### www.seacult.com

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# SeaCult

#### **Consolis Group**

Protection and life support for the sea

#### We are working sustainable development

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## The foundation for SeaCult

#### One of the largest environmental disasters of the world is happening in the ocean and along our coasts

The causes are many and complex, and much knowledge about this is spread over several universities all over the world. Every year large ocean floor areas are turned into underwater deserts. World society sees this, but has not been able to respond effectively. One reason for this is the sectorial interests of large business groups or nations which have their activities in the ocean or under the seabed.



A desert-like ocean bed in the USA

#### Some of the causes:



Destroyed seabed in Southern Norway. Photo NIVA i 2002



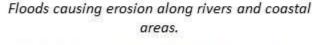
Sea urchins have destroyed the vegetation on the seabed in Finnmark, Northern Norway.

Emissions from industry, agriculture and households into the air and sea



Fishing gir such as the bottom trawl, pollution from fish farms etc..









All this has led to a warming of the oceans, ocean currents are changing, more pollution affects the sea, destruction of the marine vegetation's and reduction of the CO2 absorption of the sea. This is happening all over the world, in all oceans, and it destroys fisheries and the supplies of raw materials for coastal communities.

Initiatives that will limit the destruction: The Water Directive of the EU and MSFD (Marine Strategy Framework Directive) and the Kyoto agreement CDM (Clean Development Mechanism). In addition, international agreements including quotas and regulations of fisheries as well as internationally protected areas.

The technology and equipment for aquaculture, trawling and the oil and gas industry may be very good for the owners' objective, but not necessarily for the maritime area production capability and sea environment

We must consider the totality of the seabed to the surface



We can start with habitat

#### Not farming on land -

#### But in the sea!



The value from "the blue gold" must be created from bottom up!

## We are working for a sustainable development



- 0,5 1 ton seaweed per unit
- Scientists have estimated around 15,000 small and large fish per unit
- The fish seek safety and some a home



Habitat weight 7,5 tons Habitats width 5.6 m Habitats height 2.35 m Habitat quantity 65 m3 Overall growing area 300 m2



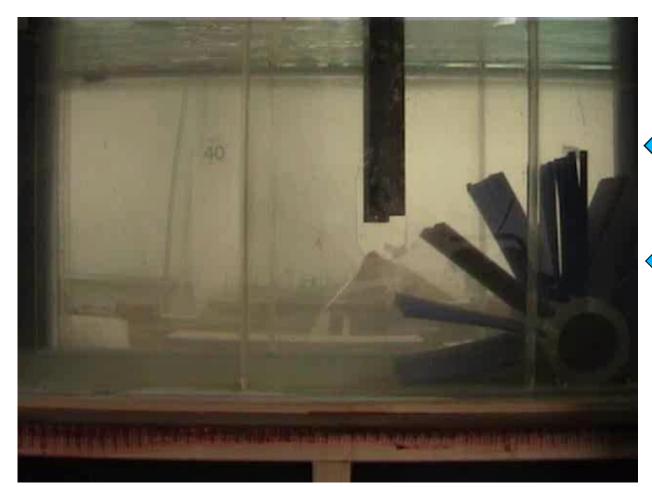
If we shall now the same with pure concrete products or stone required between 50 to 100 ton to reach the same result. Development and research partners.

Statoil SeaCult habitat and fish place Sintef Innovation Norway Spenncon, Strängbetong AB The Norwegian Institute for Water Research, Zayed International Price for the environment and Successful Nakheel in Dubai reports from Aqua Marine Advisers Hammerfest, by Prof Chris Hopkins Dubai and Risør INGENIUM and more NIN The P e. Filled with rocks, th ironment, it improv change cause atsand cts V REAL ESTATE A PARTY S The med in the market, with very istomers. to displays very good results Rest Patel ...ed

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## Pool testing at SINTEF in Trondheim, Norway SeaCult offshore and beach protection





Gross height of 3 to 4 m

Power height about 2 m

PE -plastic pipe will be overgrown in the course of the summer season, thus creating a large habitat of seaweed, fish and marine life of approx. 35 m3 at a height of 3-4 m

**Bonus** 

# **SeaCult Offshore Protection**

#### •The product:

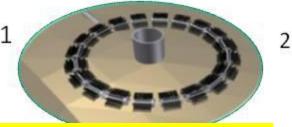
Is made of concrete and polyethylene and does not harm, but on the contrary improves the marine environment

#### •Use:

The offshore industry is looking for new and better solutions for protecting their





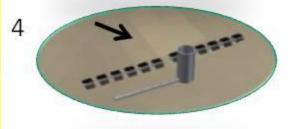


## SeaCult Beach Protection

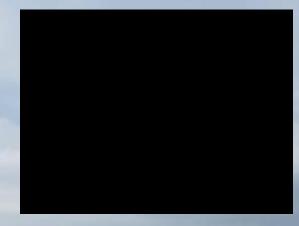




#### protection solutions



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# SeaCult floating habitat

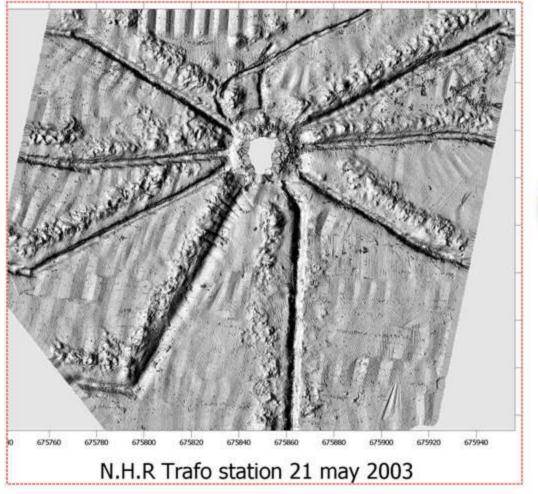
SeaCult floating habitat 10 to 20 meters below the surface SeaCult habitat on the seabed



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## Air foto from construction work in an offshore windpark





•What happens with the habitat after this destruction?

What happens with the cables on the sandy bottom and during erosion ?

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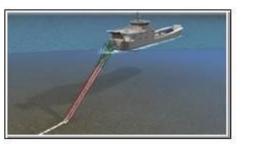
## SeaCult cable and pipe protection

Example of installation methods without divers



#### Automated spreader bar For diverless installation. Company has the systems to day and partners will build it.





Stinger system from barge or vessel to seabed in shallow water . Cable and protection are installed in one operation.





Sea

#### SeaCult Cable Systems. (Patented)

With a mobile module on the barge or vessel, the cable and protection are installed in one operation.

- Today too much sea grass and corals are destroyed due to the laying of submarine cables and pipelines.
- With SeaCult protection these can be put on the seabed.
- In addition to providing protection and being safe for trawling, the SeaCult protection unit provides habitat for fish and other marine animals
- Sea grass and coral can grow through the perforations.

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## Status in the world and sea, many disagree – but climate change is going on!

Today over 300 children die every hour from hunger and unfortunately this will increase.

This summer we have had reports where researchers and others are talking about stopping fishing in the North Sea for 5 years and others say that the sea will collapse within 40 - 50 years. - In 2050 !!

What - this applies to me, my children and grandchildren and what about you?

Our children and grandchildren, and small fish that live in and out of seaweed, sea grass and coral.

## This is our gold, and our future!

Now there must be an end to destroy the fish growing opportunities



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## We must learn from the land activities.



Global changes force us to set new and stricter requirements with regard to preservation and creation of new habitat for fish and marine animals

Maybe we must introduce requirements for compensation action for those who •Discharge pollution into the sea •Use the beach or the seabed for commercial or recreational purposes

Windmill parks are example of an opportunity to preserve and create habitat. Another alternative is to allocate areas for new habitats with a size of one or more football fields.

All damage to sea must compensate! All coastal cities and communities must have their own Sea Park

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#### Without seaweed and corals the sea life dies!

SeaCult wishes to contribute:	
Preserve existing habitat	All operators who have activities in the sea must see to it that marine vegetation is NOT destroyed.
Limit destruction	SeaCult wishes to develop and offer products that protect ocean installations and the environment
Enrich sea areas	Destruction of habitat and nursery grounds is increasing. This has led to focus on off-shore windmill parks and other installations. SeaCult Offshore Protection can help create up to 1000 m3 per windmill foundation.
Contribute compensating action	Increasingly, destroyed areas must be regenerated through compensating action. SeaCult Habitat is designed to do just this.
Contribute know-how	SeaCult wishes to contribute with its own know-how to reduce the lack of knowledge about what happens under water and on the seabed by participating in research and development projects.

## We are working for a sustainable development



## Seaweed for biofuel! Positive – but!

Farming of regional fish fry cod, lobster etc. should be considered

Sea ranching can be supplemented with additional lining where species are taught to get the signal We must consider the totality of the seabed to the surface and the small fish and sea animals must have an alternative when harvest start!



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Thank you!

# SeaCult

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# Let's start by working in collaboration on pilot projects to create experiences in your area!

Workshop Trondheim 25. and 26 September 2012

> Sverre Meisingset Founder

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