

For EU, Blue Growth is the long term strategy to support sustainable growth in the marine and maritime sectors as a whole





Aquaculture



Coastal tourism



Blue technology

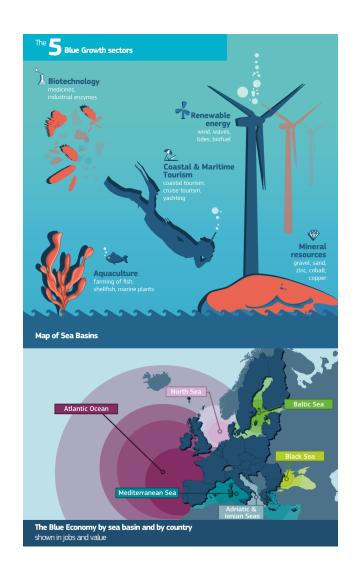


Ocean energy



Seabed mining

In other words: everything vaguely related to the sea is included



Source: https://ec.europa.eu/maritimeaffairs/policy/blue\_growth\_en

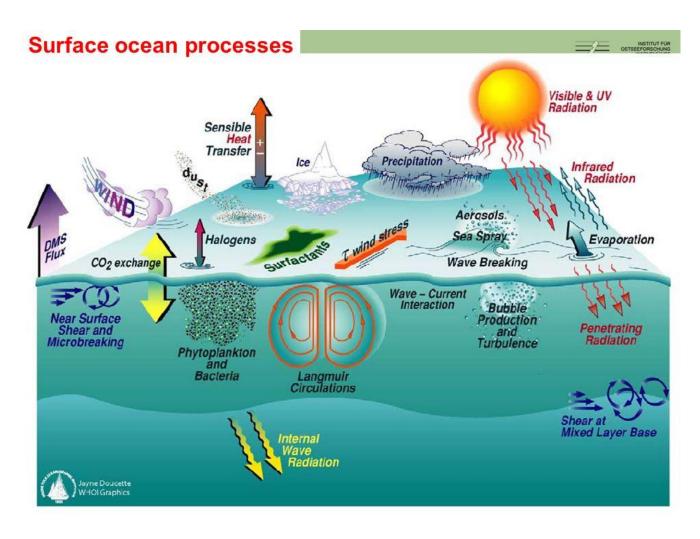
#### What makes research useful

- 1. Advancement of knowledge
- 2. New ideas within existing fields
- 3. Opening new frontiers

#### What makes research not so useful

- 1. Production of merely confirming evidence
- 2. Working only on mainstream topics
- 3. Re-discovering hot water

## Scientific heterogeneity allows to keep more factors under consideration



Modelling using only the data from main stream research may miss the point

Intergovernmental panels, like funding agency, often base their previsions on data from only those fields in which scientists have political influence. Funding is often based on these forecasts

But the devil is in details. It is necessary to preserve scientific heterogeneity

### How do you favor not so useful research

- 1. Deciding up front the topics of research (they are usually main stream) strategic research call should be separate
- 2. Forcing the constitution of big teams
- 3. Making it hard for new comers to get funded
- 4. Reducing the number of applications by imposing restriction not based on science on who can apply
- 5. Fragmenting funding into several very specific calls



## How do you favor useful research

- 1. Allowing ideas that are not currently main stream to emerge
- 2. Allow creative researchers to come in
- 3. Allowing small groups to contributes
- 4. Giving the opportunity to as many scientist to apply
- 5. Increasing the amount of funding (of course)



# Someone will say: but research needs to be directed!

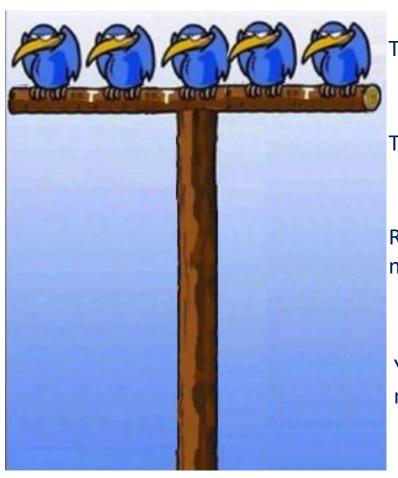
- 1. Only to some extent and in certain cases
- 2. Top-down research may be needed, but problems must be identified in very general terms, allowing for non-main stream research
- 3. Even top-down research must leave space to creativity (this is not what is being done)
- 4. Who designs the calls? We need to broaden the group of counselors to the decision makers



# How do funding work currently (especially in our area)?

- 1. Very rigid definition of the topics
- 2. Requiring previous funding experience to applicants
- 3. Favoring big teams (with established and politically influential leaders)
- 4. Bottom-up funding is rare and extremely competitive: it is not enough to have good ideas, you need excellent facilities: thus who has resources can get more, who doesn't although very smart has a very hard time.

# We need to find a way to modify the current rigid pecking order



The usual big guys

The disciples of big guys

Researcher that work on mainstream topics

Young and creative (non mainstream) researchers

Is this fair? Is this fruitful?

#### The problem is...

How do we explain this to the funding agencies?



 We need to make organizations of researchers (bottom up) grow and become more influential I- in our area, we need to support Uniadrion and make all other associations converge in it, so that we have one association that is highly influential, rather than a few small ones with no relevance