

# Newsletter

## No. 01 | September 2019



Dear readers,

Most of you are familiar with our work, but for some "SeeWandel" may be a novel term. "SeeWandel: Life in Lake Constance – the past, present and future" is a large research project that investigates complex interactions between climate change, invasive and non-native species, as well as nutrient decline (re-oligotrophication) and other stress factors, and how they affect the Lake Constance ecosystem, its biodiversity and functioning, and the utilisation of lake resources by people. Its objective is to provide a basis for water management and politicians to make scientifically informed decisions about the future of Lake Constance. In SeeWandel, seven research institutes from three countries (Germany, Switzerland and Austria) closely work together on various topics in order to understand the responses of Lake Constance to changing environmental conditions. The applied nature of our research as well as the process leading to the successful funding of the project facilitates continuous engagement with stakeholders, agencies and local authorities as well as organisations, which adds value to the overarching goals and successful development of SeeWandel.

With this first newsletter, we would like to share some insights about our activities and inform you about upcoming events. For further information, please visit [www.seewandel.org](http://www.seewandel.org) or contact us directly [seewandel@seewandel.org](mailto:seewandel@seewandel.org).

Piet Spaak (Project Leader) and Josephine Alexander (Project Coordinator)

Stay connected, be informed – please visit  
[www.seewandel.org](http://www.seewandel.org)



Editor:

SeeWandel ~ Überlandstrasse 133 ~ CH-8600 Dübendorf ~ [seewandel@seewandel.org](mailto:seewandel@seewandel.org)



## News from the SeeWandel Project Management

SeeWandel comprises 13 sub-projects that address current problems in Lake Constance using a wide variety of research methods, and considering the whole ecosystem. Primary producers (e.g. aquatic plants, phytoplankton), primary consumers (e.g. zooplankton, macrozoobenthos) and secondary consumers (e.g. fish) are investigated. A majority of our research focuses on the interactions between these groups. For further information, please visit [www.seewandel.org/en/research/](http://www.seewandel.org/en/research/).

There are four SeeWandel thematic working groups: "Fishes", "Pelagic Zone", "Neozoo & Climate Change", "Littoral" and an additional "Project Synthesis Group". These are established to facilitate scientific discussions and interactions within and beyond SeeWandel, and with other external scientists, as well as to foster exchange and knowledge transfer between science and practice with specific focus on the development of Lake Constance. Discussions and work performed within the framework of the four thematic groups mentioned above are fundamental for project synthesis and the transfer of knowledge. Inviting external experts strengthens the interdisciplinary research network.

For further information, please contact [seewandel@seewandel.org](mailto:seewandel@seewandel.org).

The cross-border cooperation of the seven SeeWandel research institutes (Germany: FFS-LAZBW, ISF-LUBW, University of Hohenheim, University of Konstanz, Switzerland: Eawag, University of Zurich, Austria: University of Innsbruck) offers the opportunity to conduct outstanding research on issues and questions of fundamental importance to Lake Constance. Project results are discussed with stakeholders, agencies and authorities of the states bordering Lake Constance and with this continuous engagement SeeWandel aims to incorporate the diversity of views, needs and goals in the successful development of the project. SeeWandel receives EU Funds (Interreg Alpenrhein-Bodensee-Hochrhein / EU Fund for Regional Development), covering 40 % of the budget of the Swiss research institutions and 60 % of the budget of the German and Austrian research institutions. Other external resources and in-kind contributions complement the funding. For further information, please visit [www.seewandel.org/en/projektpartners/#supporters](http://www.seewandel.org/en/projektpartners/#supporters).

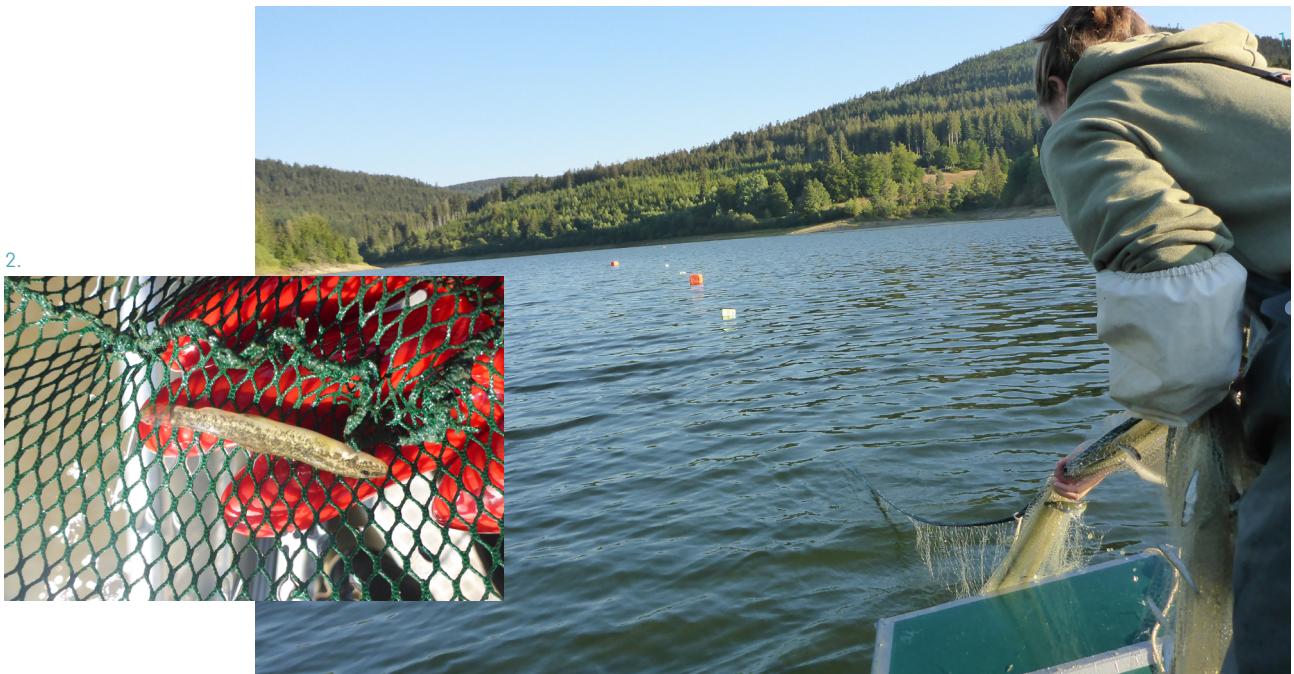
The following scheme gives an overview about the project structure and organisation:

SeeWandel Project Management					
<b>P. Spaak</b> Project Leader (PL), <a href="#">Eawag</a>		<b>H. Hetzenauer</b> Deputy Project Leader (DPL), <a href="#">ISF-LUBW</a>			
<b>Steering Committee</b>					
A. Brinker, FFS-LAZBW   M. Möst, U Innsbruck (UI)   K.-O. Rothaupt, U Konstanz (UK)   K. Schmieder, U Hohenheim (UH)   T. Posch, U Zurich (UZH)   TBA (Practice Representative)   PL & DPL					
<b>Project Coordination (PC) &amp; Administration (PA)</b>					
<a href="#">J. Alexander</a> (PC)   <a href="#">A. Maniglia</a> (PA)					
<b>Advisory Board</b>					
S. Müller, Chair, FOEN & IGKB   R. Eggen, Eawag   A. Fäh, IBK-U, AWEL   B. Lundsgaard-Hansen, IGKB-SVK   F. Peeters, U Konstanz, RTG R <sup>3</sup>   H. Romang, FOEN, AÖL   D. Thiel, IBKF   J. Wüest, Eawag, EPFL					
<b>Country/Canton Representatives</b>					
L. Walser, AT   V. Leib, CH   C. Schranz, BY   H. Hetzenauer, BW					
<b>SeeWandel Research Institutions Representatives &amp; Sub-project PIs</b>					
<a href="#">Eawag</a> : P. Feulner, B. Matthews, O. Seehausen, P. Spaak   <a href="#">ISF-LUBW</a> : H. Hetzenauer, B. Wahl   <a href="#">FFS-LAZBW</a> : A. Brinker   <a href="#">UI</a> : M. Möst   <a href="#">UH</a> : F. Schurr, K. Schmieder   <a href="#">UZH</a> : J. Pernthaler, T. Posch   <a href="#">UK</a> : K.-O. Rothaupt, D. Straile E. Yohannes					
SeeWandel Project Synthesis Group (S14): Steering Committee, PC, Experts					
<b>4 Thematic Working Groups</b>					
Fishes	Pelagic Zone	Neozoa & Climate Change	Littoral		
					
A. Brinker (Chair) TBA (Deputy)  PIs & members of sub-projects: P1   P3 (SeeWandel/RTG R <sup>3</sup> )   P2   P4   L12   L13 (SeeWandel)  PL   DPL   PC	M. Möst (Chair) D. Straile (Deputy)  PIs & members of sub-projects: P5   P6   P7   P8   L10 (SeeWandel)   A3   B2 (RTG R <sup>3</sup> )   U Konstanz  PL   DPL   PC	K.-O. Rothaupt (Chair) TBA (Deputy)  PIs & members of sub-projects: L9 (SeeWandel/RTG R <sup>3</sup> )   L10 (SeeWandel)   PhD H. Zhang (UK)   Hydro  PL   DPL   PC	K. Schmieder (Chair) TBA (Deputy)  PIs & members of sub-projects: P1   L9 (SeeWandel/RTG R <sup>3</sup> )   P7   L10   L11   L12   L13 (SeeWandel)  PL   DPL   PC		
Practice Representative: B. Lundsgaard-Hansen, N. Schotzko	Practice Representative: L. Taxböck	Practice Representative: P. Teiber-Sießegger, R. Schick	Practice Representative: C. Schranz, B. Engstle		



## SeeWandel Highlights

Intensive fish community assessment  
of Lake Constance about to kick-off



1. © Joachim Thonhofer: Lifting of a levitation net ("Schwebnetz")
2. © FFS: Stone loach (*Barbatula barbatula* L.) caught during electric fishing sampling of Lake Constance

For four weeks, Lake Constance becomes the scene for a journey of discovery. Researchers of the Fisheries Research Station Langenargen of the Agricultural Centre for Cattle Farming, Grassland Management, Dairy Farming, Game and Fisheries Baden-Württemberg (FFS-LAZBW) and the Fisheries Administration of the State of Baden-Württemberg (Germany) will intensively screen the depths of the Lake Constance waters to unlock the secrets of the local fish fauna community. This big campaign will start in mid-September 2019 and while making local news (e.g. article "Gibt es genügend Fische im Bodensee? Forscher wollen es herausfinden" published in the local newspaper "Schwäbische Zeitung" on the 28<sup>th</sup> of August 2019, and highlight "Barsch, Felchen, Karpfen und Co. - Wie viele Fische gibt es eigentlich im Bodensee?" in the news section of the Interreg website), researches carefully prepare the last details for this standardised fish monitoring that is about to find out what has changed in terms of the fish fauna species composition, distribution and growth, in comparison to the first big fish survey in 2014.

To read the press release (in German) of the Fisheries Research Station Baden-Württemberg (FFS-LAZBW), please visit the SeeWandel website: <https://seewandel.org/en/media/>.



## News from the SeeWandel Thematic Working Groups

### Fishes



The detailed planning for the next intensive fish fauna assessment in Lake Constance has been completed. The sampling campaign is about to start in mid-September (for further details, please see section "Highlights"). Building on the first standardised fish survey of Lake Constance performed in 2014, the aim of this year's assessment is to develop an effective and standardised fish monitoring protocol that accounts for the horizontal as well as vertical fish distribution across the whole lake, while minimising fish mortality and being logically and financially feasible.

The next meeting of the thematic working group "Fishes" will take place on the 4<sup>th</sup> of November 2019 at the Fisheries Research Station Baden-Württemberg (FFS) in Langenargen (Germany). For further information, please contact [seewandel@seewandel.org](mailto:seewandel@seewandel.org).

### Pelagic Zone



The thematic working group "Pelagic Zone" will hold their first meeting at the end of this year (provisional date 5<sup>th</sup> of December 2019) at the University of Konstanz (Germany). This meeting will bring together scientists and practitioners working on organisms positioned across the pelagic food web in Lake Constance - ranging from cyanobacteria and phytoplankton, and different zooplankton species to fish. The aim is to coordinate the different sub-projects, to identify synergies as well as opportunities for collaboration, and to discuss approaches, responsibilities and tasks to implement a synthesis of the results, providing targeted products tailored to specific audiences. For further information, please contact [seewandel@seewandel.org](mailto:seewandel@seewandel.org).

### Neozoa & Climate Change



Prof. Cary Troy (Lyles School of Civil Engineering, Purdue University, USA) gave a talk on "Quagga Mussel Effects on the Lake Michigan Food Web" during the last meeting of the thematic working group "Neozoa & Climate Change" on the 24<sup>th</sup> of June 2019 at Eawag Dübendorf (Switzerland). At this meeting, insights about different management scenarios were shared and the status and potential future development of the quagga invasion in Lake Constance was discussed among scientist from SeeWandel, RTG R<sup>3</sup>, the University of Konstanz and the LUBW, as well as representatives of the Hydra AG (performing the neozoa monitoring of Lake Constance), practice representatives (including Lake Constance Water Industries Association), and members of the expert committee of the IBKF and the SeeWandel advisory board.

The thematic working group "Neozoa & Climate Change" plans to meet again in mid-December 2019. For further information, please contact [seewandel@seewandel.org](mailto:seewandel@seewandel.org).

## Littoral



Different applied topics related to Lake Constance's macrophytes and littoral zone were discussed with representatives from practice, and local authorities and agencies in the last meeting of the thematic working group "Littoral" on the 13<sup>th</sup> of March 2019 at the University of Hohenheim (Germany). This included input talks from Klaus van de Weyer (lanaplan) "Neophytes", Michael Dienst (AGBU) "Climate Change (Extreme Events: Flood Water and Low Water)", Bernd Wohl (SeeWandel, ISF-LUBW) "Water Level – Macrophytes – Flood Protection (Swiss pondweed, *Potamogeton helveticus* (G. Fisch.) W. Koch)", and Sarah Gugele (LAZBW) "Macrophytes: Species Composition – Spawning Habitat for Fish". In addition to the coordination of the research performed in the different littoral sub-projects, a first outline and framework to implement synthesis of project-results and to facilitate knowledge transfer was discussed.

The thematic working group "Littoral" plans to meet again in mid-November 2019. For further information, please contact [seewandel@seewandel.org](mailto:seewandel@seewandel.org).



## Collaboration with RTG R<sup>3</sup>

SeeWandel closely collaborates with the Research Training Group "R<sup>3</sup> – Responses to biotic and abiotic changes, Resilience and Reversibility of lake ecosystems" of the University of Konstanz (Germany), funded by the DFG since April 2017. For more information, please visit: <https://www.rtg-resilience.uni-konstanz.de/>.

The two large research projects complement one another and the cooperation provides a strong scientific framework to investigate the resilience of Lake Constance. While the RTG R<sup>3</sup> focuses more on basic research, the SeeWandel sub-projects are more focused on applied questions. The research of the SeeWandel and associated RTG R<sup>3</sup> sub-projects is primarily discussed and coordinated within the framework of the SeeWandel thematic working groups.

Beyond the SeeWandel thematic working groups, the PhD students and postdocs of RTG R<sup>3</sup> and SeeWandel got together on the 3<sup>rd</sup> of December 2018 at the University of Konstanz (Germany). The aim of this "Young Scientist Event" was to intensify cross-project networking between sub-projects of the two big complementary research projects and to exchange experience in relation to completed and planned research work.



## Upcoming Events

### September 30 – October 01, 2019 WASNE

The Research Training Group “R<sup>3</sup>” of the University of Konstanz organises the 1<sup>st</sup> Women in Aquatic Sciences Networking Event (WASNE), taking place from the 30<sup>th</sup> of September to the 1<sup>st</sup> of October 2019 at the University of Konstanz (Germany).

This innovative event addresses women researchers in aquatic sciences from PhD level to junior professor/junior group leader, offers a platform for discussion and scientific exchange, and brings early career woman researchers into contact with experienced scientists with the aim of increasing their networks. For more information, please visit:

<https://www.rtg-resilience.uni-konstanz.de/events/wasne/>.

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### January 30 – 31, 2020 SeeWandel Retreat

The yearly SeeWandel retreat will take place from the 30<sup>th</sup> to the 31<sup>st</sup> of January 2020 in Konstanz (Germany). This meeting is open to all SeeWandel project members. The goal of the retreat is to discuss progress in research, collaborations among sub-projects within SeeWandel and with RTG R<sup>3</sup> (University of Konstanz), and interactions across the SeeWandel thematic working groups as well as with practice and external experts.

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### March 23 – 25, 2020 Symposium “Resilience and Reversibility of Lake Ecosystems in a Changing World”

Online registration and abstract submission will be available soon.

This international symposium is organised by the Research Training Group “R<sup>3</sup>” of the University of Konstanz and supported by SeeWandel, and will take place from the 23<sup>rd</sup> to the 25<sup>th</sup> of March 2020 at the University of Konstanz (Germany). The symposium is open to researchers from the public and private sectors, students, and stakeholders. All RTG R<sup>3</sup> and SeeWandel sub-projects will be presented, either in a plenary talk or with a poster. The symposium is intended to promote discussions and interactions on research investigating long-term dynamics, responses to changing environmental condition and invasive species in lakes, as well as theoretical studies on resilience and reversibility in complex systems. You will have the opportunity to present and share your expertise and applied solutions in the thematic sessions.

For more information, please visit:

<https://www.uni-konstanz.de/resilience-and-reversibility-of-lake-ecosystems-in-a-changing-world/>.

March 25, 2020

(afternoon)

Workshop with practitioners and stakeholders

Within the framework of the symposium mentioned above, SeeWandel organises an additional event in the afternoon of the 25<sup>th</sup> of March 2020, aimed to foster interaction and knowledge transfer between science and practice with specific focus on the development of the Lake Constance ecosystem.



## SeeWandel Agenda

Date	Event	Place
September 30, 2019	Steering Committee Meeting	Innsbruck (Austria)
September 30 – October 1, 2019	WASNE	University of Konstanz (Germany)
November 4, 2019	TG Fishes Meeting	FFS Langenargen (Germany)
December 5, 2019 (provisional)	TG Pelagic Zone Meeting	University of Konstanz (Germany)
December 31, 2019	End of 3 <sup>rd</sup> Interreg reporting period  Each SeeWandel partner institution: prepare reports	
January 30 – 31, 2020	SeeWandel Retreat	Konstanz (Germany)
February 28, 2020	Deadline of 3 <sup>rd</sup> Interreg reporting period  Reports of each partner institution have to be validated & submitted by lead partner	
March 23 – 25, 2020	International Symposium Resilience and Reversibility of Lake Ecosystems in a Changing World	University of Konstanz (Germany)
March 25, 2020 (afternoon)	Workshop on development of Lake Constance ecosystem with practitioners & stakeholders	University of Konstanz (Germany)
March 25, 2020 (late afternoon)	SeeWandel Advisory Board Meeting	Konstanz (Germany)



## Collaboration with Lake Constance Commissions and Practice

SeeWandel closely collaborates with the International Commission of Lake Constance Water Conservation ("IGKB"), the International Delegate Conference of Lake Constance Fisheries ("IBKF") and the Environmental Commission of the International Lake Constance Conference ("IBK-U"). In 2016, the IGKB launched the process that later led to the development of SeeWandel with the involvement of Interreg. Members of the IGKB and IBKF expert committee ("Sachverständige") participate in the SeeWandel thematic groups and, in doing so, foster exchange of expertise and knowledge transfer.

The SeeWandel project leader Piet Spaak regularly participates and presents the project developments in the meetings of the commissions and committees mentioned above, in order to intensify the transfer of knowledge. Furthermore, SeeWandel is represented and/or presented, among others, in local forum discussions (e.g. "Dialogforum See und Fisch Bodensee"). Two workshops have been held, discussing questions, expectations and concerns regarding SeeWandel from professional practice experts, as well as requests for targeted products resulting from the project synthesis tailored to specific audiences. A similar workshop is planned with the expert committee of the IBKF for early 2020.

There is growing interest in SeeWandel from people from practice and scientists working in administration or agencies at the cantonal or federal government levels. In the coming months, Piet Spaak will present SeeWandel, among others, at a meeting in Bern (Switzerland) where cantonal representatives will discuss sampling strategies of lakes, at the yearly meeting of the SGHL, and at a national workshop about lake fisheries.



### Editorial Note

SeeWandel is a European research project involving seven research institutions: Swiss Federal Institute of Aquatic Science and Technology (Eawag), Fisheries Research Station Baden-Württemberg (FFS) of the LAZBW, Institute for Lake Research (ISF) of the (LUBW), and the Universities of Hohenheim, Innsbruck, Konstanz and Zurich. SeeWandel is represented by the project management and its project leader PD Dr. Piet Spaak, Überlandstrasse 133, CH-8600 Dübendorf, [seewandel@seewandel.org](mailto:seewandel@seewandel.org).

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Please direct inquiries to [seewandel@seewandel.org](mailto:seewandel@seewandel.org).