

Annual Programme 2024

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Netherlands Centre for River studies c/o Deltares
Boussinesqweg 1
2629 HV Delft
P.O. 177
2600 MH Delft
The Netherlands

dr. ir. K.D. Berends
Programme secretary
telephone: +31 6 2128 7461
e-mail: secretary@ncr-web.org
www: <https://ncr-web.org>

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1 Introduction

1.1 Objective of NCR

NCR was founded as a formal cooperation between several Dutch institutions. On October 4, 2012, the partners of the 'Netherlands Centre for River studies' (NCR, Dutch: 'Nederlands Centrum voor Rivierkunde (NCR)') formally renewed their cooperation within NCR.

The objective of NCR is:

Doelstelling van het NCR is een samenwerking tot stand te brengen tussen de belangrijkste kennisgebruikers en kennisontwikkelaars in Nederland op het gebied van rivieren met als uiteindelijk resultaat een versterking van het kennispotentieel, de profilering van de (inter)nationale positie van het Nederlands rivieronderzoek en het versterken van het onderwijs en het wetenschappelijk onderzoek aan de Nederlandse Universiteiten ten behoeve van een betere inrichting en beheer van de Nederlandse rivieren.

This translates to:

The objective of the NCR is to establish cooperation between the major knowledge suppliers and knowledge users in Netherlands in the field of river studies, with the ultimate aim of reinforcing the knowledge potential, promoting the international position of Dutch river research and strengthen the education & scientific research at Dutch universities, to better design and manage Dutch rivers.

1.2 Domains

NCR encompasses all disciplines relevant to river studies as practices by its institutional partners. They include:

- Hydrodynamics
- Sediment transport and morphology
- Fluvial geomorphology and sedimentology
- River ecology, restoration and water quality

- Governance and spatial planning
- Modelling, serious gaming and digital twins

1.3 NCR Organisation

NCR has four main bodies. The mandates for all except Young NCR (YNCR) are documented in the "Overeenkomst Nederlands Centrum voor Rivierkunde 2012".

- **Programme Secretary (Dutch: Programmasecretaris)**
Safeguards the continuity of NCR activities, secretary to SB and PC; monitors of agreed actions by the SB and PC; reports of NCR finances; management of all NCR communications.
- **Supervisory Board (Dutch: Commissie van Toezicht)**
Supervises the implementation of the cooperation agreement, settles disputes and approves the scientific programme.
- **Program Committee (Dutch: Programmacommissie)**
Determines the scientific programme, stimulates and initiates proposals for activities and integration of knowledge, ideas, experiences and results.
- **Young NCR (Dutch: Jong NCR)**
Established in December 2020, YNCR strives to strengthen the network of young/early-career scientists within NCR.

1.4 Institutional partners

The partners of NCR are: Rijkswaterstaat (RWS), Universiteit Twente (UT), Radboud Universiteit Nijmegen (RUN), Deltares, Universiteit Utrecht (UU), Technische Universiteit (TUD), Wageningen University & Research (WUR), Leiden University Collega (LUC), Vrije Universiteit Amsterdam (VU) and IHE Delft.

Each partner contributes in-kind and/or in-cash to realise the annual programme.

1.5 Accountability

NCR activities are annually documented in an annual programme, annual report and annual budget. The annual programme and budget are approved by the Supervisory board.

2 Boards

2.1 Board membership

NCR partners nominate members for the various boards. Multiple members are allowed per partner, though only the most senior partner present has voting rights during meetings. The boards nominate their own chair. Current chairpersons are prof. dr. Jaap Kwadijk (Supervisory board), drs. Evelien van Eijsbergen (Programme committee) and Jelle Dercksen (YNCR).

2.2 Board meetings

The supervisory board meets at least once a year to approve the annual programme. The programme committee meets three times per year. The programme secretary takes minutes of these meetings. Young NCR meets monthly and is administered by the vice programme secretary. Once a year a joint meeting of the boards is called during the NCR Days.

Table 2.1: The composition of NCR Boards in 2023. Persons marked with * are chair persons.

Person	Partner institution	Email
Programme Secretary		
dr. ir. Koen Berends*	Deltares	koen.berends@deltares.nl
ir. Anna van den Hoek	Deltares	anna.vandehoek@deltares.nl
Supervisory board		
prof. dr. Jaap Kwadijk*	Deltares	jaap.kwadijk@deltares.nl
prof. dr. Hans Middelkoop	Utrecht University	h.middelkoop@uu.nl
dr. ir. Astrid Blom	Delft University of Technology	astrid.blom@tudelft.nl
prof. dr. Ton Hoitink	Wageningen University & Research	ton.hoitink@wur.nl
prof. dr. Suzanne Hulscher	University of Twente	s.j.m.h.hulscher@utwente.nl
drs. Monique Busnach-Blankers	Rijkswaterstaat	monique.busnach-blankers@rws.nl
dr. Wilco Verberk	Radboud University Nijmegen	w.verberk@science.ru.nl
dr. Fredrik Huthoff	IHE Delft	f.huthoff@un-ihe.org
<i>Vacant</i>	Vrije Universiteit Amsterdam	
Programme committee		
drs. Evelien van Eijsbergen*	Rijkswaterstaat	evelien.van.eijsbergen@rws.nl
dr. Susanne Quartel	Rijkswaterstaat	susanne.quartel@rws.nl
dr. Laura Stancanelli	Delft University of Technology	L.M.Stancanelli@tudelft.nl
dr. Heleen Vreugdenhil	Deltares	heleen.vreugdenhil@deltares.nl
dr. Victor Chavarrias	Deltares	victor.chavarrias@deltares.nl
drs. Valesca Harezlak	Deltares	valesca.harezlak@deltares.nl
dr. Frank Collas	Radboud University Nijmegen	F.Collas@science.ru.nl
dr. Menno Straatsma	Utrecht University	m.w.straatsma@uu.nl
dr. Jord Warmink	University of Twente	j.j.warmink@utwente.nl

dr. Kryss Waldschläger	Wageningen University & Research	kryss.waldschlager@wur.nl
dr. Willem Toonen	Vrije Universiteit Amsterdam	w.h.j.toonen@vu.nl
dr. Paolo Scussolini	Vrije Universiteit Amsterdam	p.scussolini@vu.nl
dr. Paul Hudson	Leiden University College	p.f.hudson@luc.leidenuniv.nl
dr. Ioana Popescu	IHE Delft	i.popescu@un-ihe.org
dr. Francesco Bregoli	IHE Delft	f.bregoli@un-ihe.org
Young NCR		
Jelle Dercksen MSc*	Delft University of Technology	J.A.Dercksen@tudelft.nl
ir. Anna van den Hoek	Deltares	anna.vandehoek@deltares.nl
Simon Smits MSc	Rijkswaterstaat-WVL	simon.smits@rws.nl
Paul Vriend MSc	Rijkswaterstaat / Leiden University College	paul.vriend@rws.nl
Henry Amorocho Daza MSc	IHE Delft	h.amorochodaza@un-ihe.org
Tatiana Edler MSc	Deltares	Tatjana.Edler@deltares.nl
ir. Leon Besseling	University of Twente	l.s.besseling@utwente.nl
Miranda Stibora MSc	Wageningen University & Research	miranda.stibora@wur.nl
Eise Nota MSc	Utrecht University	e.w.nota@uu.nl
Joshua Climo MSc	Radboud University Nijmegen	joshua.climo@ru.nl
Joeri Reinders MSc	Leiden University College	j.b.reinders@luc.leidenuniv.nl
<i>Vacant</i>	Vrije Universiteit Amsterdam	

3 Planned activities

3.1 Types of events event

3.1.1 NCR Days

The NCR DAYS is the annual meeting of the NCR network. It is a two-day conference organised by one of the partners. The organising partner is fully responsible for the organisation of the event. The programme secretary maintains an organiser toolkit to help with the planning and budgeting of this event.

3.1.2 Meetings

Meetings are planned, formal or informal meetings of the various boards of NCR. The programme committee meets approximately three times per year, the supervisory board once per year and the YNCR meets as often as they deem necessary. In addition, there is one joint meeting of all three boards during the NCR Days.

3.1.3 Event

NCR organises various events. *Themedays* or seminars, which are single or half-day events focussed on a single topic or theme, e.g. "Remote sensing of rivers". Other events include field trips, excursions, networking events and workshops. NCR aims to offer all events except the NCR Days free-of-charge to participants.

3.2 Events in 2024

3.2.1 NCR Days

The NCR DAYS 2024 will be organised by Wageningen University & Research. This is the 26th edition of the NCR DAYS. The theme of this year's conference is "*Tomorrow's Rivers*". The LOC is headed by prof. Ton Hoitink. The organisation of the NCR DAYS 2025 (provisionally) falls to Deltares.

3.2.2 Events

This year, the PC intends to organise three different theme days.

- A potential **joint NCR-NCK Themeday** that will focus on sediment distribution in the Rijn-Maasmonding. Evelien van Eijsbergen is contact person from the NCR-PC.
- The **NCR Hands-on** is a workshop-style day intended to "peek under the hood" of tools and models used in river studies. Contact persons from NCR-PC are Victor Chavarrias (Deltares) and Jord Warmink (UT). This year, we aim at a half-day

event at Deltares. The theme is "A positive view on model limitations". Two model limitations are considered which are due to (1) numerical solution of the system of equations and (2) model uncertainty. Potential collaboration with NMDC will be explored.

3.2.3 YNCR events

YNCR plans to organise various events in 2024:

- 1 *Social event with YNCK*: A fun event to facilitate networking between YNCR and YNCK. The plan is to organize an event with 'jeu de boules' and snacks/drinks in Utrecht.
- 2 *Social event NCR days*: In 2023, a social event (drinks + bowling) was organized following the NCR-days. We would like to make a social event during the NCR days a recurring event and therefore aim for a social activity during the conference again this year. The activity itself depends on the schedule of the NCR days and the available options near the conference's venue. It is decided that YNCR will host a pub-quiz after the conference dinner at the next NCR days.
- 3 *Annual field trip*: The summer field trip is an annually recurring event and is usually well appreciated and well visited.
- 4 *Social event*: A fun event to facilitate networking amongst young professionals (e.g., a scavenger hunt, visualization workshop, kayaking or cooking workshop).
- 5 *Annual career event*: We aim for at least one career-related event every year, such as the alumni event (2021), the data visualization workshop (2022) or the panel discussion (2023).
- 6 *End of the year YNCR board members get-together*: This is a non-public event in the list. Here, the YNCR board members meet in person to discuss plans for the next year and get to know each other better. The estimated budget is for drinks and snacks.
- 7 *Social event ('25)*: A fun event to facilitate networking amongst young professionals. From now on, the first event of a calendar year will be included in the activity plan of the preceding calendar year, to avoid last-minute organizing. This event is paid for by the 2025 budget.

3.2.4 Summerschool 2025

The first NCR Summerschool for PhD students, post-docs and young professionals working with rivers was organized by University of Twente (dr. Vasilis Kitsikoudis, dr. Jord Warmink) in 2023. It consisted of a series of lectures and tutorials in topics such as River Hydraulics and Fluid Mechanics, Ecohydraulics, Sediment Transport and River Morphodynamics, both from a technical and a management perspective.

There was also a field trip to Nijmegen and the Pan-nerdensche Kop. All lectures and tutorials were given in English and the Summerschool welcomed participants from all over the world.

NCR has the intention to organize a second Summerschool in 2025. It will be decided in 2024 if and where this Summerschool will take place.

4 Research

4.1 Projects

Research projects are scientific endeavors that may consist of work-packages, themes and sub-projects. Multiple researchers may work on the same research project. NCR does not initiate or lead its own research projects. Instead, research projects of NCR members are promoted through the services NCR offers (see [Secretary and Services](#)). Any research project is relevant according to NCR [Introduction](#). A list of ongoing

NCR projects is available on the [NCR Project portal](#).

4.2 Publications

Academic and non-academic publications by NCR partners are promoted through the NCR services (see [Secretary and Services](#)). Any publication written by at least one (co-)author with an affiliation at an NCR institutional partner is eligible. A list of promoted publications is available on the [NCR publications portal](#).

Project	Description	Main contact	Started
Rivers2Morrow	The Rivers2Morrow is a research program of 8 PhD topics that investigate the consequences of climate change and large-scale human interventions on the river functions water safety, nature, and navigability, and what it takes to keep these manageable. It will increase the system knowledge of lowland rivers with respect to hydraulics, morphology, ecology and governance, with a focus on developments that take place on along temporal time scale until 2100 (and sometime beyond). In 2023 the program is extended and 5 new PhD topics are added to the program.	drs. Evelien van Eijsbergen	2018
SaltiSolutions	Freshwater is vital for drinking water, nature, agriculture and industry. However, the availability of freshwater is under pressure in deltas throughout the world. Salty seawater is penetrating further up the rivers due to human intervention, such as the deepening of waterways, as equally climate change. Within SALTISolutions, the researchers, together with the partners involved such as Rijkswaterstaat, water boards, port authorities and dredging companies, will produce a virtual model (digital twin) of the Rhine-Meuse Delta. This model will integrate knowledge about processes on various spatial and time scales: from turbulent flows at the smallest scale level to the consequences of climate change in the long-term. They will use this to predict how, where, when, and how long salt from seawater will penetrate, and how measures such as implementing nature-based solutions influence the freshwater supply. These insights will be tested worldwide, as a result of which the position of Dutch delta technology will be further strengthened.	Mw. J. Grootveld (program manager)	2021

Project	Description	Main contact	Started
FutureFRM	Adequate protection against flooding is essential for the existence of the Netherlands. There is a very large challenge to reinforce the current flood defence system in our densely populated country, while also adapting it to deal with accelerating sea level rise and increasing river runoff. In this program "Future FRM Tech" we will develop new technical, nature-based and hybrid solutions for flood risk management and climate adaptation.	prof. dr. Matthijs Kok	2023
NL2120	The NL2120 knowledge and innovation programme invests in research into nature-based solutions. The aim is to mitigate climate impacts, restore biodiversity while preserving production capacity and strengthening well-being. Within these projects, the parties involved learn about the operation of natural solutions, innovative revenue models and social transition processes. The integrated approach makes the proposal unique. By combining knowledge development and practical experience, NL2120 integrates, deepens and enriches existing knowledge.	Dr. Bregje van Wesenbeeck	2024
Delta ENIGMA	On 4 December 2023, the Delta ENIGMA project has successfully begun with its seven collaborating partners. The consortium is formed by Utrecht University, Delft University of Technology, University of Twente, Wageningen University and Research, NIOZ Royal Netherlands Institute for Sea Research, Deltares and TNO. Delta ENIGMA is a NWO funded Large Scale Research Infrastructure (LSRI) roadmap project that will be active for a decade, from 2023 to 2033. It is the Dutch contribution to the European DANUBIUS-RI initiative which aims at a comprehensive measurement, documentation and analysis of the (sediment, water, biological) connectivity in the river-estuary-coast continuum. The project aims to turn the Dutch delta into a world-leading 'supersite' for research on delta bio-geomorphology under climate change. This would bring bio geomorphology research in the Netherlands to the next level by establishing a unique infrastructure on how the physical processes (organisms, currents, waves, winds and sediment load) together shape the delta landscape, even during extreme events. More detailed information can be found on our website, https://delta-enigma.nl/ .	Dr. Smriti Dutta	2023

5 Secretary and Services

5.1 Overview

To support river studies, NCR offers services to its institutional partners. These services are coordinated by the Programme Secretary. All services are offered free of charge. These include:

- **Website & Knowledge base.** Partners may use the NCR website to host a project website and promote their publications.
- **Mailing list & LinkedIn** Partners may distribute information, vacancies and news through the NCR mailing list and LinkedIn company page. Research projects may use the mailing list to send out newsletters to the network.
- **Vimeo** NCR offers hosting of videos on the NCR vimeo account

5.2 Plans for 2024

5.2.1 New collaboration agreement

Last year the draft collaboration agreement was revised to version 0.5. This year, we plan review by various legal departments of NCR partners.

5.2.2 Rejoining of IHE Delft

IHE Delft has indicated interest for rejoining the NCR. IHE Delft was one of the founding members of NCR, but resigned from NCR in 2021, partly due to several key persons leaving the institute. Their positions are now filled and IHE Delft, spearheaded by dr. Fredrik Huthoff, has indicated a wish to rejoin. This request will be on the agenda for the Supervisory Board meeting during the NCR DAYS 2024.

5.2.3 Mailing list provider

This year we plan to phase out MailChimp in favour of Brevo (formerly SendInBlue). Deltares has now switched to Brevo as default service provider for newsletters. As a result, NCR will switch to the enterprise license of Deltares. This will hopefully be complete in the first half of 2024.