



## Arctic Science Partnership (ASP) annual meeting

17-18 February 2023  
Hôtel-Restaurant Le Saint – Paul  
29 Bd Franck Pilatte, 06300 NICE, France

### Minutes 17-18 February 2023

Dear All

Thank you for participating in the annual ASP meeting in Nice. It was a pleasure to meet you all again after a long period of not being able to see each other physically due to corona.

It was impressive to see how many ongoing projects and the increasing amounts of joint projects between institutions. Below you will find an overview of funded and planned projects.

We also discussed what should be the focus over the next year of ASP and identified the following 3 ideas that needs further development over the next year. We also identified PIs for each idea/project and updated the ASP roadmap (<https://asp-net.org/content/asp-research-roadmap>)

## Linking atmosphere, ice and ocean

*understanding high-arctic climate change (heat, energy, freshwater)*

- Ice drilling – Müller, Tausen (team: Bo, Olav, Fei)
- Trans Polar Drift – Tara, St Nord, Alert, Pearl, Svalbard (team: CJ, Mathieu, Andreas)
- Atmosphere, sea ice – ocean interactions (Baffin Bay, NE Greenland) team: John, Torsten, Philip, Jens)
- Overview – register projects, logistics, people and metadata, Isaaffik Arctic Gateway – “ASP” tag

To maintain an overview of projects we encourage you to register your projects, fieldwork etc on the Isaaffik Arctic Gateway (<https://isaaffik.org>) with an "ASP" tag. In case you need assistance with this the first time you a welcome to contact Peter Mikkelsen ([pemi@bio.au.dk](mailto:pemi@bio.au.dk)).

We agreed on meeting again in Nice 28-29 February 2024 for the annual 2024 ASP meeting. Remember to book these dates in your calendars.



## Funded / planned activities in the NOW2NEW area. Identifying PI's Atmosphere (Henrik, Lotte, Fei, )

	Project title	Subject	Region CA/NOW/G/NEW/S V	Start - End	Institution	PI name	Status (F/P)
1	<u>Greenfeedback</u>	Gas fluxes	G (coastal)	July 2022-july 2026	AU, UM, GNR, <u>UIT</u>	Lise Lotte Sørensen	F
2	ICOS	GHG measurements	Villum	2020-2030	AU	Do	F
3	AMAP CORE	Contaminants (also in biota)	Villum and G	Continuous	AU	Henrik Skov/Jens Søndergaard	F
4	SLCF	Sort lived GF	Villum	Continuous	AU	Andreas Massling	F
5	ACTRIS-DK	All but GHG	Villum	2020-2026	AU	Henrik Skov	F
6	Interact	Terrestrial research	Villum	2019-2023	AU	Henrik Skov	F
7	CMO	Met and air quality [CO, CO <sub>2</sub> , CH <sub>4</sub> , O <sub>3</sub> , NO <sub>x</sub> , PM <sub>2.5</sub> , PM <sub>10</sub> , PAH, black carbon] in the subarctic	CA and mobile	Continuous	UM	<u>Fei Wang</u> , CJ Mundy	F
8	<u>ArcticNet</u>	Contaminants in a changing Arctic	CAA	2003-2024	UM	Gary Stern	F
9	ALERT and PEARL	Met and air quality in the high Arctic	CAA	Continuous	ECCC, U Toronto	Sandy Steffen and Kim Strong	F
10	GIOS	CH <sub>4</sub> , CO <sub>2</sub> geographical gradient	<b>G</b>	2021-2025	AU	Søren Rysgaard	F



## Funded / planned activities in the NOW2NEW area. Identifying PI's Atmosphere - 2

	Project title	Subject	Region	Start - End	Institution	PI name	Status
1	<i>Available mobile infrastructures</i>	<i>Campaigns</i>	<i>CMO, Villum</i>		<i>AU</i>	<i>Henrik Skov</i>	<i>F</i>
2	Bridging the Fram Strait	Study the biogeochemical processes at Svalbard and Greenland	Fram Strait region	ASAP-5 years	UNIS, AU, KU, <u>Tromsø</u> , SIOS, GIOS....	Hanne <u>Hvidtfeldt</u> <u>Chrstiansen</u>	P
3	<u>North East Greenland expedition</u>	Establishing basic knowledge biogeochemical processes	Northeast Greenland	2026-2028	AU, <u>Hindgavl group</u>	Henrik Skov	P
4	<u>Cleancloud</u> (Aerosol cloud interaction)	The interaction of aerosol and cloud in high Arctic	Villum	2024-2029	AU, HU; Cyprus..	Ulas Im (Henrik Skov)	P
5	<u>TransARCTIC</u>	Safe and sustainable marine shipping in the Arctic (air theme)	CA, G	2025-2031	UM, UO, AU, ...	<u>Fei Wang</u>	P
6	<u>BaffinBay North</u>	Baffin Bay 'North Observatory (air theme)	CA, NOW, NG	2023-	UM	Dorthe Dahl-Jensen	P
7	Zero Pollution in the Arctic	Contaminants in the Arctic (air theme)	CA, NOW, G, NEW, SV	2024-	SINTEF, AU, UM,	Emily Cowan	P
8							
9							



## Funded / planned activities in the NOW2NEW area. Identifying PI's Ice Sheet, ice cap, glaciers (Bo, Olaf, Iben, Marie)

	Project title	Subject	Region	Start - End	Institution	PI name	Status
1	EGRIP	Ice-core drilling, ice-stream dynamics, climate	NE <u>Greenland</u>	-2024	EGRIP consortium	DDJ	F
2	Müller	Ice-core drilling, Holocene climate, glaciology, pollution, chemistry	Axel Heiberg Island	2023-2024	UM + consortium	DDJ	F
3	NEGIS-Flow	Ice-stream dynamics	NE Greenland	2024	AWI + EGRIP	O Eisen	F
4	N79	Stability 79NG	NE Greenland	2024ff	<u>AWI+partners</u>	A Humbert, C Hofstede	F
5	<u>Calvdis</u>	Ice-sheet hydrology	Greenland	2023ff			
6	<u>Polarmonitor</u> , <u>SLOGIS</u>	Ice-sheet hydrology	W Greenland	2024ff	<u>AWI+partners</u>	A Humbert	F
7	Green2Ice	Greenland glaciation	GRIP	2024-2025(?)	UCPH	A Svenson + DDJ	F
8	Hans <u>Tausen</u> North	Ice-core drilling, late Holocene + recent climate change + chemistry	N Greenland	2026?	UCPH + AWI	<u>B Vinther</u> + <u>M Hörhold</u>	P
9	North Greenland Traverse revisited (NGT)	Firn cores for regional climate change + chemistry	N Greenland	202x-3x	AWI, UCPH, ...	<u>Hörhold</u>	P
1							



## Funded / planned activities in the NOW2NEW area. Identifying PI's Ice Sheet, ice cap, glaciers (Bo, Olaf, Iben, Marie)

	Project title	Subject	Region	Start - End	Institution	PI name	Status
1 1	Greenland Climate Network	Climate Monitoring, snow-ice-atmosphere interaction	Greenland	ongoing	GEUS	A Ahlstrom	F
1 2		Caving dynamics	Greenland	ongoing	Several	Several	F
1 3		Glacier Mass Balance	AK-CA-GRL-SVB (Arctic)	ongoing	Several	Several	F
1 4	South Greenland Mass Balance	Ice Sheet Mass Balance	SE Greenland	<u>tbd</u>	<u>Nn</u>	<u>Nn</u>	P
1 5	LOTS OF	PROJECTS IN IASC NAG	NETWORK	ARCTIC	GLACIOLOGY	(meeting Jan 2023)	F
1 6							



## Funded / planned activities in the NOW2NEW area. Identifying PI's Ocean (CJ, Marcel et al)

	Project title	Subject	Region	Start - End	Institution	PI name	Status
1	REFUGE-ARCTIC/ArcticCore/Arctic-NET	Oceanography/moorings	NG,CA,NOW	2023-26	TAKUVIK/Laval U.	M. Ardyna	F
2	Greenhab	Harmful algal blooms/oceanography	NOW/BB	2025	AWI	U.John	F
3	GONE Green	Oceanography	NG,NEW	2025	AWI	T. Kanzow	P
4	GONE Green	Geology	NG,NEW	2026	AWI	Gebhard	P
5	GONE Green	Biology	NG,NEW	2027	AWI	Metfies	P
6	Qikitarjuaq Research Station	Oceanography	BB	2024-	Laval	M. Babin	F
7	Baffin Bay North	Moorings (Infrastructure)	NOW	2024	UM	D. Dahl-Jensen	P
8	UM-CERC/ArcticNet	Mooring deployments/ice camp	CA,NOW	2023-2024	UM	I. Dmitrenko	F/P
9	KEBABB/S	Oceanography	CA,BB,NOW	2019-2024	DFO	C. Michel	F
10	Takuvik-BGC Argo	BGC-Argo floats	BB	2016-	Laval	M. Babin	F
11	GEM-Longterm Monitoring Program	Atmosphere-Ocean	panGreenland	-	AU/GINR/CU	T. Christiesen	F



## Funded / planned activities in the NOW2NEW area. Identifying PI's Ocean - 2

	Project title	Subject	Region	Start - End	Institution	PI name	Status
1	TUNU	Oceanography/sea ice	NG-Pole	2022-26	UIT	A. Lynghammer	F
2	C2C	Sea ice	SV fjords	2023-2027	UIT	A. Frainer	F
3	DIM (Qik)	Microalgae	BB	2024	Takuvik	M. Babin	F
4	GINR-Taraioq	Oceanography	BB	-	GINR	Mortensen	F
5	Badex	Geology/paleo	BB	2023	WHOI	R. Hatfield	F
6	NEW-Argo	BGC-Argo float	NEW	2023-	DTU/GIOS	C. Stedmon	F
7	NOW-Argo	BGC-Argo float	NOW	2024-	DTU/GIOS	C. Stedmon	F
8	ARCMOGIOS/	Autonomous measurements	EG	2022-26	AU	S. Rysgaard	F
9	TARA TPS	Oceanography/atmospheric	EG,NG	2025-36	Laval	M. Babin	F
10	Fjord change	Biodiversity/oceanography /moorings	SV	2023/26/28	AWI	U.John	F
11	Greenhab (Disko Bay)	Harmful algal blooms/oceanography	BB	2024-25	AWI	U.John	F
12	Melville Bay	Habitat Mapping	BB	2023	GINR	Diana	F

- **Key gaps and ideas discussed**
- **Seasonality of the system**
  - Ship-based - 12 month (once new Polar Stern 2 running – potential to book Polar Stern for 12 months) or fall and spring program
  - Ice camp – 12 month program (Alert, Ward Hunt, Qaanaaq, St. Nd, Qik, Pond Inlet)
- **Role of regions on modifying waters (i.e., BBPW formation)**
- **Interannual variability in TPD**
  - Deploy ITP north of Greenland and Lincoln Sea – need to model sea ice motion to examine how long moorings would last
- **Moorings should capture surface**
  - Profiling cabled observatory at Carey Islands
  - ITP deployments
- **Transport modeling efforts focused on NEW/Fram region to NOW region**

All the best  
Søren, Peter & Egon



## Arctic Science Partnership (ASP)

### annual meeting

17-18 February 2023

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### Agenda

<b>This 2023 annual ASP meeting aim to update its work roadmap and discuss ideas for the next long-term ASP direction and new activities.</b>	
<b>Friday 17 February</b> 10.00 - 10.30 (UTC) Plenum	Welcome and presentation (Søren Rysgaard). <ul style="list-style-type: none"><li>• Short overview of ASP and its purpose</li><li>• How did it start and where are we today?</li><li>• Science questions - revisiting ASP questions</li></ul>
10.30 - 11.30	Short presentation of participants and ASP related activities. 5 minutes and 5 slides for each ASP partner
11.30 -12.00 Plenum	General overall presentation of the next large ASP field initiative <ul style="list-style-type: none"><li>• Now2New overall idea (CJ Mundy)</li></ul> <p>The Northeast Water Polynya Project (NEW) occurred in 1992, while the International Northwater Polynya Study (NOW) was in 1998-99. Roughly 30 years later, we still look to the original research produced from these international efforts that greatly advanced our understanding of these important recurring polynyas to the east and west of Greenland. Over the last 30 years, there has been relatively consistent observations in both regions via mooring deployments and (semi-)annual research cruise observations, the latter largely restricted to the open water season when the polynyas are not present. Both polynyas form over major outflow shelves of the Arctic Ocean, impacted by: the changing sea ice and oceanic freshwater flux from the central Arctic Ocean; an increasing glacial melt input from the Greenland ice sheet and surrounding glaciers of the Canadian Archipelago; and a changing interaction of warmer saltier waters from the south (North Atlantic in the NEW and the West Greenland Current in the NOW). Although changes have been noted in both regions, our understanding on how these changes impact polynya processes and the associated ecosystem are greatly limited by our lack of seasonal observations. ASP-researchers currently run multiple programs throughout the region, researching oceans to glaciers. Here it is proposed that via ASP, we seek to build a program (new proposals) to undertake an international multiplatform effort to extend seasonal observations in the region under the title NOW 2 NEW.</p>
12.00-13.00	Lunch
13.00-13.30	Presentation of the ASP laboratory intercomparison (Marcos Lemes)

13.30-15.00 Plenum	Funded and planned activities in the NOW2NEW area. Identifying PI's (Peter Mikkelsen) <ul style="list-style-type: none"> <li>• Atmosphere</li> <li>• Ice sheet</li> <li>• Land</li> <li>• Ocean</li> </ul>
15.00-15.30 Plenum	Introduction to breakout sessions (Søren Rysgaard)
15.30-16.00	Break
16.00-18.00 Breakout	How to connect existing activities? What new activities should ASP contribute with in the NOW 2 NEW area? <ul style="list-style-type: none"> <li>• Atmosphere (Henrik Skov/Lise Lotte)</li> <li>• Ice sheet (Bo Vinter/Olaf Eisen)</li> <li>• Land (Torben Røjle/Jose Nymand)</li> <li>• Ocean (CJ Mundy/Marcel Babin)</li> </ul>
18.00-18.30 Plenum	Wrap up day one (Søren Rysgaard)
20.00	Dinner

<b>Saturday 18 February</b> 9.00 - 10.30 (UTC) Plenum	Report from breakout sessions. <ul style="list-style-type: none"> <li>• Atmosphere (Henrik Skov/TBD)</li> <li>• Ice sheet (Bo Vinter/Olaf Eisen)</li> <li>• Land (Torben Røjle/Jose Nymand)</li> <li>• Ocean (CJ Mundy/Marcel Babin)</li> </ul>
10.30 - 11.00	Break
11.00 -13.00 Plenum	Consolidation of ASP research plan (Peter Mikkelsen) <ul style="list-style-type: none"> <li>• ASP roadmap 2023-2028 (within the NOW2NEW area)</li> <li>• Who does what and when?</li> <li>• Follow up</li> </ul>
13.00-14.00	Lunch
14.00-15.30 Breakout	ASP planning <ul style="list-style-type: none"> <li>• Science staff</li> <li>• Support staff (admin, operation, laboratory, communication)</li> </ul>
15.30-16.00 Plenum	End of ASP annual meeting