

The Ocean Clean Up Project



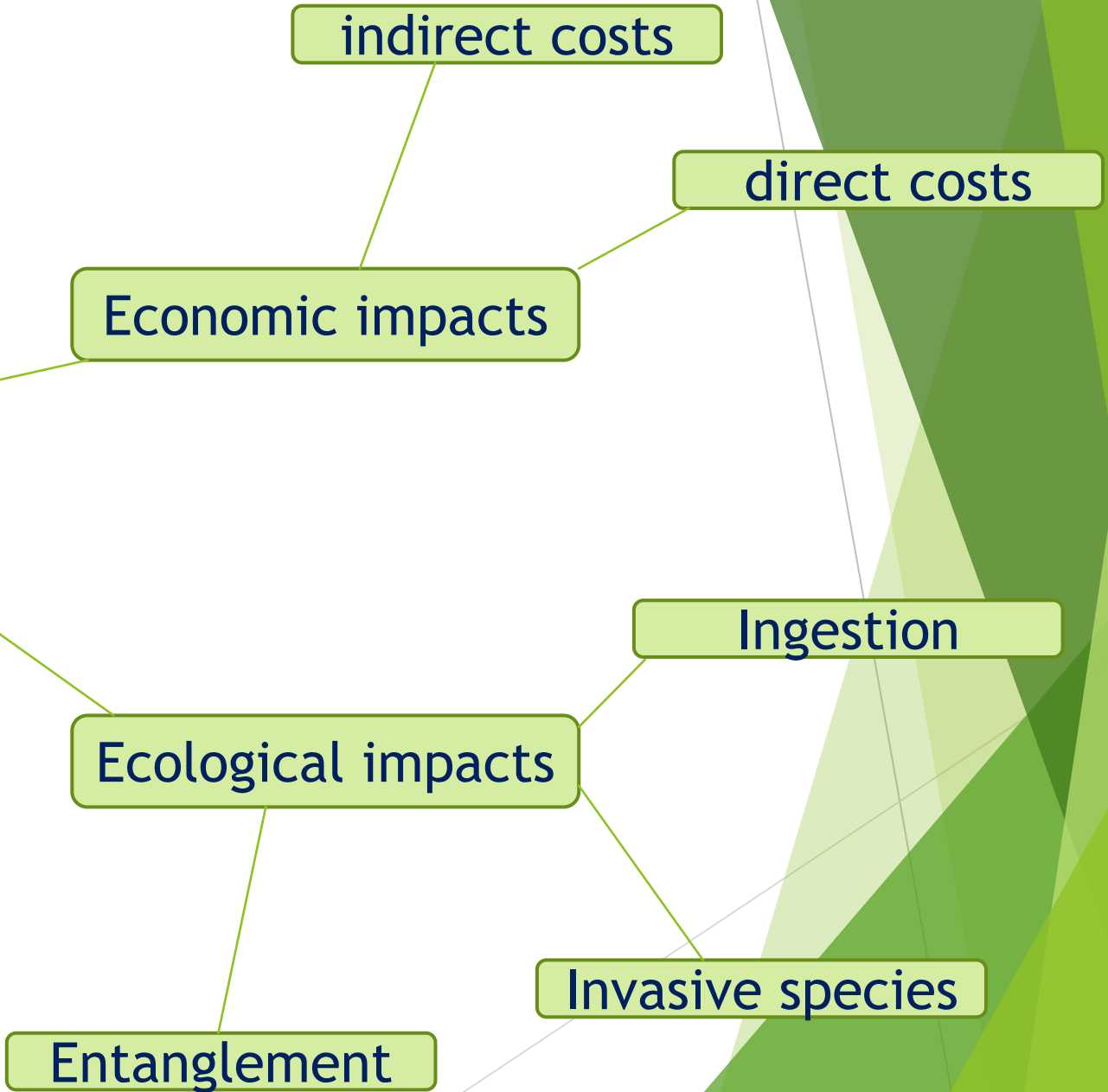
Outline

- ▶ Clean up challenges
- ▶ Effects of plastic in the marine ecosystem
- ▶ Alternative cleaning methods
- ▶ Our concept





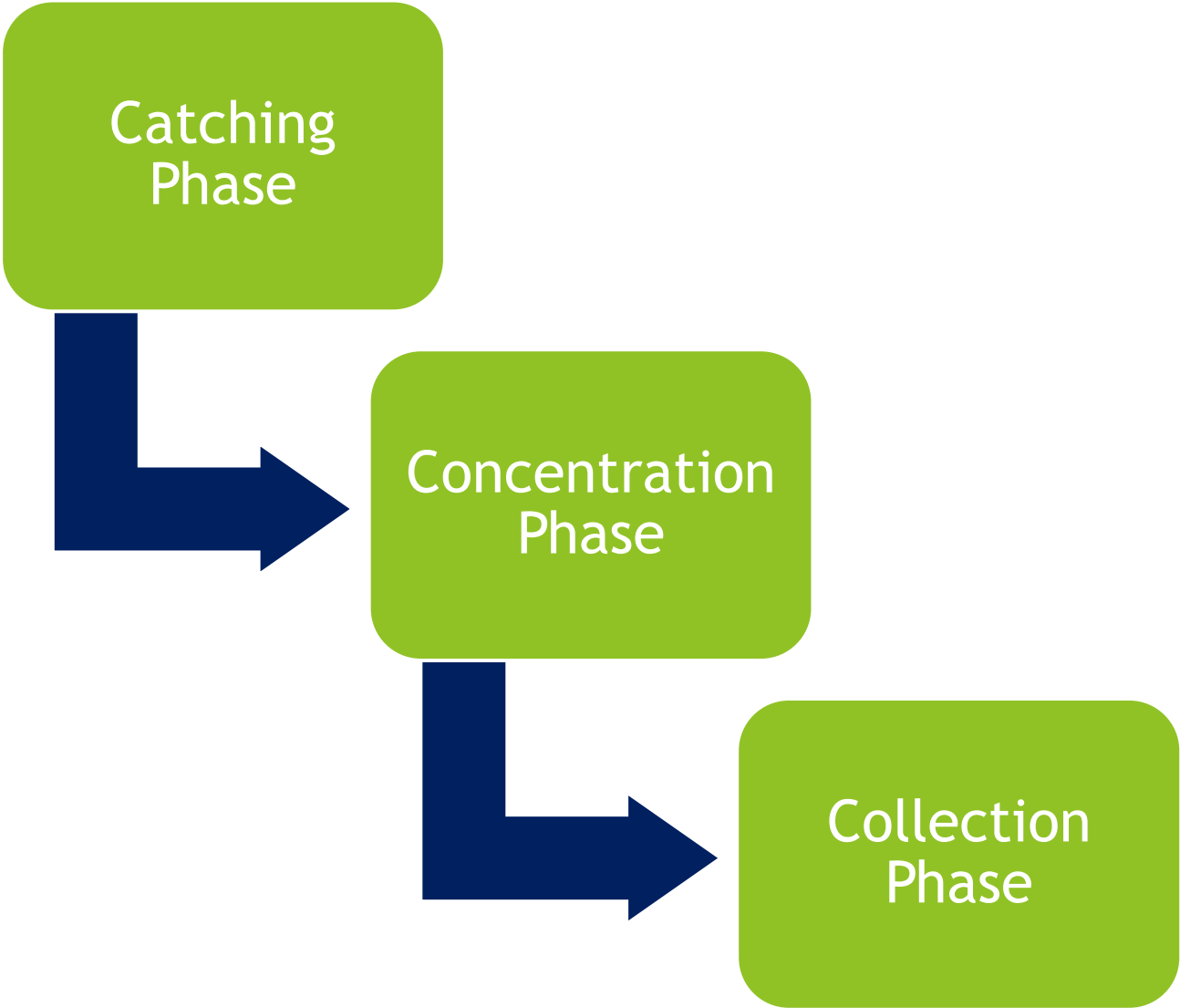
Effects of plastic in the ocean



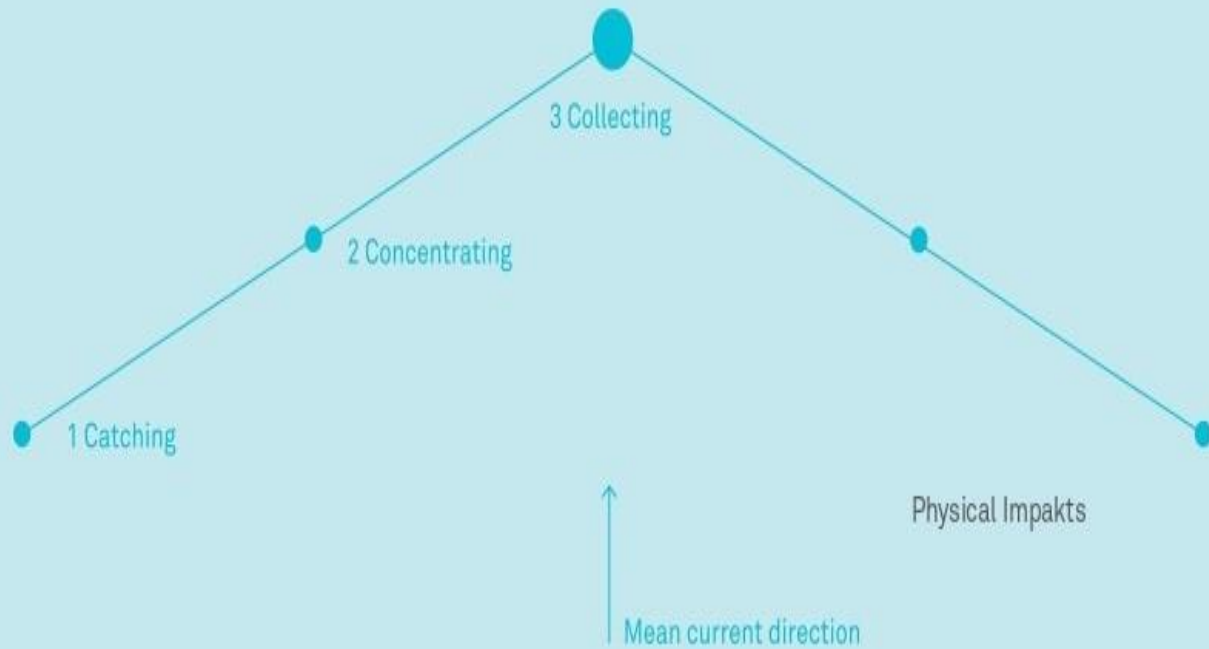
Alternative cleaning methods

	Pros	Cons
Drones	<ul style="list-style-type: none">-units are inexpensive to replace-can potentially catch small particles	<ul style="list-style-type: none">-will take very long time-potential for by-catch-unable to catch very large debris
Vessels	<ul style="list-style-type: none">-existing technology-so low capital expenditures	<ul style="list-style-type: none">-will take very long time-potential for by-catch-atmospheric emissions

Our Concept

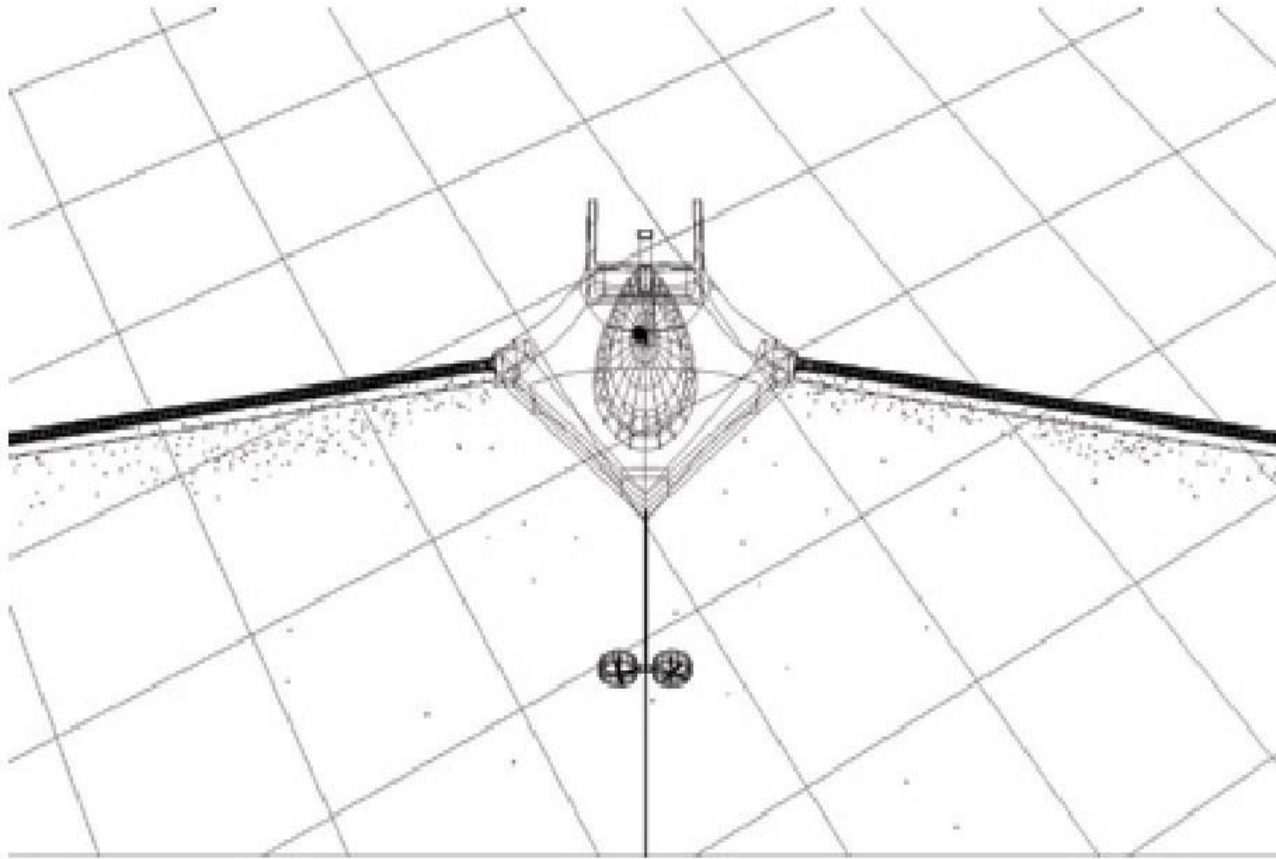


Catching Phase



- ▶ Upper part avoids overtopping of water
- ▶ Lower part consists of a skirt which catches near-surface plastic debris
- ▶ Preventing by catch

Concentration/Collection Phase



- ▶ Opening of the construction is against the water flow
- ▶ Construction is arranged in a U or V shape
- ▶ High plastic concentration along the booms
- ▶ Plastic can be extracted from the ocean by using conventional techniques (pumps)
- ▶ Water is gonna be filtered=> separating water and plastic
- ▶ Plastic will be shipped to land