

# Towards better tailored weather and marine forecasts in the Arctic to serve sustainable economic activities and infrastructure (TWASE)

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## Introduction

In the Arctic, economic activities, such as navigation, aviation, fisheries, energy production, manufacturing, and tourism, are extremely sensitive to weather.

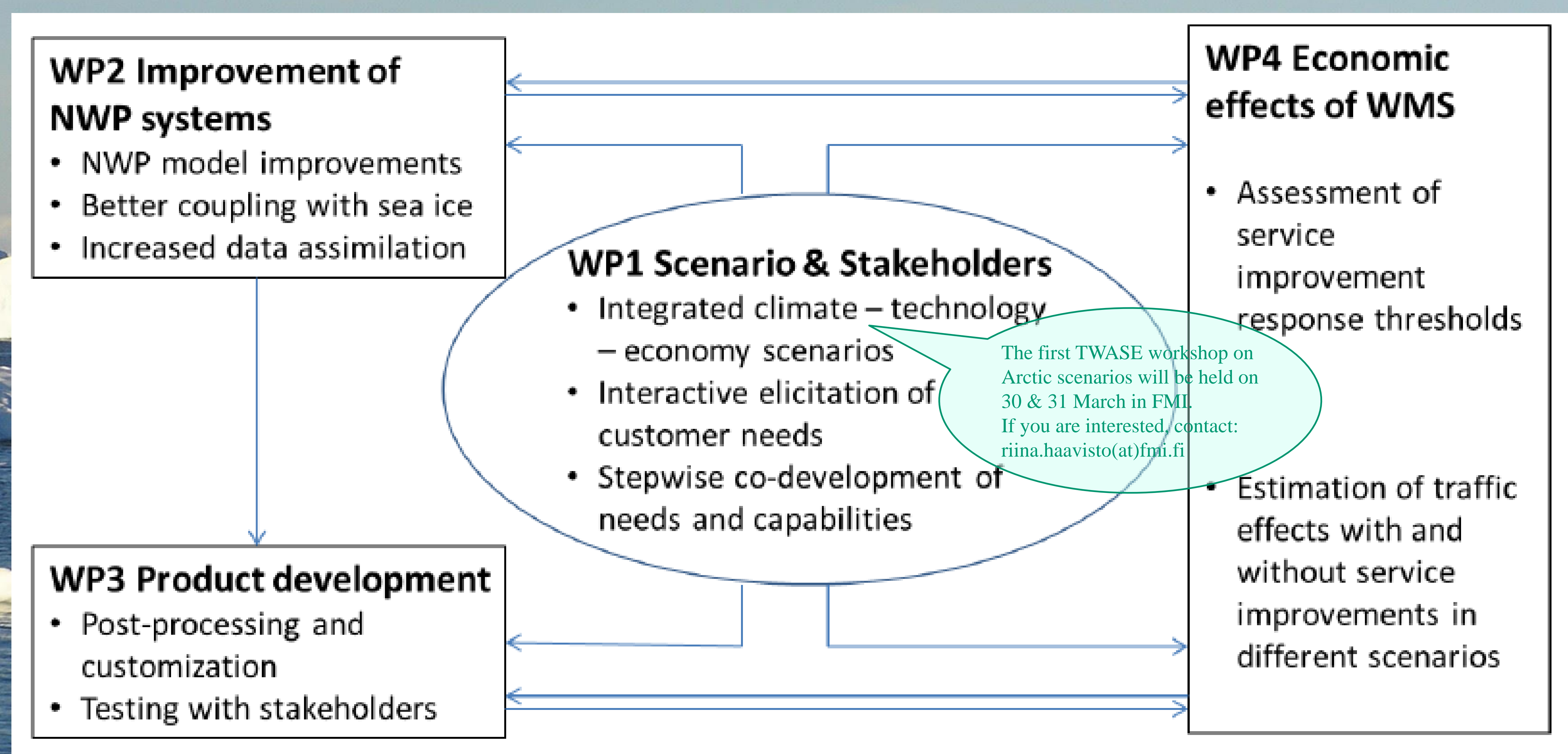
All these activities require accurate weather forecasts and accompanying marine forecasts, as well as long-term climate change projections to infer the future range of weather variability.

The quality of Weather and Marine Services (WMS) in the Arctic evolves in conjunction with the unfolding of needs for such services. These need to be evaluated together with the service users.

## Objectives

1. Identify, classify, prioritise and conceptualise the needs of stakeholders based on an understanding of how the climatic, institutional and economic context will develop in the Arctic.
2. Improve the predictability of weather, marine and sea ice conditions in the Arctic
3. Improve preparedness for impacts of climate change by exploring likely shifts in weather and marine conditions in conjunction with the expanding range of aviation, maritime transport, infrastructure networks, and wind power production.
4. Evaluate and optimize the benefits of the new WMS products to enhance the development of sustainable economy and infrastructure in the Arctic.

## Work Packages



## Expected results

- (a) improved WMS based on user needs
- (b) improved and new post-processing methods of weather and marine forecasts for Arctic conditions adaptable to various socio-economic purposes
- (c) structured information on the needs of economic actors, responsible authorities and practitioners as to their activities in the Arctic
- (d) modelling tool to appraise economic effects of improved WMS based on various compound climate-socioeconomics-policy scenarios
- (e) estimated response functions for critical thresholds in adverse weather and in weather-information levels.