024				
7:50 – 8:40	Registration				
8:40 – 8:50	Opening and welcome, featuring a welcome video by Virginijus Sinkevičius – European Commissioner for the Environment, Oceans and Fisheries				
8:50 – 9:30	Zeb Hogan: Global Swimways and Migratory Megafish: Current Status and Future Opportunities				
9:30 – 10:10	Pao Fernandez Garrido: Progress, challenges and achievements on dam removal in Europe the last 10 years				
10:10 – 10:20	Exhibitors' pitch presentations				
10:20 – 10:40	Break				
10:40 – 12:00	<b>A1 (FREE FLOW ROOM)</b>	<b>B1 (OTTER ROOM)</b>	<b>C1 (STURGEON ROOM)</b>	<b>D1 (DRAGONFLY ROOM)</b>	<b>E1 (KINGFISHER ROOM)</b>
	<b>Implementing European Biodiversity Targets and EU policies for free-flowing rivers</b>  <b>Moderator: Claire Baffert</b>	<b>Ecology and hydromorphology of free-flowing rivers</b>  <b>Moderator: Roland Jansson</b>	<b>River restoration projects</b>  <b>Moderator: Kaspars Abersons</b>	<b>Conservation of Danube River basin</b>  <b>Moderator: Martin Tschikof</b>	<b>Cultural and socio-economic aspects of dam removal</b>  <b>Moderator: TBD</b>
12:10 – 12:40	Official opening & VIP guests, featuring a digital interview with Jutta Paulus – Member of the European Parliament				
12:40 – 14:00	Lunch time & Exhibitors' market				
	Posters' session – Sponsored by: 				
14:00 – 15:20	<b>A2</b>	<b>B2</b>	<b>C2</b>	<b>D2</b>	<b>E2</b>
	<b>20 years of WFD: What did this bring to free-flowing rivers (+ panel discussion)</b>  <b>Moderator: Yurena Lorenzo</b>	<b>Dam Removal – Small barriers</b> <b>Moderator: Jeffrey Duda</b>  Sponsored by: 	<b>River restoration for LIFE (EU LIFE projects)</b>  <b>Moderator: Karin Olsson</b>	<b>Hydropower development vs free-flowing rivers</b>  <b>Moderator: Birgitta Malm Renöfalt</b>	<b>Small scale fish passage solutions</b>  <b>Moderator: Tom Buijse</b>
15:20 – 15:40	Break				
15:40 – 17:00	<b>A3</b>	<b>B3</b>	<b>C3</b>	<b>D3</b>	<b>E3</b>
	<b>Freshwater fish &amp; fisheries: Restoration of migratory fish populations</b>  <b>Moderator: Marc Ordeix</b>	<b>Nature-based Solutions</b>  <b>Moderator: Kerry Brink</b>	<b>Road dams / Culverts retrofitting</b> <b>Moderator: Paul Coulson</b>  Sponsored by: 	<b>River protection in the Western Balkans</b>  <b>Moderator: Amelie Huber</b>	<b>River restoration tools</b>  <b>Moderator: Joshua Royte</b>
17:05 – 18:00	Social – Sponsored by:  				
18:00 – 19:30	DAMBUSTERS FILM SCREENING				



# Programme overview – Day 2

Tuesday, 16 April 2024

Time	Programme Overview – Tuesday 16 April 2024				
8:25 – 8:40	Registration				
8:40 – 8:50	Opening and welcome				
8:50 – 9:30	Gabriel Singer: The river as a habitat for river ecologists				
9:30 – 10:10	Jeff Duda: Science and dam removal: Lessons learned from local to continental scales				
10:10 – 10:20	Exhibitors' pitch presentations				
10:20 – 10:40	Break				
10:40 – 12:00	<b>A4 (FREE FLOW ROOM)</b>  <b>Dam Removal – Large dams</b>  <b>Moderator: Michelle Thieme</b>  Sponsored by:  <b>McMillen</b>	<b>B4 (OTTER ROOM)</b>  <b>Small scale fish passage solutions</b>  <b>Moderator: Olle Calles</b>	<b>C4 (STURGEON ROOM)</b>  <b>Cultural and socio-economic aspects of free-flowing rivers</b>  <b>Moderator: Sebastian Birk</b>	<b>D4 (DRAGONFLY ROOM)</b>  <b>Priority actions towards free-flowing Rhine and Maas rivers</b>  <b>Moderator: Jeroen Tummers</b>  Sponsored by: 	<b>E4 (KINGFISHER ROOM)</b>  <b>BioAgora workshop: Removing barriers together: Developing a new collaborative strategy for prioritising research to restore free-flowing rivers</b>  <b>Moderator: Twan Stoffers</b>
	Free flowing developments				
12:35 – 14:00	FREE FLOW Yoga		Lunch time		
			Posters' session – Sponsored by: 		
14:00 – 15:20	<b>A5</b>  <b>Large scale fish passage solutions</b>  <b>Moderator: Paul Coulson</b>  Sponsored by: 	<b>B5</b>  <b>River restoration tools</b>  <b>Moderator: Ruben van Treeck</b>	<b>C5</b>  <b>River restoration for LIFE (EU LIFE projects)</b>  <b>Moderator: Katarina Mravcova</b>	<b>D5</b>  <b>Priority actions towards free-flowing Rhine and Maas rivers</b>  <b>Moderator: Bas Roels</b>  Sponsored by: 	<b>E5</b>  <b>Dam Removal Europe / European Open Rivers Programme workshop</b>  <b>Moderators: Kerry Brink, Gwen McDonald</b>
	Break				
15:40 – 17:00	<b>A6</b>  <b>River restoration projects</b>  <b>Moderator: Charles Crundwell</b>	<b>B6</b>  <b>Ecology and hydromorphology of free-flowing rivers</b>  <b>Moderator: Twan Stoffers</b>	<b>C6</b>  <b>Freshwater fish &amp; fisheries: Restoration of migratory fish populations</b>  <b>Moderator: Yurena Lorenzo</b>	<b>D6</b>  <b>Dam Removal – Small barriers</b>  <b>Moderator: Jeffrey Duda</b>	<b>E6</b>  <b>Prioritizing rivers and dams for restoration workshop</b>  <b>Moderators: Joshua Royte, Ruben van Treeck</b>
	Social & Exhibitors' market				
18:30 – 22:30	Dam Removal Europe Award ceremony & Conference dinner The first drink of the dinner is proudly sponsored by:				
	DJ GrooveAX FREE FLOW SET				

# Daily schedule – Day 1

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10:40	Introduction by Living European Rivers coalition	Piotr Parasiwicz: Over 200,000 kilometers of free-flowing river habitat in Europe is altered due to impoundments	Donné Mathijssen: Restoring the Westerwoldse Aa from sea to source: 30 years of improving water quality, connectivity and habitat diversity for fish	Yusdiel Torres-Cambas: Prioritizing conservation and monitoring areas in the Danube River basin: Insights from the DANUBE4all project	Marq Redeker: People love their weirs – Moving goalposts in a dam removal project
10:55	Wouter van de Bund: Is my river free-flowing? Towards a common European method showing the benefits of barrier removal for river connectivity	Victoria Huk: The effects of the German-Polish expansion of the Odra River on nutrient retention and water quality	Ana Catarina Miranda: Rollin'Rivers – People, knowledge and action to enhance river restoration in Portugal	Miroslava Rakovská: Comprehensive efforts towards improvement of the Danube inland delta water regime	Miriam Colls: The adventure of implementing a barrier removal project – A socio-cultural perspective
11:10	Bart Fokkens: River continuity restoration policies and freshwater ecosystem restoration	Róisín Donovan: Invisible actors: Thermal responses to low head impounding structures – Identification, quantification, prioritization, and mitigation	Paweł Pawlaczyk: Natural fluvial processes as a tool of river restoration (example of Polish Surface Waters Restoration Programme)	Marcell Szabo-Meszaros: Connectivity assessment for fish in the Danube River basin	Clemens Gumpinger: Dam Removal in Austria – How to move from pilot projects to standard procedure?
11:25	Melissa de Raaij: Towards a free(er) flowing Netherlands	Martin Dalvai Ragnoli: How damming contributes to global warming: Learning from the free-flowing Upper Neretva River in Bosnia-Herzegovina	Tim Feierfeil: Structural measures for the near-natural development of the Neckar in Mannheim	Mária Šibíková: NaturaSat Wetland project – A novel tool for riparian vegetation monitoring after river branch system restoration	Eva Horvat: Best match on Reka catchment: River barrier inventory with awareness raising activities

11:40	Twan Stoffers: Reviving Europe's rivers: Seven challenges in the implementation of the Nature Restoration Law to restore free-flowing rivers	Arjit Mishra: Mapping of free flowing and wild rivers of Uttarakhand, India	Johanna Hägglund: Ecostreams: Holistic approach to restoring aquatic habitats in Northern Sweden	Anthony Basooma: Biodiversity data quality flagging checks for distribution models using species ecological and tolerance limits	Lígia Vaz de Figueiredo: Can people's engagement facilitate dam removal processes? Lessons learned from a case study in Portugal
12:10 – 12:40	Official opening & VIP guests, featuring a digital interview with Jutta Paulus – Member of the European Parliament				
12:40 – 14:00	Lunch time & Exhibitors' market				
	Posters' session (Sponsored by Oregon RFID)				
	<b>A2</b>	<b>B2</b>	<b>C2</b>	<b>D2</b>	<b>E2</b>
14:00 – 15:20	<b>20 years of WFD: What did this bring to free-flowing rivers (+ panel discussion)</b>  <b>Moderator: Yurena Lorenzo</b>	<b>Dam Removal – Small barriers (sponsored by Princeton Hydro)</b>  <b>Moderator: Jeffrey Duda</b>	<b>River restoration for LIFE (EU LIFE projects)</b>  <b>Moderator: Karin Olsson</b>	<b>Hydropower development vs free-flowing rivers</b>  <b>Moderator: Birgitta Malm Renöfält</b>	<b>Small scale fish passage solutions</b>  <b>Moderator: Tom Buijse</b>
14:00	Valentina Bastino: River restoration in EU Water and Nature policy	Geoffrey Goll: Dam removal is not just about dam removal	Katarina Mravcova: LIFE Living rivers: Restoring rivers in Slovakia	Esther Carmen: Navigating change to mainstream barrier removal: Using a Nature-based Solutions (NbS) approach with the hydropower sector across Europe	Olle Calles: Resolving recruitment bottlenecks for the critically endangered European eel
14:15	Marc Daniel Heintz: 37 years of effort to restore fish migration in the Rhine River basin – where do we stand?	Kerry Brink: How dam removal has opened up >1817 km of river in Europe	Vibeke Lirås: LIFE CONNECTS creates free flowing rivers in Southern Sweden	Peter Rudberg: Stakeholder collaboration as part of the Swedish national plan for modern environmental provisions for hydropower	Rachel Mawer: Analysing the behaviour of migrating fish to predict movement near barriers
14:30	Sergiy Moroz: Does WFD + NRL = dam removal policy in Europe?	Hamish Moir: The sustainable 'nature-based' management of dam and weir structures: Design and implementation – Case studies from Scotland, England and Iceland	Sílvia Pedro: LIFE Agueda – Restoring river connectivity for migratory fish in the Vouga River basin	Dimitrios Papageorgiou: Conservation challenges in the Aaos River basin: The threat of small hydropower plants	Jamie Dodd: Can't pass or won't pass: Quantifying improved connectivity for riverine brown trout at a low-head gauging weir
14:45	Panel discussion and Q&A	Camila Kuncar: Improving river governance: Removal of dams on the Ega River	Patrik Olofsson: Reviving freshwater pearl mussel populations and their habitats – LIFE REVIVES	Valerio Barbarossa: Strategic restoration and development scenarios to mitigate fish habitat fragmentation for low-impact hydropower in the Mekong	Patricija Raibarte: Monitoring results show slow recovery of lamprey reproduction after construction of a country wise first natural fish passage
15:00		Giandomenico Mercuri: Giov & Go: Free-flowing Giovenco. Defragmentation interventions on the Giovenco River: Connecting stakeholders to reconnect the river	Joel Rees-Jones: LIFEDeeRiver, restoring one of the most regulated rivers in Europe	Paul Meulenbroek: Conservation requirements of European eel ( <i>Anquilla anquilla</i> ) in a Balkan catchment	Ine Pauwels: Ten years of adjusted tidal barrier management to enhance glass eel migration at the Belgian coast: what have we learned?

15:20 – 15:40	Break				
15:40 – 17:00	<b>A3</b>	<b>B3</b>	<b>C3</b>	<b>D3</b>	<b>E3</b>
	<b>Freshwater fish &amp; fisheries: Restoration of migratory fish populations</b> <b>Moderator: Marc Ordeix</b>	<b>Nature-based Solutions</b> <b>Moderator: Kerry Brink</b>	<b>Road dams / Culverts retrofitting (Sponsored by US Forest Service)</b> <b>Moderator: Paul Coulson</b>	<b>River protection in the Western Balkans</b> <b>Moderator: Amelie Huber</b>	<b>River restoration tools</b> <b>Moderator: Joshua Royte</b>
15:40	Justine Gelder: What do fish do during and after the opening of a migration axis? An analysis of their colonization dynamic	Sebastian Birk: Building blocks for upscaling freshwater Nature-based Solutions in Europe	Erica Borum: A Nature Based Solution at road-stream crossings: Free flowing and flood resilient	Irma Popovic Dujmovic: Achieving durable river protection: The United for Rivers initiative in Southeast Europe	Jesse O'Hanley: Can't do them all, so how should we prioritize barriers for removal?
15:55	Emilien Lasne: A toolbox to assess the spatio-temporal dynamics of Atlantic salmon recolonisation after dam removal on the Sélune River (Normandy, France)	Paul Brotherton: Wetland solutions to protect against floods and droughts	Emma Washburn: River obstacles: A new type-attributed road-river crossing dataset for England, United Kingdom	Iskra Krstic: Serbia: A war against rivers and activists	Gonçalo Duarte: RivConnect – A new tool for river network connectivity assessment
16:10	Johan Watz: Removal of lake outlet dams in Sweden and its effects on fish communities	Péter Kajner: Involving local stakeholders into lateral connectivity restoration along the River Tisza, Hungary	Niklas Kemi: The Swedish transport administrations successful work with removing barriers	Maja Pravuljac: Implementation of environmental acquis relevant to hydropower projects in selected Western Balkan countries – Systemic failures and golden standards	Paulo Branco: Dammed fish: Impact of structural and functional river network connectivity losses on fish biodiversity – Optimising management solutions
16:25	Emma Cordier: The establishment of the Trans-European Swimways Network and Swimways of European Importance	Mario Brillinger: Nature-based solutions for the Elbe estuary?	Matïss Žagar: Mapping impassable culverts to be removed in the highly ecologically prioritized Gauja River	Jelena Popovic: Komarnica canyon, the screaming silence of untouched nature under threat – The battle for its preservation from hydroelectric power	Florian Borgwardt: Riparian zones – A key factor in conservation efforts for terrestrial and freshwater connectivity
16:40	Sebastian Rock: Parasitic freshwater pearl mussels induce upstream movement in their brown trout hosts: Early evidence of an extended phenotype	Laurice Ereifej: Living Danube Partnership for restoration: 1+1+1=5? Innovative partnership between corporate, governmental platform and NGO	Thiago Couto: Connecting water and people by improving road-crossing infrastructure in the Brazilian Amazon	Panel discussion and Q&A	Sami Domisch: Tools to address the longitudinal connectivity in spatial freshwater biodiversity science
17:05 – 18:00	Social (Sponsored by Municipality of Groningen & Oregon RFID)				
18:00 – 19:30	DAMBUSTERS FILM SCREENING				

# Daily schedule – Day 2

Tuesday, 16 April 2024

Time	Full Day Programme – Tuesday 16 April 2024				
8:25 – 8:40	Registration				
8:40 – 8:50	Opening and welcome				
8:50 – 9:30	Gabriel Singer: The river as a habitat for river ecologists				
9:30 – 10:10	Jeff Duda: Science and dam removal: Lessons learned from local to continental scales				
10:10 – 10:20	Exhibitors' pitch presentations				
10:20 – 10:40	Break				
	<b>A4 (FREE FLOW ROOM)</b>	<b>B4 (OTTER ROOM)</b>	<b>C4 (STURGEON ROOM)</b>	<b>D4 (DRAGONFLY ROOM)</b>	<b>E4 (KINGFISHER ROOM)</b>
10:40 – 12:00	<b>Dam Removal – Large dams (Sponsored by MCMillen)</b>  <b>Moderator: Michelle Thieme</b>	<b>Small scale fish passage solutions</b>  <b>Moderator: Olle Calles</b>	<b>Cultural and socio-economic aspects of free-flowing rivers</b>  <b>Moderator: Sebastian Birk</b>	<b>Priority actions towards free-flowing Rhine and Maas rivers (Sponsored by Arcadis)</b>  <b>Moderator: Jeroen Tummers</b>	<b>BioAgora workshop</b>  <b>Moderator: Twan Stoffers</b>
10:40	Morton McMillen: Planning and implementation for the removal of the four dam complex of the lower Klamath project	Pieter Boets: Fish migration passages on smaller watercourses: How effective are they?	Anna Scaini: Uncovering the invisible connection between people and rivers	Tim Vriese: Connectivity on the River Meuse	Removing barriers together: Developing a new collaborative strategy for prioritising research to restore free-flowing rivers
10:55	Laura Soissons: Ecological restoration of the Selune River (Normandy, France) through the removal of two large dams	Robert Feurich: Improving fish passage by an unstructured block ramp	Rob Cunningham: Mainstreaming NbS in water management sector – Example from Croatia	Jeroen Tummers: Connectivity in the River Meuse: Characteristics of a major, flowing bypass	
11:10	Keith Denton: Ecosystem response to the removal of the Elwha River dams, Washington State, United States of America	Arantxa Unzurrunzaga: From theory to practice with naturalized design	TBD	Sam Maijvis: Ecological continuity of weir complexes for fish in the Water Framework Directive Explorer	
11:25	Riku Rinnevali: Monitoring the very first large-scale dam removals in Finland – Preliminary results	Falko Wagner: Risk assessment for fish passing turbines, pumps and hydraulic structures: A methodological framework and innovative methods	Brigitta Mikus: Ecosystem services for dam removals in the River Lahn (Germany)	Jacco van Rijssel: Rhine salmon population threatened by multiple hurdles along their migration	

11:40	Richard Roos-Collins: Risk management in dam removal	David Buysse: An Archimedes screw threesome: A study evaluating the fish friendliness of three Archimedes screw variants	Kelsey Aho: Art as water management	Daphne Willems: Free flowing rivers in The Netherlands	
12:10 – 12:35	Free flowing developments				
12:35 – 14:00	Lunch time				
	FREE FLOW Yoga		Posters' session (Sponsored by Oregon RFID)		
14:00 – 15:20	<b>A5</b>	<b>B5</b>	<b>C5</b>	<b>D5</b>	<b>E5</b>
	<b>Large scale fish passage solutions (Sponsored by CDM Smith)</b>  <b>Moderator: Paul Coulson</b>	<b>River restoration tools</b>  <b>Moderator: Ruben van Treec</b>	<b>River restoration for LIFE (EU LIFE projects)</b>  <b>Moderator: Katarina Mravcova</b>	<b>Priority actions towards free-flowing Rhine and Maas rivers (Sponsored by Arcadis)</b>  <b>Moderator: Bas Roels</b>	<b>Dam Removal Europe / European Open Rivers Programme workshop</b>  <b>Moderators: Kerry Brink, Gwen Mcdonald</b>
14:00	Katja Philippart: Fish migration river: Nature based large scale fishway between Waddensea and Lake IJssel. Under construction now! Adaptive design, construction and research ambitions	Ruben van Treec: Prioritizing barrier removals in Germany – a GIS and feasibility approach	Karin Olsson: River restoration for a free flowing Rönne å River – Challenges and lessons learned	Melanie Meijer zu Schlochtern: Upstream passage success of large anadromous fish at the Haringvliet estuarine barrier using long-term telemetry monitoring	
14:15	Mark Yeldham: Severn Unlocked? The response of two anadromous fishes to catchment-scale barrier mitigation in the River Severn revealed using acoustic telemetry	Sigrun Lange: "River pearl"-label as driver for dam removal?	Marc Ordeix: Restoration of fish migration and beginning of a European sturgeon recovery project in the lower Ebre River (Catalonia) and beyond	Niels Brevé: Lessons learned from telemetry: How climate change affects pathways of migratory fish in one of Europe's largest river basins	
14:30	Vincent Autier: Horizontal fish screen solution for downstream fish passage at a historic dam used to restore Lahontan cutthroat trout population	Carlos Garcia de Leaniz: Are satellite images reliable for filling barrier data gaps? Modelling barrier discovery to achieve free-flowing river targets	Peter Jones: Overcoming challenges and constraints to delivering effective river restoration: Lessons learnt in the Four Rivers for LIFE project	Bas Roels: Action plan	
14:45	Reid Swanson: FishPass – A vision for selective fish passage solutions to the connectivity conundrum	Amaia Rodeles: A method for fish meta-population connectivity evaluation and barrier removal optimization	Sofia Perä: TRIWA LIFE – The Torne River International Watershed LIFE – Europe's largest water project		
15:00	Ulrike Drabek: Nature-based solutions for fishways	Jaime Ricardo Garcia Marquez: Estimating fish habitat fragmentation patterns and simulating barrier removal to target habitat restoration efforts	Helena Mühlmann: LIFE IP IRIS – Integrated River Solutions in Austria – Linking Water Framework Directive and Floods Directive	Workshop: TBD	

15:20 – 15:40	Break				
15:40 – 17:00	<b>A6</b>	<b>B6</b>	<b>C6</b>	<b>D6</b>	<b>E6</b>
	<b>River restoration projects</b>  <b>Moderator: Charles Crundwell</b>	<b>Ecology and hydromorphology of free-flowing rivers</b>  <b>Moderator: Twan Stoffers</b>	<b>Freshwater fish &amp; fisheries: Restoration of migratory fish populations</b>  <b>Moderator: Yurena Lorenzo</b>	<b>Dam Removal – Small barriers</b>  <b>Moderator: Jeffrey Duda</b>	<b>Prioritizing rivers and dams for restoration workshop</b>  <b>Moderators: Joshua Royte, Ruben van Treeck</b>
15:40	Ewa Leś: The greatest water management challenges in the Baltic Sea region	Carmen Rethschulte: Weir management and the impact on peak floods and sediment flushing as key factors for the upper Isar alluvial dynamics	Remko Verspui: Spawning migration of North Sea Houting in the Overijsselse Vecht	Kristen Coveleski: Optimizing restoration resources: Removing multiple dams along urban rivers	
15:55	Peter Mathisen: Rivers of LIFE – Examples of holistic restorations and problem solving in boreal rivers	Miriam Colls: Green house gas emissions from dammed river basin – A case study at basin scale	Ričards Kaupužs: Successful restoration of migratory fish populations confirms the benefits of dam removal in middlesized rhithral stream	Josu Elso: River connectivity restoration to improve diadromous fish populations: LIFE KANTAUribAI project	
16:10	Wendy Katagi: Los Angeles river watershed fish passage, restoration, and flows	Marcis Saklaurs: Management of water and forest ecosystems in the Salaca River basin	Stephanie Popp: Mapping sturgeon habitats: A comprehensive overview of sites, protection status and potential threats in selected river systems	Mircea Marginean: First steps in restoring longitudinal connectivity on Vâlsan River – home of critically endangered fish species Asprete	
16:25	Panos Panagiotopoulos: Restoring a lowland river basin: Effects of fishways, removing barriers and re-meandering on fish and invertebrate communities	Twan Stoffers: Ontogenetic habitat shifts by juvenile fishes highlight the importance of permanent river-floodplain connectivity and habitat heterogeneity	Pieterjan Verhelst: Downstream spawning migration of European eel ( <i>Anguilla anguilla</i> L.): A Europe-wide telemetry meta-analysis	Lorenzo Quaglietta: Galaxes weir removal: An ORP-funded project kickstarting the civic movement for the restoration of river connectivity in Portugal	
16:40	Piotr Nieznański: Space for the Oder River – Putting the concept into practice	Tamara Leite: The state of European river network connectivity	Johannes Kowal: Temporal developments of longitudinal connectivity: The perspective of potamodromous fish	Melissa Mahavar-Snow: Removing redundant gauging weirs to benefit migratory fish in Wales	
17:00 – 18:00	Social & Exhibitors' market				
18:30 – 22:30	Dam Removal Europe Award ceremony & Conference dinner The first drink of the dinner is proudly sponsored by: Aquamaintain				
	DJ GrooveAX FREE FLOW SET				

# List of posters

The conference will host poster sessions where you can present your research! 30 posters are already selected and there is enough space for 20 more. New poster proposals will be evaluated regularly. Get in touch with [Foivos@fishmigration.org](mailto:Foivos@fishmigration.org) for more information.

The poster sessions are sponsored by:



Presenter	Title
Abdul Waheed	The political ecology of Indus delta: Analysing policy paradigms for climate-resilient pathways
Akhtar Zeb Khan	Geomorphic assessment of discharge potential to identify areas more vulnerable to erosion after River Training, Slovak Carpathians
Andrijana Mićanović	Biodiversity and ecological significance of the Zeta River: A review of ichthyofauna and speleological features
Androniki Turlouki	Conservation and rehabilitation of Prespa's riparian zones: A holistic approach to biodiversity and ecosystem management
Anthony Basooma	Effect of hydropower dams on the network connectivity of the Nile River Basin
Arie Benjamin Griffioen	Far from free-flowing: glass eel migration in the highly urbanized Dutch delta
Benjamin Kavanagh	Small scale fish passage solutions
Céline Hanzen	Flowing freedom: Conservation and connectivity in the Semois valley national Park
Charlotte Van Driessche	How environmental DNA metabarcoding fills the knowledge gaps in a cross-country characterisation of lotic fish communities: the Scheldt estuary
Craig Renton	Worthyvale Camel connection
Daria Gundermann	Migratory fish worldwide: Differences in data within global and regional repositories
Fernando Tapia	Scale matters: Effects of hydrogeomorphology and anthropogenic disturbances on the abundance of native fish in Chilean Rivers
Gonçalo Duarte	Functional longitudinal connectivity impairment of European diadromous fish species during the 20th century
Guillermo Giannico	Coupling multiple ways of knowing water quality and river health in the Klamath River during and after dam removal
Hannah McCormick	Developing a UK conservation and recovery strategy for two native sturgeon species
Japhet Tembo	Fish conservation evaluation at two Kenyan east flowing rivers reveals importance of anguillids eels
Jeffrey Duda	The cost of dam removal - Trends, regional patterns, and a predictive model
Jelger Elings	Investigating fish migration through acoustic telemetry at different scales



Joanna Wqs	River restoration by chance? Floods and European beaver ( <i>Castor fiber</i> ) as factors maintaining spontaneous renaturalization of Łososina River (Western Carpathians)
Kas Guillozet	Floodplains by design: A public-private partnership for integrated floodplain management in Washington State, USA
Kaspars Abersons	If the problem is caused by a dam, the best solution is to remove it
Lotte de Jong	Politicising fish knowledge for river defence; insights from Colombia and the Netherlands
Malaurie Hons	Different meander reconnection methods lead to different biodiversity success
Marco Seminara	River defragmentation: A pilot intervention for central Italy
Maria Alp	Ten critical points when putting in place projects for restoring river connectivity: an interdisciplinary perspective
Martin Tschikof	Robust indicators for floodplain conditions and restoration success: Identify, test, evaluate, and upscale
Matrin Wenk	Integrated river planning in Austria: Advancing towards free-flowing rivers
Martine Roseboom	Dam removals and sense of place: Case studies of the Vramsån and Mörrumsån
Maya Daumal	Bossherveld: A haven for young fish in this newly developed floodplain of the Grensmaas?
Mayra Darre	A bioeconomic model for optimizing river barrier removal in Norway
Meike Traas	Fish migration river (VMR), Afsluitdijk, the Netherlands: Expected salinity effects Lake IJssel
Michael Oke	An overview of the fish issues facing Gwagwalada's fish farmers and traders Nigeria's Abuja
Mojca Hrovat	Nature conservation measures on waters of Štajerska in the LIFE integrated project for enhanced management of Natura 2000 in Slovenia
Paul Meulenbroek	The Vjosa River – A hotspot of highly threatened ecosystems and biodiversity of European significance
Philipp Thumser	Long-term performance of an underwater camera for monitoring fish migration at the HPP Kirchbichl (Austria)
Rudy Benetti	Responsiveness to surface-groundwater interactions by spawning salmonids: Site selection patterns and control mechanisms in <i>Oncorhynchus</i> , <i>Salmo</i> and <i>Salvelinus</i> genera
Sarah Broos	From fish to sensors: Assessing pumping stations impacts on fish and optimizing future research designs using innovative sensors
Sigrun Lange	Fluss.Frei.Raum, a new project to speed up dam removal in Bavaria/Germany
Stijn Bruneel	How safe is a 'fish friendly' Fairbanks Nijhuis axial flow pump? A study using live fish and passive sensors
Tamar Beridze	Rioni River – Sturgeon Diversity Hotspot
Tamara Leite	Understanding the impacts of river network fragmentation on freshwater fish species
Victor Odongo	Seasonal variations of coastal fish community in relation to environmental parameters – A case of the Sylt-Rømø Bight, southeastern North Sea

# Side programme

The conference offers a diverse and interesting side programme and networking possibilities. Highlights are presented below.

**Sunday, 14 April 2024**

## Icebreaker on Sunday evening

We invite you to kick off your Free Flow Conference with an exclusive early bird registration event held at Oosterpoort, Groningen, on the evening before the conference. Registration will be open from 19:00 to 21:00 providing you with the opportunity to network with fellow attendees while enjoying a drink.

First drink is on us! Join us to connect and unwind before the conference officially begins. We look forward to welcoming you!



## Oregon RFID workshop

The Oregon RFID PIT technology workshop covers the construction and operation of PIT Tag monitoring systems, including site selection, field power sources, installation and maintenance.

The workshop will start at 10:00 on April 14, at the Flonk Hotel Zuid - Laan Corpus Den Hoorn 300, 9728 JT Groningen. Pre-registration is required; for more information, contact [teddi@oregonrfid.com](mailto:teddi@oregonrfid.com).

## Exposition Students Noorderpoort

How do you dress a conference with a social message with design?

The first and second year students of the Spatial Design course, Noorderpoort Art and Multimedia in Groningen have given an answer to that. They have made an installation "School of Fish" and created various designed objects spread throughout the building.

**Noorderpoort**

## Wireless internet

During the conference, the Oosterpoort has complimentary wireless internet for the attendees:

Name: world fish migration

Code: FREEFLOW24

Monday, 15 April 2024

## Dambusters Documentary Screening

### #DamBusters Documentary Screening

Join us on April 15, 2024 at 17:50 for the screening of “#DamBusters - The start of the riverlution”. The documentary follows the journey around the world of Spanish engineer, Pao Fernández Garrido, meeting river heroes on their passionate quest to restore their rivers and ecosystems by removing dams.

Proudly supported by:



Tuesday, 16 April 2024

## Dam Removal Award

Dam Removal Europe proudly presents Dam Removal Award 2023. On the evening of April 16, 2024 we will celebrate together free-flowing rivers restored by dam removal projects of 2023 and the jury will announce the winner of the Dam Removal Award 2023. More about the nomination process here: [Dam Removal award](#)

Proudly sponsored by:



# Dam Removal Europe and Open Rivers Programme Workshop

This workshop will showcase various Open Rivers Programme funded projects. In this session, ORP will shed light on the programme's readily available grant opportunities, encouraging attendees to develop dam removal projects of their own. We will hear the experiences from project managers who have received funding from ORP and have a round table discussion showcasing lessons learned from completed projects and highlighting those in progress.

Brought to you by:



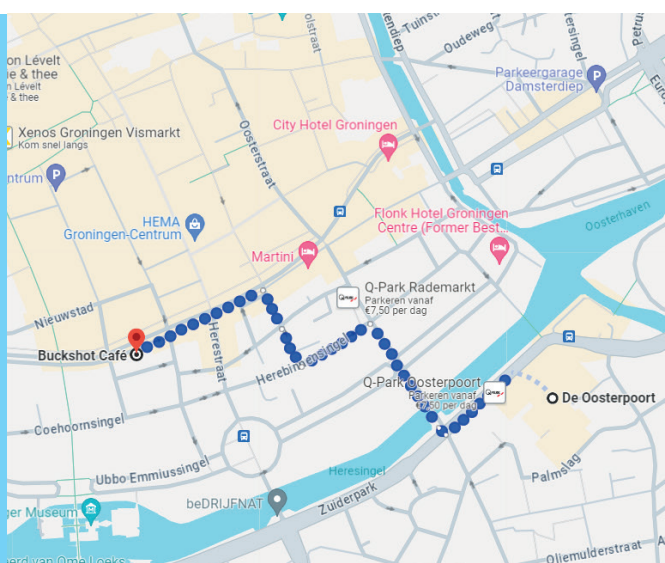
## Free Flow after party

On April 16 night, official Free Flow Conference after party will take place in Cafe Buckshot.

DJ Sampsa will roll from 23:15 onwards.



Café Buckshot  
Gedempte Zuiderdiep 58,  
9711 HK Groningen,  
The Netherlands



## Free Flow Yoga

12:35 – 14:00



"In my personal journey I have noticed how the practice of yoga is an excellent way to reconnect with ourselves and to get back in tune with the world around us.

A yoga practice offers us a moment of reflection to learn more about ourselves, our thoughts, emotions and patterns that may or may not be functional or self-sabotaging.

Learning about ourselves in this way, we start to realize that we are not separate from other people, beings or our environment. In this slow-paced Yoga flow practice let us take that moment of reflection."

**Julia Engelbrecht**

*Osteopath & Yoga Teacher*

## Excursions

Excursions are organised in cooperation with Wadden Sea Swimway project. All of the excursions will take place on Wednesday, April 17, 2024. Please see departure times for each excursion below.

### Between Sea and Source: Peizerdiep (Excursion 1)

- Meeting place is bus station, Groningen, at 8:30. Bus will leave at 9:00, be at the meeting place at least 15 minutes before departure.
- Planned return to Oosterpoort is by 19:00.
- Organised by Sportvisserij Nederland, Staatsbosbeheer, Waterschap Noorderzijlvest, Waddenvereniging



### Between Sea and Source Westerwoldse Aa (Excursion 2)

- Meeting place is bus station Groningen, at 8:30. Bus will leave at 9:00, be at the meeting place at least 15 minutes before departure.
- Planned return to Oosterpoort is by 19:00.
- Organised by Peter Paul Schollema (Regional Water Authority Hunze en Aa's), Jeroen Huisman (Van Hall Larenstein University of Applied Sciences), Donn  Mathijssen (Wageningen University)



### Afsluitdijk & Fish migration river (Excursion 3)

- Meeting place is bus station, Groningen, at 8:30. Bus will leave at 9:00, be at the meeting place at least 15 minutes before departure.
- Planned return to Oosterpoort is by 19:00.
- Organised by Waddenvereniging



### Texel - Researching fish in the Wadden Sea (Excursion 4)

- Meeting place is bus station, Groningen, at 7:30. Bus will leave at 8:00, be at the meeting place at least 15 minutes before departure.
- Planned return to Oosterpoort is by 19:00.
- Organised by Waddenvereniging, Royal Netherlands Institute for Sea Research (NIOZ)



### Saltmarshes as fish habitat on Schiermonnikoog (Excursion 5)

- Meeting place is bus station, Groningen, at 7:30. Bus will leave at 8:00, be at the meeting place at least 15 minutes before departure.
- Planned return to Oosterpoort is by 19:00.
- Organised by Rijksuniversiteit Groningen, Waddenvereniging



Proudly sponsored by:



waddenacademie



Waddenvereniging



WORLD FISH MIGRATION  
FOUNDATION

Waterschap NOORDERZIJVEST



# World Fish Migration Day 2024

#WFMD2024

**WFMD** is a global awareness campaign celebrated every two years to highlight the connections between fish, rivers, and people. This year, **May 25** is marked by hundreds of celebrations worldwide to celebrate free-flowing rivers! Join this celebration by hosting an event: anything is welcome, from river clean-ups, art exhibitions, a group walk on a river, movie screenings, conferences, festivals, dam removals... You name it!



## Why celebrate this day?

Migratory fish are essential for connecting water and land ecosystems, serving as vital links in food chains, and supporting the livelihoods of millions of people. However, many face obstacles like dams and other barriers that disrupt their natural migration routes. To preserve migratory fish and revitalize our rivers, we need to raise awareness and build support for the restoration of free-flowing rivers.

### Know

Learn more about migratory fishes, their connections to different ecosystems and human communities, and the threats in your area.

### Imagine

Healthy, free-flowing rivers that work with fish year after year, and all the species and people that benefit from them.

### Act

Help protect healthy rivers and restore others by raising awareness and building coalitions to free flow our rivers

**REGISTER HERE YOUR  
WFMD EVENT HERE!**



### United for Rivers Photo Exhibition

The Lives Shaped By Water Exhibition documents the connections between people and rivers by exploring how we influence each other.

This exhibition is as much a story of rivers as it is of the people and life taking place on their banks. It transcends borders to bolster the shared landscape upon which we (re)connect with nature and each other.

### Arthur de Bruin Underwater Photography

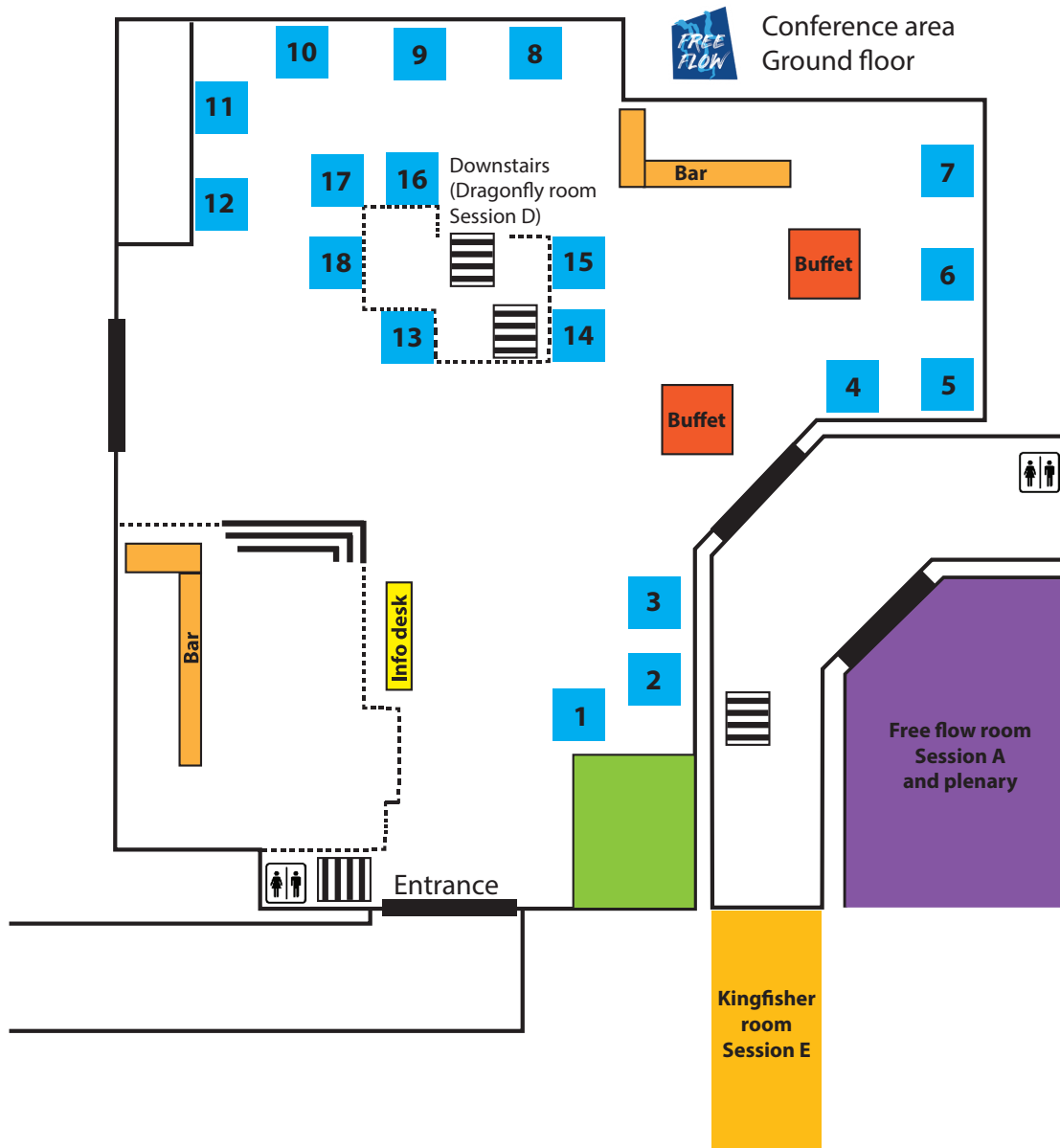
During the conference, the filmmakers Arthur de Bruin and Dick Harrewijn will be enriching the Free Flow Festival with underwater video from our beloved fish friends beneath the waterline.

<https://www.blikonderwater.nl/>

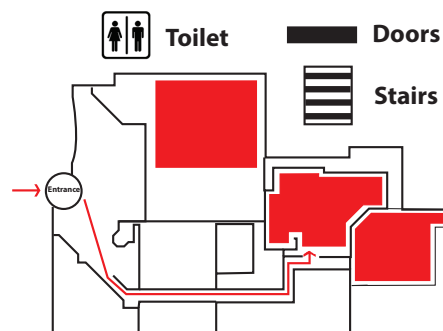


# Floor plan - Ground floor

Overview of conference rooms and exhibitor stands



1 ifm Institute of Fisheries Management	2 regon REID Proudly serving our customers for 20 years	3 TIVA	4 McMillen
5 hydrolox ENGINEERED POLYMER SCREENS	6 VisAdvies	7 AECOM	8 IAM HYDRO
9 VISLIFT Ecology meath technology	10 INNOVASEA	11 rainbow RESOURCES	12 ATS ADVANCED TELEMETRY SYSTEMS
13 pH SOLUTIONS	14 MSD Animal Health	15 inter-fluve	16-1 Waddervereniging
16-2 provincje fryslân provincie fryslân	17 provincie groningen	18 Sportvisserij Nederland	

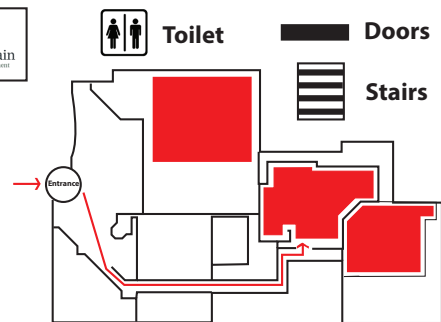
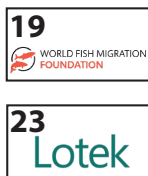
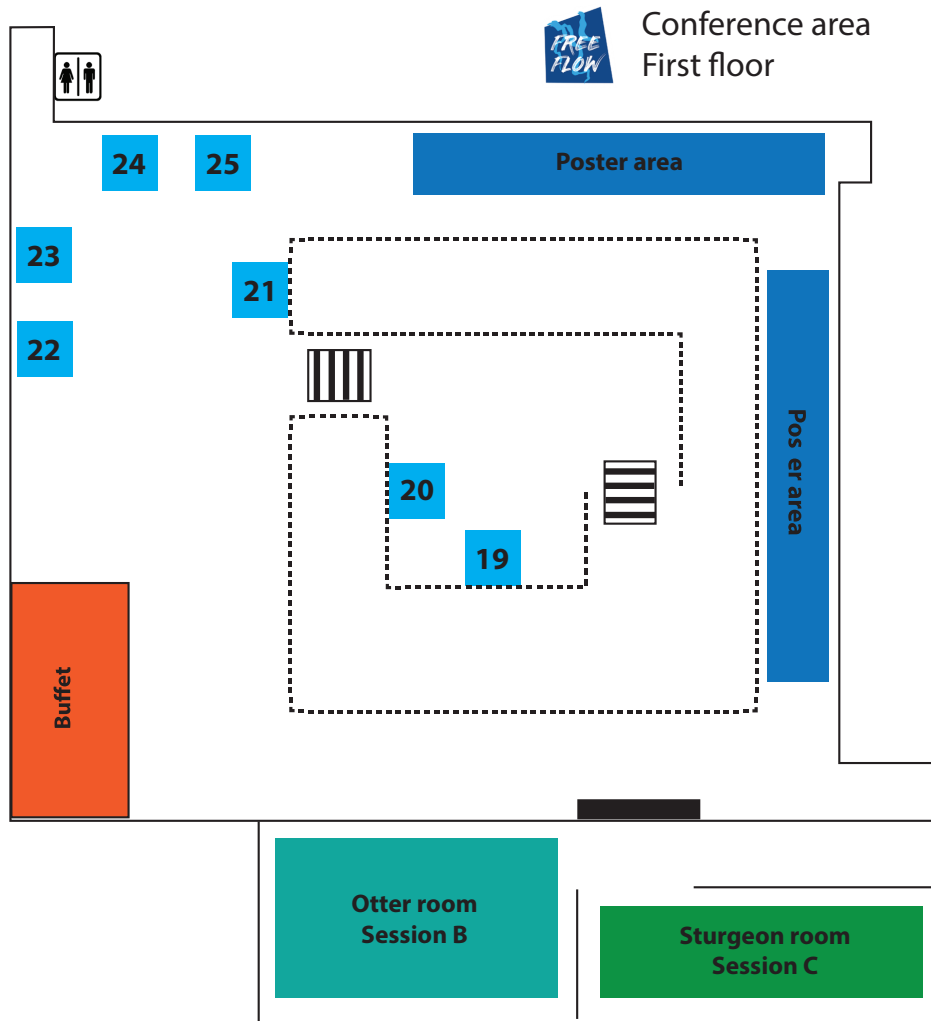


Oosterpoort overview



# Floor plan - First floor

Overview of conference rooms, exhibitor stands and poster presentations



Oosterpoort overview

# Conference notes

# Conference notes

# Made possible by:

