

An aerial photograph of a coastal landscape. In the foreground, there are green agricultural fields and a small settlement with a thatched-roof building. A river or canal flows through the landscape. In the background, there is a body of water and a distant shoreline. A woman in a colorful sari is superimposed over the center of the image, holding a bunch of green leafy vegetables.

Conference

Saline Futures

Addressing climate change
and food security

10-11 september 2019

Leeuwarden, the Netherlands

Programme

10 September 2019

Chair of the day Angelica Kaus,
Director SalFar project

		LOCATION
08:30	Registration opens	VHL entrance
09:30 – 10:00	Welcome and introduction to the conference Angelica Kaus, Director SalFar Project Jan van Iersel, Chair van Hall Larenstein Pier Vellinga, Wadden Academy	Auditory F.002
10:00 – 11:00	Keynote speeches	Auditory F.002
10:00 – 10:30	Dionysia Aggeliki Lyra, ICBA	
10:30 – 11:00	Willem Ferwerda, CEO Commonland	
11:00 – 12:00	Opening of the fair and poster presentations	Studiekantine/ hallway
12:00 – 13:00	Lunch Welcome by Douwe Hoogland, Member of the Executive Council, Province of Friesland	Studiekantine/ hallway
13:00 – 13:30	Keynote speech	Auditory F.002
13:00 – 13:30	Marc van Rijsselberghe, pioneer entrepreneur Salt Farm Foundation	
13:30 – 15:30	Parallel sessions	
	I Addressing Climate Change and Food Security	Room F.112
	V Experiments and promising crops	Room F.129
	IX Revitalization of saline degraded soils	Room S.110
15:30 – 16:00	Coffee break and poster presentations	Studiekantine/ hallway
16:00 – 18:00	Parallel sessions	
	II Awareness raising and capacity building for saline farming	Room F.112
	VI Promising crops for saline farming	Room F.129
	X Traits affecting salinity tolerance	Room S.110
18:30 – 19:30	Welcome reception by Wetsus Introduction to Wetsus – Cees Buijs, Director, and Jan Post, Director of Programs	Walk together to Wetsus

11 September 2019

Chair of the day: Margot Faber,
Province of Groningen

		LOCATION
09:00 – 10:00	Plenary sessions	Auditory F.002
<i>09:00 – 09:30</i>	Genetic characterization of salinity tolerance traits to increase salinity tolerance in crops – Mark Tester, KAUST	
<i>09:30 – 10:00</i>	“Living with salinity” Can saline agriculture contribute in a sustainable and profitable way? – Arjen de Vos, Saline Farming	
<i>10:00 – 10:15</i>	Introduction to EPI AGRI Working Group – Iain Gould	
10:15 – 11:00	Coffee break and poster presentations	Studiekantine/ hallway
11:00 – 13:00	Parallel sessions	
	III Food-water-energy nexus	Room F.112
	VII Salinity adapted cultivation strategies	Room F.129
	XI Interactions among salinity, roots and microbial communities	Room F.110
13:00 – 14:00	Lunch	Studiekantine
14:00 – 15:00	Plenary sessions	Auditory F.002
<i>14:00 – 14:30</i>	Climate change induced salinization as a growing global challenge – Atiq Rahman, Bangladesh Center for Advanced Studies	
<i>14:30 – 15:00</i>	Global opportunities and constraints – Katarzyna Negacz, Waddenacademie	
15:00 – 15:30	Coffee break and poster presentations	Studiekantine/ hallway
15:30 – 17:10	Parallel sessions	
	IV Fresh and brackish water management in potentially saline soils	Room F.112
	VIII Innovation and practical experience at farm level	Room F.129
	XII Alternative use of salt-tolerant plants	Auditory F.002
17:30 – 18:00	Report on priorities from the parallel international farmers meeting	Auditory F.002
18:00 – 18:30	Conclusions from the parallel sessions by Pier Vellinga	
18:30	Refreshments	Kantine/hallway
19:30	CONFERENCE DINNER	

SCIENTIFIC COMMITTEE

The Saline Futures Scientific Committee's role is advising on the programme, reviewing all submitted abstracts, selecting presentations and posters.

Prof. Henrik Aronsson

(University of Gothenburg, Sweden)

Prof. Pier Vellinga

(Waddenacademy, Netherlands)

Prof. Theo Elzenga

(University of Groningen, Netherlands)

Dr. Anne Asselin de Willencourt

(NMBU, Norway)

Dr. Bas Bruning

(Saline Farming, Netherlands)

Dr. Dennis Corwin

(USDA-ARS, U.S. Salinity Laboratory)

Dr. Dionysia Aggeliki Lyra

(ICBA, United Arab Emirates)

Dr. Ed Barrett-Lennard

(Murdoch University and The University of Western Australia, Australia)

Dr. Gary Bosworth

(University of Lincoln, UK)

Dr. Jeroen De Waegemaeker

(ILVO, Belgium)

Dr. Laurids Siig Christensen

(Taste of Denmark/VIFU)

Dr. Leena Karrasch

(University of Oldenburg, Germany)

Dr. Maria Konyushkova

(Lomonosov Moscow State University, Russia)

Dr. Redouane Choukr-Allah

(Institut Agronomique et Vétérinaire Hassan II Morocco)

Dr. Sara Marjani Zadeh (FAO, Turkey)

ORGANISING COMMITTEE

The Saline Futures Organising Committee tasks include organisational matters, logistics and communication.

Prof. Pier Vellinga

Conference chair

(Waddenacademy, Netherlands)

Dr. Katarzyna Negacz

Conference manager

(Waddenacademy, Netherlands)

Angelica Kaus

Director SalFar project

(Province of Groningen, Netherlands)

Douwe van Noordenburg

Financial Manager SalFar project

(Province of Groningen, Netherlands)

Dr. Jeroen De Waegemaeker

(ILVO, Belgium)

Sjerpy Moeyersoons-Joustra

(Waddenacademy, Netherlands)

Thea Smit

(Waddenacademy, Netherlands)

ORGANISING PARTIES



CONFERENCE PARTNERS



PARTNERS



APPENDIX 1.

PARALLEL SESSIONS

Policy and Management

I

Addressing Climate Change and Food Security

10 September, 13:30 – 15:30, Room F.112

Chair: *Dr. Leena Karrasch*
Dr. Anne Asselin de Willencourt

Freshwater salinisation and its drivers:
A critical water quality challenge with
implications for agricultural development
– *Josefin Thorslund, Michelle van Vliet*

Understanding Farmers' Perceptions of and
Livelihoods Adaptation to Climate Change:
Insights from the Coastal Bangladesh
– *Md. Jahangir Kabir, Donald H Gaydon,*
Mohammad Mainuddin, Mohammad Moniruzzaman

Delta environments: landscapes at major
threat from salinity
– *Edward G Barrett-Lennard*

The Effect of Climate Change Adaptation
on Rural Community Livelihoods
– *Nakasaga Halima, Kabagenyi Hilder, Lukyamuzi*
Grace, Mbidde Robertson (presenting author:
Nalubega Rose)

II

Awareness raising and capacity building for saline farming

10 September, 16:00 – 18:00, Room F.112

Chair: *Dr. Sara Marjani Zadeh*
Dr. Jeroen De Waegemaeker

A Legal Perspective on the Effects and Prevention
of Salinization
– *Annalies Outhuijse, Ida Helene Groninga,*
Tatia Brunings

Is saline farming a shape shifter? Review of the
debate on and policies for climate adaptation
at the Flemish coast (2005–2017)
– *Jeroen De Waegemaeker*

A vision and a strategy for mitigating and adapting
to salinization of highly productive clay soils in
the Netherlands
– *Mindert de Vries*

Adaptive Management Strategies to Alleviate the
Impacts of Saltwater Inundation on Agricultural Lands
– *Christopher F. Miller*

Salinization of the coastal zone as driver for
innovation in flood risk management strategy
– *Jantsje M. van Loon-Steensma*

Salinization and agriculture in the Netherlands:
benchmarking stakeholder perspectives
– *Isa Camara Beauchampet*

III

Food-water-energy nexus

11 September, 11:00 – 13:00, Room F.112

Chair: *Dr. Anne Asselin de Willencourt*
Dr. Sara Marjani Zadeh

Salinity dynamics in river water, canal water,
pond water and groundwater over the dry season
in Ganges Delta

– *Afrin Jahan Mila, Richard Bell, Edward Barrett-
Lennard, Enamul Kabir and Yingying Yu*

What if it becomes too saline?

– *Reinier Nauta*

The impacts of North Sea flooding
to UK agriculture

– *Iain Gould, Isobel Wright, Gary Bosworth,
Eric Ruto, Martin Collison, Simon Pearson*

Sustainable saline agriculture in Iran:

Turning Threats into Opportunities

– *Raheleh Malekian*

The Study of South Coastal Areas Development
of Iran Using Biosaline Agriculture (Haloculture)

– *Ardavan Azari*

Potentials of saline agriculture for subsistence
and livelihoods of local poor communities in the
Jordan Valley

– *Ziad Al-Ghazawi*

IV

Fresh and brackish water management in potentially saline soils

11 September, 15:30 – 17:10, Room F.112

Chair: *Dr. Eric Ruto*
Dr. Leena Karrasch

Managing salinization under climate change: using
degraded irrigation waters and new technologies

– *Francisco Pedrero Salcedoa, Juan José Alarcón
Cabañeroa, Margo Robbenb, Huub Rijnaartsb,
Pedro Javier Guillermo López*

Nine steps towards a sustainable climate-proof
fresh groundwater supply: the case of Zeeland,
the Netherlands

– *Oude Essink, Gualbert*

Saline groundwater seepage increase with
sea level rise

– *Johan Medenblik*

Awareness raising and commitment, experiences
in how to involve the farming community

– *Jouke Velstra*

The Water Farm: collaborative water system
measures and governance approach to increase
self-sufficiency of freshwater availability for
agriculture

– *Jouke Rozema, Pieter Pauw, Marco Arts,
Esther van Baaren, Melle Nikkels, Tim Moermans,
Marjan Sommeijer, Vincent Klap*

Innovations

V

Experiments and promising crops

10 September, 13:30 – 15:30, Room F.129

Chair: *Dr. Bas Bruning*
Dr. Redouane Choukr-Allah

Quinoa, a Promising Halophyte with Modified Planting Date and Minimum Water and Pesticide Requirements for Fars province, Iran
– *Rezvan Talebnejad*

The study of quinoa at high salinity in the field conditions
– *Muhammad Shahid*

Screening of Sorghum genotypes in the coastal saline region of Bangladesh
– *Md. Harunor Rashid, Mustafa Kamal Shahadat, M. Amiruzzaman and M. Akkas Ali*

Multi-year evaluation field trials of *Salicornia bigelovii* in United Arab Emirates: prospects & challenges
– *Dionysia Lyra, Hifzur Rahman, Hamza Khan and R.K. Singh*

VI

Promising crops for saline farming

10 September, 16:00 – 18:00, Room F.129

Chair: *Dr. Bas Bruning*
Dr. Ed Barrett-Lennard

Physiological growth and gas exchange of saffron (*Crocus sativus* L) in saline and deficit irrigation condition under different planting methods
– *Maryam Dastranj, Alireza Sepaskhah, Seyed Mohammad Mirsafi*

Tetragonia tetragonioides as a salt-tolerant crop in a saline agriculture context
– *Giulia Atzori*

Investigations of soils and plants from farms and field trials in South-East Norway, can make the local farmer better prepared from future episodes of sea water flooding
– *Åsgeir R. Almås and Susanne Eich-Greatorex*

VII

Salinity adapted cultivation strategies

11 September, 11:00 – 13:00, Room F.129

Chair: *Dr. Redouane Choukr-Allah*
Dr. Laurids Siig Christensen

Reducing Salinity Effect On Alfalfa (*Medicago Sativa*) Production Using Soil Condintioner – Case Of Lahbab Farm In Dubai
– *Khalil Ur Rahman, Mohammed Khalifa Bin Thaleth and Khalfan Al Suwaidi*

Crop Intensification option through zero tillage potato cultivation using mulch that improves soil properties in the south-western saline soil of Bangladesh
– *Mustafa Kamal Shahadat, Md. Harunor Rashid, Farzana Jahan Juthi and Munmun Ahmed*

Performance Of Intercropping Short Duration Leafy Vegetables With Elephant Foot Yam In The Coastal Area Of Bangladesh
– *Md. Harunor Rashid, Mustafa Kamal Shahadat and M. Akkas Ali*

Spaarwater: sustainable and profitable usage of fresh water for agriculture in the Wadden Sea Region
– *Jouke Velstra, Tine te Winkel, A. Oord, S. Burger, B. de la Loma Gonzalez*

Desalinization of greenhouse floors
– *Stephan Jung*

VIII

Innovation and practical experience at farm level

11 September, 15:30 – 17:10, Room F.129

Chair: *Dr. Dionysia Aggeliki Lyra*
Dr. Redouane Choukr-Allah

Putting Saline Agriculture into Practise – a showcase from Bangladesh
– *Arjen de Vos*

Climate resilient agricultural practices in the saline prone areas of Bangladesh
– *Muhammad Abdur Rahaman Rana*

Modular farming approach utilizing saline water resources to enhance food and nutrition security in desert environments: two case studies in United Arab Emirates
– *Dionysia Lyra and Stathis Lampakis*

Saline Agriculture, Smart Water Management and Agroforestry
– *Bas Bruning, Rogier van Opstal, Eric van Zandwijk*

Sustainable Saline Soils Use System for Food Security and Poverty Alleviation in Ghana
– *Rosemary Nunoo*

Geography and Biology

IX

Revitalization of saline degraded soils

10 September, 13:30 – 15:30, Room S.110

Chair: Dr. Maria Konyushkova

The monitoring of soil salinity using remote sensing data on agricultural lands of Central Asia
– Maria Konyushkova, Tatyana Khamzina, Gulchekhra Khasankhanova, Anna Kontoboytseva, Yevgenia Pankova

A Simplified Model for Soil Salinity and Sodicity in Drylands
– Isaac Kramer, Yair Mau

Droughts impacts on surface salinity levels and implications for irrigation water scarcity in the United States
– Edward Jones, Michelle T.H. van Vliet

Salinity of soil in Denmark
– Laurids Siig Christensen

Recovery opportunities and prospects for the use of degraded land in the context of structural economic and technological changes
– Mikhail Kislitskii

Revitalisation of degraded lands
– Ties van der Hoeven

X

Traits affecting salinity tolerance

10 September, 16:00 – 18:00, Room S.110

Chair: Prof. Theo Elzenga
Dr. Laurids Siig Christensen

Development and characterization of an EMS mutated wheat population and identification of salt tolerant wheat lines
– Lethin Johanna, Shakil Shahriar S.M., Hassan Sameer, Sirijovski Nick, Töpel Mats, Olsson Olof, Aronsson Henrik

OsHAK9, a potassium transporter, is essential for seed germination in rice under salt stress
– Peng Zeng, Luofeng Qian, Ting Xie, Xumei Qian, Yuqian Jiang, Zhoufei Wang, Henrik Aronsson, Jinping Cheng, Hongsheng Zhang

Genome Wide Analysis Of WRKY Transcription Factors In The Wheat Genome With Emphasis On Regulating Salt Tolerance
– Hassan Sameer, Lethin Johanna, Blomberg Rasmus, Mousavi Hesam, Aronsson Henrik

Molecular breeding of Triticum aestivum in abiotic stress
– Esteri Viitanen, Sameer Hassan, Henrik Aronsson

Effects of elevated salinity on agronomic and physiological parameters of different mutated wheat lines
– Hesam Mousavi, Johanna Lethin, Nupur Naik, Olof Olsson, Henrik Aronsson

XI

Interactions among salinity, roots and microbial communities

11 September, 11:00 – 13:00, Room S.110

Chair: *Dr. Ed Barrett-Lennard*
Dr. Bas Bruning

Rhizobiome of resurrection plants–potential source of plant growth promoting bacteria

– *Zivko Jovanovic, Svetlana Radovic, Tamara Rakic, Jelena Lozo, Djordje Fira*

Endophytic fungi-mediated salinity stress tolerance in *Solanum dulcamara* (Bittersweet)

– *Sasirekha Munikumar, J. Theo M. Elzenga, J. Dick van Elsas, N. Nataraja Karaba*

Elucidation of root traits that contribute to yield stabilisation in potato under climate change

– *Jan Henk Venema and J. Theo M. Elzenga*

Root system architecture and grass productivity under salt stress

– *L. Wang, J. Theo M. Elzenga*

XII

Alternative use of salt-tolerant plants

11 September, 15:30 – 17:10, Auditory F.002

Chair: *Prof. Henrik Aronsson*
Dr. Laurids Siig Christensen

Evaluating crop salt tolerance from field trials at Salt Farm Texel – a new venue

– *Gerrit van Straten, Arjen de Vos, Jelte Rozema, Peter van Bodegom*

Saline plant molecular factory for production of pharmaceuticals, functional feed, and biofuels using biorefinery technologies

– *Mette Hedegaard Thomsen, Tanmay Chaturvedi, Iwona Cybulska*

Bio-fractionation of *Salicornia bigelovii* to increase the value of the green biomass

– *Aslak Christiansen, Henning Jørgensen, Dionysia Lyra*

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