UNDERSTANDING THE IMPACT OF A CHANGING ARCTIC ON NORTHERN HEMISPHERE WEATHER AND CLIMATE

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Blue-Action aims to:

- improve our understanding of the impact of a changing Arctic on Northern Hemisphere weather and climate;
- improve the safety & wellbeing of people in the Arctic and across the Northern Hemisphere;
- reduce the risks associated with Arctic operations and resource exploitation; and,
- support evidence-based decision-making by policymakers worldwide.
Blue-Action brings together experts from over 40 organisations in 17 countries across 3 continents to:

- Develop new methods to characterise climate conditions where hazardous weather system forms across the Northern Hemisphere and establish their link to Arctic climate change.

- Deliver an improved representation of Arctic warming and its impact on atmosphere and ocean circulation.

- Enable robust and reliable forecasting to deliver better predictions at sub-seasonal to decadal scales.
WP7 Management and scientific coordination

WP1 Improving long-range forecast skill
WP2 Drivers of Arctic Change
WP3 Arctic Impacts
WP4 Seasonal-to-decadal prediction in the Arctic and over the Northern Hemisphere.
WP5 Developing and Valuing Climate services

WP6 Clustering for Blue Growth
WP8 Dissemination, engagement and exploitation

Policy makers - Business actors - Environmental NGOs - Indigenous communities - Wider scientific community
In WP1: C3S seasonal systems: CMCC Uni Hamburg

In WP4: decadal prediction groups: MPI-M CNRS Bergen

In WP5: case studies: Finnish ski resort Arctic shipping routes Heatwaves
**WP1**
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UHAM
Jens H. Christensen
DMI/NBI

**WP2**
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HAV
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**WP3**
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**WP4**
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MPI
Noel Keenlyside
UiB

**WP5**
Mark Payne
DTU-Aqua
Kathrin Keil
IASS

**WP6**
Clustering for Blue Growth

**WP7**
Management and scientific coordination

**WP8**
Communication, engagement and exploitation
Blue-Action aims to work with:

- **Researchers and projects** focussing on Arctic and northern hemisphere observational monitoring, climate modelling, forecasting, and climate services.
- **Governments and policymakers** in need of weather and climate information for evidence-based decision-making.
- **NGOs, public sector bodies, and community organisations** interested in extreme weather events, climate services, forecasting, and climate change.
- **Businesses or industries** who rely on seasonal to decadal climate predictions, risk estimates of extreme weather and climate events, or who would like to work with Blue-Action to co-develop climate services and tools.
• Project coordinators:
  • **Steffen Olsen**, Danish Meteorological Institute, smo@dmi.dk
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• Communication, Dissemination, Engagement, and Exploitation Officer:
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Blue-Action will also:

• Embed scientific developments and improved model capability within international programmes through organisations including Copernicus C3S, WCRP, IPCC (AR6), JPI Climate and WMO (YOPP & PPP).

• Co-design a series of case studies with organisations and industries that rely on accurate weather and climate forecasting, to apply new modelling techniques to cutting-edge climate services.

• Communicate new insights, results, and messages – as well as data, model improvements and storylines – to a community of stakeholders for whom understanding climate change and associated environmental trends and risks is imperative.

NASA/Kathryn Hansen
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Faced with a changing climate, businesses, policymakers, and local communities need to access reliable weather and climate information to safeguard human health, wellbeing, economic growth, and environmental sustainability.

WHY BLUE-ACTION?