

Oil: nature and environment

The yearly planned oil spill and its impact on the environment

Oil-on-water: What are they doing?

- ▶ 12.000 l of heavy oil used for the oil spill
- ▶ Two different types of crude oil
- ▶ 50% burned → smoke dangerous for lungs and climate!
- ▶ Skimmers & oil booms more effective
- ▶ Observation with drones and aircrafts
- ▶ Mechanical dispersion for easier intake



Why are they doing it?

- ▶ Check out new oil spill response technologies
- ▶ Test new equipment
- ▶ Training for staff → Prepare for a possibly bigger event in realistic conditions, rise understanding for responsibility
- ▶ Understand the equipment's efficiency (e.g. speed for pulling booms)
- ▶ Governmental responsibility for emergencies to acute pollution → collaboration with different institutions and agencies



- ▶ More cleaning techniques:
 - ▶ chemical dispersants
 - ▶ natural sorbents
 - ▶ “Super Sponge” AeroClay
 - ▶ Sea Swarm: robot assembly line
 - ▶ Vacuum cleaner

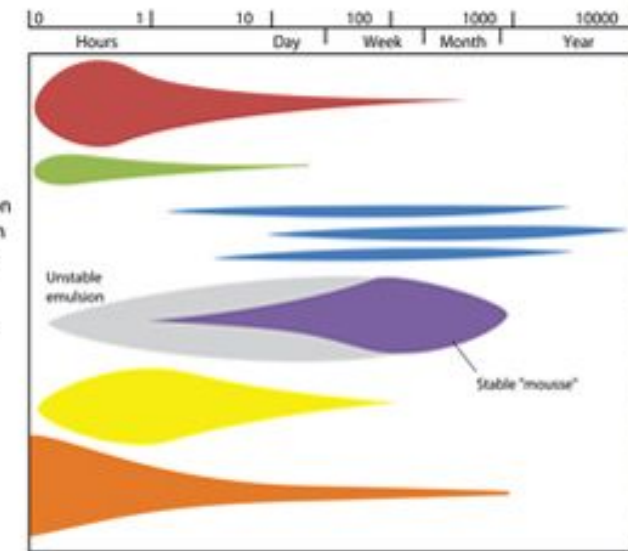
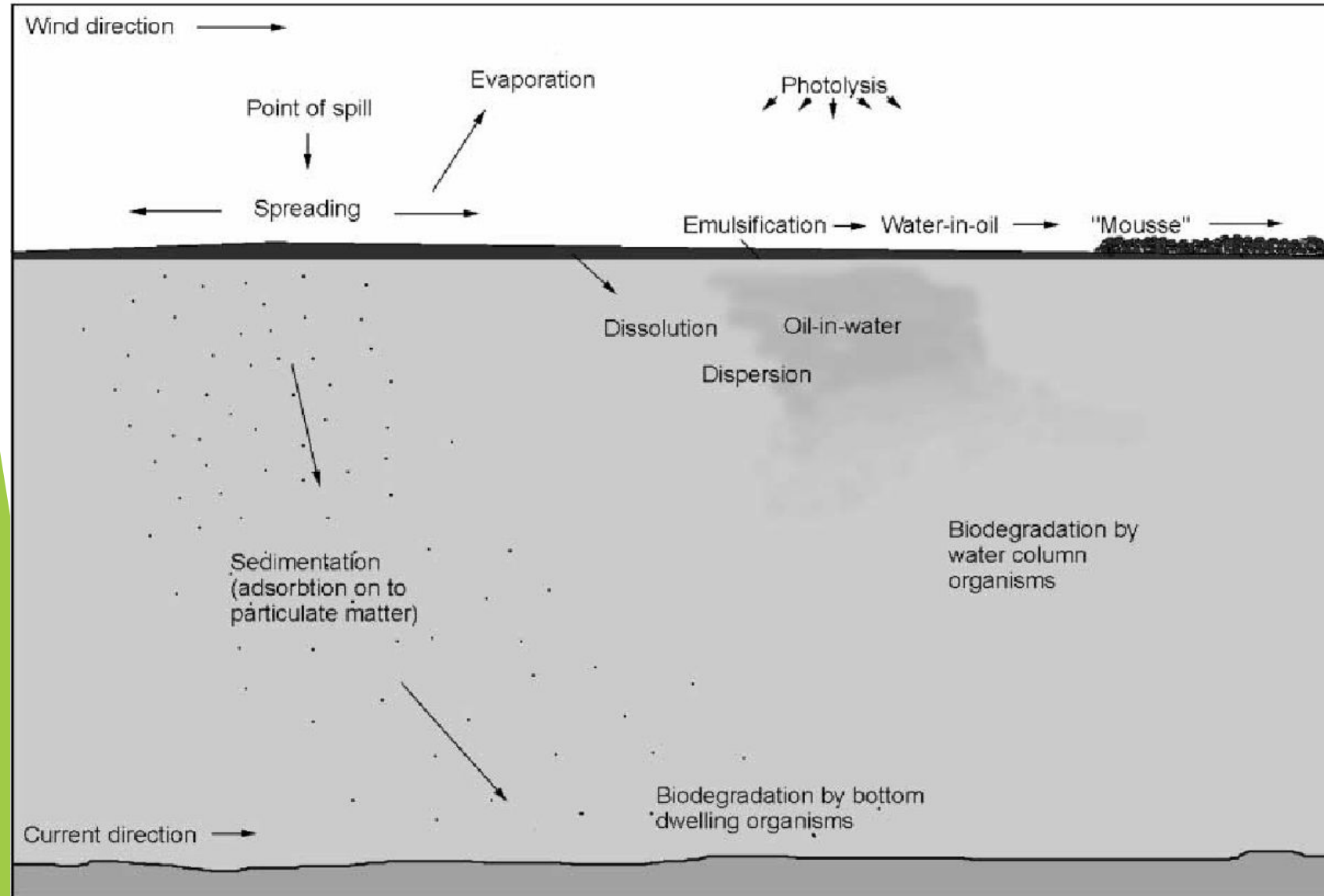


Sea Swarm in action:

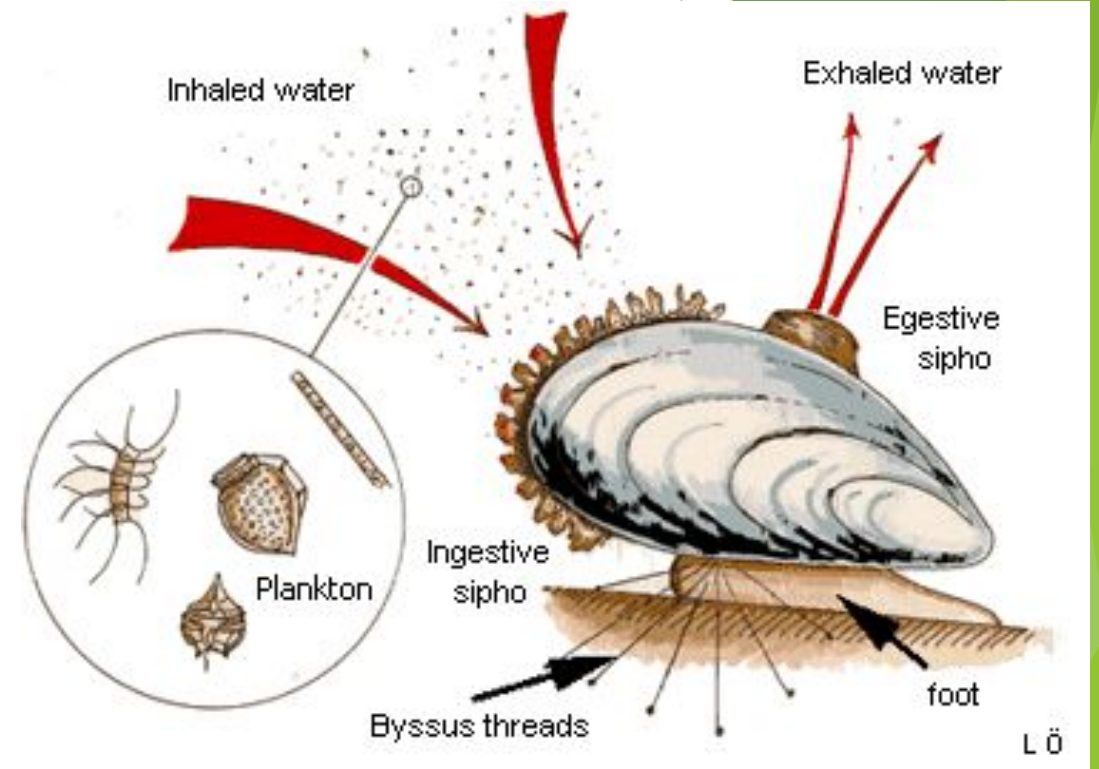
<https://www.youtube.com/watch?v=vruZVg6j9-l>

- ▶ Clean up sometimes worse than pollution itself
- ▶ A lot of new techniques and materials for the future in testing!

Responses from the environment



after a diagram courtesy of SINTEF



impacts

- ▶ impact on nature depends on
 - ▶ affected natural resources: presence or absence e.g coral reefs
 - ▶ type of oil
 - ▶ amount of oil
 - ▶ time of the year
 - ▶ weather conditions
- ▶ species are adapted to deal with natural mass dying (bad weather, natural variability)
- ▶ ecological changes
- ▶ impacts on flora: death, habitat loss
- ▶ impacts on fauna: physical suffering, chemical toxicity, habitat loss
- ▶ other impacts e.g fishery, tourism, outdoor recreation activities



sources and references

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