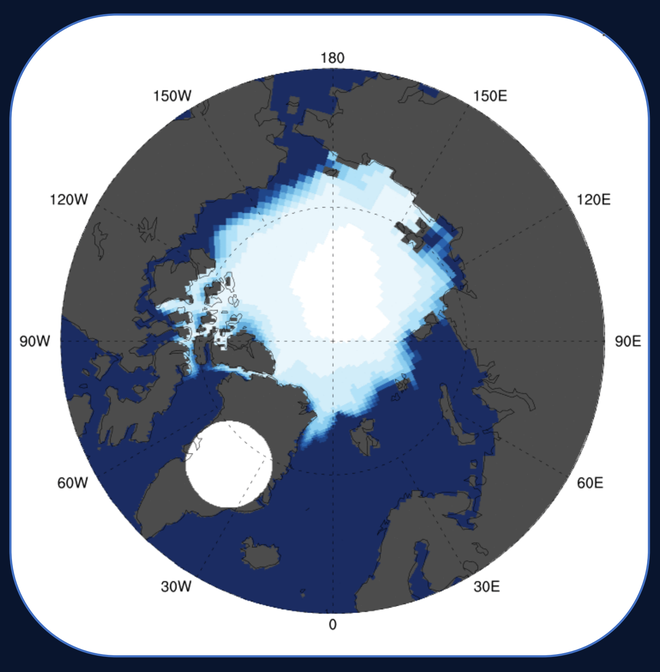
Tipping Point Arctic Sea Ice

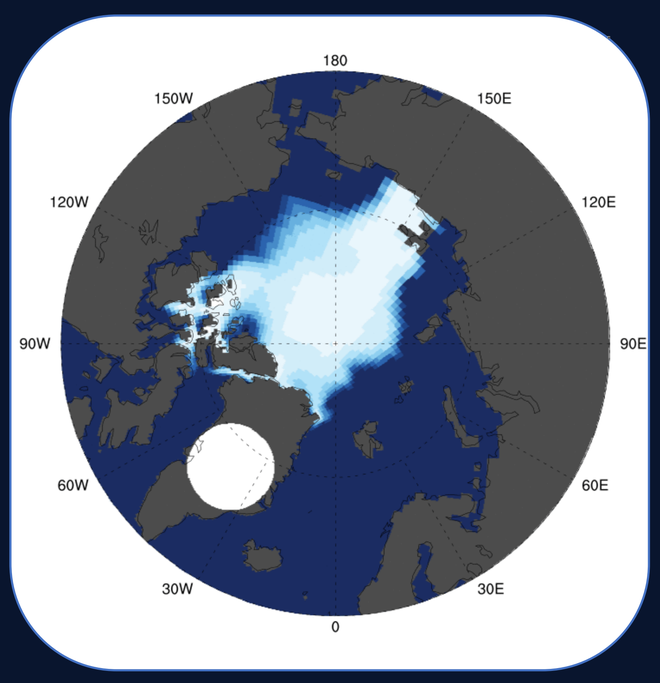
Heading towards a point of no return?

UNIVERSITÄT GREIFSWALD
Wissen lockt. Seit 1456

1983



2018



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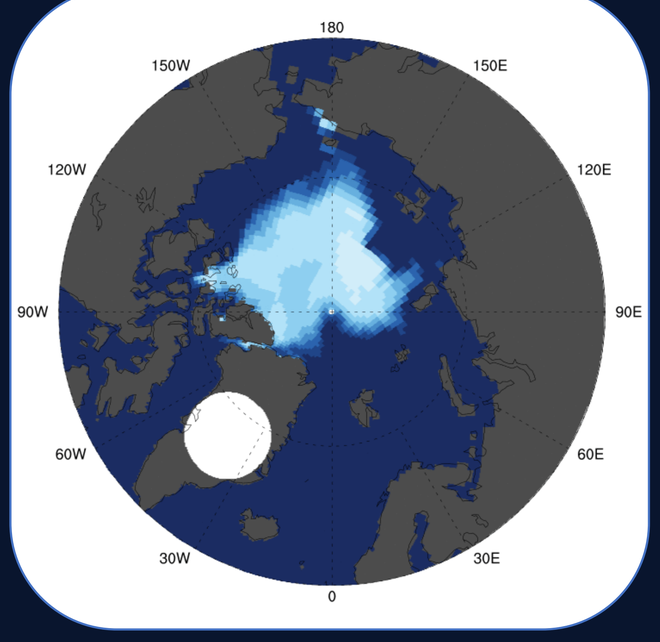

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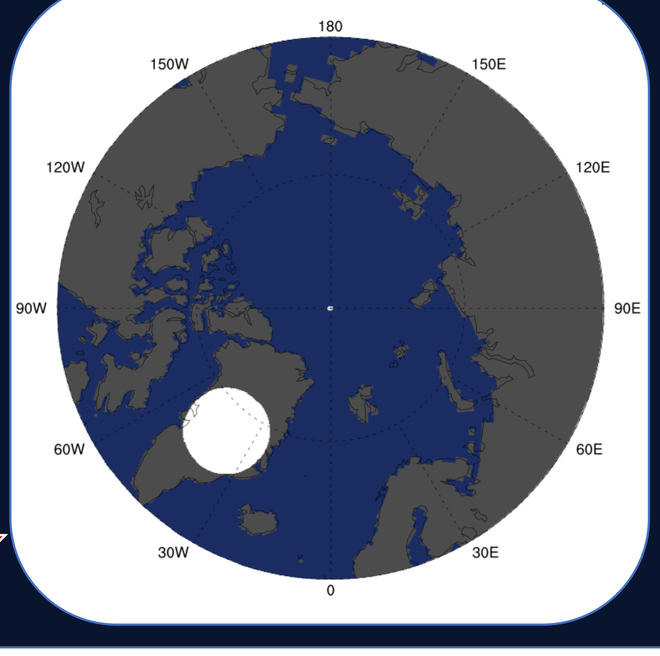
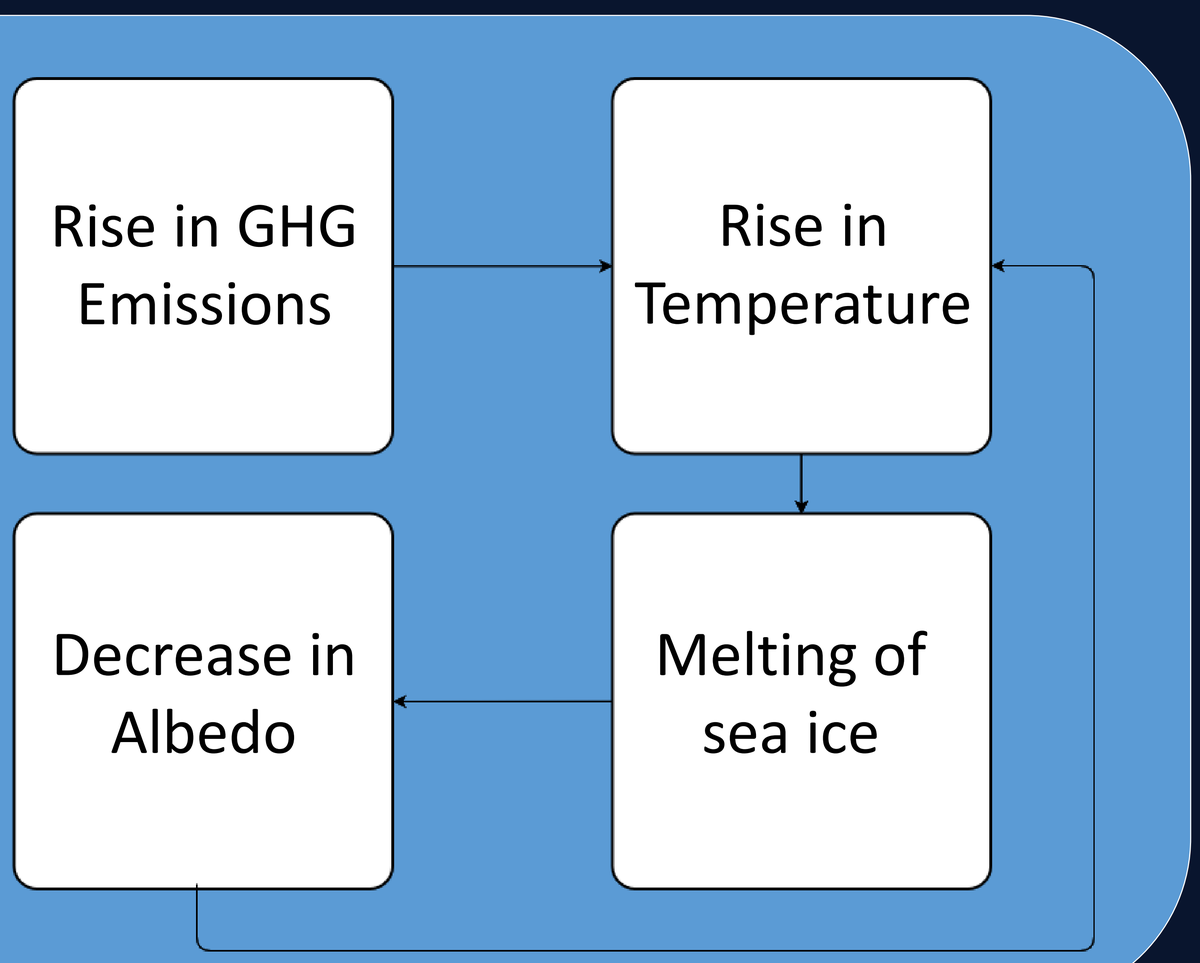


Introduction

- Rapid loss of arctic sea ice in the last decades, both in extent and thickness
- Arctic warms faster than any other region on earth (Arctic amplification)
- Predictions of ice-free conditions in this century
- Significant factor in regulating the global temperature

→ Important tipping point for global climate

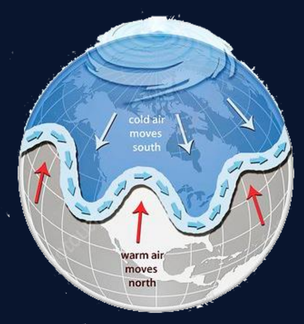
Arctic Sea Ice Feedback Loop



Rise in global temperature

Rise of sea level

Changes in ocean circulation



Changes in atmospheric currents

Conclusion

1. Unprecedented loss of arctic sea ice due to anthropogenic influences
2. Self-enforcing feedback loop may take hold and accelerate global warming
3. Regarded as a tipping point for the global climate because of its impact on the atmospheric and oceanic currents

Sources:
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