

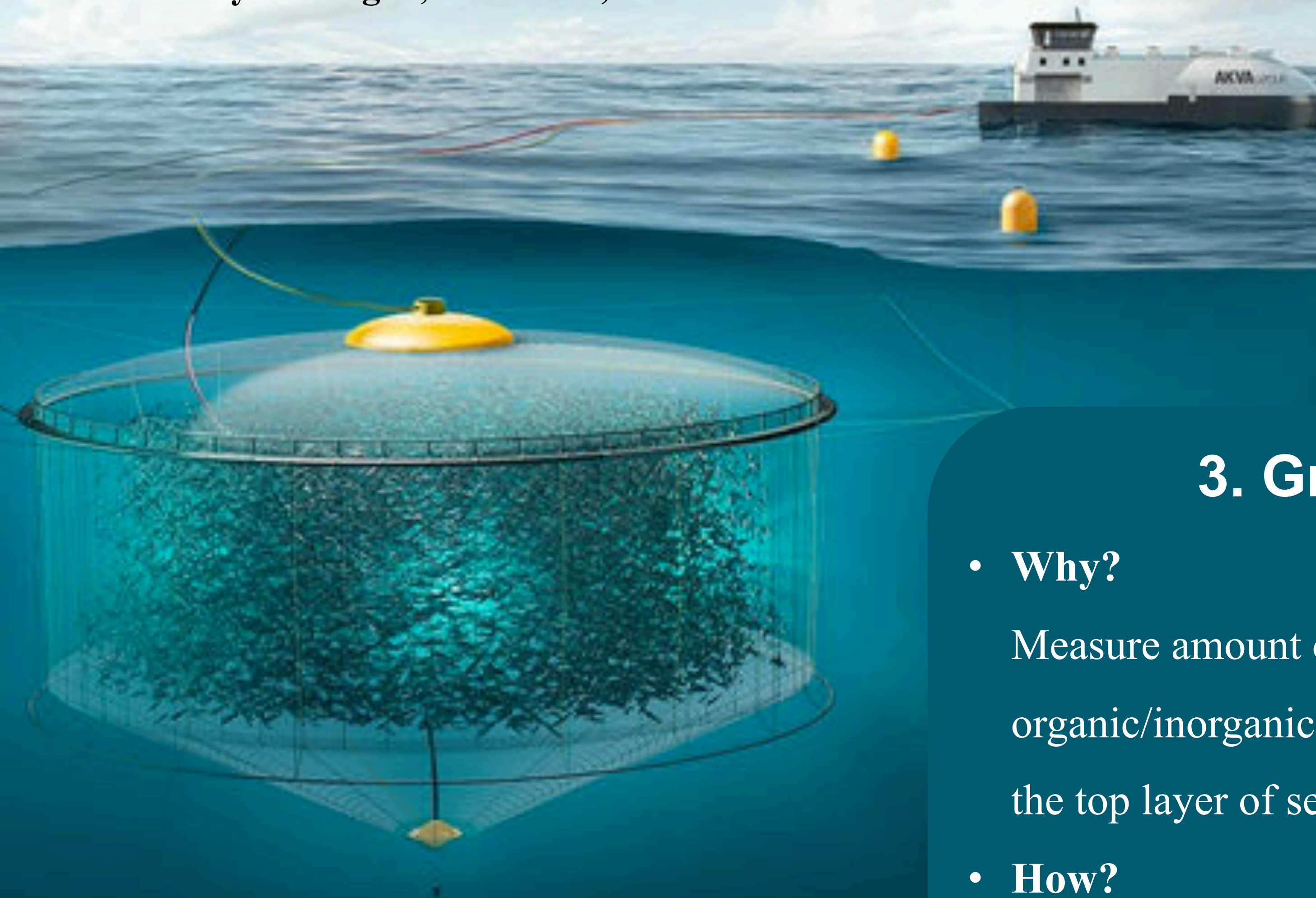
Collecting Data for Protocol on Mitigation of Aquaculture Effects on Vulnerable Habitats

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Why is a protocol needed?

- Aquaculture industry is expanding ¹.
- No vulnerable sea floor environments should be harmed.
- Limited knowledge on the whereabouts of vulnerable habitats today.



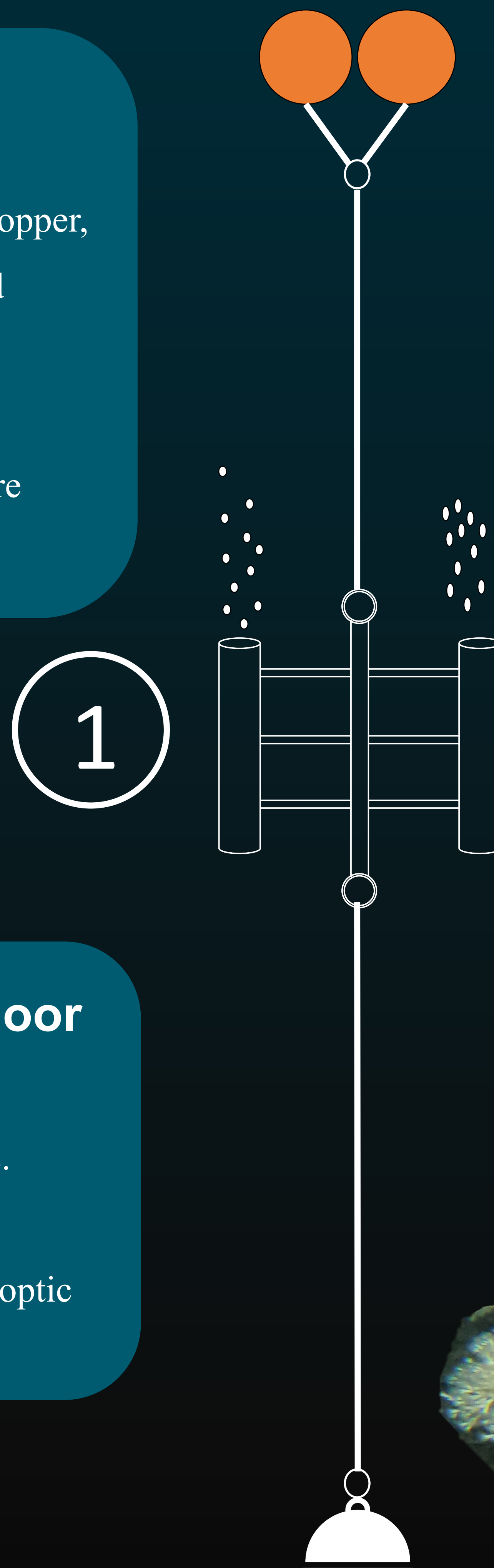
Picture: Atlantis Subsea Farming

3. Grab sampling

- **Why?**
Measure amount of microplastics, organic/inorganic matter, medicine and metals in the top layer of sediment.
- **How?**
Using a van Veen grab.

1. Sediment traps

- **Why?**
Get a measurement of sedimentation rate, copper, microplastics, organic/inorganic matter, and metals coming from existing facilities.
- **How?**
Place traps in a transect from the aquaculture facility catching sinking particles.



Conclusion

- **Sediment traps and grab sampling**
No results from the sediment traps or van Veen grab has been produced as of now.
- **Video analysis**
Success in finding a new coral reef (Bukkarevet).
Towed video-rig provides good images in flat areas, such as the fjord sill. ROV must be used on the steep walls.
Same methods could be used by fish farmers.

2. Video analysis of ocean floor

- **Why?**
Quick documentation of vulnerable habitats.
- **How?**
Using a towed video-rig connected with an optic cable from a moving boat.

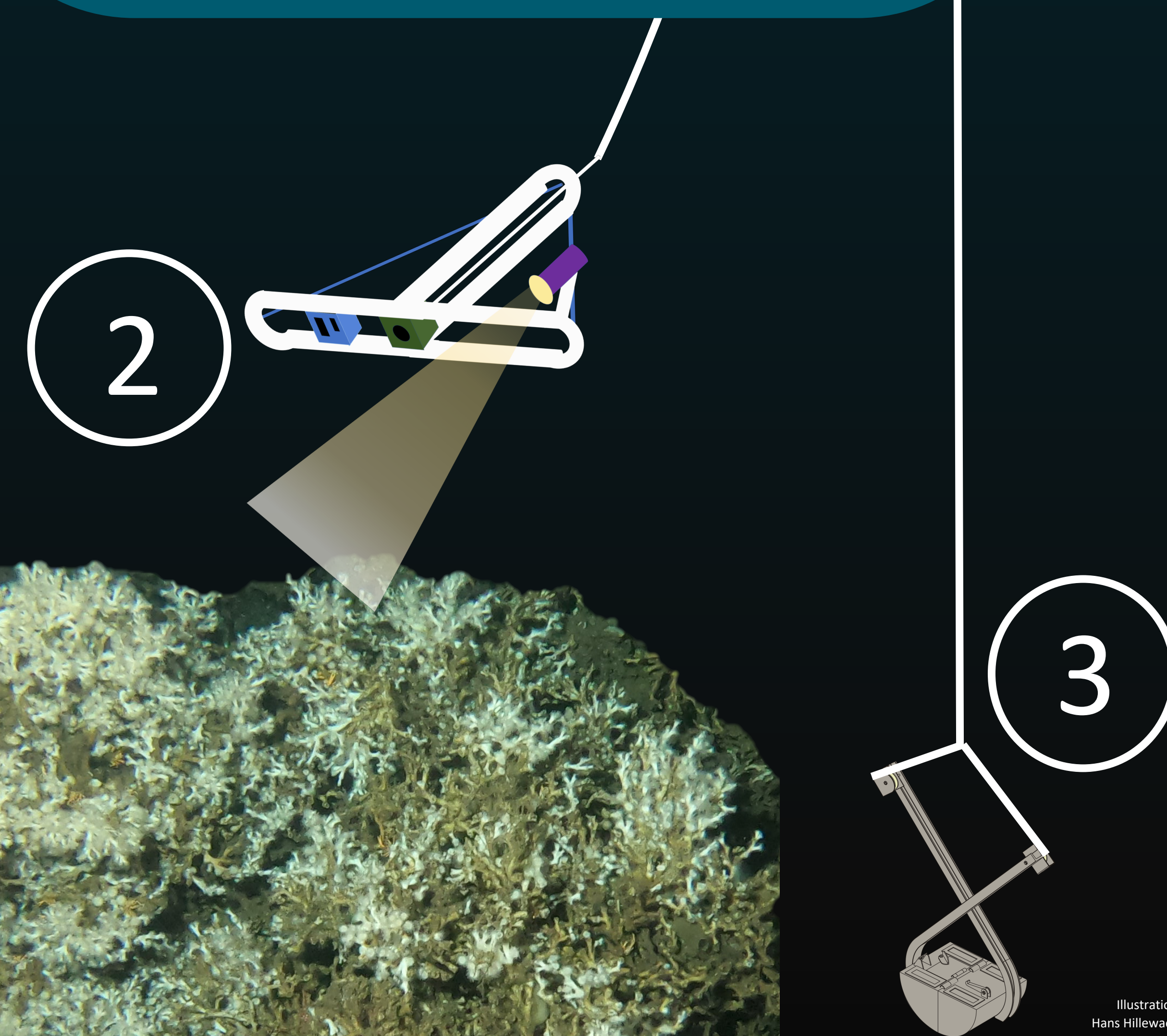


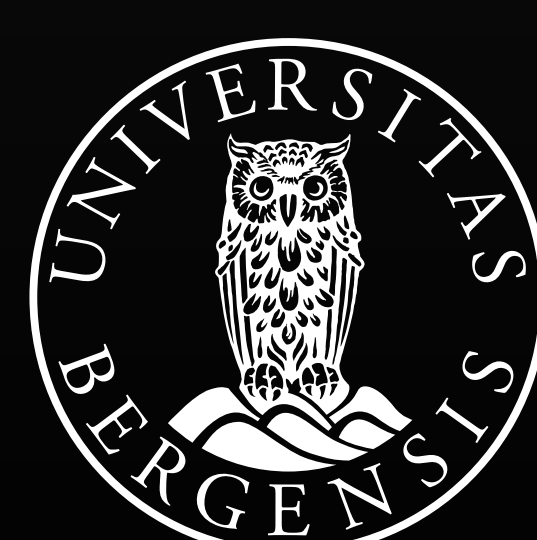
Illustration: Hans Hillewaert

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References

¹ Tiller, R., Brekken, T., & Bailey, J. (2012). Norwegian aquaculture expansion and Integrated Coastal Zone Management (ICZM): Simmering conflicts and competing claims.. *Marine Policy*, 36(5), 1086–1095. <https://doi.org/10.1016/j.marpol.2012.02.023>



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