

Catching THE Potential

Evaluation report first pilot in Greece (WP4)

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Version 2

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CATCHING THE POTENTIAL IN 4 STEPS

The ultimate goal of the Catching the Potential project (CTP) is to develop a standard for sustainability training of fishers and start implementation of this standard in the EU. To achieve this, the project proposal identifies several logical steps:

- First, the project starts with a desk study (WP2) to gather information about sustainability training for fishers, including the identification and documentation of best practices in sustainability training of fishers in EU countries and identification of elements on sustainable fisheries in existing instruments/guidelines, and, the setup of an international network of fishing academies and training institutes to facilitate the exchange of best practices and experiences within the CTP project (WP3).
- The second step in CTP (WP4) is to conduct country specific trainings in seven EU member states: France, Germany, Greece, Ireland, Latvia, Spain, and the Azores. It is essential to recognize that the fishing sector in every EU member state is different and unique in many aspects. Setting up a sustainable fisheries training for fishers in different countries requires that the training should be adjusted to the specific situation for that country or region, and adjusted to training level, language, culture, specifics of the fishing sector and the local environment.
- The third step is the development of an EU-course standard for sustainable fisheries training (WP5). The pilot courses and implementation process in the seven CTP countries, combined with the exchange of experiences in the international network of fishing trainers, will provide valuable insights into what sustainable fishing means on an overarching and international level. This insight would serve as a firm foundation for the more formal setting of an international standard for sustainable fishing training, which is consistent but also offers sufficient room for adaptation to the local/ regional circumstances in which fishers (will) operate.
- The fourth and final step in CTP is the implementation of the international standard. This project will setup a strategy to work with partners and stakeholders to incorporate the sustainable training standard into international policy and to contribute to the establishment of adequate and uniform competence requirements for fishers (EU, and ultimately FAO and IMO STCW-F).



INTRODUCTION

One of the key aspects of the CTP project is the organization of pilot trainings about sustainable fisheries in seven EU countries. These pilot courses are organized by lead partner ProSea and the CTP partner from the pilot country. This is the report from the first sustainable fisheries pilot in Greece, organised by ProSea and Enaleia.

The first pilot training in Greece is based on the successful program developed by ProSea in the Netherlands, adjusted for the Greek situation. This report describes the steps taken for development of the pilot, the organisation and execution of the pilot training itself and the evaluation of the pilot, both by the participants as well as by the course leader and by CTP partners Enaleia and ProSea. Finally, we identify consequences for the development of the sustainable fisheries standard in WP5.

QUICK SCAN- GETTING TO KNOW OUR PARTNERS

The first step in developing the pilot in Greece was for ProSea and Enaleia to get acquainted by meeting online (because of the COVID pandemic). In addition, ProSea investigated two main questions, with the goal to understand the differences between Greece and The Netherlands, in particular in fisheries as a sector and in the education of fishers:

1. Who is the CTP partner in Greece, what do they do? Is there anything special that stands out?
2. The fishing sector: What how, where and how much do they fish? Anything special?

A checklist of topics was followed during the quick scan:

Partner

1. School or institute
2. Size (number of students, age, target group, teachers)
3. Type of education, level, duration, theoretic/practical, structure and internships.
4. Method/mission
5. Relation to fisheries sector
6. Language
7. Differences Dutch method/situation?



Country

1. Size of the fisheries sector (economics, employment, ships)
2. Characteristics fisheries sector (type of fishery, target species, size of a company, number of ships, innovations?)
3. Fishing grounds (location, population size, issues)
4. Geographical/regional spread
5. Challenges, issues, threats, opportunities?
6. Differences Dutch method/situation?

This quick scan gave us the following insights:

CORE QUESTIONS

WHO ARE OUR PARTNERS, WHAT ARE THEY DOING? MISSION/VISION/PARTICULARS?

January 29th, 2020 – Skype call with Lefteris Arapakis and Greg Nitas

Enaleia is a social enterprise focussing on the training of fishers in Greece. The goal is to create more jobs. The first courses were set up in schedule with normal schooling systems. However, more students were willing to do the training when it became an e-learning module. This way students can start whenever they want and study on their own pace. This has doubled the number of students. The course exists of two parts: An e-learning part with theory and an internship for the practical skills.

Part of the curriculum is a sustainability training which can be given next to the e-learning and is brought to active fishers on the vast number of small islands of Greece. This training focuses on fishing tourism, developing a business/legal plan, and branding of your product. The duration of the training is 1-3 hours. After the training support is offered to the fishers. Recently a circular economy part is added focussing on plastic collection and upcycling. 30% of the collected plastic is upcycled by Healthy Seas. The other 70% is recycled in Greece.

Questions regarding planning and practical matters

- ❖ Available time: would it be possible to schedule a four-day training at your school? What is the best time to schedule a four-day training during the school year (spring, summer, autumn, winter)?



- Best timing for the Greek students would be spring or autumn (year doesn't matter). The summer is a difficult time.
- A four-day training could work with the e-learning students. There are 2 groups to distinguish among the e-learning students. A group who is definitely going to stay in the fishing sector and is almost finished with their program. A second group that does not know whether they wish to stay in the fishing sector. This is something we must take into account for the pilot courses.
- A four-day training won't work for the active fishers, that's too long.
- When planning the course reserve **enough** time! Especially with the active fishers, you cannot plan a date but rather a time window (a week) for conducting the course ('When the conditions to fish are good, they will not show up').
- ❖ Size of school (number of students, age distribution of students (oldest – youngest), number of teachers)
 - This year they had 100 e-learning students. Average age is around 35 years old. The students come from all kinds of levels of education and previous jobs. This is also due to the high level of unemployment and scarcity of jobs in Greece. A lot of the students do not necessarily end up fishing, but in the surrounding sectors (processing industry, hospitality).
- ❖ How is fishery education/training given on your school? (Level, duration (fulltime/part-time), theory and practice ratio, internships (number, character, duration).
 - 50/50 theory on e-learning, practice during an internship.
- ❖ Way of teaching (in classrooms, individual assignments, group assignments, digital, ...)
 - E-learning, internships, and workshops on the islands
 - It is easy to get the students in a training room, to reach the active fishers is a challenge but doable.
 - Students are more open to learning; active fishers are more conservative.
- ❖ How proficient are students in English?
 - Not, everything is done in Greek.
 - There are trainers available that are willing to learn how to conduct the course.

WHAT, HOW, WHERE, FISHING HOW MUCH AND BY WHOM? ANYTHING SPECIAL?

Questions regarding the fishery sector of your country

- ❖ Size and trends fishery sector (economics, jobs, vessels)



- The Greek fishing fleet consists of a large number of fishing vessels (14,123 vessels as on the 31 December 2018) with small overall tonnage (66,748.11 GT) and engine power (395,170.51 kW) engaged in fishing coastal stocks along the extensive shoreline of the Greek mainland and the numerous Greek islands. It is the EU's largest fleet in terms of the number of vessels
- ❖ Fishery (type fishery, target species, size companies/vessels, developments/innovations...)
 - There are some main ports for purse seiners and small trawlers (Piraeus, Lavrio, Salamina, Chalkida, Kimi, Patra, Killini, Mihaniona, Kavala, Alexandroupoli, Herakleion) while in all the other regions of Greece (including islands) the fishing is conducted from small scale fishermen (less than 12 meters), especially over summer months
 - The largest segment of the fleet (96.54%) is made up of vessels fishing multiple species near the coast with static gear. Only 1.69% of the fleet (239 vessels) target pelagic species, mainly anchovy and sardine, with purse seines (PS) as their principal gear, and 1.77% (250 vessels) target benthic species, mainly striped mullet, red mullet, hake, and crustaceans, with bottom otter trawls (OTB) as their principal gear.
- ❖ How is your contact with active fishers/fishery sector?
 - Since we are known as the first professional fishing school in Greece, and after many trips in fishing areas (including islands) our relationship with the fishing communities is very good and we have many contacts. Although, mostly in central Greece and Ionian and Cycladic Islands.
- ❖ Fishing areas (where? status? issues? ...) - Geographic/regional/differences
 - The Greek fishing fleet, which operates almost exclusively in the Mediterranean, meaning Greek waters (the Aegean, Ionian and Cretan Seas) and across most of the international waters of the Eastern Mediterranean.
- ❖ Specific challenges/threats/issues/chances?
 - Currently the sector is facing 3 main treats: a) The average age of Greek fishermen is 65 (Ministry of Agriculture) and they need new manpower b) lack of demand e to the financial crisis c) marine plastic pollution
 - Find more
here: https://ec.europa.eu/fisheries/sites/fisheries/files/docs/2018-fleet-capacity-report-greece_en.pdf

The quick scan in Greece gave valuable insight needed to further develop the pilot. ProSea established country teams for every country to work with the partners. The team for Greece consisted of Roos Swart and Erik Bogaard.



DEVELOP MATERIALS AS STARTING POINT FOR PILOT DEVELOPMENT IN ALL COUNTRIES

The final goal of Catching the Potential is to develop an international training standard for all fishers. To make sure we can compare all pilots and trainings given with our partners it is important to have the same starting point. To facilitate this starting point we looked at all best practices on sustainable fisheries training (D2.2). In addition, we made an overview of all rules and regulations important for fisheries (D2.1).

Based on the report of the desk study in WP2, taking the ProSea experience and educational materials as the basis of the project seems logical. While the best practices offered materials and experiences about teaching some subjects (mainly fisheries management), the project will not be able to find training frameworks that are adopted to the regional/national/local situation in the WP4 pilot countries and will have to develop those frameworks by combining the ProSea experience in sustainability training with the country specific experience of training of fishers.

In addition, the project needed to develop educational materials about subjects that were not included in the ProSea materials, like social aspects of fishing. The ProSea courses address image and communication as part of social sustainability for fishers. The research in WP2 suggested that we should also include topics mentioned in the ILO Work in Fishing Convention (C188), including fair wages, safe working environment, slavery, and corruption. A leaflet with this content was developed to inform partners to include this content (attachment 1).

Consequently, CTP decided to use the ProSea materials as a starting point for the development of the pilot trainings. ProSea translated the Dutch materials in English, included the additional social aspects, added an explanation of the content for all the slides and made 9 presentations (attachment 2a-2i) available for all the CTP partners in basecamp:

- a) Introduction Fishing into the Future
- b) Marine ecology
- c) Fisheries management
- d) Oil and solid waste
- e) Fishing and society
- f) Communication
- g) Overview air emissions and climate change
- h) Fisheries economy



i) Sea the future

POWER POINT PRESENTATION – PREPARATION OF THE PILOT TRAINING FOR ALL COUNTRIES

The next step was sharing the starting point developed by ProSea with the CTP partners in all pilot countries. For this purpose, ProSea prepared a PowerPoint presentation that addressed not only the content of the training, but also the training principles and the procedure of the pilot training development. In addition, the presentation discussed the areas where the content needed to be adjusted to the local situation and aimed to start the development process by addressing practical issues and an implementation timeline. The starting presentation is included in attachment 3.

PREPARATION FIRST PILOT IN GREECE (TASK 4.2)

After the first stage of exploring the Greek fisheries sector and the best practices in fisheries training, we reached out to our Greek partner Enaleia. The first communication took place online.

ONLINE MEETINGS TO PREPARE THE CONTENT OF THE PILOT

The first meeting on January 29th, 2020, with Enaleia was between Lefteris Arapakis, Thomas van Schie and Roos Swart. Here we discussed the information of the quickscan. Lefteris told us more about Enaleia and the way they operate. He also introduces Greg Nitas who will work on Catching the Potential. It became apparent that there are two different target groups for the pilot. The students of Enaleia who have no background in fisheries. Their studies are mostly given through e-learning. In addition, Enaleia gives training to active fishermen all around Greece.

On May 28th, 2020, we spoke again briefly during the online assembly. This online meeting helped to get acquainted with the different partners.

On August 14, 2020, Erik Bogaard and Roos Swart met with Lefteris Arapakis and Greg Nitas. Together we discussed the starting presentation (attachment 3). From this point we developed the pilot training material in English based on the ProSea course and the best practices. As soon as these were finished, we shared them with our Greek partner. This way they could adapt the presentations to the Greek fishing



sector. In addition, we agreed to go through every presentation together to explain nuances and sensitivities.

We started with the development of the pilot content and shared this with our Greek partner on September 22nd, 2020. Due to the COVID pandemic we decided to focus developing content for an e-learning and therefore we chose the Enaleia students as the target group for the first pilot.

In April 2021 Greg Nitas left the project and Enaleia. Lefteris introduced Zeta Kabardi as main contact person at Enaleia from now on. ProSea briefed her with all the content. Zeta has no background in fisheries or marine ecology, she was not able to modify the information on these parts for us. Therefore she reached out to Nathalia Athineou, a Greek fisheries student who comes from a fishing family. She helped us fill in the content with the missing information.

In July 2021 we finished sharing the ProSea course with Zeta and Nathalia. Evi Papadopoulou joined these discussions as well. Some pressure was addressed to the development of the pilot due to the developments of the COVID pandemic. All of us were vaccinated at this point. Which made it possible to do the pilot face to face in Greece in fall 2021. That made it easier to conduct the first pilot with active fishers.

Enaleia agreed to take the summer of 2021 to complete the Greek PowerPoint presentations (attachments 4a-4h). Here we decided not to use presentation number 9: Sea the future (attachment 2i). This subject is not very relevant for the Greek fisheries sector. At the start of September 2021, we started the planning of the pilot.

In September we agreed to plan the pilot in week 45 of 2021. Due to diminished covid restrictions many activities were possible again. This resulted in very busy work schedule for Enaleia and ProSea. Although there were some miscommunications about the pilot date, we were able to plan the pilot in week 45 on November 9th and 10. Enaleia worked hard in a short period of time to facilitate and organise this pilot.

Enaleia does not employ their own trainers and hires trainers for the courses they organize. For this first pilot they hired Nathalia Athineou. Nathalia just finished her master's degree in fisheries science. Her father is one of the proactive fishers in Marathon who was joining the course. Her CV can be found as attachment 5.



PRACTICAL PREPARATION

Contact fishers for the participation

The communication with the fishers was initiated months before the pilot. Enaleia worked together with Giannis Athinaios, the leader for the fishers in Marathon. He was a key partner for the communication with the fishers and played an important role in their participation in the training.

Venue

The original plan for the venue for the pilot was a hall in the municipality buildings, but because of the new COVID restriction measures that were announced a few days before the pilot, we had to adapt. The pilot took place in a local restaurant that also hosts events and talks. The location of the training was chosen considering what was easier and more accessible for the fishers. Regarding the arrival of the fishers, we had made sure that everybody knew about the location of the pilot. Furthermore, we gave them a warm welcome at the entrance of the building to make them feel more comfortable.

Classroom material

Considering it was a training program, we had made sure to supply participants with classroom supplies, like notebooks, pens & markers. The supplies are not only essential for the course but also it was an indication that they will participate in a class and learn new information. The technical part includes a beamer and a screen, that were provided by the venue.



IN PERSON MEETING BEFORE THE TRAINING

Erik Bogaard and Roos Swart visited the shared office of Enaleia on November 8th, 2021. They met the trainer, Nathalia Athineou, and together with Zeta Kabardi from Enaleia, they conducted a short train the trainer session where the most important messages of the course were highlighted:

- ❖ Based on the Triple P concept of sustainable development – People, Planet, Profit
- ❖ Uses best available knowledge

- ❖ Balances content and participation
- ❖ Adjusted to regional/local circumstances
- ❖ Challenges participants, but does not blame
- ❖ Conducted in the fisher's language
- ❖ Invites fishers to share their ideas and opinions

In addition, we discussed the workshops and interactive parts of the course. Finally, Nathalia asked some questions and practicalities were arranged.

CONDUCT FIRST PILOT IN GREECE (TASK 4.3)

The first pilot of Catching the Potential was conducted on November 9th and 10th, 2021 in Marathon, Greece. As the main trainer, Nathalia Athineou, was responsible for leading the course in general and for conducting the course lectures. Erik Bogaard and Roos Swart from ProSea introduced the CTP project to the participants and led several workshops and games related to fisheries management, societal acceptance, and communication. Zeta Kabardi and Nikos Therapos were responsible for the practical organisation of the pilot, assisted with the workshop and translated when necessary.

The pilot was held in the evenings to make it as easy as possible for the fishers to attend. All participants had to be vaccinated or had to show a negative COVID test to be able to participate. Since this was the first course of its kind in Greece and the fishers had to miss fishing time, the fishers were promised a financial compensation for participating in this training of 35 euro per day. While we were hoping to have 8 participants for the two-day course, we ended up with a group of 14 on the first day and 16 on the second day (attachments 6).

The time schedule of the training was:

Tuesday November 9: Sustainability, marine ecology, fisheries management

Time	Activity
17:00	Gathering of participants
17:30	Introduction to participants
17:45	Introduction 'Sustainable fisheries course'
18:00	Group assignment sustainable fisheries – Workshop 1 <ul style="list-style-type: none"> ❖ Split up in small groups & discuss about the main challenges in fisheries
18:15	Presentations group assignment

18:30		Break
18:45	Marine ecology: How does the sea work?	
19:15		Break
19:30	Fisheries management ❖ The fishing game	
20:00	Recap	
20:30	Remaining question and end	



Wednesday November 10: Fisheries economics, marine litter, oil, fishing and society, communication

Time	Activity
17:00	Gathering of participants
17:30	Fisheries economy
18:00	Break
18:05	Fisheries & Society ❖ Image workshop
18:45	Break
18:55	Communication workshop ❖ A different perspective ❖ A common language ❖ A conversation in the bar
19:30	Overview of air emissions and climate change
20:00	Break
20:05	Oil and solid waste
20:45	End of pilot ❖ Feedback and evaluation

EVALUATION FIRST PILOT IN GREECE (TASK 4.4)

The pilot was very successful! It was fascinating to see the active participation of most of the fishers and how engaged they were during both days of the course. The active participation was shown not only with their body language but also with their questions and comments about all topics.

We really believe the pilot went well because of three reasons:

1. The content itself and the whole setup of the pilot. The content that ProSea has created covered all related topics about fishing in a simple and understanding way. Furthermore, our trainer did a great job in adjusting the content to greek standards and small-scale fishing. Also, the venue where the pilot took place was a friendly environment, close to their standards and it made them feel comfortable.
2. New interesting information, that helped them realize more things about the sea and their work. Most of the participants fish their whole lives and they have a great knowledge of the sea. Yet, they lack the knowledge of vital information, for example, what is a phytoplankton and what it does.

3. The fact that somebody paid attention to them and listened carefully about their comments and problems. It is of paramount importance that in Greece we do not have a representative of the fishers in the Government. This means that is very difficult for them to share the issues they face in the profession. With this pilot, we gave them the opportunity to talk about their problems and find ways to solve them.

EVALUATION PRACTICAL ASPECTS

Participants

In terms of the number of participants, the pilot went really well. On the first day, we had fourteen fishers and on the second day, sixteen. Working together with a local leader from the fishing industry is an excellent and effective way in recruiting fishers for the training. We also believe that the financial compensation was a valid tool for them to come to the training. However, what made this pilot very successful was that they felt listened to, and that the training enabled and stimulated their active participation which included many comments and questions during the training.

Venue

The pilot took part in the city of Marathon where most of the fishers work and live, and this was very crucial for their participation because it was very close to them. Also, a few fishers came from Varkiza, which is an hour's drive from Marathon.

Days before the course, we had to change the venue of the course due to COVID restrictions in the original venue. We chose a local restaurant, but this change turned out to be a good thing. The local not so formal venue was one of the reasons that the training was so successful because the fishers felt more comfortable in a more friendly and hospitable environment, and it led to their active participation.

The venue offered food & beverages during the pilot. Considering that the pilot took place from 5:00 pm until 9:00 pm at night, we believe that it was very essential to have a snack or a cup of coffee during this time. Apart from the fact that offering food and beverages is necessary in terms of genuine vital reasons, it also shows hospitality and respect.

Materials

We were fully prepared in terms of tools for the training (notebooks, program –



attachment 7, etc). Our recent visit to the Seminar of Catching the Potential in the Netherlands was really helpful and played a key role in the organization of the pilot.

Course leader/trainer

Natalia was the best choice as a trainer for this pilot. She has great academic knowledge of the content and practical knowledge of the fishing industry. However, it was the first time she conducted a training like this and next time, she needs to be more organized beforehand, and she should probably practice more on how to lead the overall training and workshops.

Technical equipment

The technicality part included the beamer. It did not go as well as we expected, not in terms of system malfunctions but in terms of usage. For example, the trainer had to change the slides directly from the computer, thus meaning she had to be near the computer all the time. A remote control would be a much preferable choice and it would make the pilot more interactive because the trainer could walk around and engage more with the fishers.

EVALUATION OF COURSE CONTENT

In general, the content was good, most parts were very interesting and stimulating for the fishers. It was amazing to see fishers, that have lived and worked their whole lives at sea, learn something new about it and be amazed by all that information. Also, even when some of the information was not relatively useful for them, some of them were intrigued to know about it.

CTP partner Enaleia thinks that the content covers the majority of the topics that are relevant for Greek fishers, so no other subjects need to be included. However, the content covered in the lectures is extensive, was too much for the available time and not all content is relevant for this target group – small scale fishers. We suggest the following changes to the course content:

LECTURE SPECIFIC

- a) Introduction in sustainability
 - Could be shorter because most parts were mentioned afterward.
- b) Marine ecology
 - More related topics (like mammals and turtles).
 - Go from general to specific parts.
 - More examples about Mediterranean information.

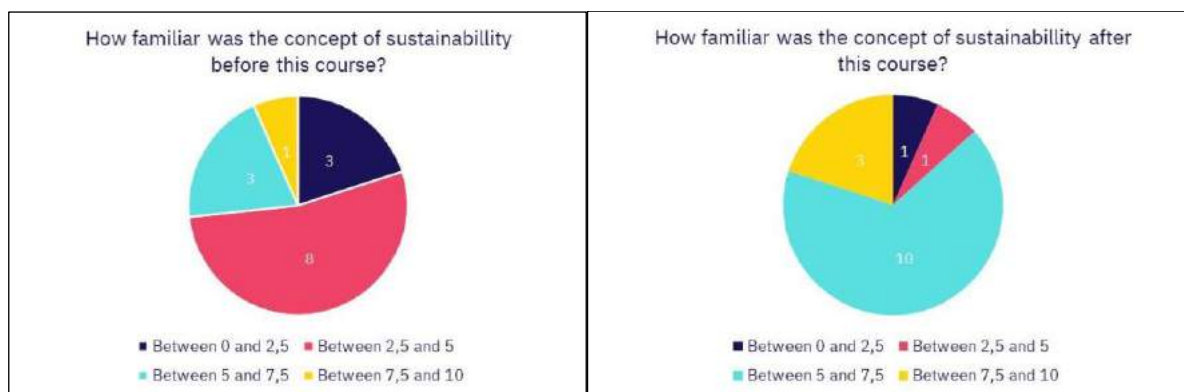


- Relate the general story to their story.
- c) Fisheries management
 - Cut out the MSY because they seemed not to understand its meaning and it is not something important to them, because they mainly fish for fish without a quota.
 - Insist on the importance of collaboration of fishers and scientists from both sides.
 - There is no explanation for why scientists see things differently. The truth is that scientists have a different perspective from fishers for many reasons. Mainly it is because they have to be more strict in order to protect the sea.
 - Mention that scientists do not make the laws, but governments do.
- d) Fisheries economy
 - Let them talk more about trading “then” and “now”. In the old days, there were traders in order for fishers to sell their fish and now they have adjusted and they sell their fish themselves. For example, when they get back from fishing, most of them sell their catch straight from their fishing boats to the consumer.
- e) Fisheries and society
 - Fishers say that only 10% of consumers think that label matters over price so we should probably change that on the slides.
 - It should be more focused on small-scale fisheries. There are many differences between big scale and small scale fishing. Big and small scale fishing, operate in very different ways. For example, in this chapter, we must focus on the reputation of small-scale fishing and how small-scale fishers work.
- f) Communication
- g) Overview of air emissions and climate change
 - Focus more on CO2 emissions in the last few years.
- h) Oil and solid waste
 - Focus more on plastic and microplastic.
- i) Final assignment
 - Workshop on sustainability.

EVALUATION BY THE FISHERS

All the fishers took part in the evaluation by filled out the evaluation forms (attachment 8). Each and every one of them were very satisfied with the course. When asked to assess their familiarity with the concept of sustainability before and after the course, they indicated a significant improvement of understanding (+40%).





Four fishers answered that they liked all subjects, others named one or more lectures that they especially liked. The fishing game, climate change, marine ecology and societal aspects of fishing were named more than once. All fishers were happy with the teaching methods.

When asked “Which topic was your least favourite” the majority said that everything was interesting. The majority liked all topics the same and only four fishers indicated a least favourite: ‘Fisheries economy’ three times ‘Oil and solid waste’ once.

When asked what role they see for themselves in sustainable fishing, some fishers indicated a general role including be more careful in fishing, be more humane, more consistency for myself and respect for the environment (twice). Three fishers indicated they would use less fishing gear and not overfish; three fishers will be more careful regarding marine litter or collect litter and one fisher will pass on the information they learned to other fishers.

Regarding recommendations five fishers answered that this course should be taught more, preferably to every fisher in Greece.

EVALUATION BY TRAINER – NATALIA ATHINEOU

In general, I believe this was a great experience for me. I think it went really great. All the fishers were so engaged. I liked the fact that they talked with each other as well.

As far as I know, they enjoyed it. But they always like talking about their problems, so I think that we should focus more on that. For example, marine mammal and turtles damage fishing gear, that’s the main issue in Greece. And I know that they are considering all those things we told them, but they are not willing to act on them

if they don't have any profit out of it. It is going to take time until they totally understand the importance of sustainability and probably because they are stuck to the Planet P. Now we talked about the other two P's too and they started thinking about it. Most of the content they already are familiar with, so we should focus on the subjects they have not so much knowledge about, like the chapter with communication.

Also, I really enjoy that the trainers from ProSea participate in the training. It was a lesson for me as well and I feel comfortable now teaching it and answering questions about it.

The only issue I had to deal with, was the fact that I did not really know where to stop their talking and if it would sound rude of me not paying attention. Fishers in Greece are not always very open people and when somebody gives them a chance to talk, they have a lot to say and comment. That is of course a great opportunity to listen to their problems and their stories, but for the next pilots the trainer should intervene and assist them to concentrate more on the course.

Also, some of the slides were discussed by them before they saw them, so I had to cut them out of the presentation on the spot. Also, we could add some more information about their main issues as small-scale fishers.

EVALUATION OF COOPERATION BETWEEN ENALEIA AND PROSEA

BY PROSEA

ProSea could not wish for a better partner in setting up training in sustainable fisheries in Greece, as part of the CTP project. Enaleia has an excellent network in the fishing industry in Greece and motivated and highly skilled employees. They combine this with not only the goal to make a difference in the sustainable development of the fishing industry, but also with a great understanding of the need of individual fishers.

BY ENALEIA

The cooperation between Enaleia and ProSea was excellent. Roos Swart and Erik Bogaard were really helpful, supportive and guide us in each part of the course

(Preparation, Realization and Feedback). They were open to new ideas and really helped us transform the course into Greek standards.

One adjustment that should have occurred from our side and from ProSea as well is that days or even a month before the course we should have talked about each and every small or big aspect of the course, so we could be more prepared.

CONCLUSIONS AND LESSONS LEARNED

In conclusion we are satisfied with the entire pilot, especially considering the covid related limitations we faced while preparing the pilot. We were not able to meet in person until a week before the pilot course. The pilot went well, fishers were engaged and happy with/inspired by the course and we assembled a team in Greece that is willing and will be able to continue the implementation of the sustainable fisheries course.

Lessons learned include general lessons about practical aspects, course content and procedure of developing the pilot, lessons learned how to conduct the course evaluation and some specific lessons learned for implementing the courses in Greece.

LESSONS LEARNED ABOUT PRACTICAL ASPECTS/COURSE CONTENT/PROCEDURE

Meeting in person while preparing the pilot course is very helpful. While we were able to prepare the Greek course materials and plan the pilot course online without personal contact (due to covid travel restrictions), meeting each other during the seminar in The Netherlands (a week before the course) and in Greece the days before the course was essential to work out some of the course details. Getting to know each other better enabled all of us to communicate more effectively, talk about expectations and use all skills and experiences available in conducting the pilot course.

Communicate, communicate, communicate – the pilot course was new to Enaleia (and it will be to most CTP-partners). It is essential to talk about and discuss all aspects of the pilot course (practical, content, objectives, course leader role, evaluation) in detail with the local CTP-partner and with the trainer.

Working together with local fishing leaders or organizations helps in recruiting participants.



The venue needs to fit the course content (sea, environment, fishing), but it also should feel comfortable for the participants. This may include offering coffee/tea and snacks. Feeling 'at home' makes it easier to participate.

The trainer must have knowledge of the course content and practical knowledge of the fishing industry. In addition, experience as course leader is very helpful. When one of these aspects is missing or less developed, the CTP team should work with the trainer on the missing aspects or play a bigger role in the pilot course regarding the missing aspects.

Make sure beforehand that all materials are present, and all equipment works.

Translating the basic course content and customizing the content to the pilot course is only the first step in preparing the pilot course. The second step needed for every pilot course is cutting content that is not relevant for the specific target group (in this case small scale fishers), too technical, too difficult, or simply cannot be covered in the available time. In this pilot course in Greece, no content was cut from the lectures (see attachment for full lectures), but content was cut during the course. A better option would be to cut content from the lectures before the course.

Involving the fishers during the course is essential, and enough time should be allocated to the individual and group assignments and workshops.

LESSONS LEARNED HOW TO CONDUCT THE COURSE EVALUATION

We have to keep in mind that not everyone is used to giving feedback about the course experience. The evaluations of partners, course leader and fishers gave us a lot of general information about how everyone experienced the course but lacks detail about how fishers benefited from the course and what improvements we can make. We should:

Include a close-out session in the pilot course program (5 to 10 minutes), led by the CTP-partner while someone takes notes, that asks the participants about their general opinion about the course, guided by a set of predetermined open questions (to be developed), including:

- Which part was most enjoyable?
- Which part was most interesting?
- Which part did they like least?
- What will you do with what you have learned?
- What would you like us to change?



Change the evaluation form to make the questions more specific, and focus on understanding before/after the course, area/topics participants liked and/or benefited from, subjects they did not like and their individual role in sustainability.

Develop a set of subjects/questions for CTP-partners to address in their evaluation, including the development process, practical aspects and course content of the pilot course, cooperation with partners and changes that should be made.

Develop a set of subjects/questions for the course leader to address in their evaluation, including their assessment of what went well, what could have gone better, involvement of the participants, improvements to make and extra training/coaching needed.

Lessons learned for implementing the courses in Greece

Natalia will be a very good course leader for future courses in Greece. She has all the knowledge about course content and fishing industry that is needed but must gain more experience in leading the courses. It is important to give not only focus on the content but also on the course process. It is a challenge to give participants more space to be interactive, to involve everyone and to limit the discussion when it is not focused on the course content or when a few participants take over. Some suggestions to do this are included in attachment 9.

It is recommended that CTP-partner Enaleia (or ProSea) helps Natalia with the overall course leading and assist her in conducting the workshops until she gains this experience.

Give participants more space from the beginning to be more interactive.

The full lectures in Greek are a good base for the next courses, but it is recommended that before every course Enaleia and course leader Natalia customize the lectures to fit the target group and the available time by cutting content that is not relevant, too technical, too difficult, or simple too much to fit the available time.

Make sure the participants on both days are the same. Do not except new people on day two. This time, new people that came the second day, repeated the same discussions from day 1. They talked a lot about the problems we already identified, which influenced the course, because we lost a lot of time.



TAKE HOME MESSAGE

In the planning of the next pilot, we will consider all the lessons and the experiences we have learned. It was an excellent experience for Enaleia, ProSea and the fishers as well.

Also, Enaleia would like to state the importance of Catching the potential in the Mediterranean Sea and especially in Greece, for two reasons. Firstly, considering it is a closed sea, the repercussions of external factors (for example climate change, overfishing etc.) are having a huge impact on fishers' living. Secondly, in Greece we have around 14.000 fishers! So, if we could train even a small percentage of them on fishing sustainable, we could have an incomparable impact on sustainable fishing and on their lives as well.

CONSEQUENCES FOR STANDARD – WP5

This pilot course showed that all the subjects of the training are relevant, when adjusted properly to the specific target group. This pilot course in Greece showed us that the course content is not only relevant for Dutch fishers on larger trawlers that are at sea for a week or more at a time, but also for small scale fishers in Greece that fish close to shore. This is excellent news for the Catching the Potential project and brings us a step closer to the making of a standard sustainable fisheries training for the fishers.

This pilot emphasizes the importance of customizing the course content in the pilot countries. Some factors in fishing are very different for each country of the partners. For example, dolphins, seals, and turtles play a significant role in fishing in Greece, but they are not that important in the northern European countries. Another example is that southern European countries tend to have much more small-scale fishing boats in their fishing fleet, meaning that the way they sell their fish is different from big-scale fisheries. All these factors from each country should be taken into consideration in the making of the Standard.

LIST OF ATTACHMENTS

1. LEAFLET ILO WORK IN FISHING CONVENTION C188



2. POWERPOINT PRESENTATIONS - PROSEA FISHING WITH A FUTURE

- a) Introduction Fishing into the Future
- b) Marine ecology
- c) Fisheries management
- d) Oil and solid waste
- e) Fishing and society
- f) Communication
- g) Overview air emissions and climate change
- h) Fisheries economy
- i) Sea the future

3. STARTING PRESENTATION – PREPERATION OF PILOT TRAINING

4. PILOT COURSE POWERPOINT PRESENTATIONS TRANSLATED TO GREEK

- j) Introduction Fishing into the Future
- k) Marine ecology
- l) Fisheries management
- m) Oil and solid waste
- n) Fishing and society
- o) Communication
- p) Overview air emissions and climate change
- q) Fisheries economy
- r) Sea the future

5. CV NATHALIA ATHINEOU

6. ATTENDENCE LIST NOVEMBER 9TH AND 10TH 2021

7. PROGRAM OF PILOT

8. EVALUATION FORMS BY FISHERS

9. TIPS FOR THE COURSE LEADER



DECENT WORK FOR FISHERS



Non-favourable treatment clause

Each member to the convention has to ensure that fishing vessels flying the flag of any state that has not ratified C.188 do not receive more favourable treatment than fishing vessels that fly the flag of any state that ratified C.188.

C.188 Work in Fishing Convention

There are over 30 million fishers worldwide. Working in the fishing sector differs from other sectors since it takes place in the marine environment where weather conditions can be harsh, and fishing is considered a hazardous occupation.

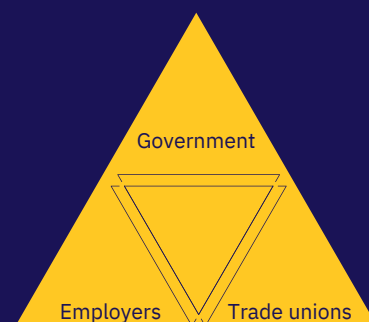
Fishers are often not working for a set wage, but their income is based on a share of the catch. This share-based income applies to both workers and self-employed fishers. While this has certain advantages for the fisher, it may lead to **overly long working hours, greater risk, and more accidents**. The variety in scale of operation, ranging from fishers in remote communities serving local markets to fishers on globally operating vessels with international crews serving the global market, makes the protection of fishers challenging.

These factors call for special considerations for workers on fishing vessels. However, in many countries fishers seem to fall through gaps in the system of laws, regulations and measures that protect other workers. The International Labour Organisation (ILO) is committed to ensure decent work for all fishers and to set standards that provide protection and improve the conditions of as many fishers as possible.

WHAT IS THE WORK IN FISHING CONVENTION C.188?

In 2007, ILO adopted an international standard about work on board fishing vessels for all fishers and fishing vessels engaged in commercial fishing operations*. Fishers need global standards that provide protection, considering the differences within the sector and among different ILO Member States. Legal protection must not only be provided for those working on large, industrial fishing vessels, but also on smaller ones. Above all, standards must serve to improve the conditions of as many fishers as possible.

An important aspect of the Convention is **the tripartite approach**. The Convention calls for countries to engage in consultations with the fishing sector social partners, to give them a genuine opportunity to express their views. Involvement of governments, employers and fishers' representative organizations is a fundamental requirement to achieve workable standards and ongoing effective implementation.



Each ILO Member shall implement and enforce laws, regulations, or other measures with respect to fishers and fishing vessels under its jurisdiction, while the fishing vessel owner has the overall responsibility to ensure that the skipper is provided with the necessary resources and facilities to comply with the obligations of this Convention.

- Commercial fishing means all fishing operations, including fishing operations on rivers, lakes or canals, with the exception of subsistence fishing and recreational fishing.

CONTENT C.188?

[For more info find the whole convention here!](#)

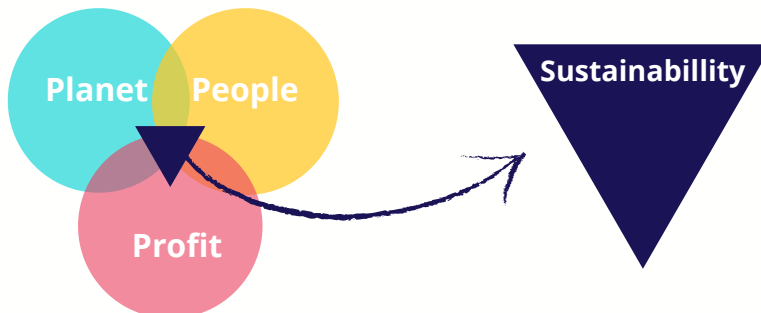
The objective of the Work in Fishing Convention, 2007 (No. 188) is to ensure that fishers have decent conditions of work on board fishing vessels. The Convention addresses a wide variety of social aspects of fishing, like;

- Minimum age
- Medical certificates
- Manning – number and qualifications of fishers
- Minimum hours of rest
- Work agreement/contract
- Right to repatriation
- Recruitment and placement of fishers
- Wages and payment for work
- Accommodation requirements
- Food and water
- Medical care
- Occupational safety and health
- Accident prevention
- Social security
- Protection in the case of work-related sickness, injury, or death

The Convention helps to prevent unacceptable forms of work for **all fishers**. It provides regulations that prevent **forced labour, trafficking, and other abuses**.

LINK WITH CATCHING THE POTENTIAL

The CTP-project is a cooperative effort of the fishing sector and educators to develop and implement an effective, international standard for sustainable fishing training for fishers. In the project, sustainable fishing is defined as a balance of environmental, social, and economic demands - the "three pillars" of sustainability (the three P's – People, Planet and Profit). This triple P approach will form the backbone of the sustainable fisheries training in the CTP-project.



Within this approach, the People P refers to humans, both to fishers and workers in the fishing industry and to people in society. Both societal acceptance of fishing and decent working conditions for fishers are an integral part of the sustainable development of the fishing industry. The ILO Work in Fishing Convention, in combination with local experiences and issues in the different countries, will provide content for the social aspect of the People P in the pilot trainings.

In the EU, the Work in Fishing Convention content is implemented in Directive 2017/159. However, this directive is slightly different. One difference is that C.188 applies to **all commercial fishers**, the related EU-directive **only applies to workers**. Also, hours of rest are defined differently. In the CTP-project, these differences will have to be taken into account.

TRIPLE P



PEOPLE P



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1

Introduction

- Introduction course leaders
- Introduction participants
- Fishing is on the move
- Sustainability
- The world is changing
- The human element
- This course



CTP

2

Introduce yourself

1. Who are you?
2. How do you see your future in fishing?
3. What do you expect from this course?



CTP

10

Fishing has a long history



CTP

11

Fishing has changed, more efficient and larger scale



CTP

12

Fishing is on the move

- ❖ Lower emissions and innovations in gear
- ❖ Cruise control
- ❖ Modifications nets
- ❖ Lighter gear
- ❖ SumWing
- ❖ Flyshoot
- ❖ Diesel electric engine
- ❖ Acoustic data collection



CTP

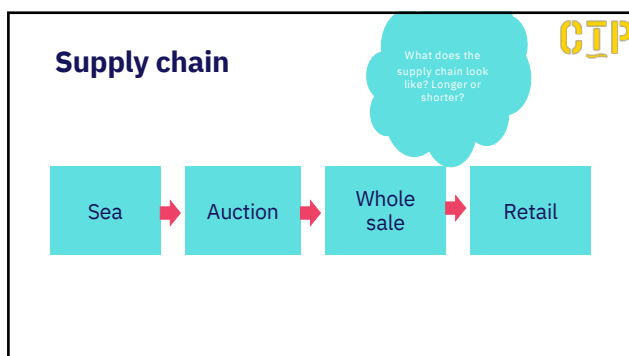
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18



19

Our influence on the planet has changed..

CIP



26

Sustainable development

CIP

Signals that the earth is out of balance, recovery is harder and goes slower

Political & economic processes are short term

- Need to act now!
- Need for long term thinking!

**YOU CAN'T BUILD
A LONG TERM
FUTURE
ON SHORT TERM
THINKING.**

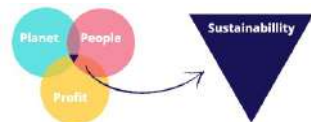
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Sustainable development is...

CIP

People: acceptance by society	4	6
Planet: preservation environmental quality	4	6
Profit: profitability companies	9	8

not sustainable sustainable



28

The road to sustainability

CIP



29

Different people contribute to sustainable fishing

CIP

- ❖ Fishers
- ❖ Traders
- ❖ Governments
- ❖ NGO's
- ❖ Scientists
- ❖ Technicians



All need to have sufficient knowledge and competences!!

30

This course...

CIP

- Fishing with a Future
- ❖ Assignments
- ❖ Lectures
- ❖ Workshops
- ❖ Excursions
- ❖ Guest speakers

... will prepare you for a better future as fisher!

31

Course program

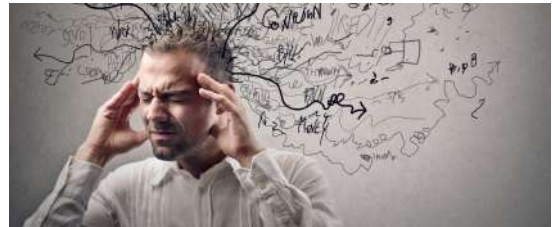
Integrate course program



CIP

32

Short break



CIP

33

Workshop – Your opinion

1. Split up in small groups
2. Make a list of the **most important challenges in sustainable fishing**
How urgent are they? Why?
 - ❖ **Appoint a discussion leader and a presenter**
 - ❖ **Discuss the challenges (15')**
 - ❖ **Write down top 5 on flip over (10')**
3. Plenary session (all groups)
 - ❖ **Presentation of results (20')**

Priority	Challenge	Why does it have this priority?
1		
2		
3		
4		
5		

CIP

34

Workshop – Your opinion

Priority	Challenge	Why does it have this priority?
1		
2		
3		
4		
5		

CIP

35



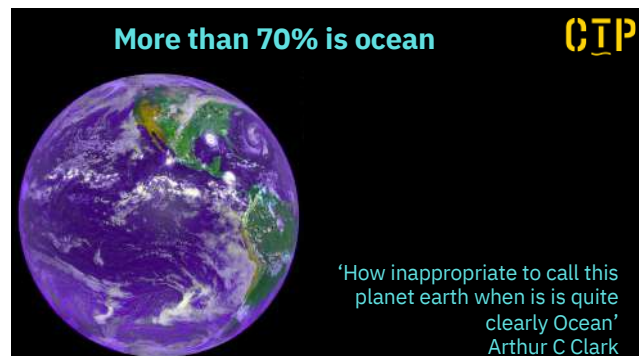
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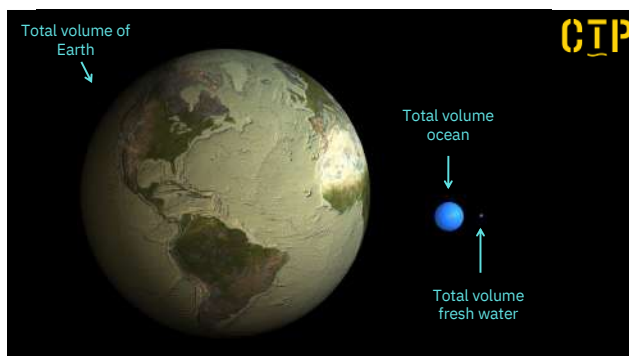
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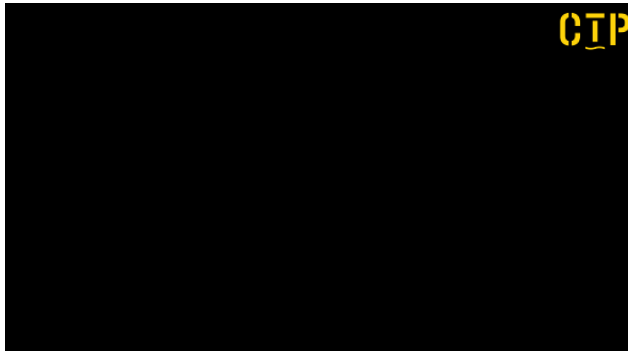
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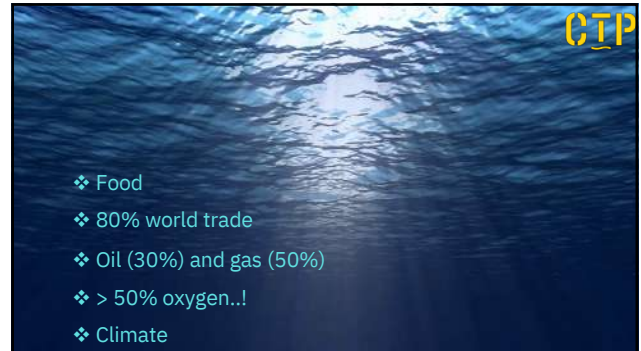
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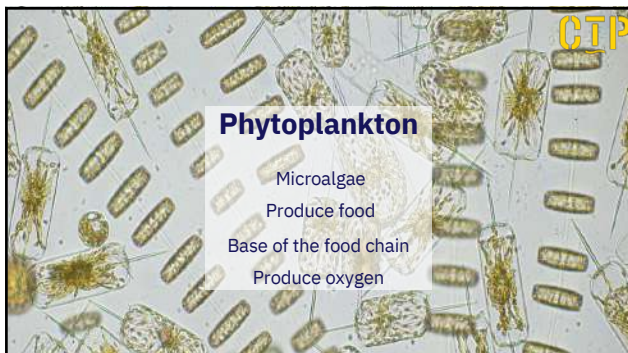
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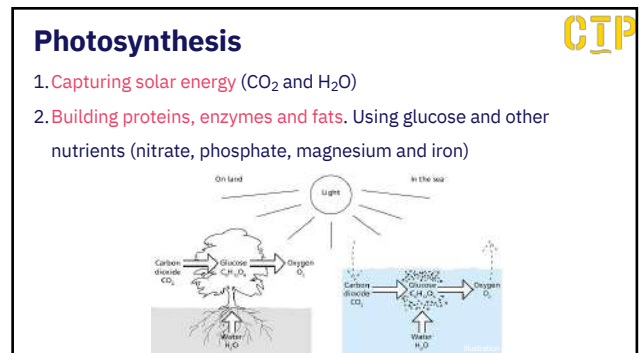
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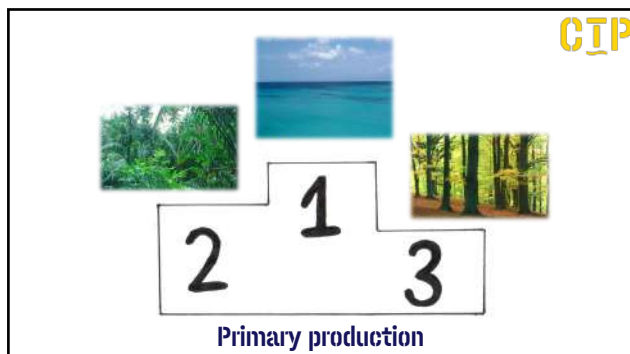
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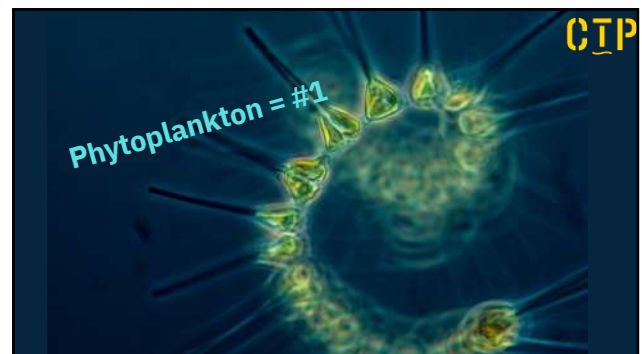
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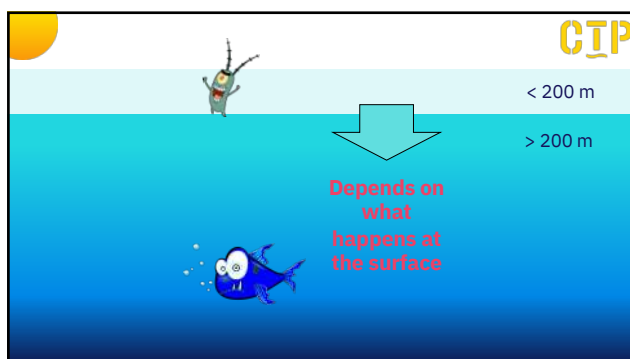
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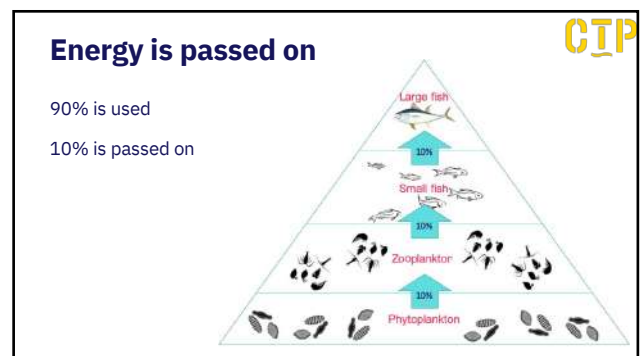
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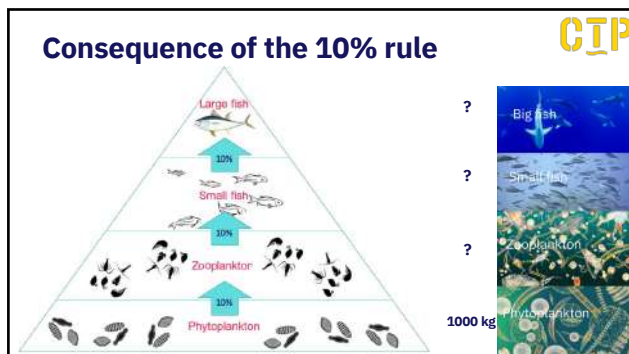
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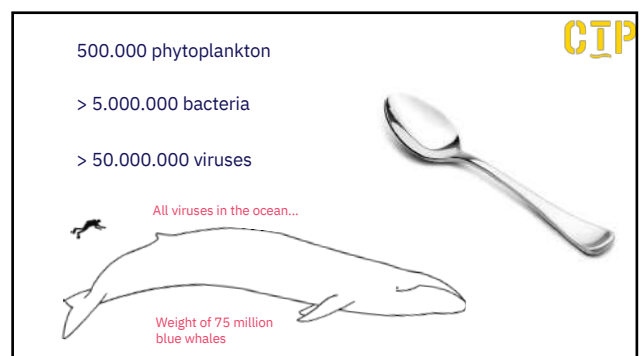
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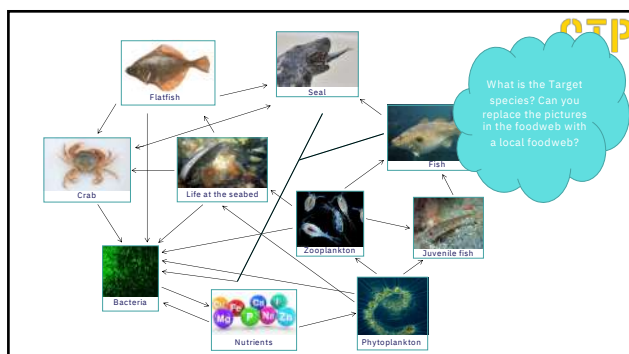
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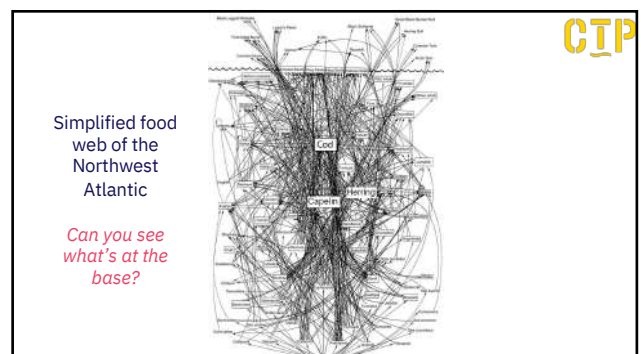
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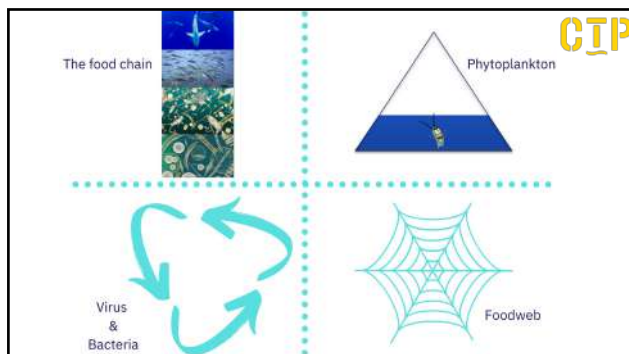
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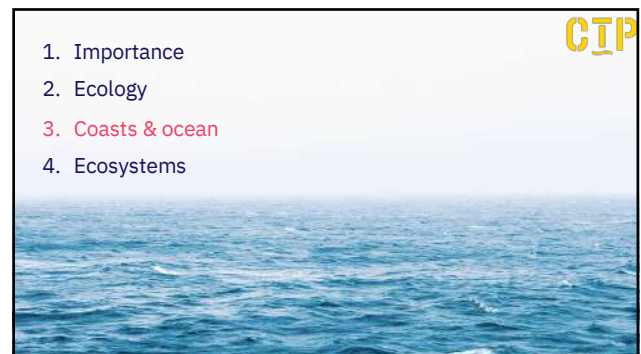
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26

1. Importance
2. Ecology
3. Coasts & ocean
4. Ecosystems



27

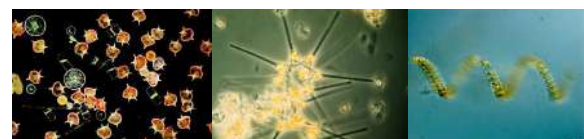
Two different systems

If you were phytoplankton, where do you want to live?



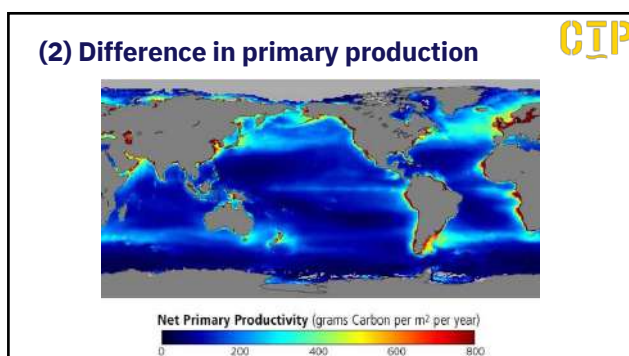
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(1) Different types of phytoplankton



Open ocean: Small and round

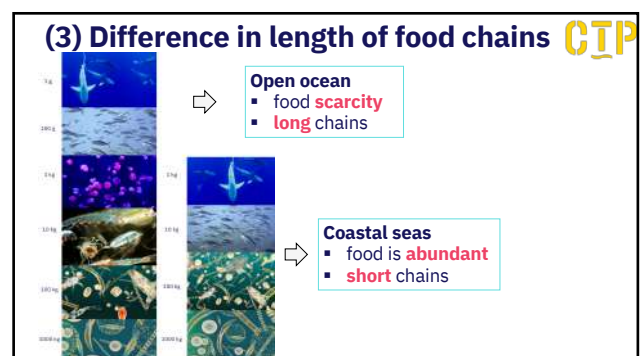
Coastal zones: Large and many shapes



32

(2) Difference in primary production

Net Primary Productivity (grams Carbon per m² per year)



33

(3) Difference in length of food chains

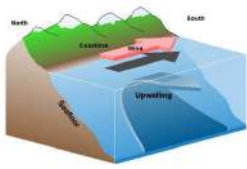
Open ocean

- food scarcity
- long chains

Coastal seas


- food is abundant
- short chains

'Upwelling' areas

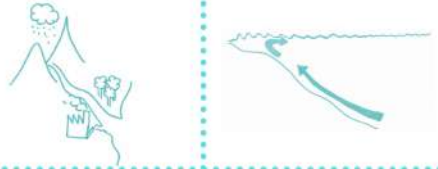


Upwelling

- Extremely abundant in food
- Extremely short food chains



34




Coast

- many nutrients
- large phytoplankton
- high primary production
- short food chains

Regulations

35

- Importance
- Ecology
- Coasts & ocean
- Ecosystems




36

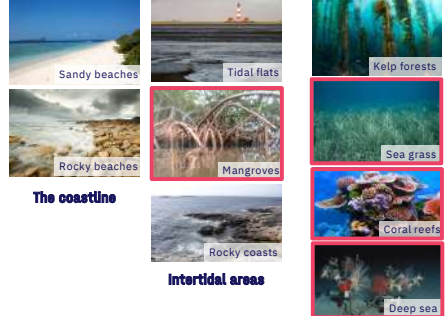
Ecosystem

'Non-living' ↔ 'Living'

One area



37



The coastline

- Sandy beaches
- Rocky beaches
- Tidal flats
- Mangroves
- Rocky coasts

Intertidal areas


Underwater marine areas

- Kelp forests
- Sea grass
- Coral reefs
- Deep sea

38

Deep sea

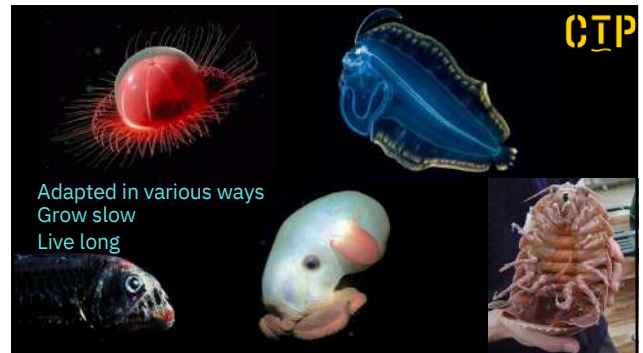
- No light
- Cold
- High pressure
- Food is scarce



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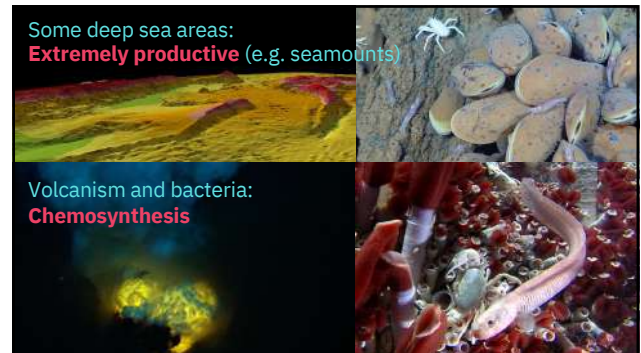
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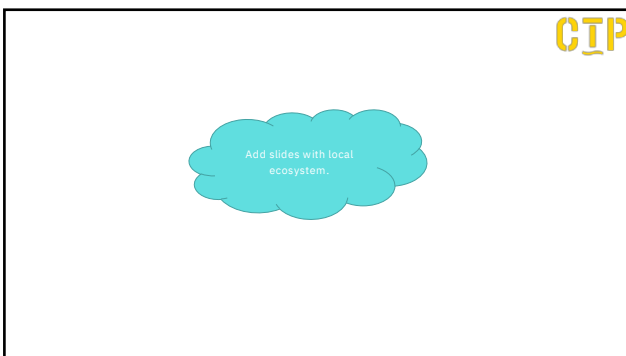
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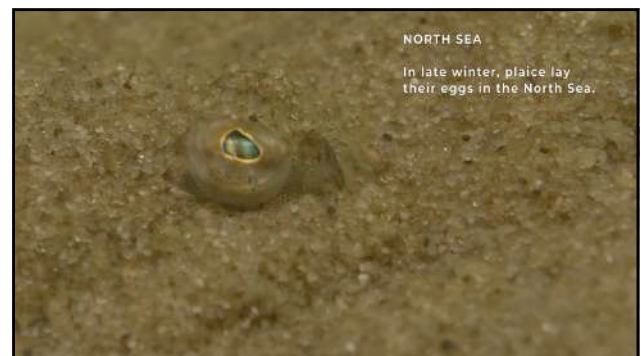
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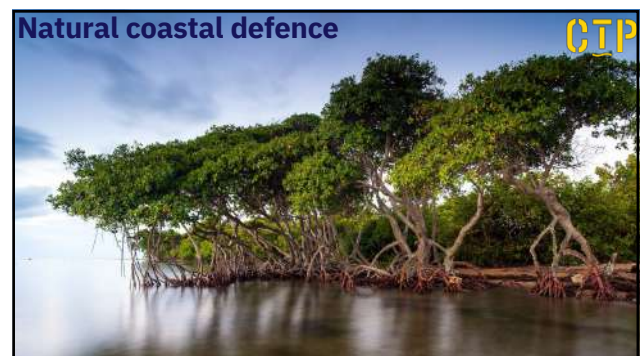
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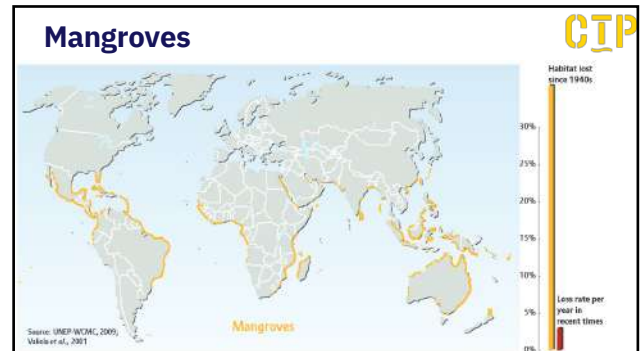
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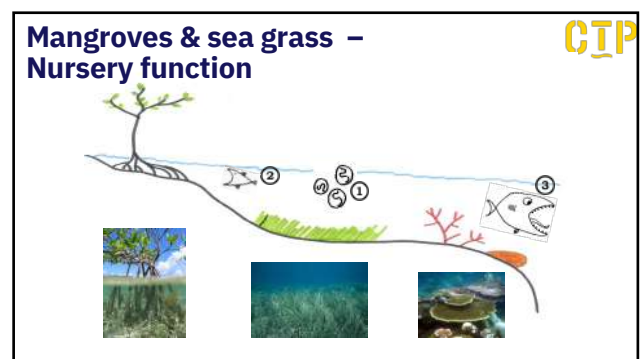
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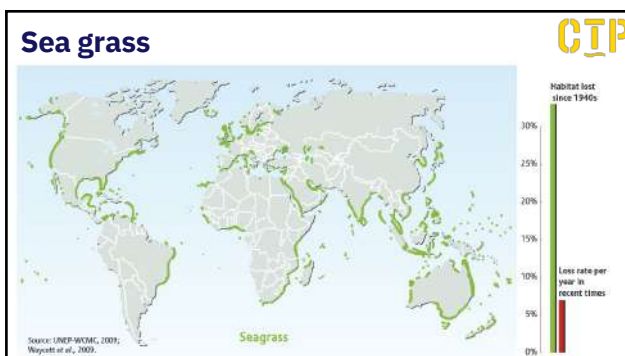
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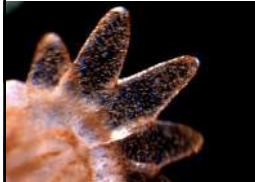



76

Coral reefs

- ❖ Corals are animals (polyps)
- ❖ Live together with algae
- ❖ Slow growing
- ❖ Build large limestone reefs

CTP

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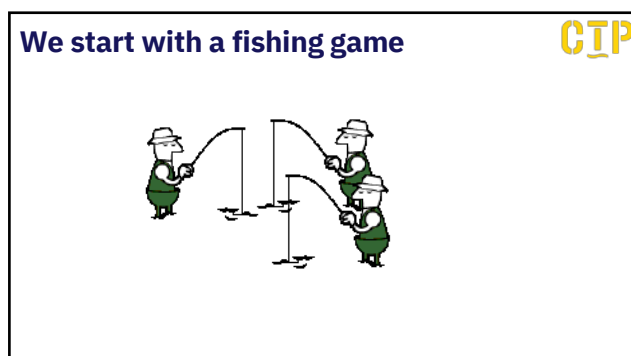
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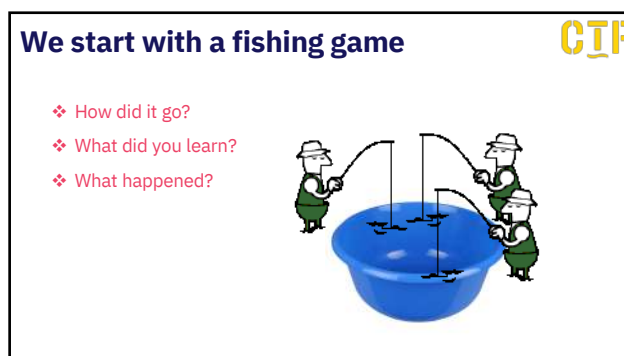
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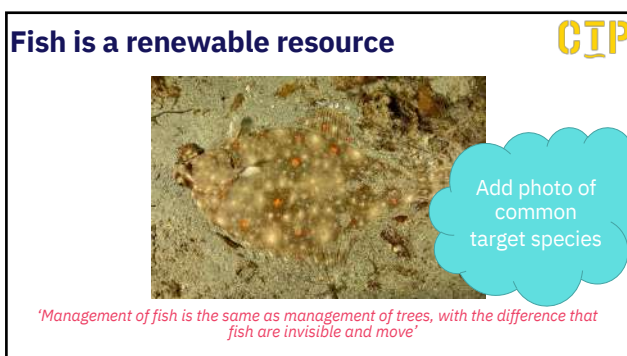
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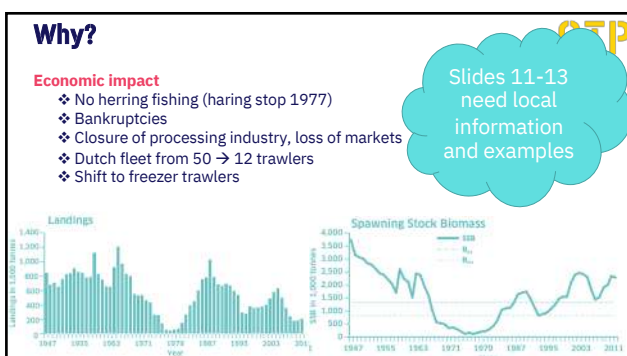
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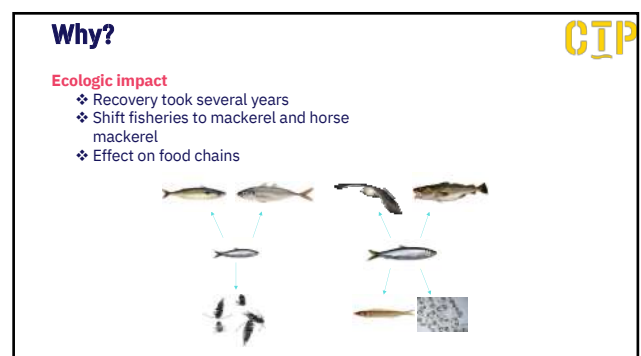
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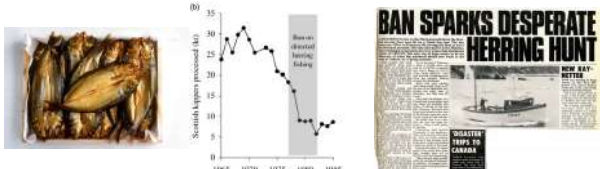


12

Why?

Social impact

- ❖ Unemployment
- ❖ Loss identity fishing communities
- ❖ Move to Irish sea, Denmark and Norway
- ❖ Change of consumer behaviour (kipper)
- ❖ Loss traditions



CTP

13

What is needed?

- ❖ Regulations
- ❖ Cooperation
- ❖ Long term vision

On different levels!



CTP

14

International agreements



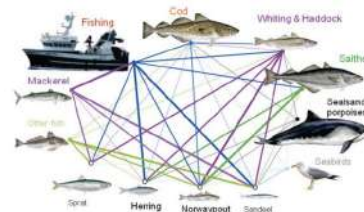
- ❖ Maximum sustainable yield
- ❖ Ecosystem approach
- ❖ Biodiversity
- ❖ UN / FAO guidelines (for example: prevent bycatch of sharks, sea birds)

CTP

15

What does ecosystem approach mean?

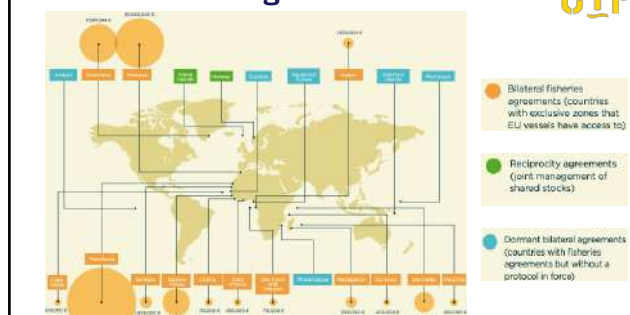
1. Account for biotopes and all species
2. Focus on the system, not on separate species



CTP

16

International agreements EU



CTP

17

Who manages the fish stocks in the North Sea?

Who owns the fish in the North Sea?



Add information from local situation

CTP

18

Exclusive Economic Zones (EEZ's)

CIP



But fish can swim...

19

Management EU-level

CIP



Therefore fish(eries) management in the North Sea is at European level in the first place, managed through the...

20

1. Tragedy of the commons
2. Fisheries management
3. **Common Fisheries Policy**
4. Landing obligation
5. Players & roles in fisheries management
6. Fish stock assessment

CIP

21

Common Fisheries Policy (CFP)

CIP

❖ Since 1983

❖ Covers how the EU deals with:

- ❖ Fleet subsidies
- ❖ Fleet size
- ❖ Bycatch
- ❖ Importance of nature
- ❖ ...



❖ Revision every 10 years (last time – 1 January 2014!)

22

Management EU-level

CIP



The European Union (EU) decides upon:

- ❖ Goals (where to?)
- ❖ Measures (how?)



EU Member states tasks:

- ❖ Enforcement and control of EU laws
- ❖ Free to propose measures on certain topics

23

Ultimate goal CFP?

CIP

Maximize food long term

Maximize profit long term

Maximize employment long term

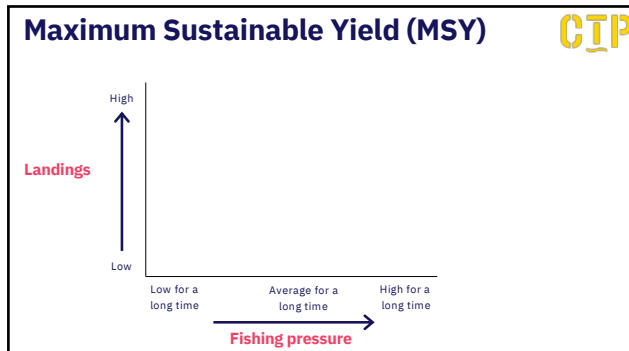
A

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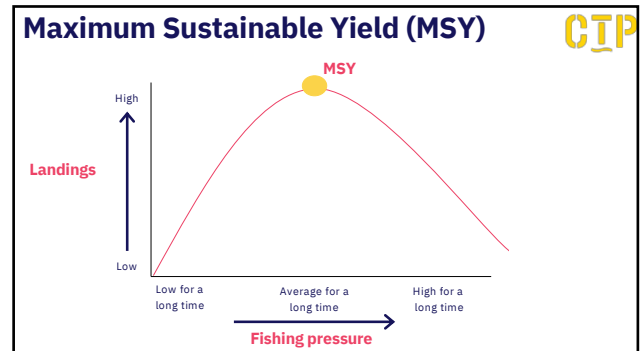
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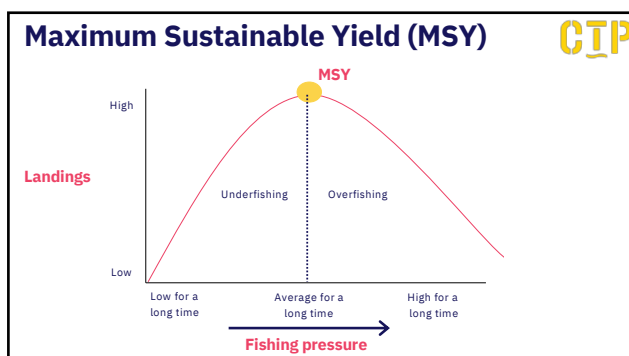
24



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26



27

Goals CIP

- Harvest as much fish in a responsible way (**maximum sustainable yield**)
- ❖Basis for a **profitable** fishing sector
- ❖**Fair division** of catching rights
- ❖**Stop** the practice of **discarding**, the throwing back of unwanted bycatch

28

If you were the manager.... CIP

- ❖Can you name measures that are being used to manage fisheries?
❖Try to come up with 3 measures
- ❖What do you think of current measures?
❖Which do you like/dislike
- ❖What would you do differently as a manager?
❖Name 3 ways to prevent overfishing, while maintaining

29

How to achieve the goals? CIP

- ❖**Amount of fish caught** – 'how much fish is harvested'
 - ❖Quota/TAC – per species
- ❖**Fishing effort** – 'how much fishing'
 - ❖Amount of vessels
 - ❖Horsepower
 - ❖Days at sea
- ❖**Selectivity** – Reduce catch of young fish/unwanted bycatch
 - ❖Minimum mesh size
 - ❖Closed areas
- ❖**Discarding**
 - ❖Gradual implementation of landing obligation

30

Summary

What?

Why?

How?

CTP

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Summary

1. Tragedy of the commons
2. Fisheries management
3. Common Fisheries Policy
- 4. Landing obligation**
5. Players & roles in fisheries management
6. Fish stock assessment

CTP

32

Let's start with the mesh size

Slide 34-40 need input with the local target species

CTP

33

Let's start with the mesh size

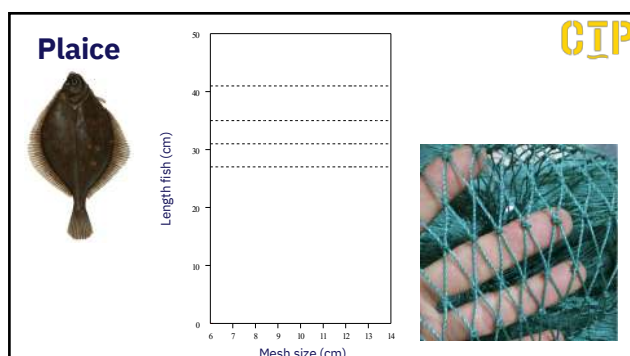
1. What round fish is **most slender** (use formula below)?
2. The minimum landing size for sole is 24 cm, for plaice 27 cm and for whiting 27 cm. Which size whiting gets caught in an 8 cm net? And in a 10 cm net?
3. Which size plaice gets caught in an 8 cm net? And in a 10 cm net?
4. What mesh size should you use to catch sole (24 cm)?
5. What mesh size should you use to catch whiting (27 cm)?
6. What mesh size should you use to catch plaice (27 cm)?
7. Which size sole gets caught in an 8 cm net? And in a 10 cm net?
8. Which size whiting gets caught in an 8 cm net? And in a 10 cm net?
9. Which size plaice gets caught in an 8 cm net? And in a 10 cm net?

Species	Selection factor
Plaice	2,2
Sole	3,4
Cod	3,0
Haddock	3,2
Whiting	3,4

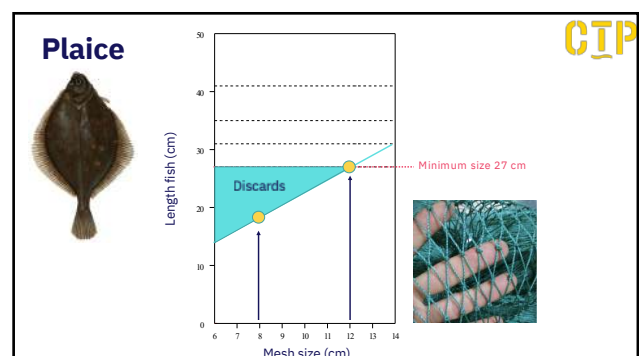
Length 'sticker' (in cm) = selection factor X mesh size (in cm)

CTP

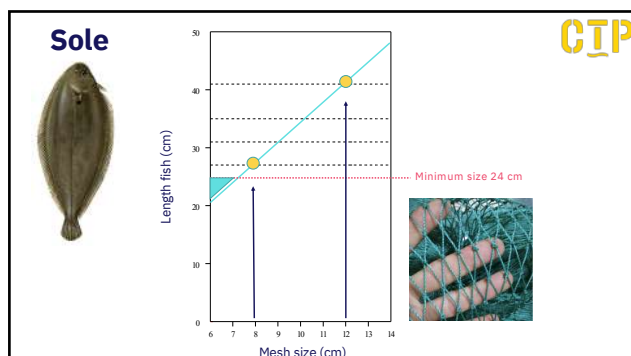
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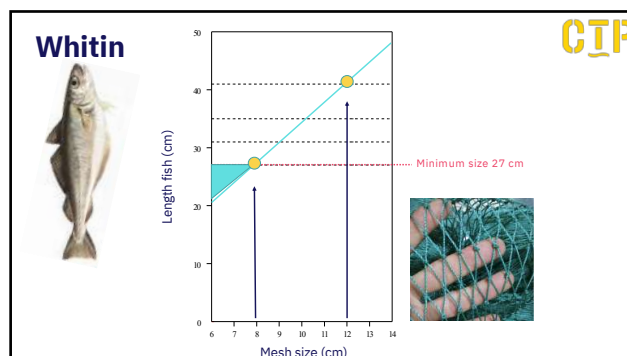
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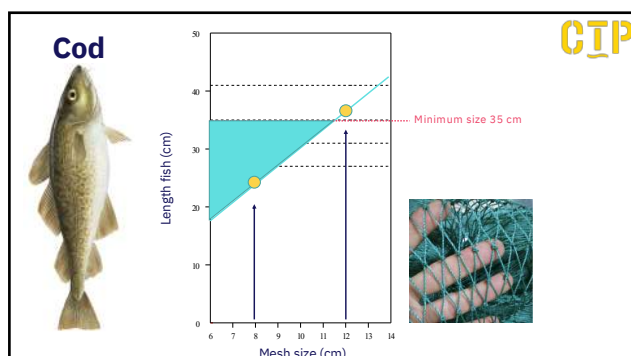
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42

About the rules

CTP

Part of the catch	Landed per....
Undersized target species	1 January 2016
Crabs, starfish, benthos	Don't
Undersized species with quota	1 January 2019
Protected species	Don't
Undersized species without quota	Don't

43



Where does the landing obligation come from?

44

Fishers have another opinion than the government

CTP



45

Perception policy maker

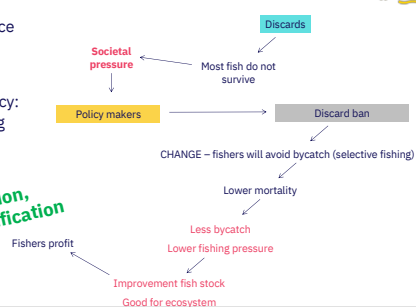
CTP

Discarding is the practice of returning unwanted catches to the sea.

Common Fisheries Policy:

- ❖ Gradually eliminating discarding
- ❖ Landing obligation.

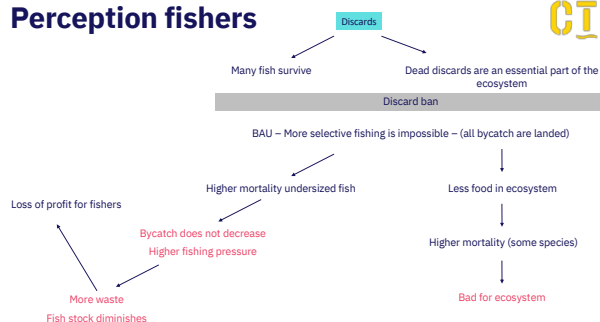
Moral decision, ecological justification



46

Perception fishers

CTP



47



48

CTP

1. Tragedy of the commons
2. Fisheries management
3. Common Fisheries Policy
4. Landing obligation
- 5. Players & roles in fisheries management**
6. Fish stock assessment



49

Roles and players: who does what? CTP



50

Scientists research, calculate and inform policy makers CTP

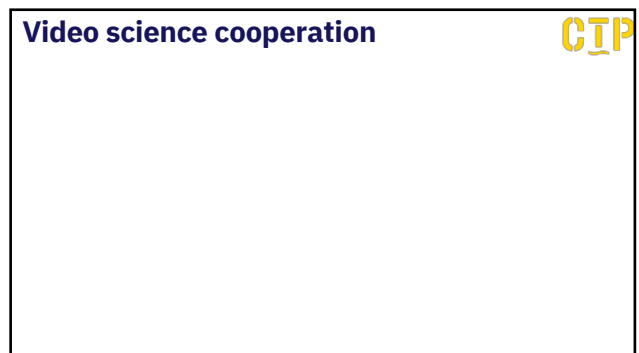
ICES – International Council for the Exploration of the Sea
More and more often, fishers help in data collection programs!



ICES CIEM

51

Video science cooperation CTP

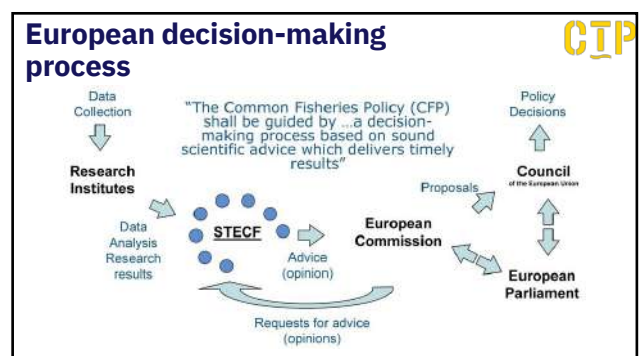


52

Policy makers decide and monitor CTP



53



54

Fishers and environmental organizations offer advise

For example through the **Advisory Councils** (ACs) since 2004



North Sea AC February 2020



11 AC's in total

55

56

1. Tragedy of the commons
2. Fisheries management
3. Common Fisheries Policy
4. Landing obligation
5. Players & roles in fisheries management
6. **Fish stock assessment**

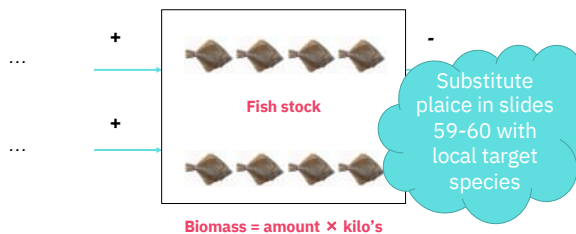
57

Why fish stock assessment?

1. Needed to determine quota
2. Check if management was successful

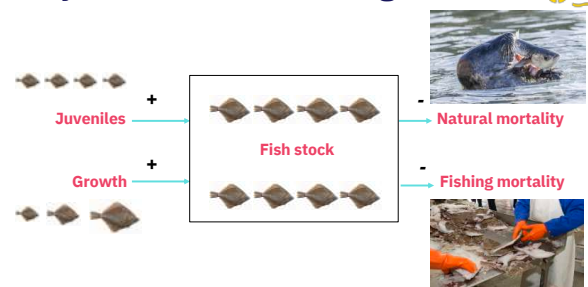
58

Basis: Why does a fish stock change?



59

Why does a fish stock change?



60

Stock assessment

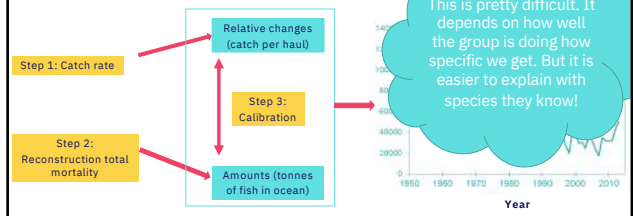
CTP

61

3 steps in stock assessment

CTP

1. Catch rate
2. Reconstruction
3. Calibration



62

Step 1. Catch rate

CTP

Surveys research vessels

Also, Data from fishers EU-logbook

De wetenschap achter
het tellen van vissen

Hoe werkt een bestandsschatting?



63

Catch rate

CTP

Catch rate =
Relation between
- catch (kilos) and
- effort
(for example 2 hours with
ship of certain size)

64

Catch rate

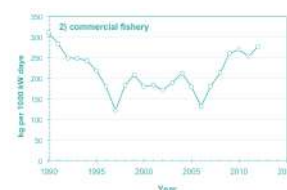
CTP

Catch rate =
Indication for the amount
of fish in the ocean

65

Catch rate as an indicator for fish stock size

CTP



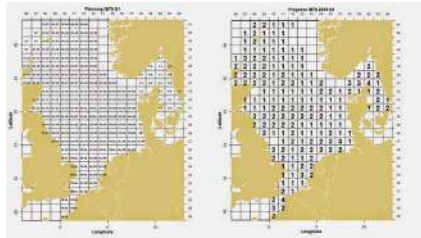
Do you see a **pattern** in the catch rate?
Does this tell you something about the **amount of plaice** in the sea?

66

Stock assessment: Every year same routine

CIP

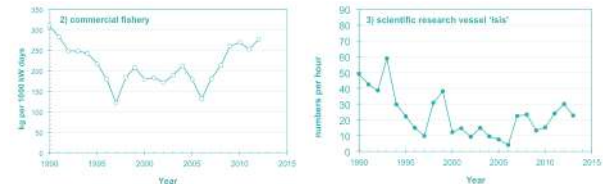
- ❖ Same area
- ❖ Same season
- ❖ Same gear
- ❖ Same fishing practise



67

Catch rate survey vs. fleet

CIP



68

Catch rate is different

CIP



69

Catch rate is different

CIP

Survey every year the same:

- ❖ Same area
- ❖ Same season
- ❖ Same gear
- ❖ Same fishing practise

Data fisher:

- ❖ Does not cover the entire area
- ❖ Fishing technique changes
- ❖ Behaviour changes (fish, quota, oil)



70

Step 2: Reconstruction fish stock

CIP

Add fish mortality → size fish stock a few years ago



Fishing mortality

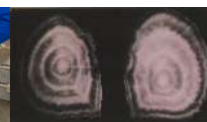
Natural mortality

71

Data needed to calculate mortality:

CIP

1. Total catch from the entire fishing fleet (for this stock)
2. Length and weight per age class: from fish samples
3. Estimate natural mortality



1.

2.

3.

72

Landing (example, not real data)

CIP

	Year										
Age class	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
0-year	0	0	0	0	0	0	0	0	0	0	0
1-year	10	30	15	10	30	20	25	15	20	15	20
2-years	30	20	70	90	20	90	40	35	40	30	65
3-years	50	40	60	80	20	40	65	60	85	75	65
4-years	20	5	20	30	40	30	45	30	35	50	40
5-years	10	5	15	5	10	20	20	10	10	20	5

Table 1: landing sole in amount of fish ($\times 1000$) (no real data)

0-year fish are too small to be caught

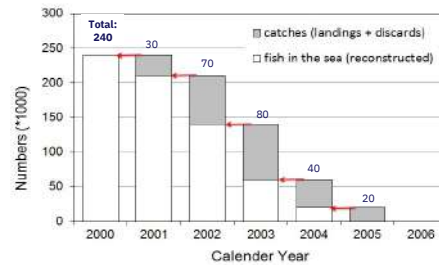
In this example all sole is fished in 5 years

Blue are fish from year class 2000 (born in 2000)

73

We calculate one year class (2000)

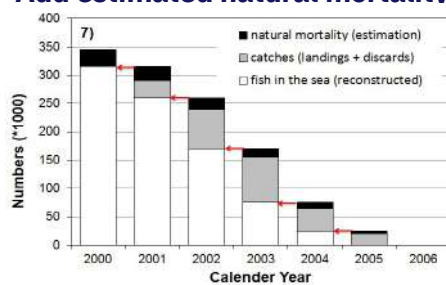
CIP



74

Add estimated natural mortality

CIP



75

Exercise reconstruction

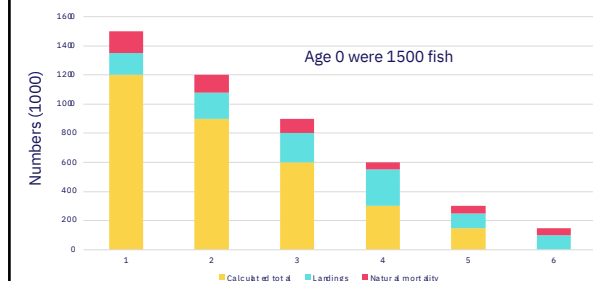
CIP



76

Solution exercise reconstruction

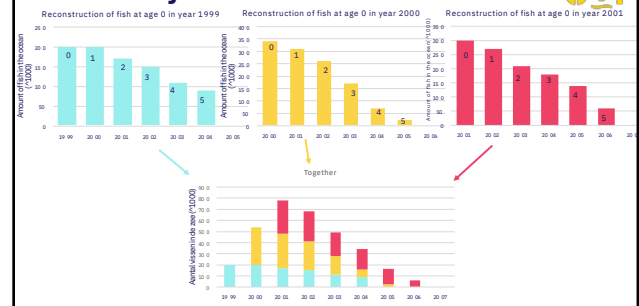
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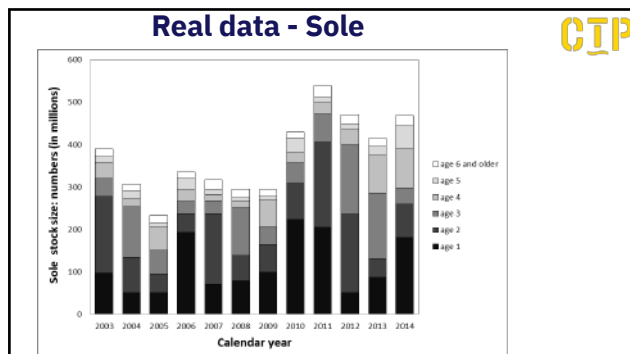
77

Combine year classes for size stock

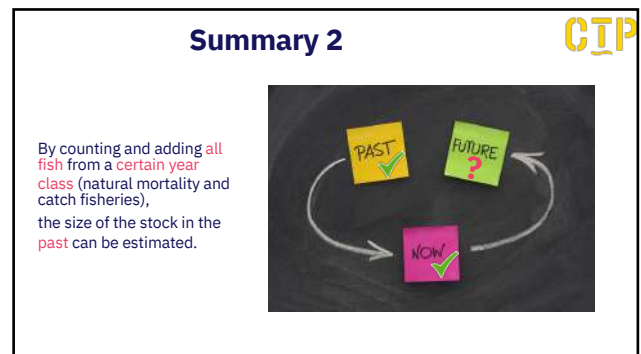
CIP



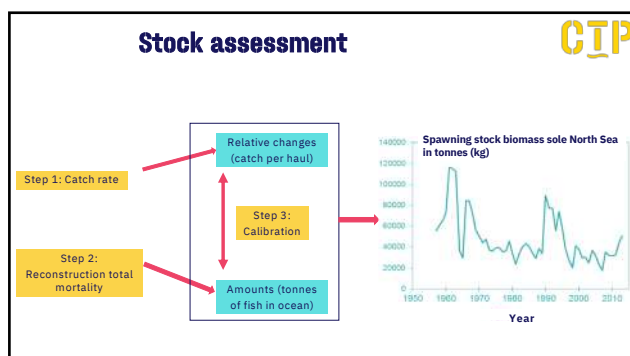
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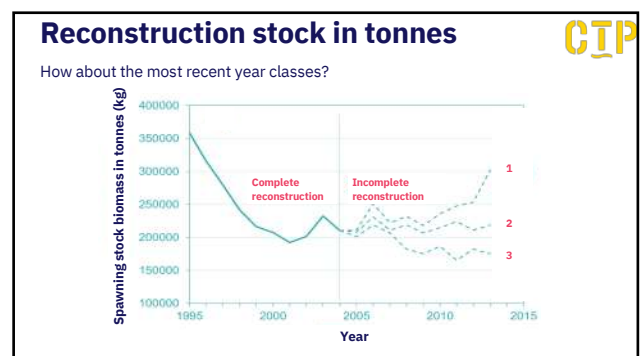
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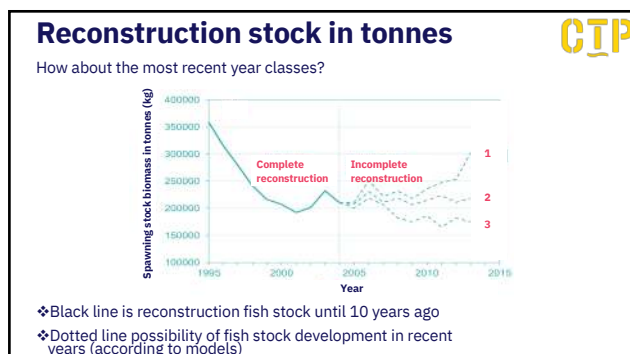
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81



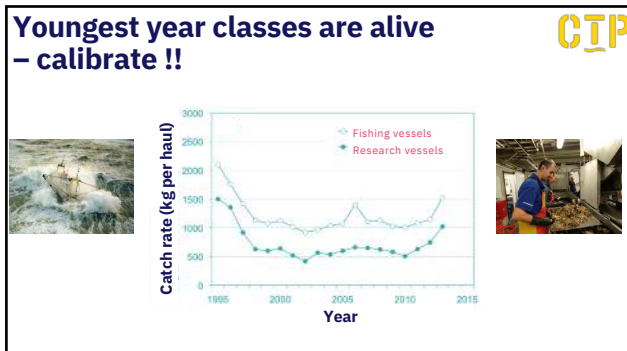
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83



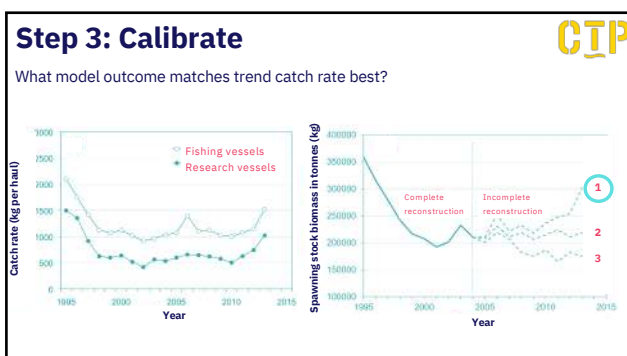
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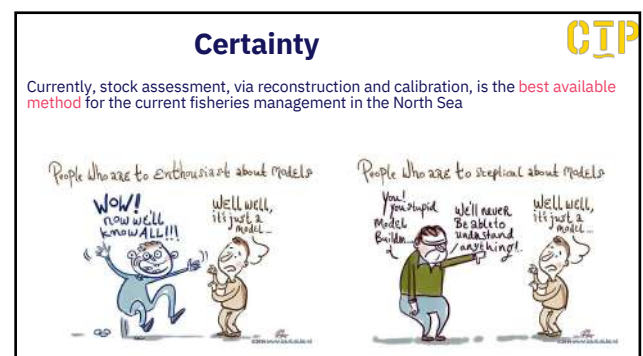
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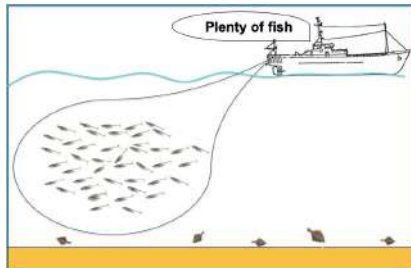
89



90

Catch rate unreliable

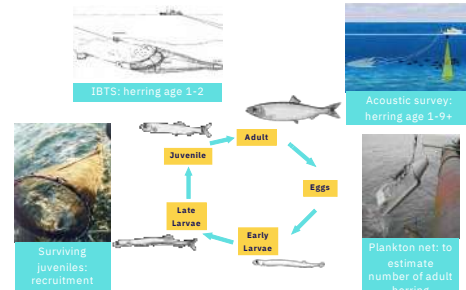
CIP



91

Survey for herring

CIP



92

Uncertainties; natural variation

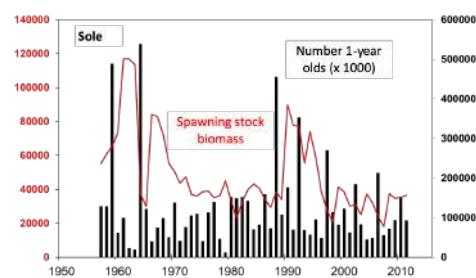
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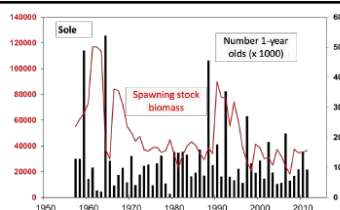
93

Natural variation – recruitment

CIP



94



CIP

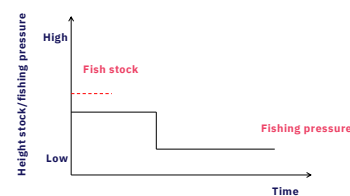
When a lot of sole are born in a certain year, this is called a **strong year class**.

1. Do you see an **effect of a strong year class** on the spawning stock biomass ('breeding stock')? *Tip: Sexually mature sole is at least 2 years old*
2. Is the opposite also true? So, a **high spawning stock biomass** of sole is **resulting in a lot of 1-year olds**? Explain why/why not.

95

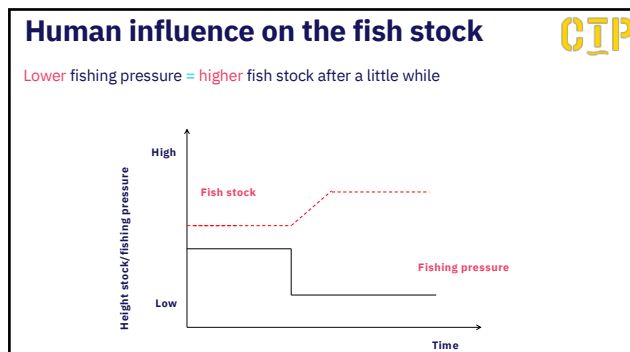
Human influence on the fish stock

CIP

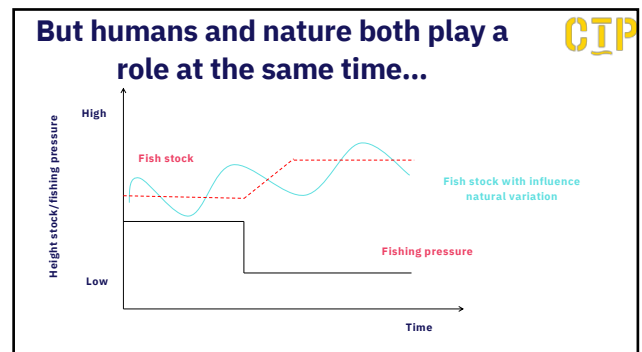


Let's assume that **only humans have influence** on the fish stock, how would the fish stock change when the fishing pressure (for example the amount of vessels) changes abruptly? Draw it.

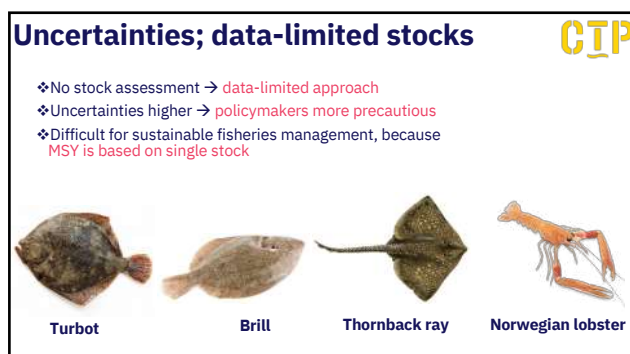
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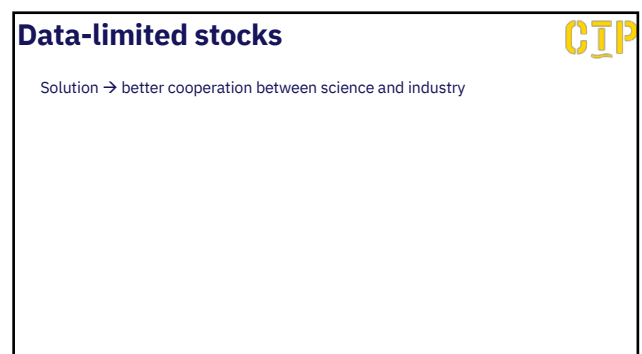
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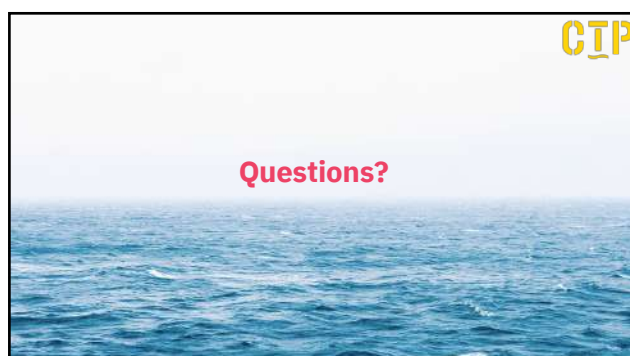
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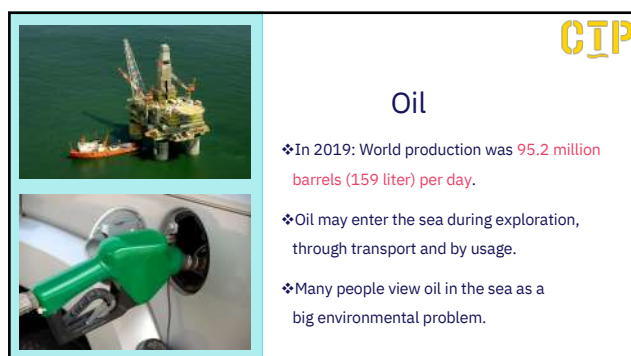
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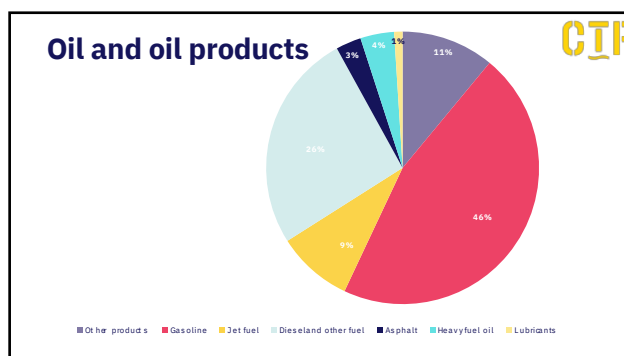
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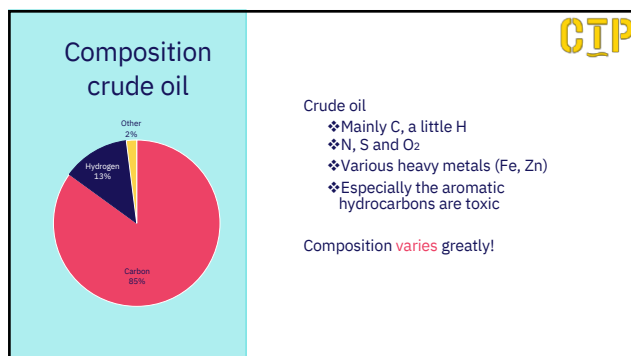
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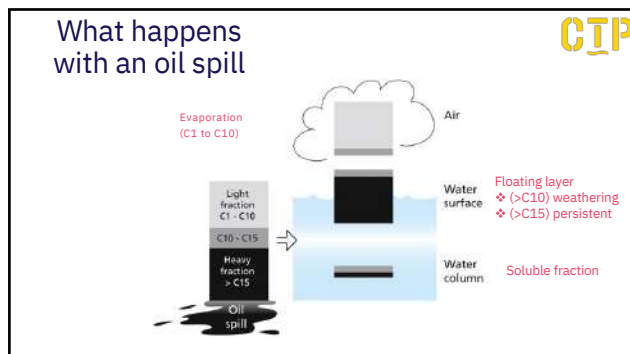
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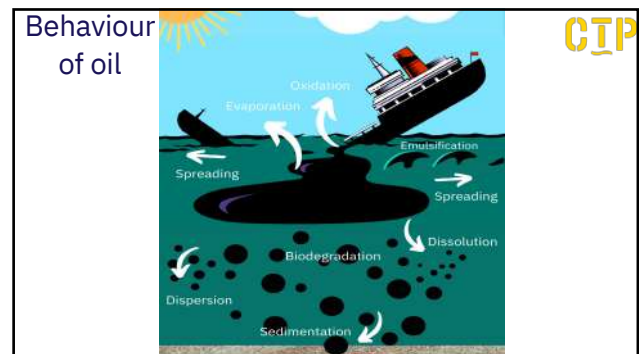
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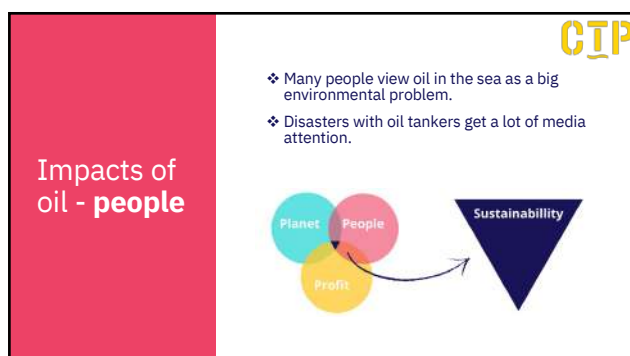
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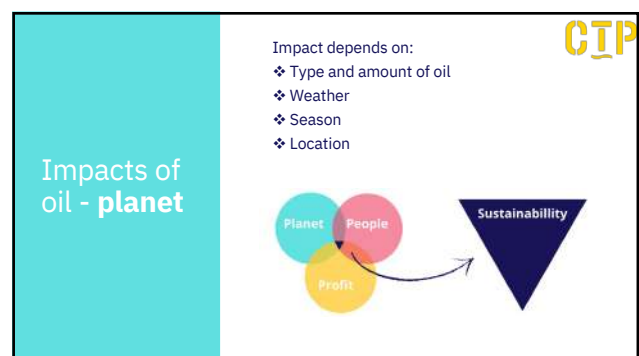
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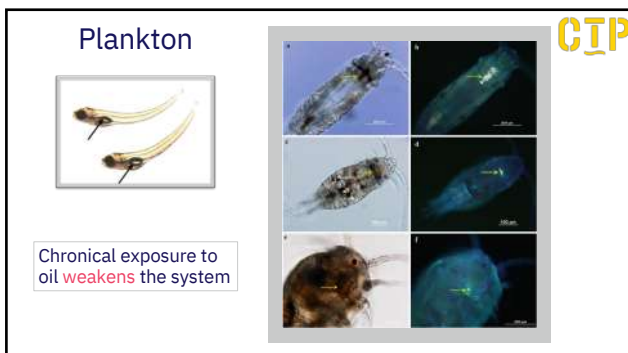
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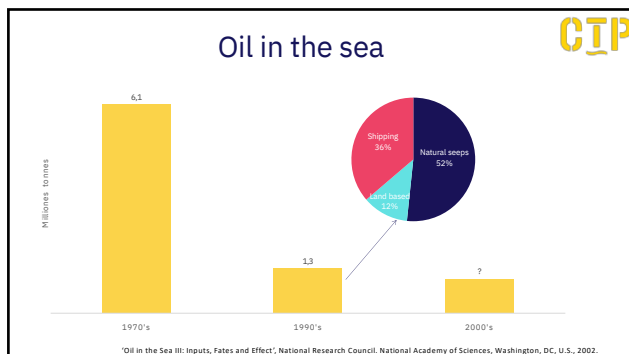
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20

Collection of oily waste

How is the local collection of oil arranged?

21



22

Catching THE Potential

Solid waste

December 8, 2021

Name

With the contribution of the European Maritime and Fisheries Fund of the European Union

23



24

Solid waste

Marpol Annex V

- ❖ Plastic
- ❖ Metal
- ❖ Wood
- ❖ Glass
- ❖ ...

Where does it come from?

- ❖ Kitchen
- ❖ Engine room
- ❖ Shipment related

25



26

Plastic lasts forever

CTP

Many benefits

- ❖ Strong
- ❖ Hygienic
- ❖ Keeps water in or out

But plastic...

- ❖ Lasts a long time
- ❖ Degrades in ever smaller pieces
- ❖ Consist of various chemicals

The 1950s
By Gabe Martin
VIEW! Plastic lasts FOREVER!
CONCLUSION
no doubt!

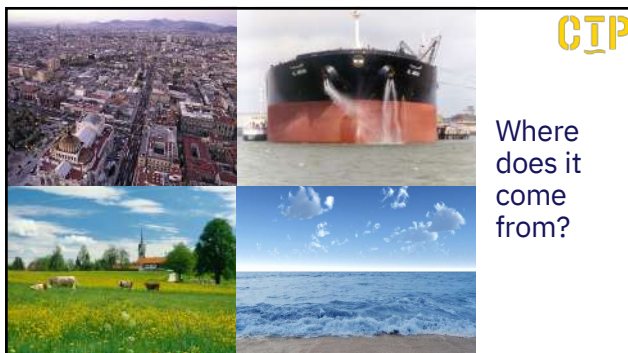
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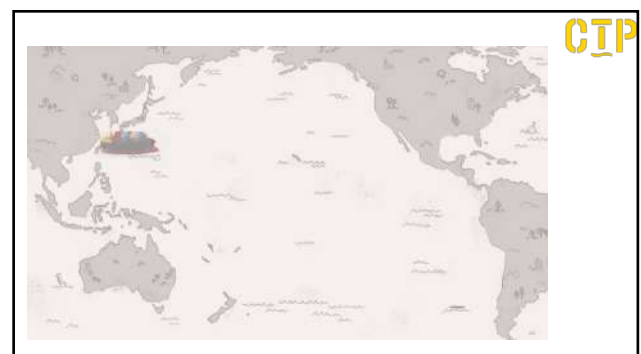
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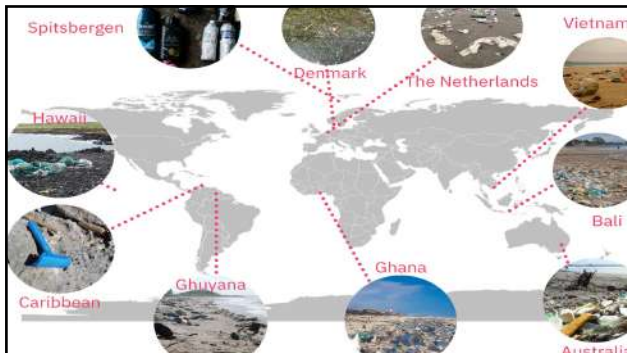
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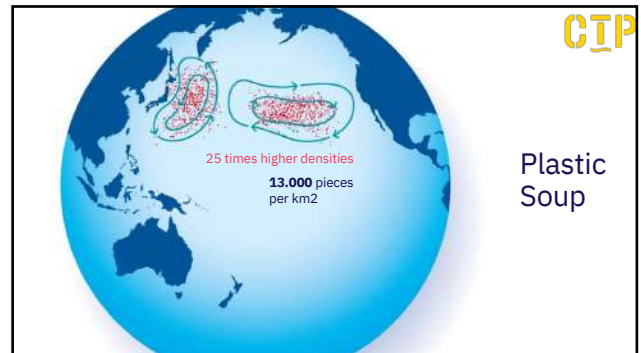
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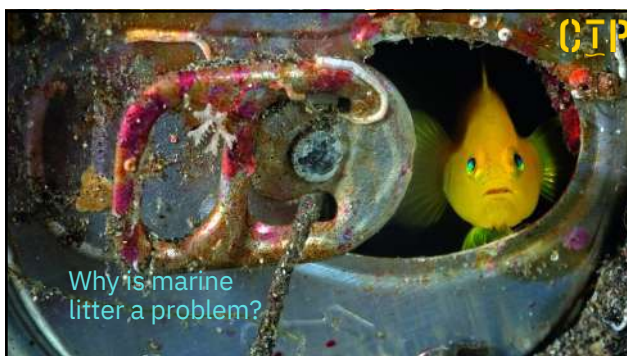
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42

Two photographs: on the left, a red buoy on a sandy beach; on the right, a close-up of a beach covered in colorful plastic litter. The CIP logo is in the top right corner.

Ecological impact

- ❖ Ingesting
- ❖ Entanglement
- ❖ Spread of invasive species, toxins and diseases
- ❖ Smothering seabed communities

A diagram shows three overlapping circles labeled "Planet", "People", and "Profit", with a larger circle labeled "Planet" in the center.

43



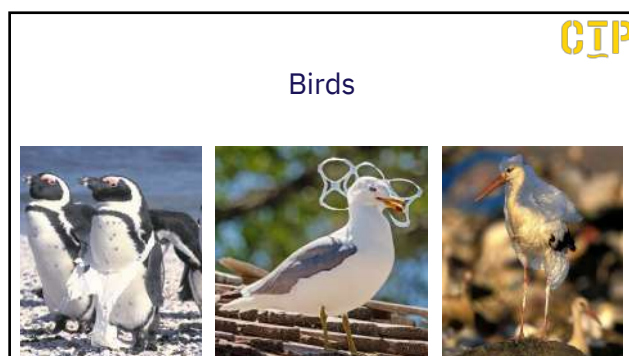
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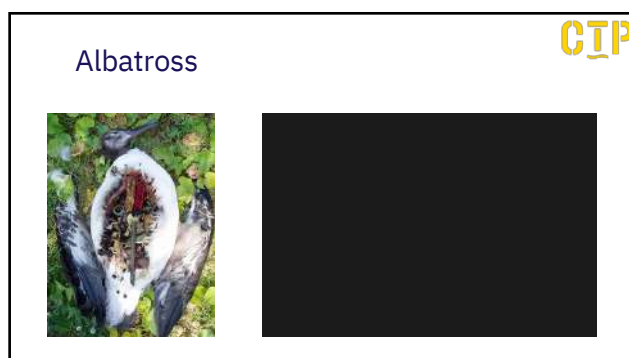
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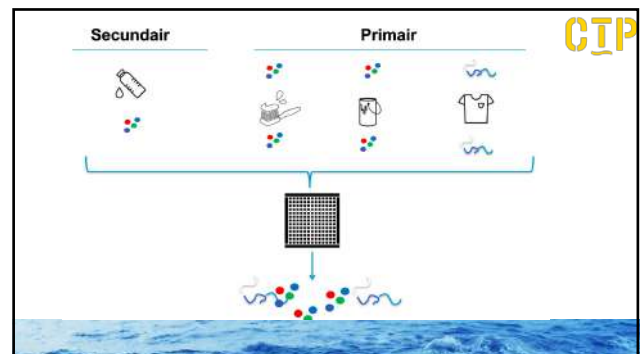
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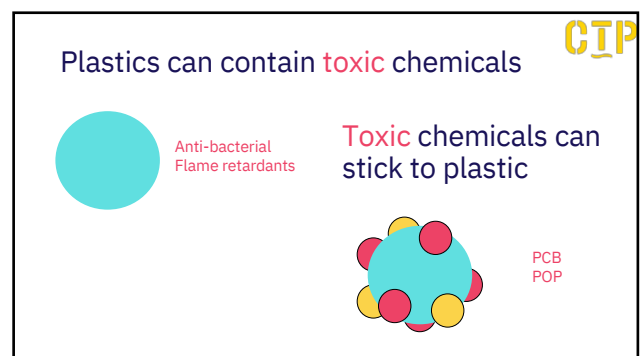
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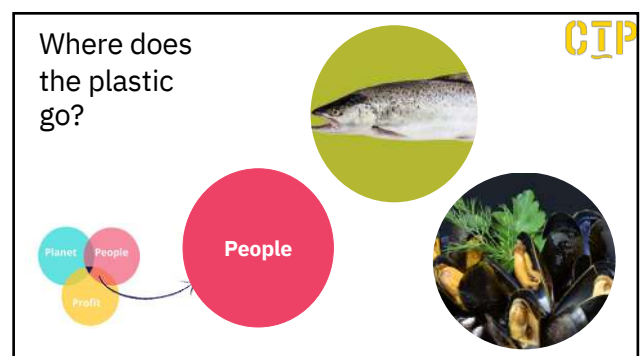
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55

Cleaning costs
€18.000 per day

Local beach
with daily clean
up costs?

The cost to
clean up are
tremendous!

Planet People Profit

56

1. Solid waste
2. Impact
3. Role of Fisheries
4. Solutions

57

Regulations - Marpol

Allowed:

- ❖ Food
- ❖ Cargo residues
- ❖ Washing water
- ❖ Carcasses of animals

Revised Annex V (2013):
Discharge of **any type of solid waste in sea is prohibited**

Information signs
Garbage management plan
Garbage record book
Port facilities

58

Labeling requirements

Ban on plastic products

Reducing single-use plastics

Responsible producer

Fishing gear

Reduce consumption

Raise awareness

90% Collection of bottles

59

Fishing gear

60

ORIGIN OF PLASTIC LITTER ON DUTCH BEACHES

Is your country doing
anything with the
OSPAR research/
clean-up

From Sea 45%

From Land 55%

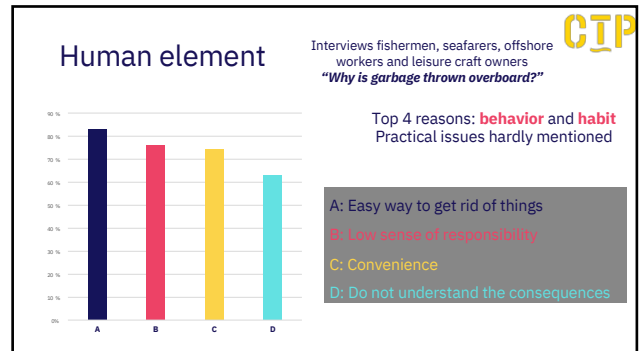
- ❖ The North Sea foundation concludes...
- ❖ Shipping and fisheries: >45% of waste on the dutch beaches
- ❖ The No.1 item found is plastic nets and ropes (used in shipping and fishing)
- ❖ In 12 year, no significant decline in waste can be observed (2004-2015)

Stichting De Noordzee

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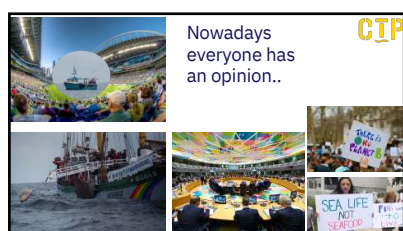
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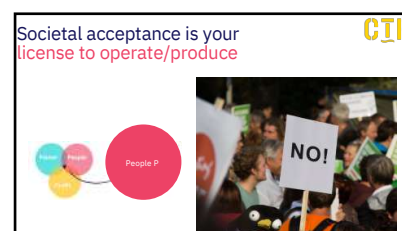
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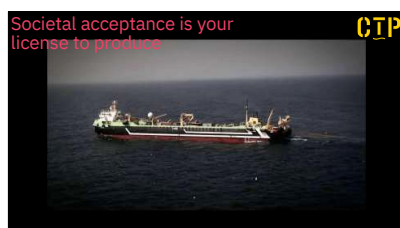
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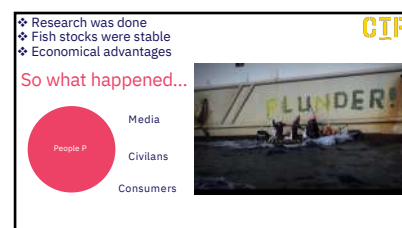
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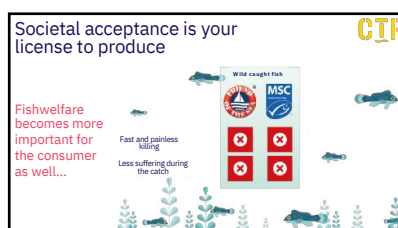
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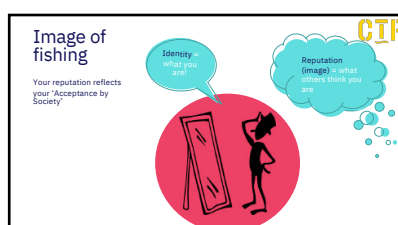
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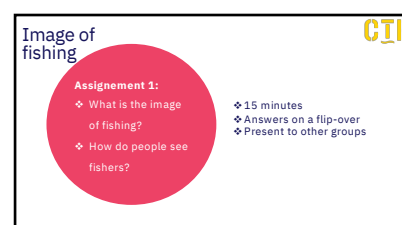
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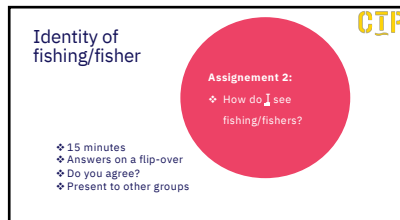
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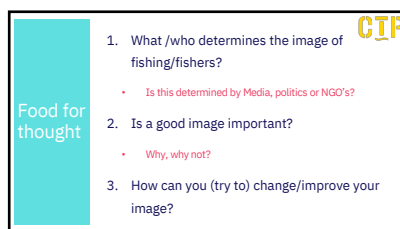
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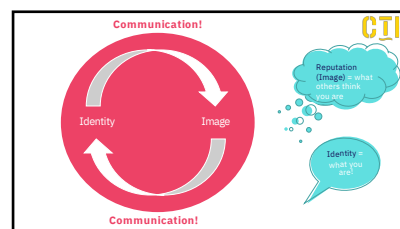
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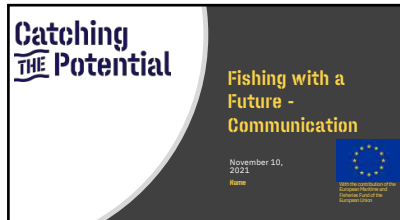
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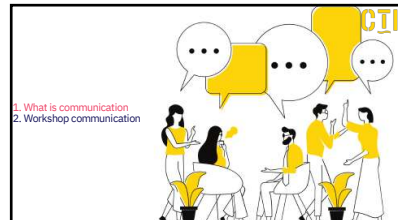
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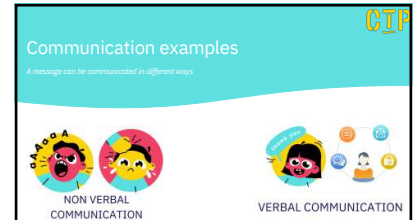
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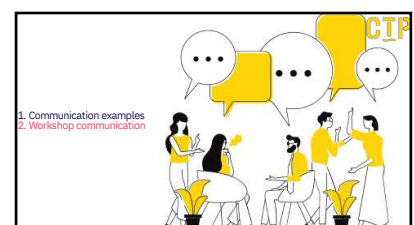
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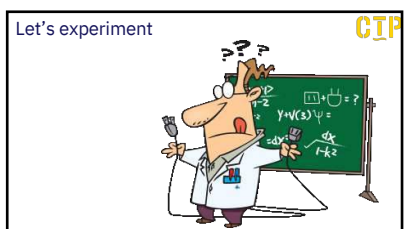
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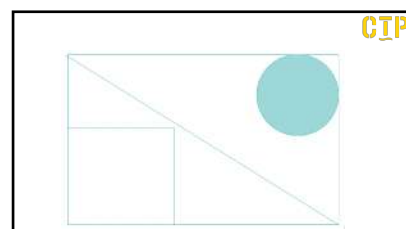
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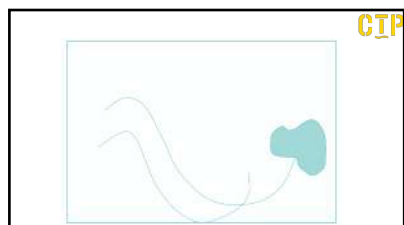
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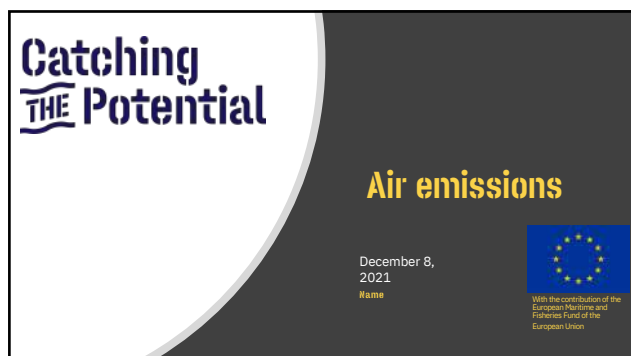
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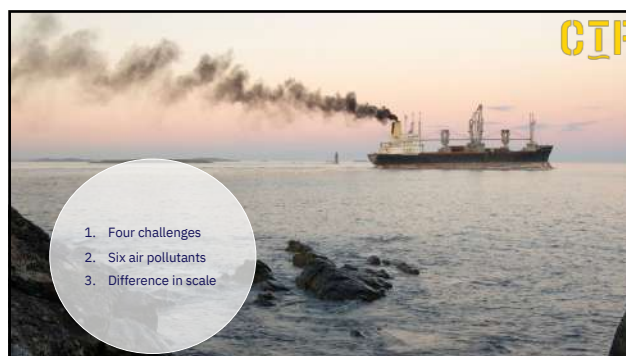
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Attachment 2g - Air emissions and climate change

08-12-2021



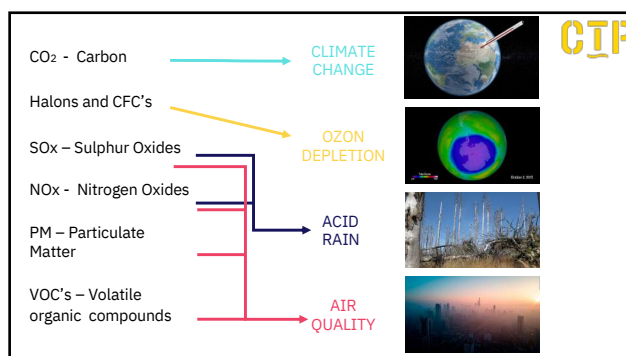
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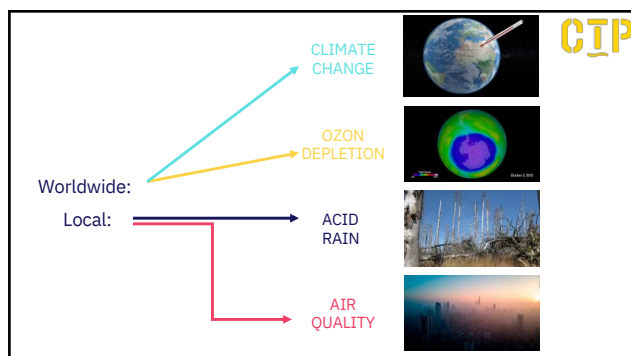
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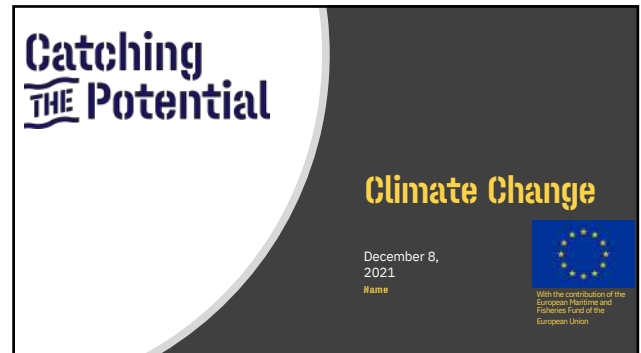
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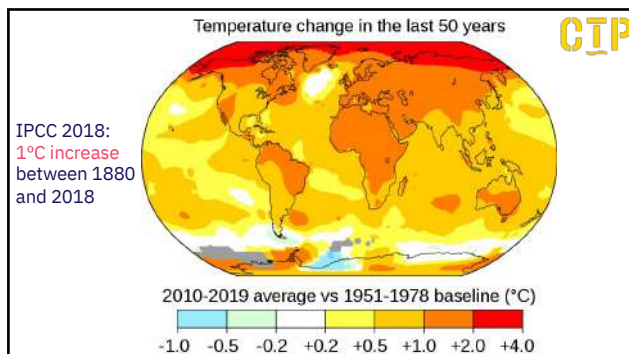
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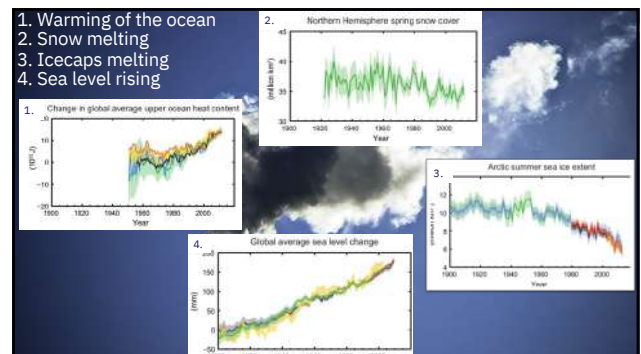
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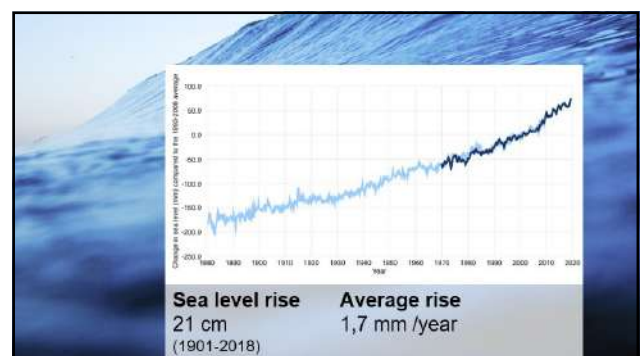
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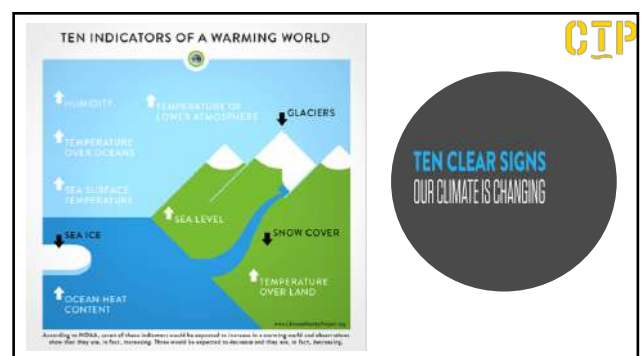
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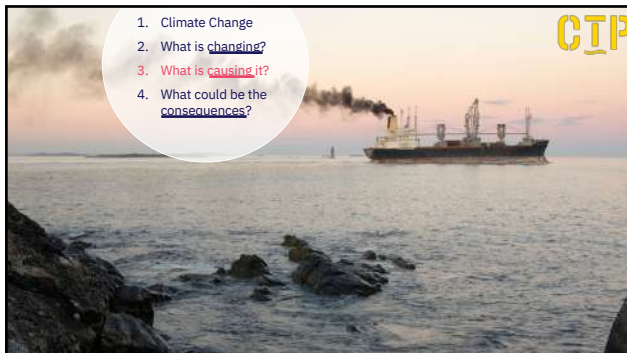
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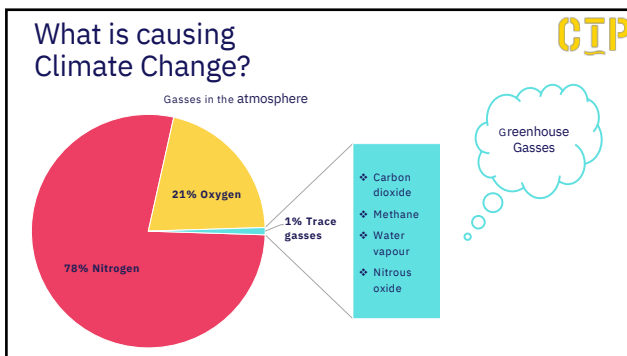
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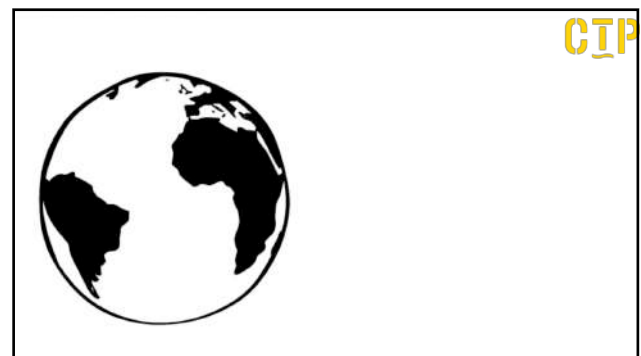
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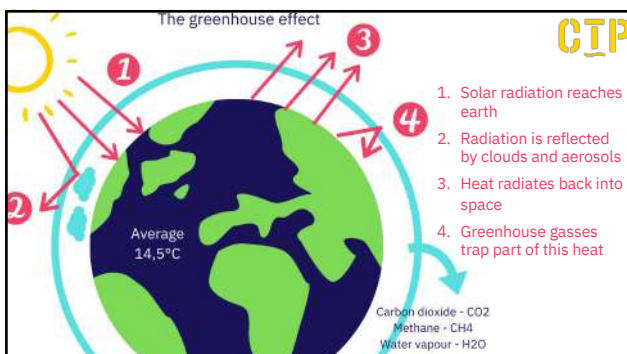
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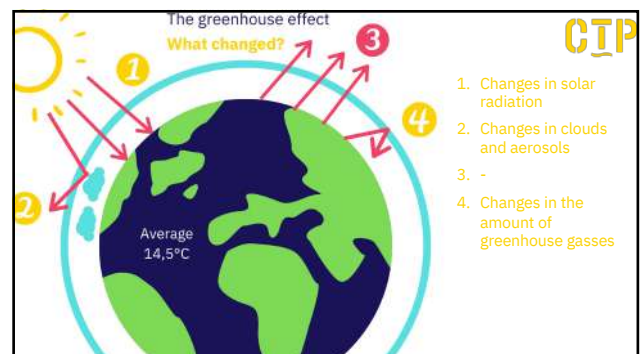
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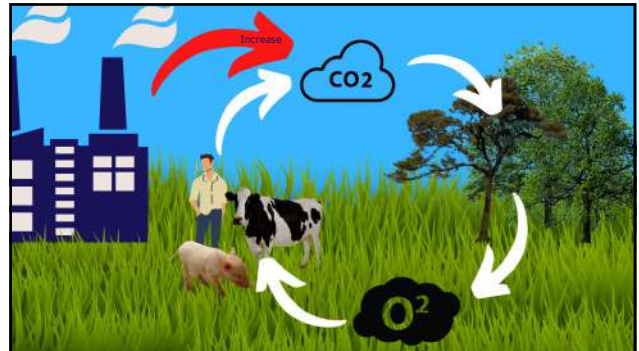
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CTP

IPCC 2013: "It is *extremely likely* that human influence has been the *dominant cause* of the observed warming since the mid-20th century."

Greater concentration of greenhouse gases strengthen the greenhouse effect: *average temperature increases*

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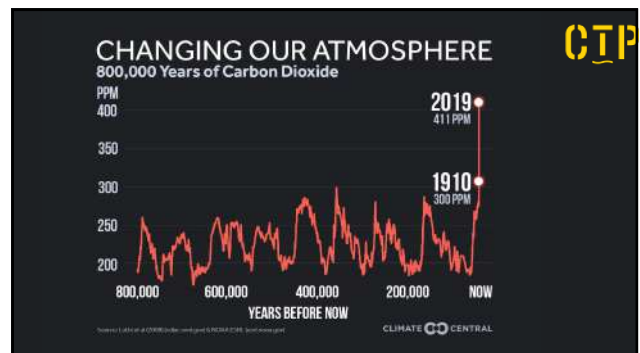
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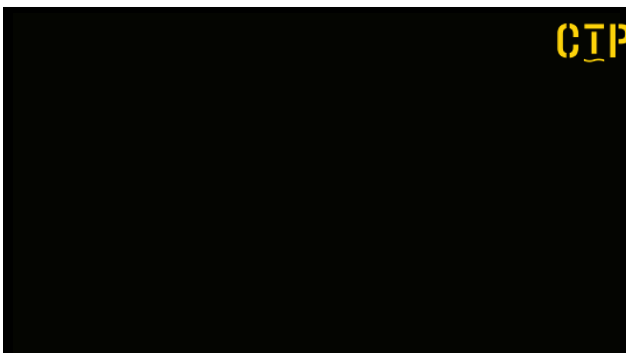
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CTP



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CTP

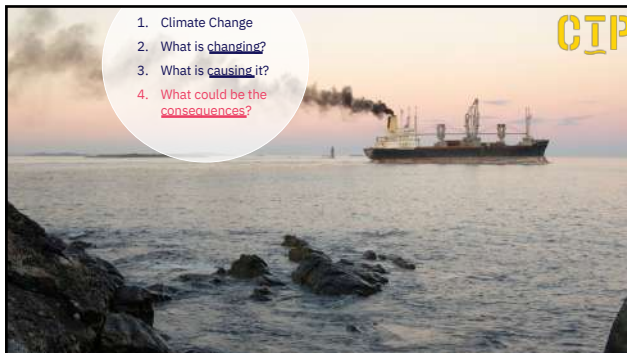


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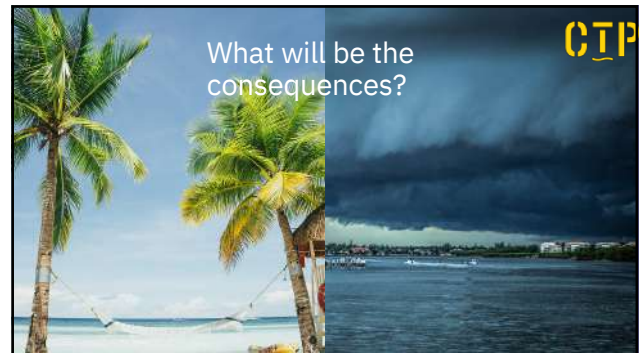
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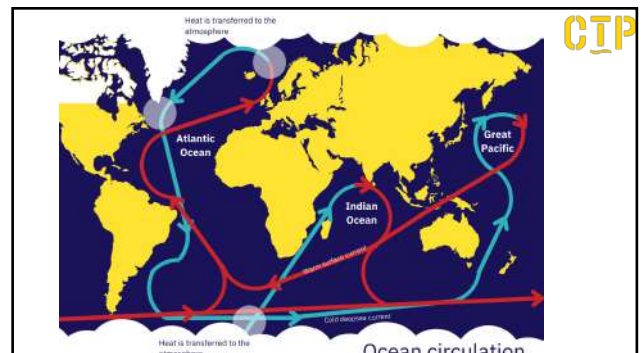
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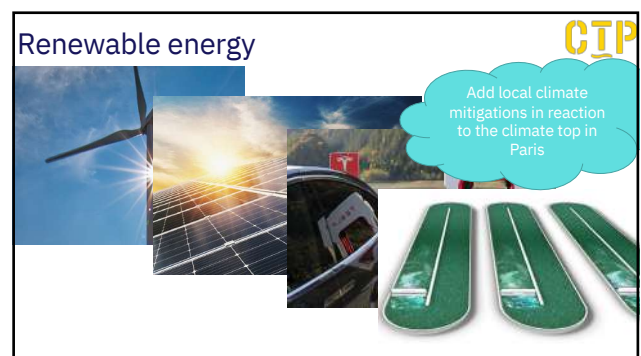
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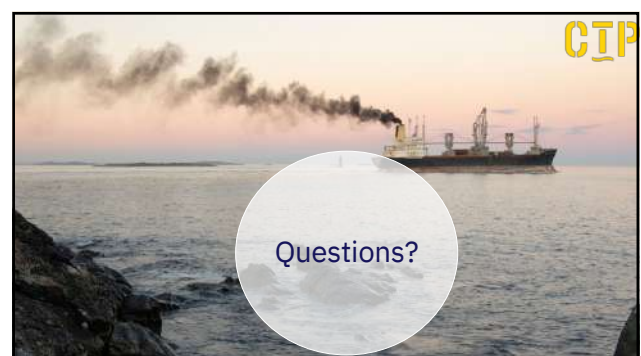
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Attachment 2h - Fisheries economy

08-12-2021



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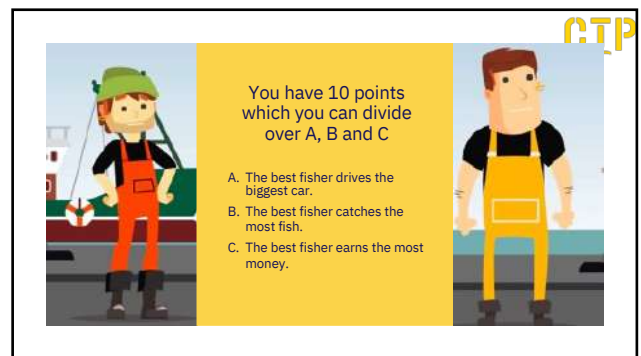
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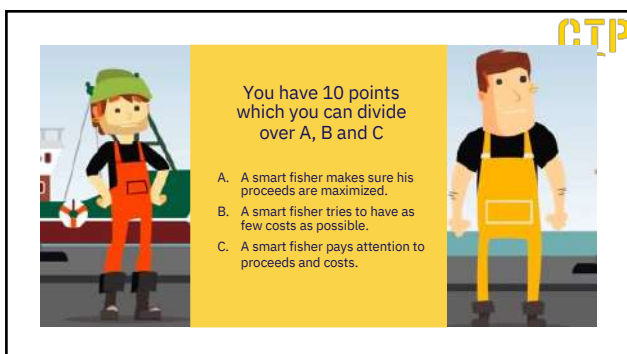
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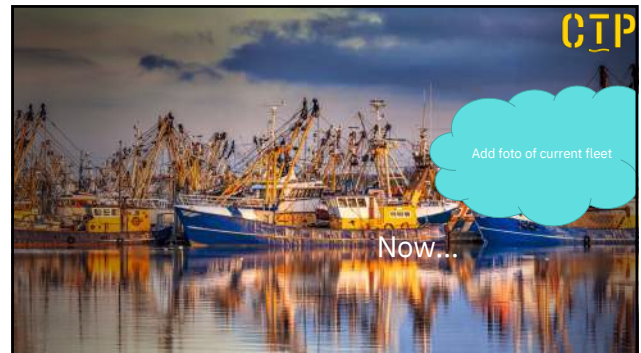
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CTP



Size of the fleet

1. On average people in ... consume ... kg of seafood per year
There are ... people in ...

How much seafood do we need to catch every year?.....

2. Do we catch enough?
How much seafood is caught per year?.....



19

CTP

Landings in kg tonnes per year

- Add a graph with the landings per year

20

CTP

Who is consuming the seafood? What are the numbers of export?

21

CTP

Economics of fishing

- ❖ Who is the best fisher?
- ❖ Fleet size and economics
- ❖ Income and costs
- ❖ Supply chain



22

CTP

Overview income total fisheries

Year	2003	2004	2005	2006
Total ships	374	367	341	346
Total income (mil)	262	241	240	
Total costs (mil)	265	247	251	25
Total revenue (mil)	-3	-6	-11	

Fill table with local information


Year	2010	2011	2012	2013	2014	2015	2016
Total ships	297	279	278	278	280	279	280
Total income (mil)	218	204	233	234	234	249	318
Total costs (mil)	211	208	219	221	206	208	238
Total revenue (mil)	7	-4	14	13	28	41	80

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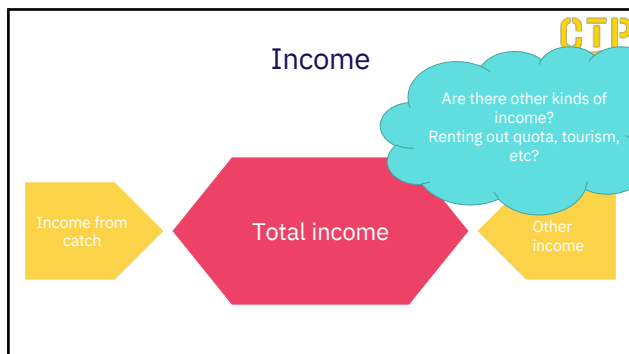
CTP

Income and cost

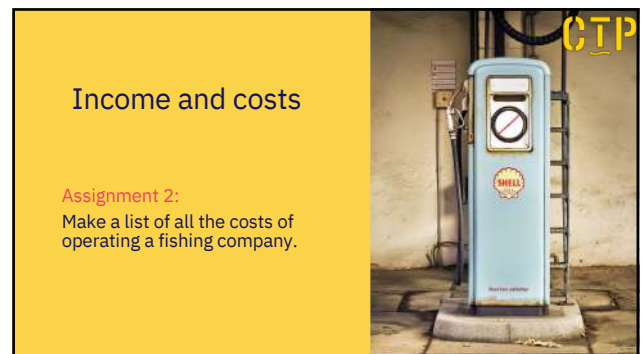
Assignment 1:
Make a list of all proceeds of a fishing company. How do you earn money?



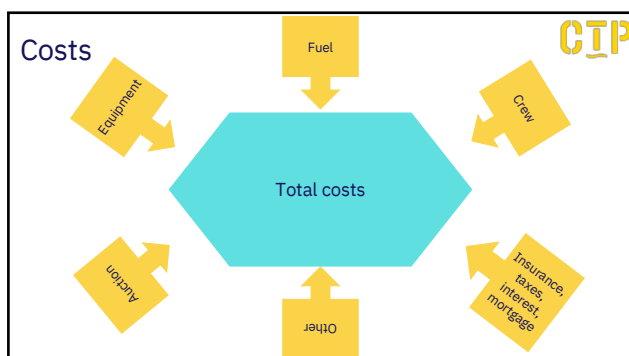
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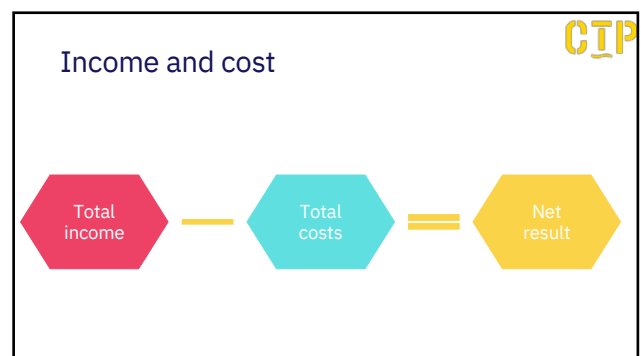
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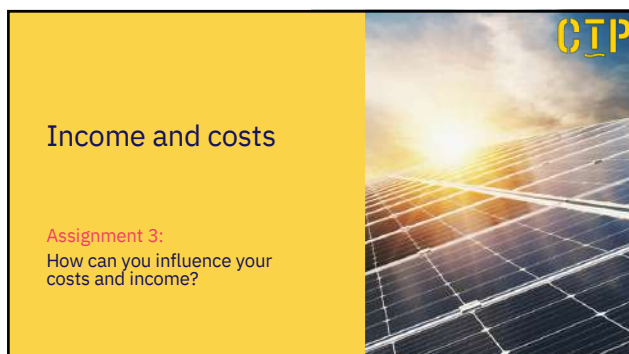
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[illegible]

30

Economics of fishing


- ❖ Who is the best fisher?
- ❖ Fleet size and economics
- ❖ Income and costs
- ❖ Supply chain



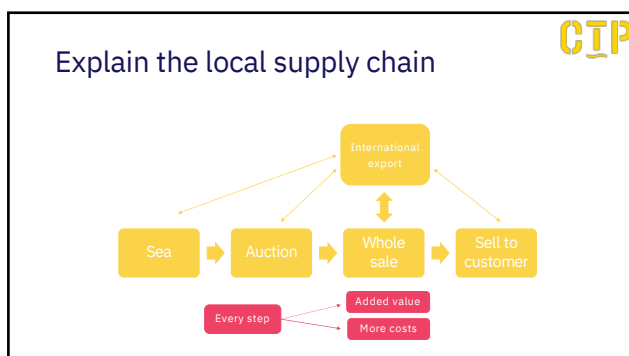
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Questions to think about:

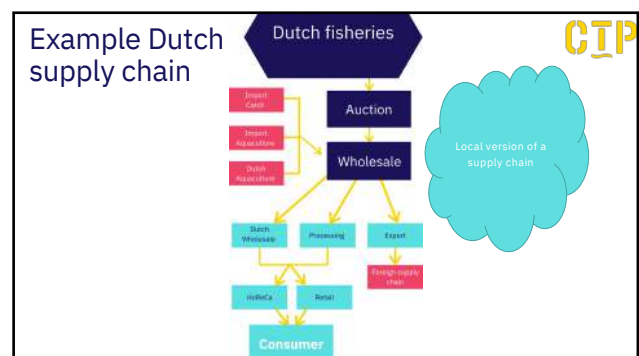
Which way must the fish 'swim' to get to the consumer?



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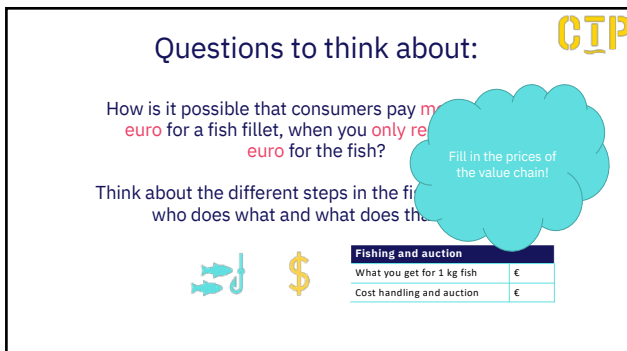
Questions to think about:

How is it possible that consumers pay **m** euro for a fish fillet, when you **only** re euro for the fish?

Think about the different steps in the fish supply chain: who does what and what does the fish do?

Fill in the prices of the value chain!

Fishing and auction	
What you get for 1 kg fish	€
Cost handling and auction	€

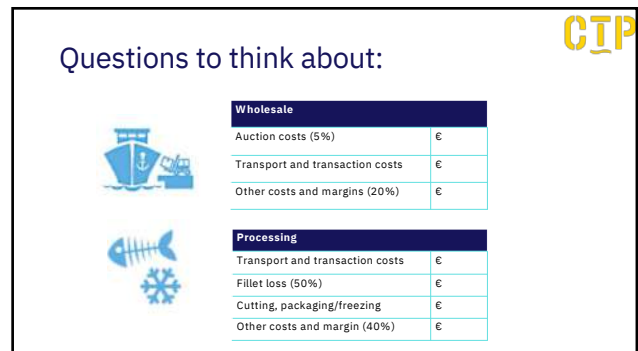


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Questions to think about:

Wholesale	
Auction costs (5%)	€
Transport and transaction costs	€
Other costs and margins (20%)	€

Processing	
Transport and transaction costs	€
Fillet loss (50%)	€
Cutting, packaging/freezing	€
Other costs and margin (40%)	€



36

Questions to think about:



Retail	
Cost shop and margin (50%)	€
Value Added Tax (VAT) – 6%	€



Consumer	
Price in store - per kg	€
Price in store - per 100 gram	€

CTP

37

Opportunities to improve profit

- ❖ Create a new product
- ❖ Find new consumers
- ❖ Shorten the chain



CTP

38

Create a new product



Mussels a la minute



Fresh fish box

Are there examples of fish products with a different role?

CTP

39

Find new consumers



Gluten free battered fish



Traditional herring → mainly elderly
Herring in Poké bowl → new product for millennials

Are there examples of fish products with new market/consumer?

CTP

40

Examples of a shorter chain



Local lobster with recipe and wine



Shrimp processed in NL instead of Morocco → less preservatives

Are there examples of a shorter chain?

CTP

41



Twelve years ago, I started my own business, De Jonkman.

42

Group assignment

CTP

1. Choose a fish product (like plaice, sole, mussel, shrimp).
2. Describe how you would like to create extra value for your product in the value chain.
3. Describe the value chain for your product.
4. How does your plan to create extra value influence the 3 P's (People, Planet, Profit)?
5. Who/which partners do you need to execute this plan?
6. Do you think your plan is realistic?

43

As a fishing entrepreneur you can do more than you think!



44



1



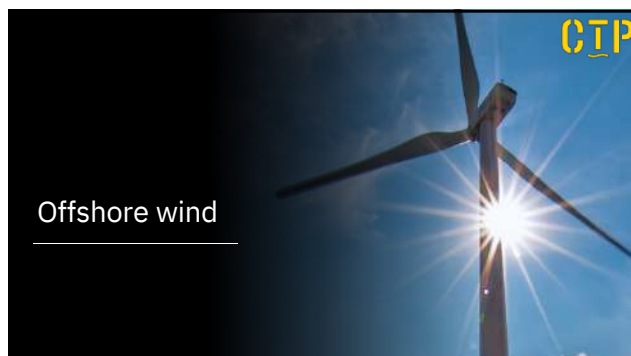
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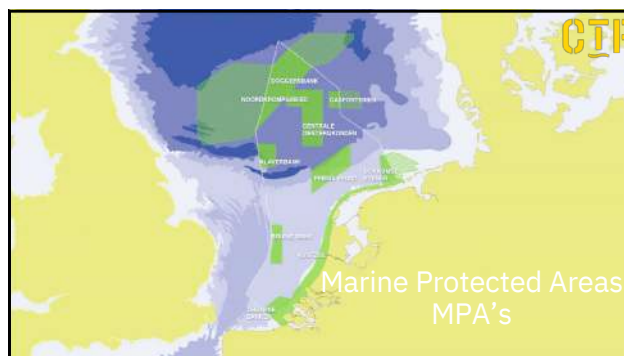
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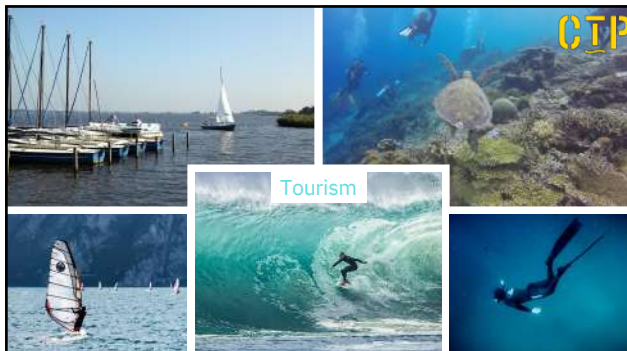
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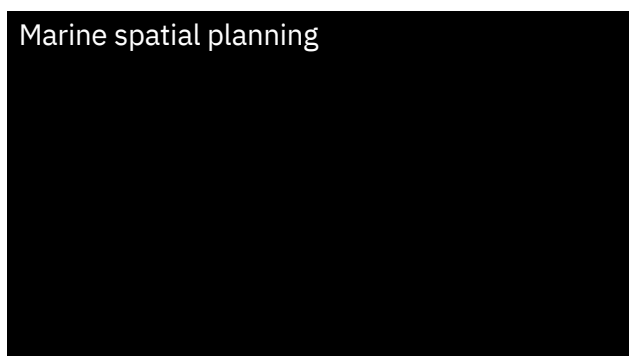
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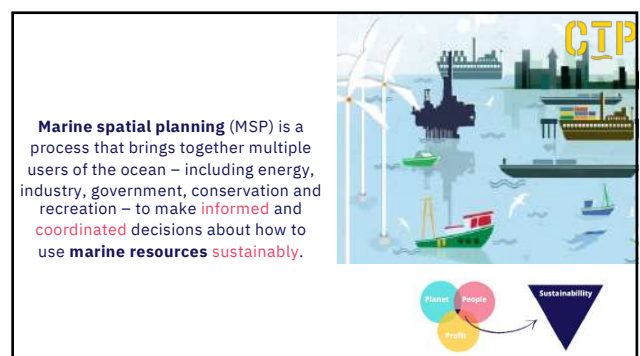
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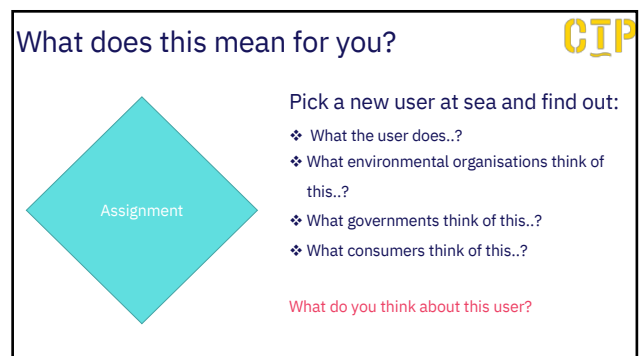
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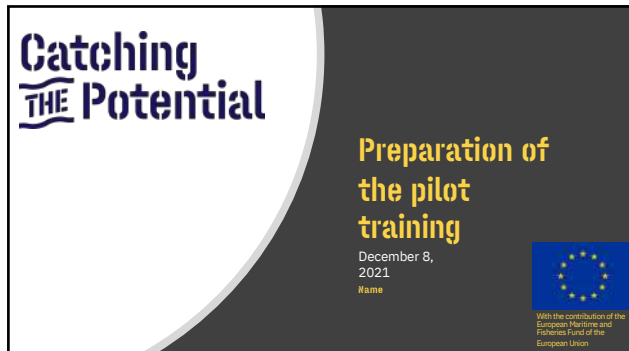
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Attachment 3 - Preparation of the pilot training

08-12-2021




1




Agenda

- What has happened so far?
- Procedure development pilot(s)
- Starting point – training principles and content
- Country specifics
- Customize content
- Practical issues/timeline
- Summary actions



2



What has happened in CTP so far?

- Setup project administration (WP1) and communication (WP7)
- Report on existing regulations (WP2)
- Report on existing best practices (WP2)
- Online meeting with pilot country partners (WP3)

and

- Quick scan in every pilot country (WP4)


3



Procedure development pilots

- ProSea shares package of content (as a starting point), based on:
 - ProSea course 'Fishing with a Future'
 - List of relevant regulations from WP2
 - Best practices from WP2
- Partner shares existing practice and experiences in pilot country
- Develop country specific pilot training
 - Use existing content when possible
 - Customize content when needed

4




Starting point - training principles

Pilot training is:

- Based on the Triple P concept of sustainable development – People, Planet, Profit
- Uses best available knowledge
- Balances content and participation
- Adjusted to regional/local circumstances
- Challenges participants, but does not blame
- Conducted in the fisher's language
- Invites fisher's to share their ideas and opinions

5



Starting point - course content

Introduction Sustainable Fisheries

People P	Planet P	Profit P
<ul style="list-style-type: none">- Acceptance by society- Communication skills- Social aspects of fishing	<ul style="list-style-type: none">- Marine Environment, seas and oceans- Marine ecology- Regional/local area- Fisheries management- Environmental challenges	<ul style="list-style-type: none">- The fishing sector- Fishing as a business (making money)- Supply chain and market- Economy and sustainability

Futuring - what does this mean for me?

6

Introduction Sustainable Fisheries

Sustainable Development
Three P's – People, Planet, Profit

Sustainable development
"Meeting the needs of the present without compromising the ability of future generations to meet their own needs" (WCED 1987)

Sustainable development is...
 People: acceptance by society
 Planet: preservation environmental quality
 Profit: profitability companies

Our influence on the planet has changed...

7

Introduction Sustainable Fisheries

The world is changing
The profession of fisher is changing ...

Fishing has changed
Different knowledge and skills are needed!

Fishing is on the move
Increased cooperation and knowledge exchange

Fishing is on the move
 • Lower emissions and innovations in gear
 • Cruise control
 • Innovations in nets
 • Lighter gear
 • Sunlight
 • Flywheel
 • Diesel electric engine
 • Accurate data collection

New "Culture of Expert"
 • Oceanographer
 • Economist
 • Biologist
 • Engineer
 • Fisherman
 • Policy maker
 • Environmentalist
 • Social scientist
 • Technologist

8

Introduction Sustainable Fisheries

Toward sustainable Fisheries
Competences needed

The road to sustainability
 Regulators
 Innovation and entrepreneurship
 Competent people

Different people contribute to sustainable fishing
 • Fishers
 • Traders
 • Governments
 • NGOs
 • Scientists
 • Technologists
 (All need to have sufficient knowledge and competence!)

This course
 Fishing with a Future
 • Awareness
 • Lectures
 • Workshops
 • Conferences
 • Guest speakers
 (The fish sector improved the lives of people and the planet)

9

Introduction Sustainable Fisheries

People P
 - Acceptance by society
 - Communication skills
 - Social aspects of fishing

Planet P
 - Marine Environment, seas and oceans
 - Marine ecology
 - Regional/local area
 - Fisheries management
 - Environmental challenges

Profit P
 - The fishing sector
 - Fishing as a business (making money)
 - Supply chain and market
 - Economy and sustainability

Futuring - what does this mean for me?

10

Planet P: Marine environment

Importance of the oceans

- Food
- 80% world trade
- Oil (30%) and gas (50%)
- > 50% oxygen...
- Climate

11

Planet P: Marine ecology

Phytoplankton
Photosynthesis
Food chain & pyramid

Phytoplankton
 Microalgae
 Produce food
 Base of the food chain
 Produce oxygen

Photosynthesis
 1. Capturing solar energy (CO₂ and H₂O)
 2. Building proteins, enzymes and fats. Using glucose and other nutrients (nitrate, phosphate, magnesium and iron)

Energy is passed on
 90% is used
 10% is passed on

12

Planet P: Fisheries Management

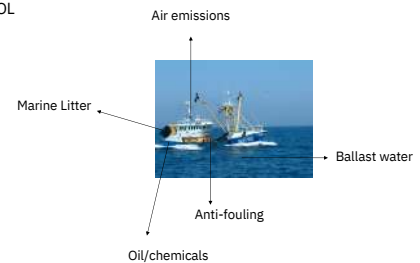
Fish stock assessment



19

Planet P: Environmental challenges

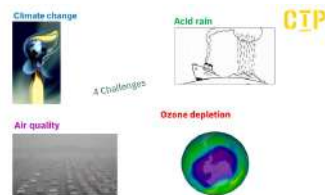
Overview/MARPOL



20

Planet P: Environmental challenges

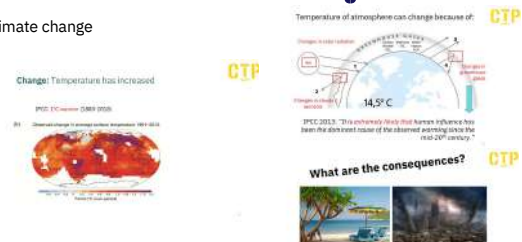
Air emissions



21

Planet P: Environmental challenges

Climate change



22

Planet P: Environmental challenges

Oil



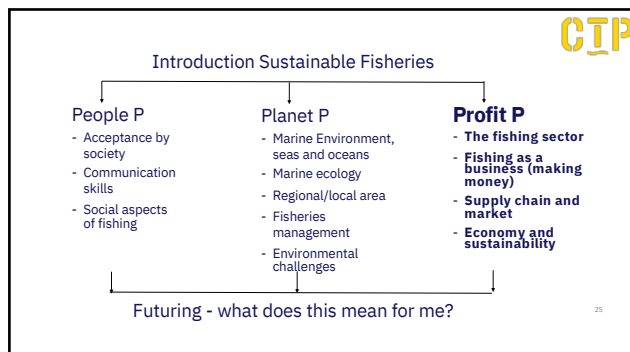
23

Planet P: Environmental challenges

Marine Litter



24



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CIP

Profit P: Economics of fishing

Who is the best fisherman?



26

26

CIP

Profit P: The fishing sector

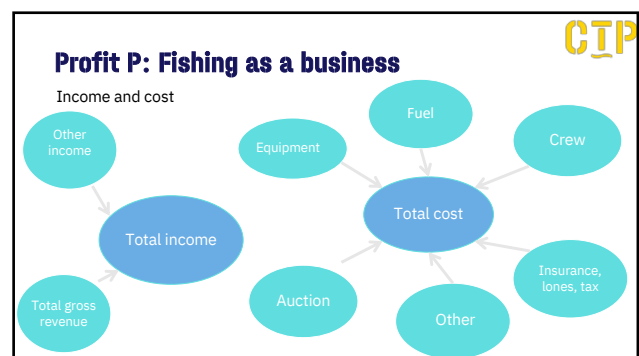
Our fishing fleet

- Vessels
- Target species
- History



27

27



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29

CIP

Profit P: Certification



30

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Pilot country specifics

CTP

- Hier de CTP partner de gelegenheid geven om te vertellen welke materialen ze hebben.

En

- Per land een samenvatting van quick scan

37

Customize content

CTP

- Which content is already available and can be used without changes?
 - Marine Environment
 - Environmental issues
 - ?
- Where do we need to add regional/local examples?
 - Intro sustainable fisheries
 - Acceptance by society/image/communication
 - ?
- Which subjects need to be fully changed/customized
 - Regional/local sea area
 - Fisheries Management
 - Economics of fishing
 - ?

38

Practical issues/timeline

CTP

- Type of training (e-learning / zoom / in-person / workshops / assignments / webinars...)
- Role CTP partners in development
- Involvement local network (fishing sector / auction / scientific institutes / NGO's?...)
- Translations
- Timeline/planning
- Budget
- Communication plan

39

Summary actions

CTP

- Samenvatting wie wat doet, met SMART afspraken

40



1



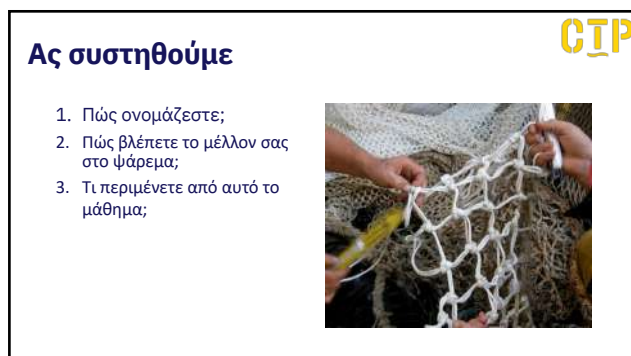
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Βιωσιμότητα;

Βιώσιμη Ανάπτυξη **Βιώσιμη Αλιεία**

Στόχοι Βιώσιμης Ανάπτυξης




18

Τι ακριβώς είναι η βιωσιμότητα/βιώσιμη αλιεία;

Ποιο είναι το πρώτο πράγμα που έρχεται στο μυαλό σας;

Γράψτε την απάντησή σας σε ένα χαρτί



19

Βιώσιμη Ανάπτυξη

“Καλύπτουμε τις ανάγκες του παρόντος χωρίς να θέτουμε σε κίνδυνο την ικανότητα των μελλοντικών γενεών να καλύψουν τις δικές τους ανάγκες” (WCED 1987)




20

Υπόβαθρο αειφόρου ανάπτυξης

Η ανθρωπότητα έχει αλλάξει

- ❖ Τεχνολογία
- ❖ Γνώση
- ❖ Παγκόσμια Αγορά
- ❖ Χρήση Ενέργειας
- ❖ Χρήση Πόρων



21


Έχουμε γίνει ισχυροί και μπορούμε πλέον να αλλάξουμε τον κόσμο όταν θέλουμε



22

..Παρόλα αυτά, αλλάζουμε τον κόσμο και όταν δεν το θέλουμε

- Ευτροφισμός
- Τρύπα του όζοντος
- Εξαφάνιση ειδών
- Κλιματική αλλαγή
- Εισβολικά είδη
- Λίμνες σκουπιδιών



23



24

Περισσότεροι άνθρωποι, περισσότερη τεχνολογία και γνώση, που λειτουργούν παγκοσμίως

Η επιρροή μας στον πλανήτη έχει αλλάξει

25



26

Βιώσιμη Ανάπτυξη

Σημάδια ότι η γη είναι εκτός ισορροπίας, η ανάκτηση είναι πιο δύσκολη και πιο αργή. Οι πολιτικές και οικονομικές διαδικασίες είναι βραχυπρόθεσμες

YOU CAN'T BUILD A LONG TERM FUTURE ON SHORT TERM THINKING.

- Ανάγκη να δράσουμε τώρα!
- Ανάγκη για μακροπρόθεσμη σκέψη!

27

Η βιώσιμη ανάπτυξη είναι..

Άνθρωποι: αποδοχή από την κοινωνία	4	6
Πλανήτη: διατήρηση της ποιότητας του περιβάλλοντος	4	6
Κέρδος: Εταιρείες κερδοφορίας	9	8

Μη βιώσιμο **Βιώσιμο**

28

Ο δρόμος προς τη βιωσιμότητα

Κανονισμοί

Καινοτομία και διαδικασίες

Ικανοί άνθρωποι

29

Διαφορετικοί άνθρωποι συμβάλλουν στη βιώσιμη αλιεία

❖ Αλιείς
❖ Έμποροι
❖ Κυβερνήσεις
❖ ΜΚΟ
❖ Επιστήμονες
❖ Τεχνικοί



Όλοι πρέπει να διαθέτουν επαρκείς γνώσεις και ικανότητες !!

30

Το μάθημα αυτό..

Ψαρεύοντας με μέλλον

- ❖ Εργασίες
- ❖ Διαλέξεις
- ❖ Εργαστήρια
- ❖ Εκδρομές
- ❖ Επισκέπτες
- Ομιλητές



... θα σας προετοιμάσει για ένα καλύτερο μέλλον ως αλιείς!

31

Πρόγραμμα Μαθήματος

Ενσωμάτωση προγράμματος μαθημάτων



32

Σύντομο διάλειμμα



33

Άσκηση- Η γνώμη σας

- Χωριστείτε σε ομάδες
- Φτιάξτε μία λίστα με τις σημαντικότερες προκλήσεις στη βιώσιμη αλιεία. Πόσο επείγουσες είναι; Γιατί;
❖ Ορίστε έναν υπεύθυνο συζήτησης και έναν παρουσιαστή
❖ Συζητήστε τις προκλήσεις (15')
❖ Καταγράψτε τις 5 πιο σημαντικές (10')
- Συζήτηση με όλες τις ομάδες
❖ Παρουσίαση αποτελεσμάτων (20')

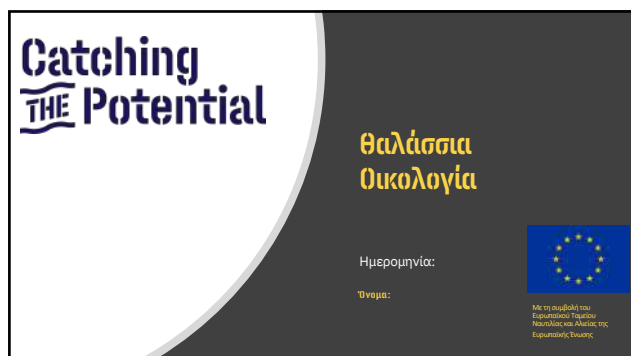
Σειρά Προτεραιότητας	Πρόκληση	Γιατί είναι προτεραιότητα;
1		
2		
3		
4		
5		

34

Άσκηση: Η γνώμη σας

Σειρά Προτεραιότητας	Πρόκληση	Γιατί είναι προτεραιότητα;
1		
2		
3		
4		
5		

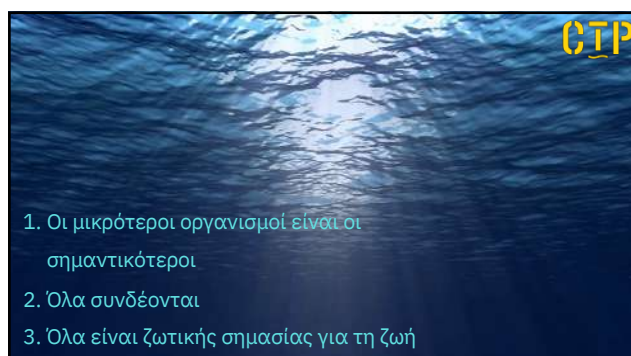
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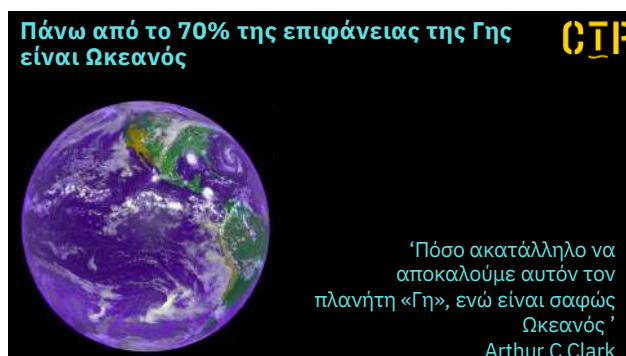
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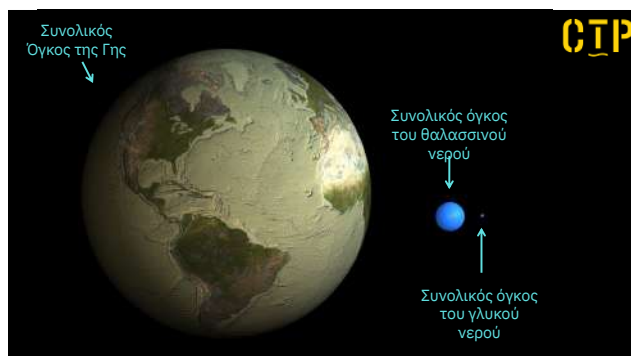
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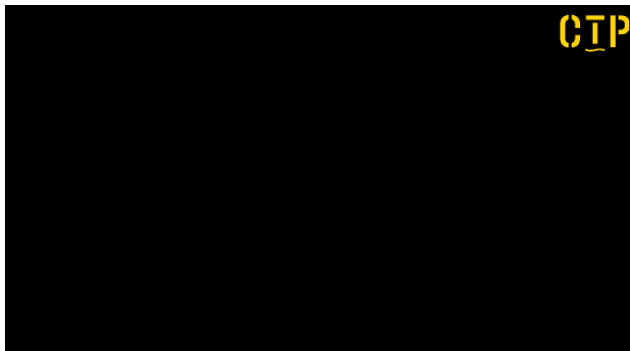
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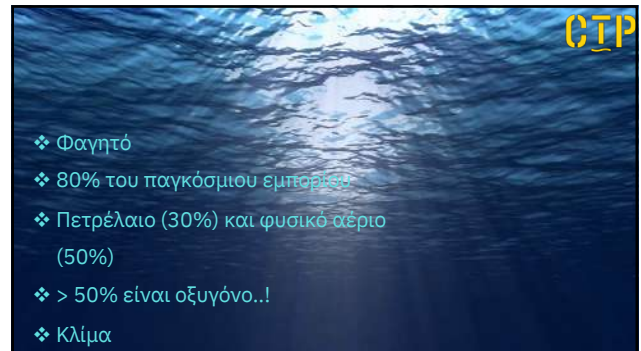
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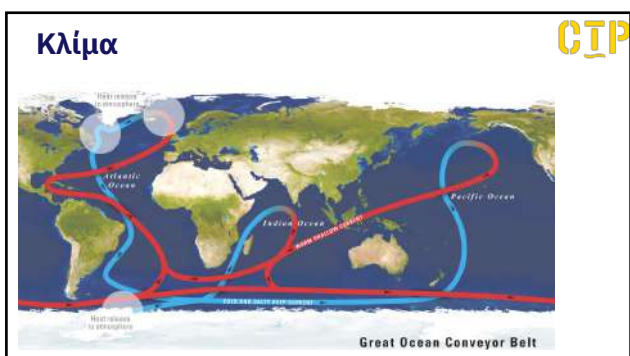
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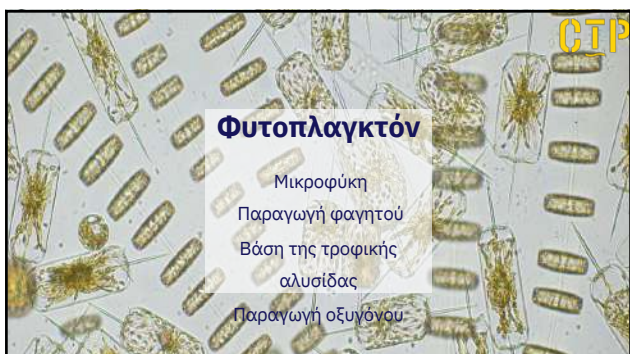
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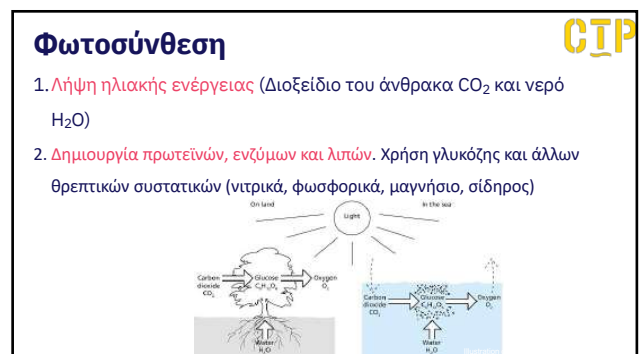
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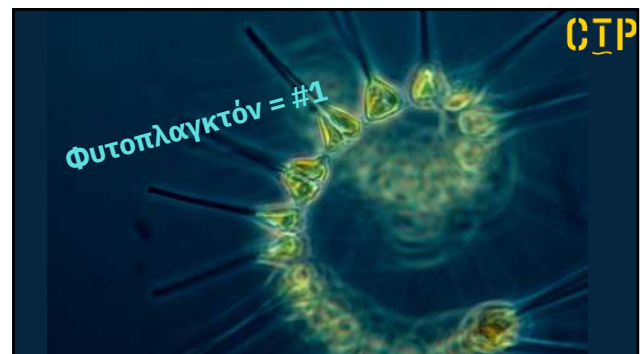
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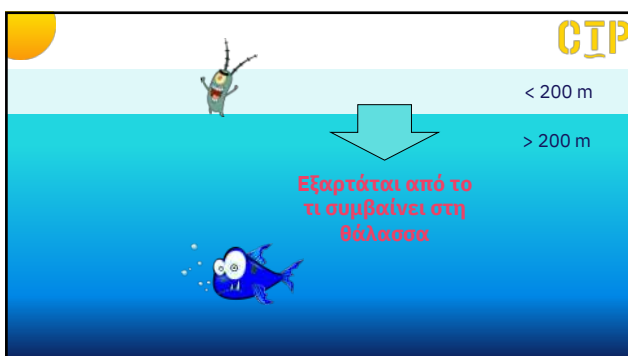
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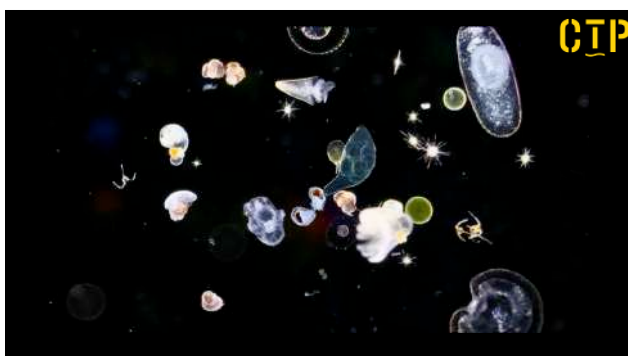
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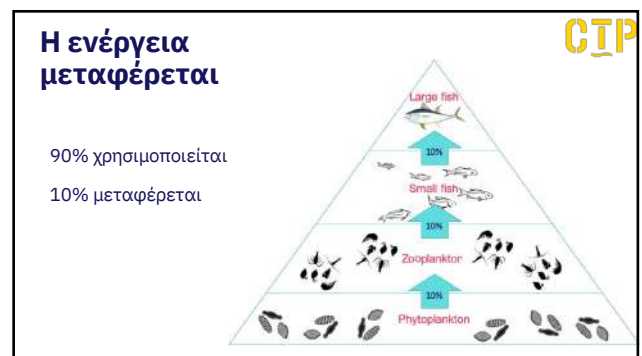
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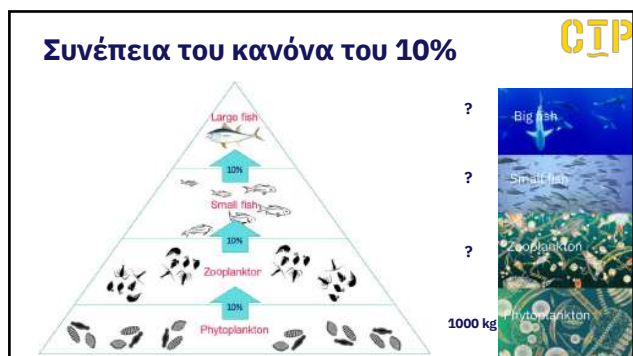
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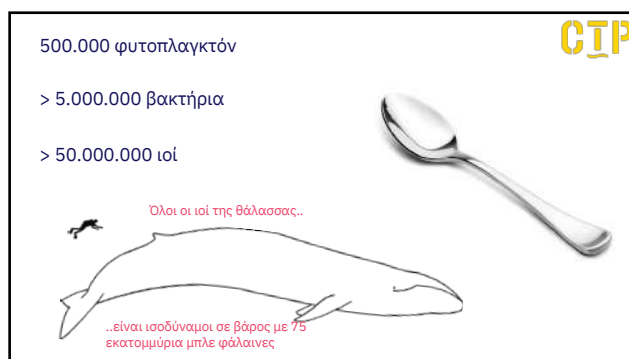
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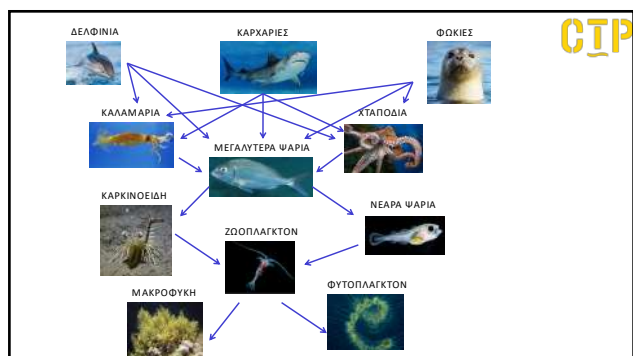
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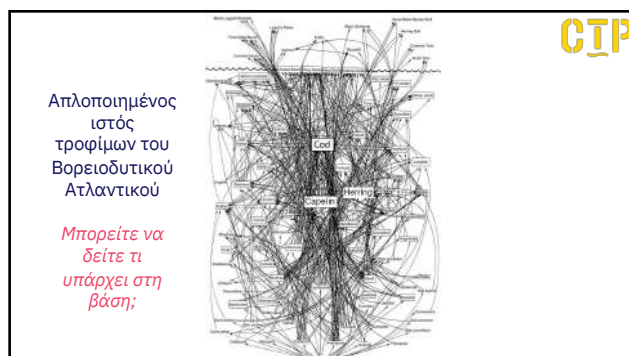
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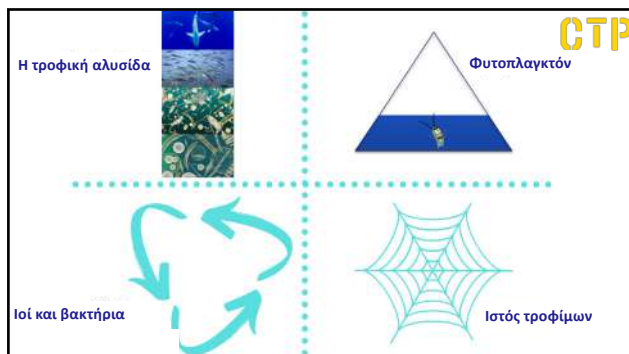
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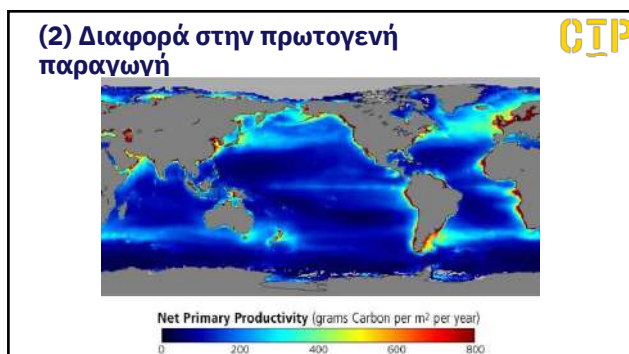
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«Ανοδικές» περιοχές

CTP

- Εξαιρετικά άφθονες σε φαγητό
- Εξαιρετικά κοντές τροφικές αλυσίδες

34

Κανονισμοί

CTP

Ακτές

- πολλά θρεπτικά συστατικά
- μεγάλο φυτοπλαγκτόν
- υψηλή πρωτογενής παραγωγή
- κοντές αλυσίδες τροφίμων

35

1. Σημασία
2. Οικολογία
3. Ακτές & Ωκεανοί
4. Οικοσυστήματα

CTP

36

Οικοσύστημα

CTP

Αβιοτικοί παράγοντες ↔ Βιοτικοί παράγοντες

Μία περιοχή

37

Ενδιάμεσες περιοχές

CTP

Αμμώδεις παραλίες

Παλιρροιακές ζώνες

Κέλπιες

Βραχώδεις παραλίες

Μαγκρόβια φυτά

Θαλάσσια φυτά

Βραχώδεις ακτές

Κοραλλιογενείς ύφαλοι

Βαθιά θάλασσα

Παλιρροιακές περιοχές

Υποβρύχιες θαλάσσιες περιοχές

38

Βαθιά θάλασσα

CTP

Καθόλου φως

Κρύο

Υψηλή πίεση

Έλλειψη φαγητού

39



CTP

40



CTP

Οι οργανισμοί προσαρμόζονται με ποικίλους
τρόπους
Αναπτύσσονται αργά
Ζούνε πολλά χρόνια

41



CTP

42



CTP

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CTP

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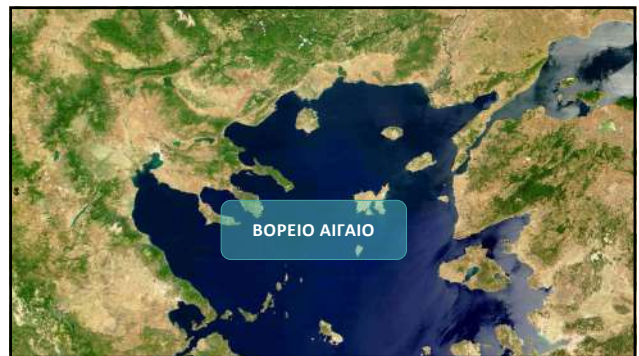
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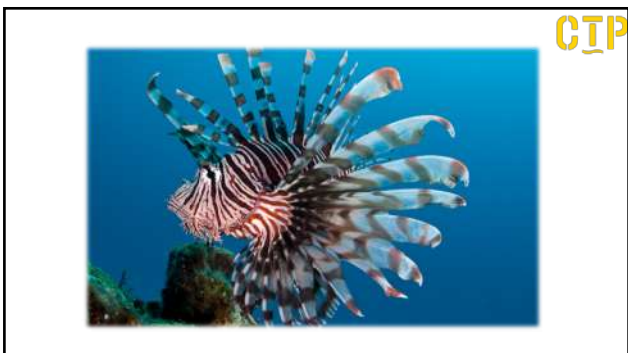
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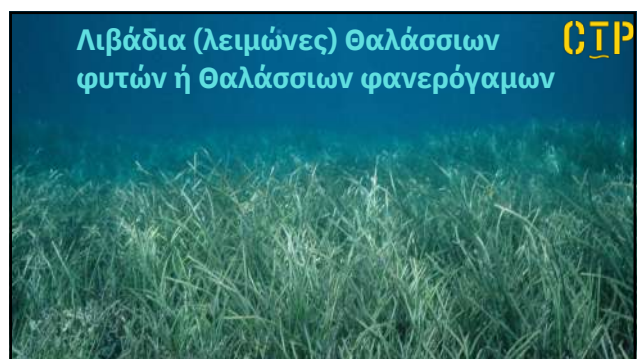
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Κοραλλιογενείς ύφαλοι CTP

- ❖ Τα κοράλλια είναι ζώα (πολύποδες)
- ❖ Ζουν μαζί με φύκια
- ❖ Αναπτύσσονται αργά
- ❖ Κατασκευάζουν μεγάλους ασβεστολιθικούς υφάλους




67



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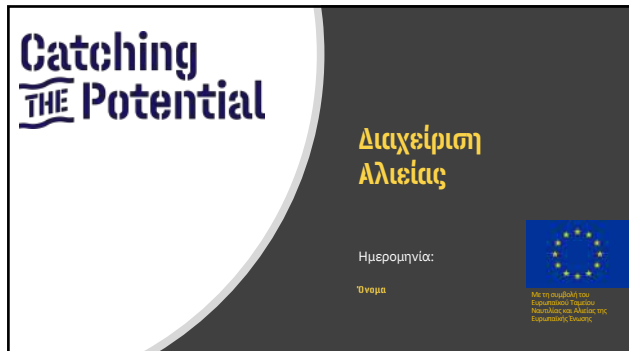
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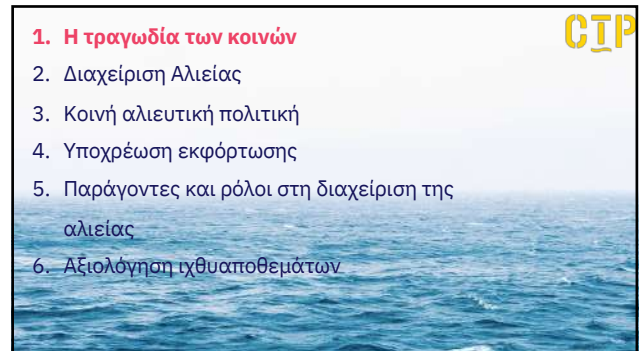
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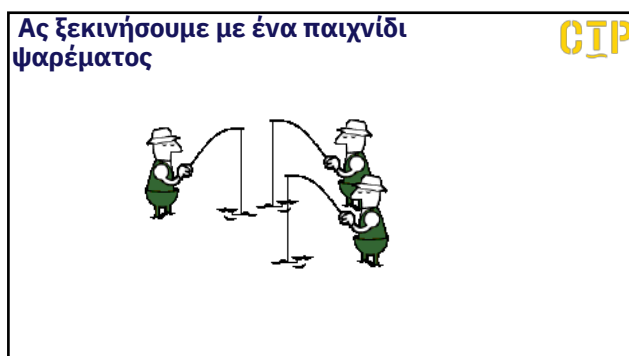
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1



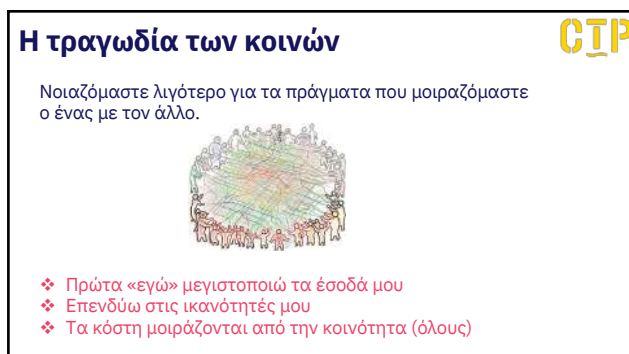
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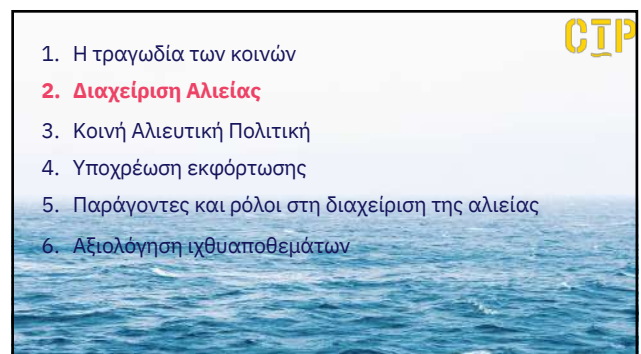
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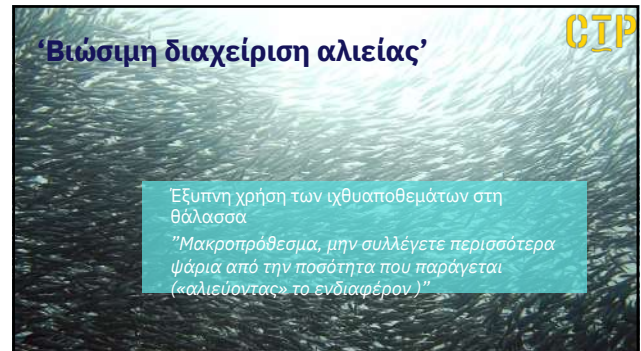
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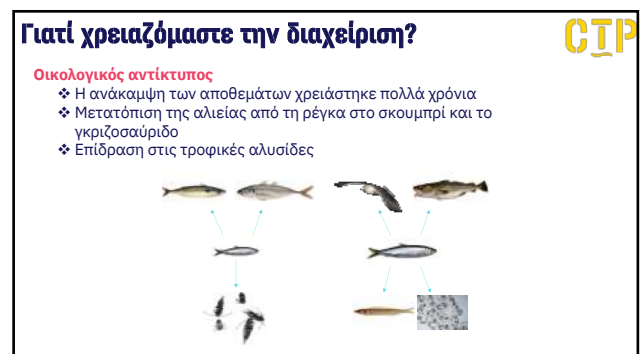
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Γιατί χρειαζόμαστε την διαχείριση?

CIP

Κοινωνικός αντίκτυπος

- ❖ Ανεργία
- ❖ Απώλεια ταυτότητας αλιευτικών κοινοτήτων
- ❖ Αλλαγή στις καταναλωτικές συνήθειες
- ❖ Απώλεια παραδόσεων



13

Τι πρέπει να κάνουμε;

CIP

- ❖ Κανονισμοί
- ❖ Συνεργασία
- ❖ Μακροπρόθεσμο όραμα

Σε πολλά και διαφορετικά επίπεδα



14

Διεθνείς συμφωνίες

CIP



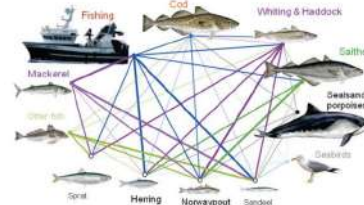
- ❖ Μέγιστη βιώσιμη απόδοση
- ❖ Προσέγγιση οικοσυστήματος
- ❖ Βιοποικιλότητα
- ❖ Οδηγίες UN / FAO (για παράδειγμα: αποτροπή παράπλευρης αλιείας καρχαριών, πουλιών)

15

Τι σημαίνει η προσέγγιση του οικοσυστήματος?

CIP

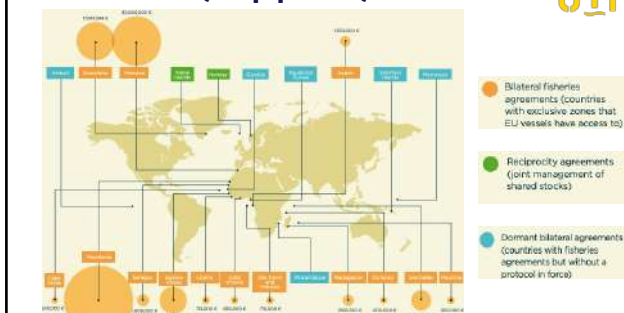
1. Λαμβάνει υπόψη τους βιοτόπους και όλα τα είδη
2. Επικεντρώνεται σε όλο το σύστημα, όχι σε ξεχωριστά είδη



16

Διεθνείς συμφωνίες ΕΕ

CIP



17

Ποιος διαχειρίζεται τα αποθέματα ψαριών στη Μεσόγειο θάλασσα?

Σε ποιόν ανήκουν τα ψάρια στη Μεσόγειο θάλασσα?



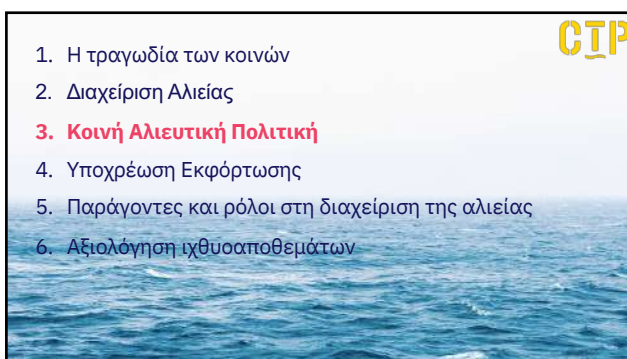
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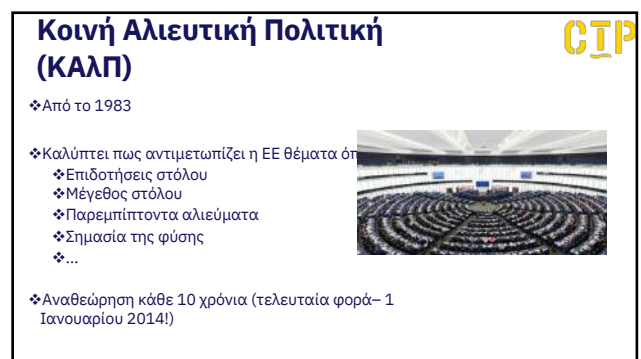
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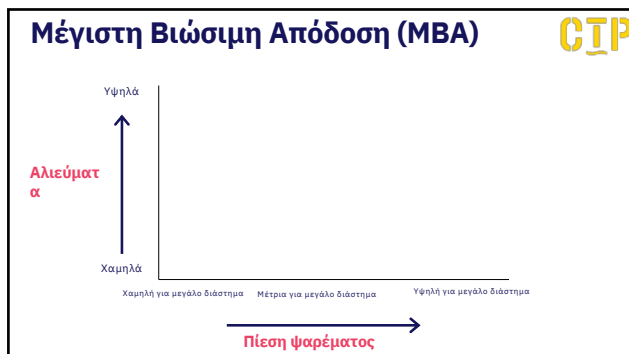
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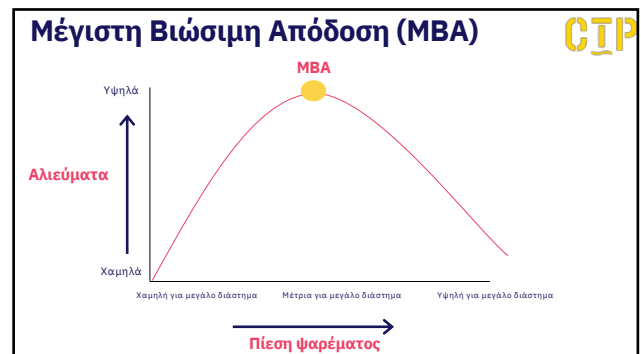
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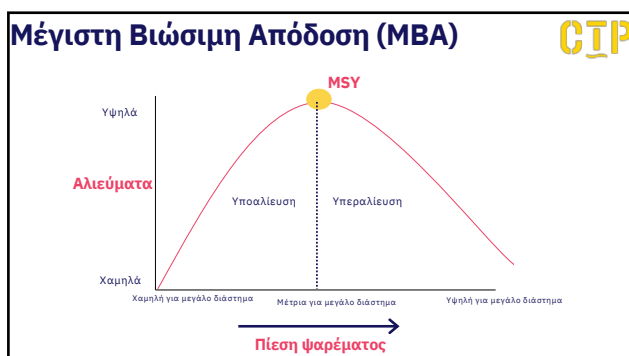
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Στόχοι ΚΑΛΠ

Συλλέξτε όσα περισσότερα ψάρια μπορείτε με υπεύθυνο τρόπο (μέγιστη βιώσιμη απόδοση)

- ❖ Βάση για έναν **κερδοφόρο** αλιευτικό κλάδο
- ❖ **Δίκαιη** κατανομή των αλιευτικών δικαιωμάτων
- ❖ **Σταματήστε** την πρακτική της απόρριψης, της ρίψης πίσω στη θάλασσα των ανεπιθύμητων παρεμπιπτόντων αλιευμάτων

28

Αν ήσασταν ο διαχειριστής....

- ❖ Μπορείτε να αναφέρετε μέτρα που χρησιμοποιούνται για τη διαχείριση της αλιείας;
 - ❖ Προσπαθήστε να σκεφτείτε 3 μέτρα
- ❖ Τι πιστεύετε για τα τρέχοντα μέτρα;
 - ❖ Ποια σας αρέσουν/ δεν σας αρέσουν
- ❖ Τι θα κάνετε διαφορετικά ως διαχειριστής;
 - ❖ Αναφέρατε τρεις τρόπους αποφυγής της υπεραλίευσης, διατηρώντας παράλληλα τα αποθέματα των ψαριών σε υγιή επίπεδα

29

Πώς πετυχαίνονται οι στόχοι;

- ❖ **Ποσότητα αλιευμάτων** – 'πόσα ψάρια ψαρεύονται'
 - ❖ Ποσοστάσεις
- ❖ **Αλιευτική προσπάθεια** – 'Πόσο ψάρεμα χρειάζεται'
 - ❖ Αριθμός σκαφών
 - ❖ Ιπποδύναμη μηχανών
 - ❖ Μέρες στη θάλασσα
- ❖ **Επιλεκτικότητα** – Μείωση του ψαρέματος νεαρών ψαριών/ανεπιθύμητων παρεμπιπτόντων αλιευμάτων
 - ❖ Ελάχιστο μέγεθος ματιών δίχτυων
 - ❖ (Προσωρινό) κλείσιμο των αλιευτικών περιοχών
- ❖ **Απόρριψη**
 - ❖ Σταδιακή ενασχόληση της υποναρρωπικής εκκώρυτσης

30

Σύνοψη

Τί είναι η βιώσιμη διαχείριση; **CTP**

Γιατί είναι σημαντική;

Πώς θα φτάσουμε

31

CTP

1. Η τραγωδία των κοινών
2. Διαχείριση Αλιείας
3. Κοινή Αλιευτική Πολιτική
4. Υποχρέωση Εκφόρτωσης
5. Παράγοντες και ρόλοι στη διαχείριση της αλιείας
6. Αξιολόγηση ιχθυοαποθεμάτων

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Ας ξεκινήσουμε με το μέγεθος των ματιών στα δίκτυα

CTP

33

ΠΑΡΑΔΕΙΓΜΑΤΑ ΕΛΑΧΙΣΤΩΝ ΕΠΙΤΡΕΠΤΩΝ ΜΕΓΕΘΩΝ

CTP

Ονομασία	Ελάχιστο επιτρεπτό μέγεθος
Λαβράκι	25
Σπάρδος	12
Γαύρος	9
Ροφός	45
Μουρμούρα	20
Μπακαλιάρος	20
Μπαρμπούνι	11
Κέφαλος	16
Γλώσσα	20
Τσιπούρα	20
Φαγγρί	18
Γαρίδα	20

Η αλιεία οργανισμών μεγαλύτερων από το ελάχιστο επιτρεπτό μέγεθος καθορίζεται εν μέρει και από το άνοιγμα ματιού του δικτυού που χρησιμοποιείται.

34

Ας πάρουμε ως παράδειγμα το μπαρμπούνι...!

CTP

- >Ελάχιστο επιτρεπτό μέγεθος αλιείας: 11 εκ.
- >Μήκος αναπαραγωγικής ωριμότητας: 16 εκ.
- >Τι θα συμβεί εάν αλιεύουμε μπαρμπούνια 11 εκατοστών;
- >Η βιώσιμη αλίευση είναι στο χέρι μας

35

ΜΙΚΡΑ ΠΕΛΑΓΙΚΑ ΕΙΔΗ

CTP

ΕΙΔΟΣ	ΚΩΔΙΚΟΣ	ΠΑΡΑΓΩΓΗ (κιλό)	ΑΠΟΡΡΙΨΕΙΣ (κιλό)	ΠΟΣΟΣΤΟ %
ΓΑΥΡΟΣ	ANE	21.298.447	1.478	0.007
ΣΑΦΡΙΔΙ	JAX	1.984.018	2.155	0.109
ΣΚΟΥΜΠΡΙ	MAC - MAS	2.771.109	163	0.006
ΣΑΡΔΕΛΑ	PIL	17.461.662	11.149	0.064

ΒΕΘΩΙΚΑ ΕΙΔΗ ΠΟΥ ΧΑΡΑΚΤΗΡΙΖΟΥΝ ΤΗΝ ΑΛΙΕΙΑ

ΕΙΔΟΣ	ΚΩΔΙΚΟΣ	ΠΑΡΑΓΩΓΗ (κιλό)	ΑΠΟΡΡΙΨΕΙΣ (κιλό)	ΠΟΣΟΣΤΟ %
ΜΠΑΚΑΛΙΑΡΟΣ	HKE	2.754.612	1.121	0.041
ΚΟΥΤΣΟΜΟΥΡΑ	MUT	1.434.395	3.937	0.274
ΚΟΚΚΙΝΗ ΓΑΡΙΔΑ	DPS	2.661.861	0	0.000

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Υποχρέωση εκφόρτωσης

CTP



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Σχετικά με τους κανόνες

CTP



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Σχετικά με τους κανόνες

CTP

Μέρος των αλιευμάτων	Εκφορτώνονται από
Υπομεγέθη είδη-στόχοι	1 ^η Ιανουαρίου 2016
Καβούρια, αστερίες, βένθος	Δεν εκφορτώνονται
Υπομεγέθη είδη με ποσόστωση	1 ^η Ιανουαρίου 2019
Προστατευόμενα είδη	Δεν εκφορτώνονται
Υπομεγέθη είδη χωρίς ποσόστωση	Δεν εκφορτώνονται

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Οι ψαράδες έχουν διαφορετική γνώμη από την κυβέρνηση

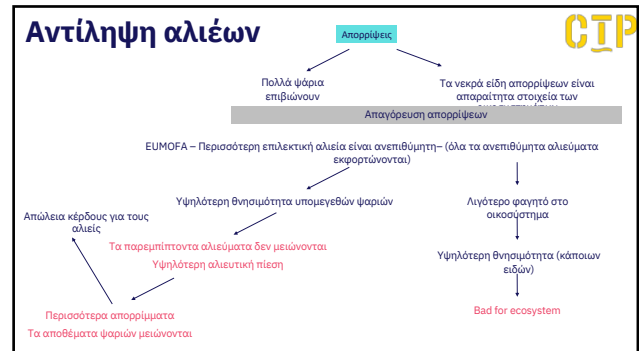
CTP



42



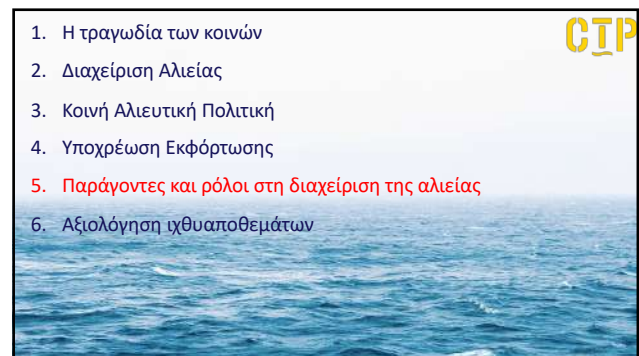
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Βίντεο-συνεργασία της επιστήμης

CTP

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Ευρωπαϊκή διαδικασία λήψης αποφάσεων

CTP



51

Αλιείς και περιβαλλοντικοί οργανισμοί προσφέρουν συμβουλές

CTP

Για παράδειγμα, μέσω των **Συμβουλευτικών Συμβουλών (ΣΣ)** since 2004



Βόρεια θάλασσα ΣΣ Φεβρουάριος 2020

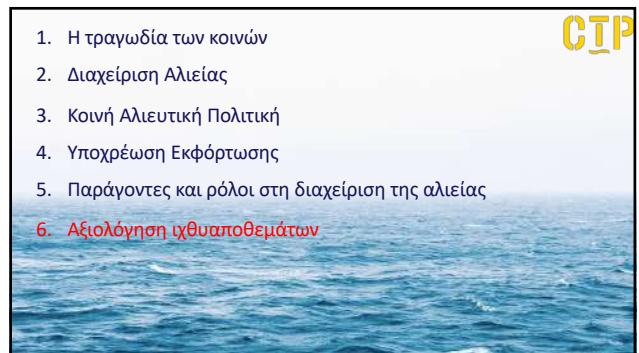


11 ΣΣ συνολικά

52



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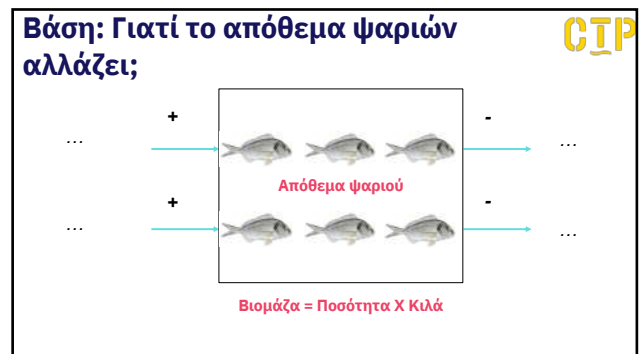
54

1. Η τραγωδία των κοινών
2. Διαχείριση Αλιείας
3. Κοινή Αλιευτική Πολιτική
4. Υποχρέωση Εκφόρτωσης
5. Παράγοντες και ρόλοι στη διαχείριση της αλιείας
6. Αξιολόγηση ιχθυαποθεμάτων

CTP



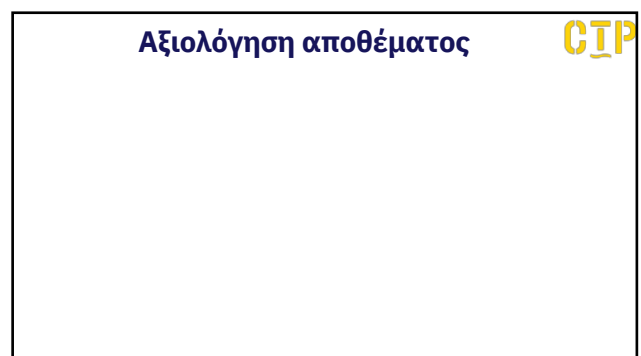
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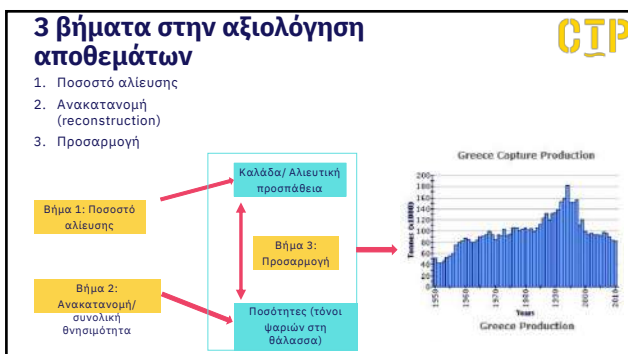
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Το ποσοστό αλίευσης είναι διαφορετικό

CIP

Η έρευνα είναι η ίδια κάθε χρόνο:

- ❖ Ίδια περιοχή
- ❖ Ίδια εποχή
- ❖ Ίδιος εξοπλισμός
- ❖ Ίδια αλιευτική πρακτική



Δεδομένα αλιείων:

- ❖ Δεν καλύπτουν ολόκληρη την περιοχή
- ❖ Οι αλιείς αλλάζουν αλιευτικές τεχνικές
- ❖ Οι αλιείς αλλάζουν την αλιευτική συμπεριφορά τους για διάφορους λόγους (ψάρια, έλλειψη ποσοστώσεων, υψηλότερες τιμές πετρελαίου)



67

Βήμα 2: Ανακατανομή (Reconstruction) ιχθυοαποθεμάτων

CIP

Προσθέτουμε τη θνησιμότητα των ψαριών → Μέγεθος αποθέματος ψαριών πριν από μερικά χρόνια



Αλιευτική θνησιμότητα

Φυσική θνησιμότητα

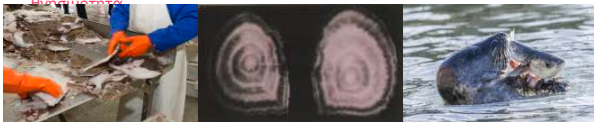
68

Χρειάζονται δεδομένα για να υπολογιστεί η θνησιμότητα

CIP

1. Συνολικά αλιεύματα από ολόκληρο τον αλιευτικό στόλο (για ένα συγκεκριμένο απόθεμα)
2. Μήκος και βάρος ανά ηλικιακή κατηγορία : από δείγματα ψαριών
3. Εκτίμηση φυσικής θνησιμότητας

➤ Ολική θνησιμότητα = Αλιευτική θνησιμότητα + Φυσική θνησιμότητα



1.

2.

3.

69

Εκφόρτωση (παράδειγμα, όχι πραγματικά δεδομένα)

CIP

Ηλικιακή κατηγορία	Έτος										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
0 ετών	0	0	0	0	0	0	0	0	0	0	0
1 έτους	10	30	15	10	30	20	25	15	20	15	20
2 ετών	30	20	70	90	20	90	40	35	40	30	65
3 ετών	50	40	60	80	20	40	65	60	85	75	65
4 ετών	20	5	20	30	40	30	45	30	35	50	40
5-ετών	10	5	15	5	10	20	20	10	10	20	5

Πίνακας 1: Εκφόρτωση γλώσσας (sole) σε ποσότητα ψαριών (× 1000) (όχι αληθινά δεδομένα)

Τα ψάρια 0 ετών είναι πολύ μικρά για να αλιευθούν

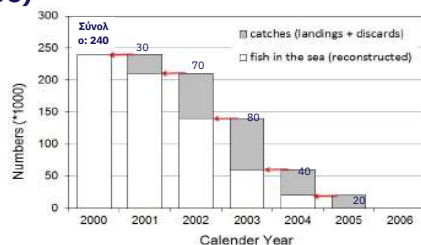
Σε αυτό το παράδειγμα ολόκληρη η γλώσσα αλιεύεται σε 5 χρόνια

Με μπλε χρώμα απεικονίζονται τα ψάρια της χρονιάς 2000 (που γεννήθηκαν το 2000)

70

Υπολογίζουμε για μία χρονιά-κλάση (2000)

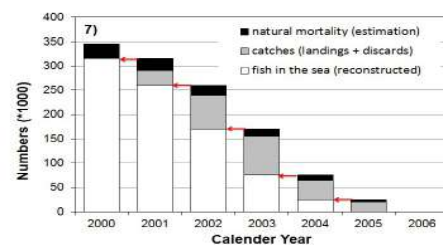
CIP



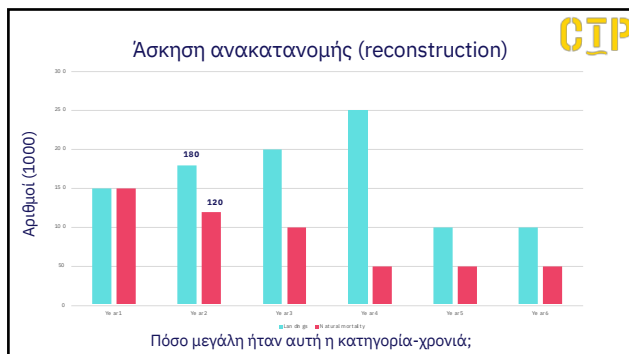
71

Προσθέτουμε την εκτιμώμενη φυσική θνησιμότητα

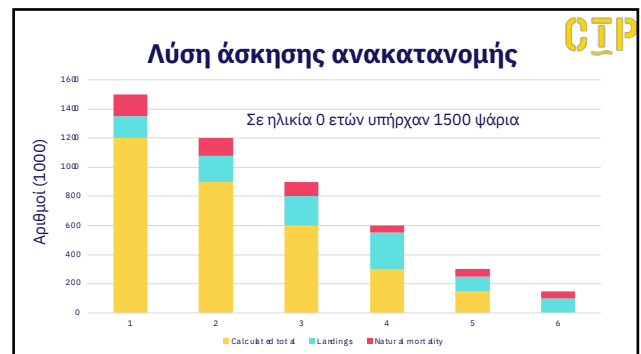
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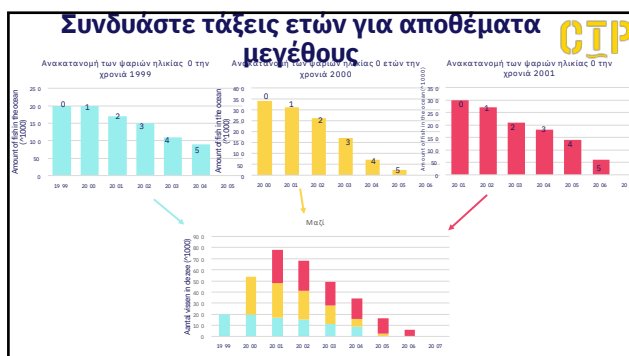
72



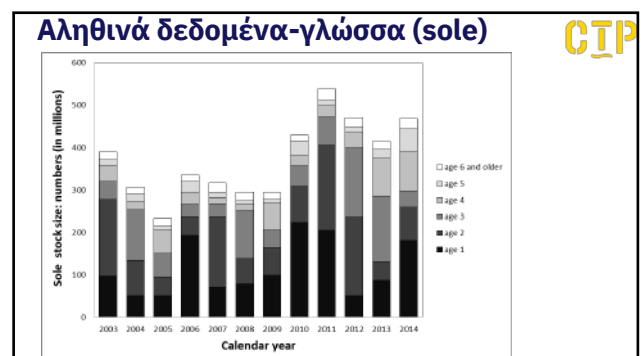
73



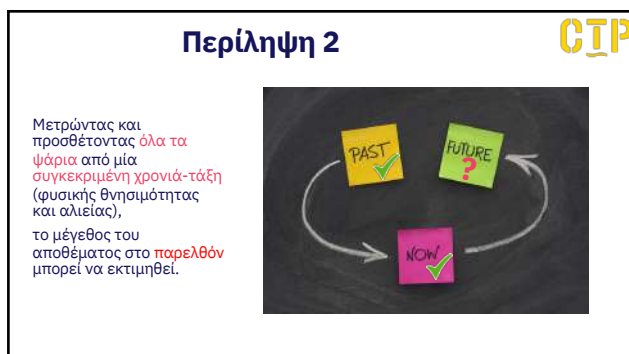
74



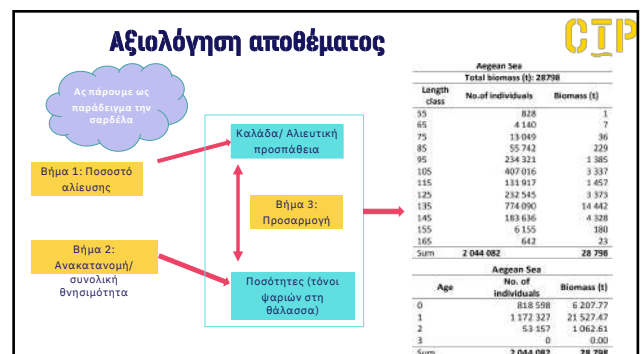
75



76



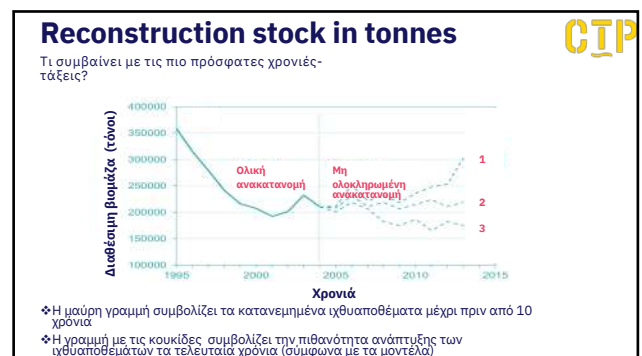
77



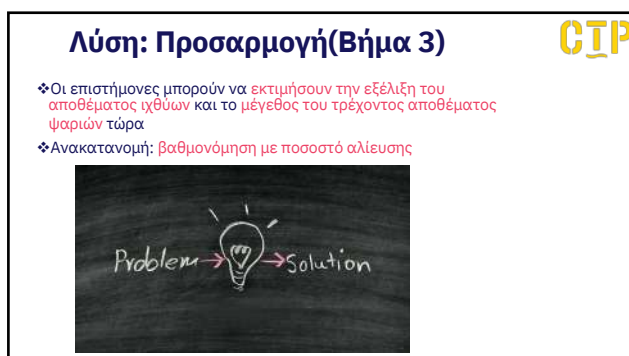
78



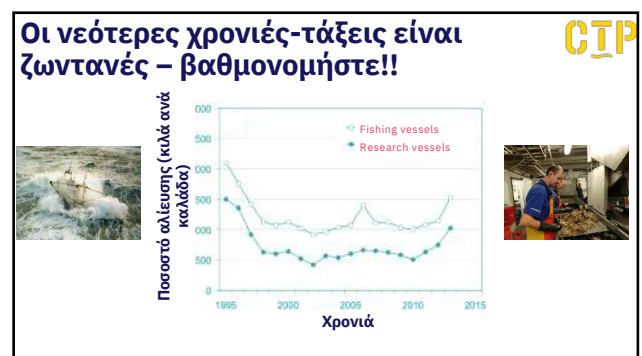
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84

Βεβαιότητα

CIP

Επί του παρόντος, η αξιολόγηση των αποθεμάτων, μέσω ανακατανομής και βαθμονόμησης, είναι η **καλύτερη διαθέσιμη μέθοδος** για την τρέχουσα διαχείριση της αλιείας στη Βόρεια Θάλασσα



85

Αβεβαιότητες & εξαιρέσεις

CIP

Υπάρχουν αβεβαιότητες και εξαιρέσεις, όπως:

- ❖ Πελαγικά είδη
- ❖ Φυσική διασπορά
- ❖ Αποθέματα περιορισμένων δεδομένων



86

Εξαιρέση; Πελαγικά είδη

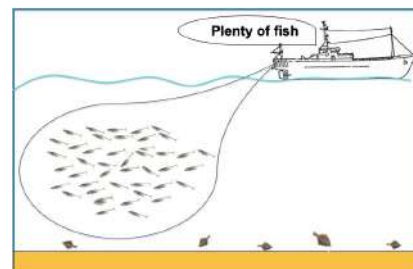
CIP

Ανακατανομή: αλιεύματα
Βαθμονόμηση (Calibration): έρευνες, όχι με ποσοστά αλίευσης

87

Ποσοστό αλίευσης μη αξιόπιστο

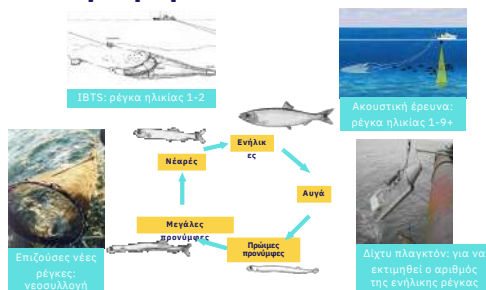
CIP



88

Έρευνα για ρέγκα

CIP



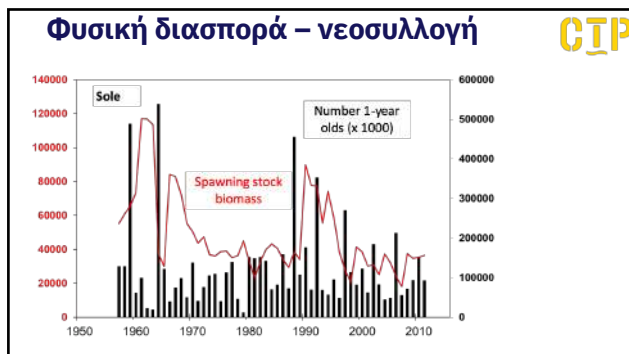
89

Αβεβαιότητες; Φυσική διασπορά

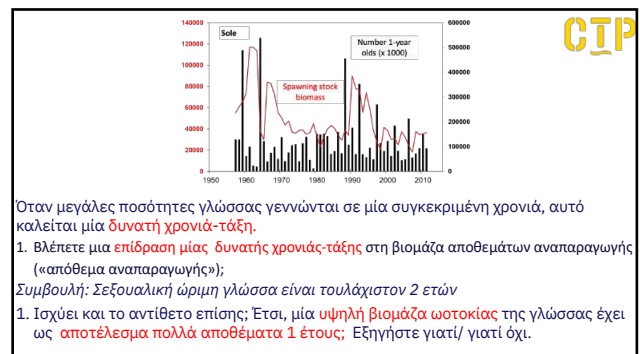
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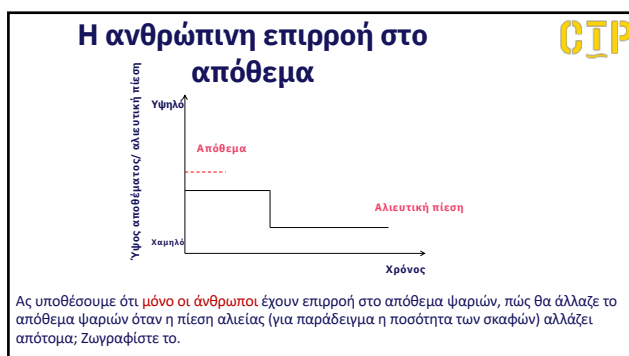
90



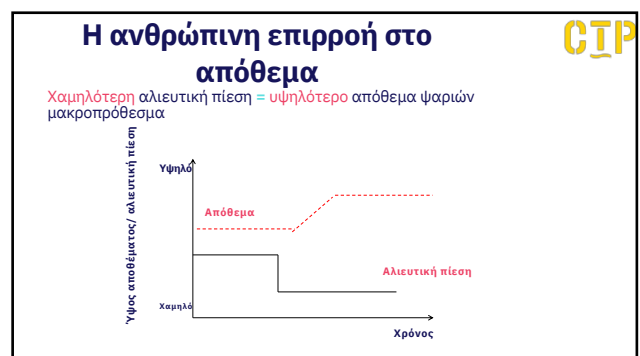
91



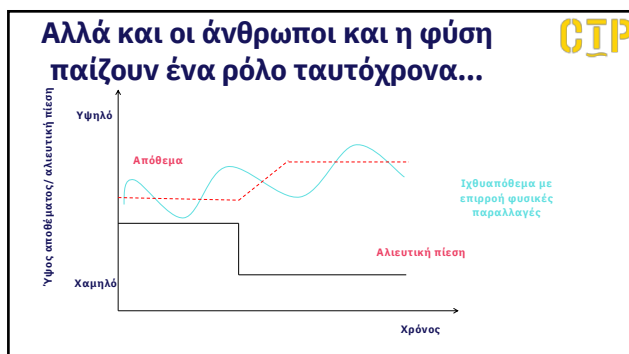
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Αποθέματα περιορισμένων δεδομένων CIP

Λύση → καλύτερη συνεργασία μεταξύ επιστήμης και βιομηχανίας.

97

CIP

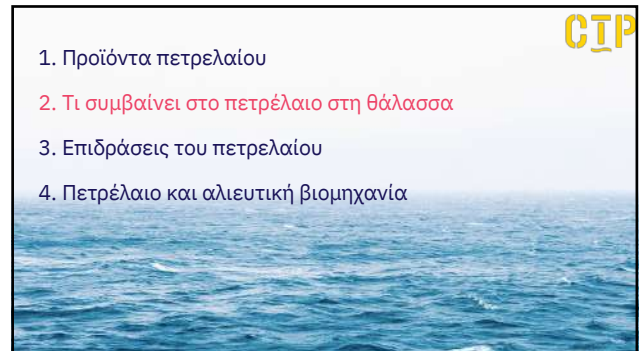
Ερωτήσεις



98



1



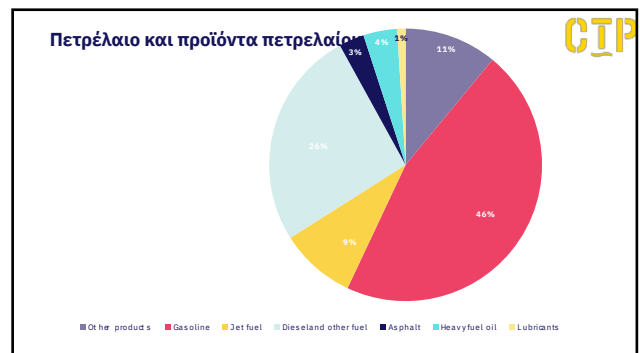
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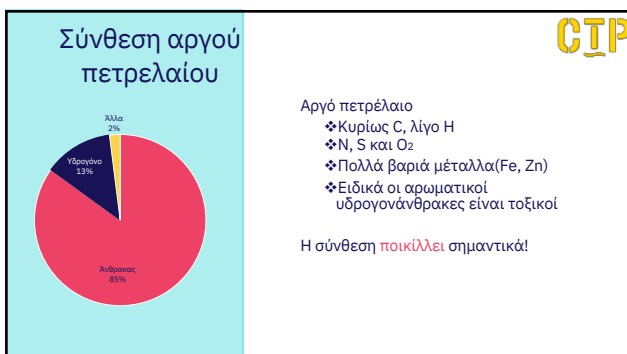
Πετρέλαιο

- ❖ Το 2019: Η παγκόσμια παραγωγή ήταν **95,2 εκατομμύρια βαρέλια (159 λίτρα)** ημερησίως
- ❖ Το πετρέλαιο μπορεί να εισέλθει στη θάλασσα κατά τη διάρκεια της εξερεύνησης, μέσω μεταφοράς και χρήσης.
- ❖ Πολλοί άνθρωποι θεωρούν το πετρέλαιο στη θάλασσα ως ένα μεγάλο περιβαλλοντικό πρόβλημα.

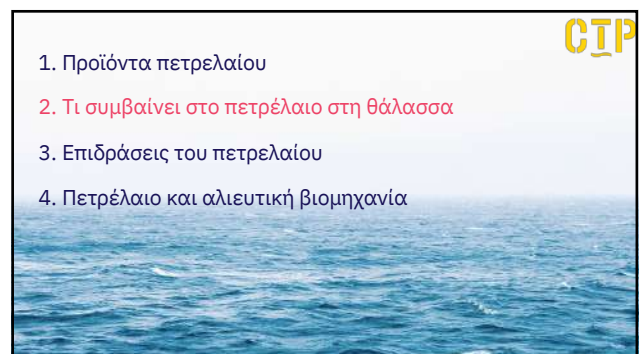
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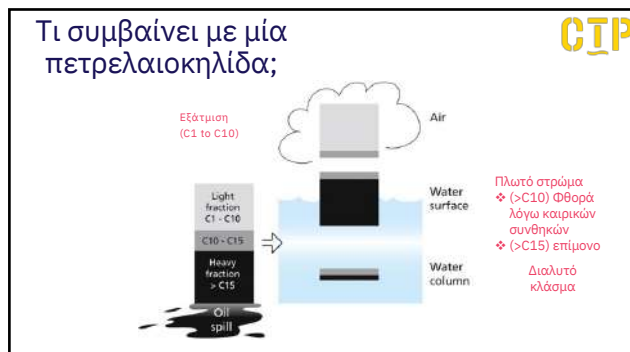
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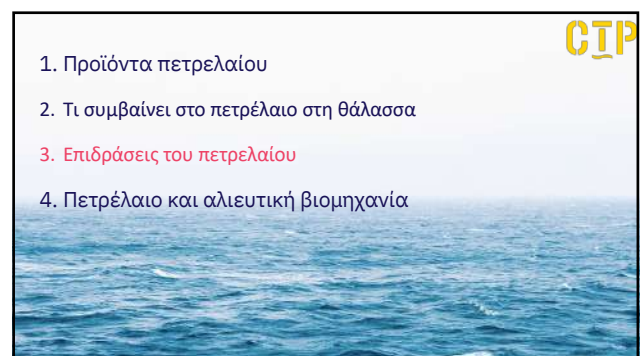
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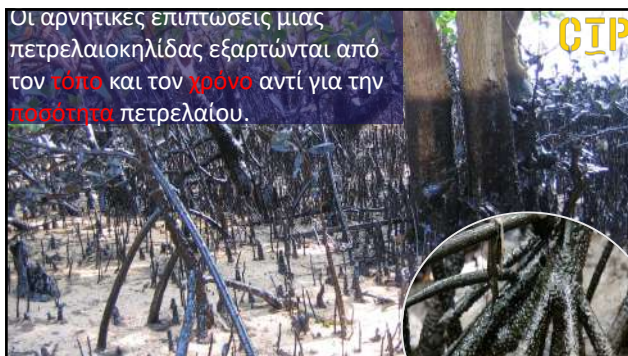
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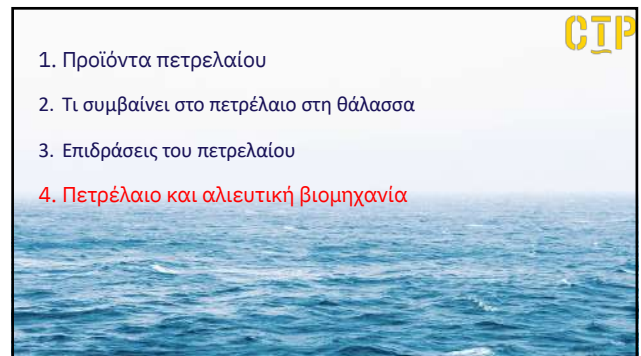
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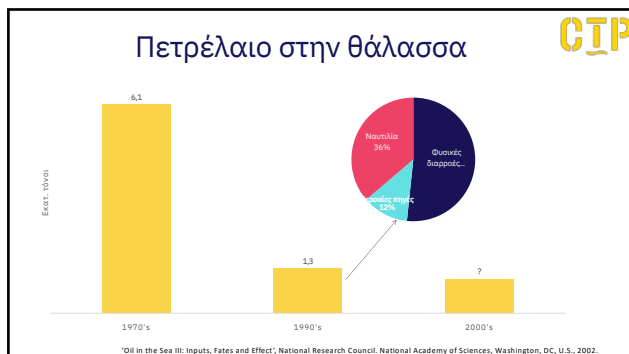
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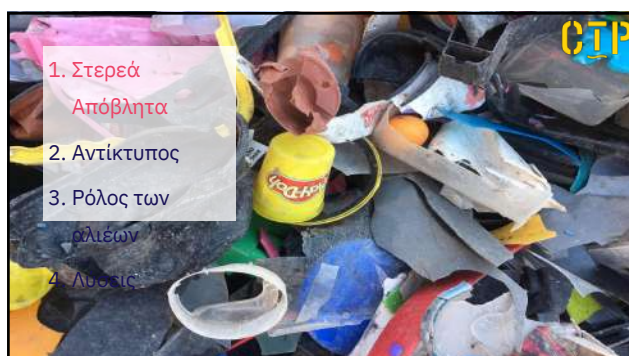
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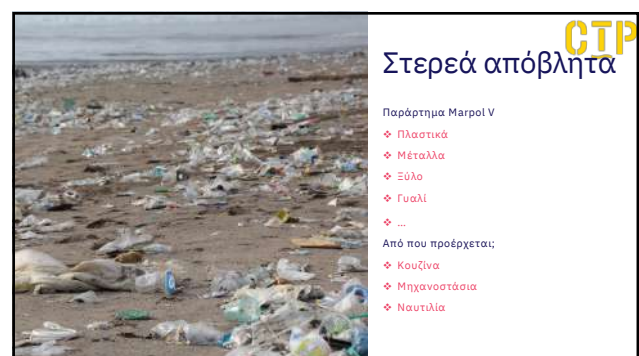
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Το πλαστικό διαρκεί για πάντα

Πολλά ωφέλη:

- ❖ Ανθεκτικό
- ❖ Υγιεινό
- ❖ Διατηρεί το νερό μέσα ή έξω

Παρόλα αυτά το πλαστικό...

- ❖ Διαρκεί πάρα πολύ καιρό
- ❖ Διασπάται σε ακόμα μικρότερα κομμάτια
- ❖ Αποτελείται από πολλά χημικά

CTP

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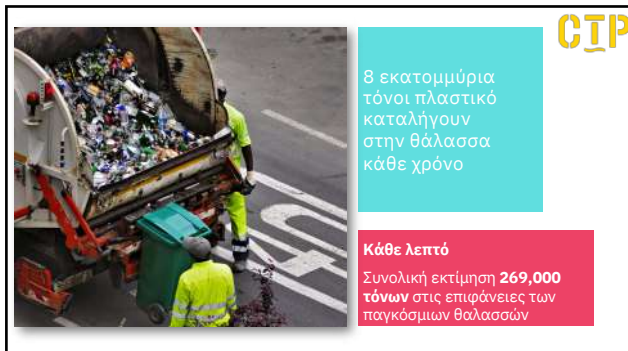
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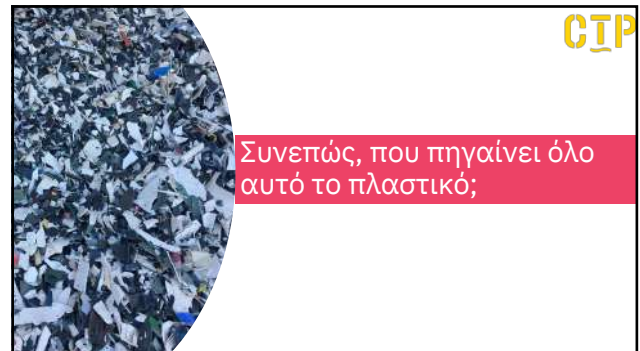
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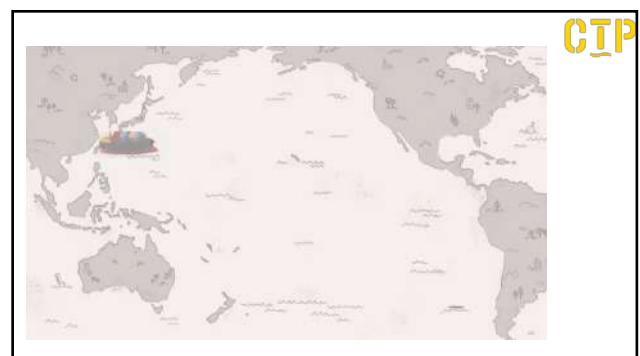
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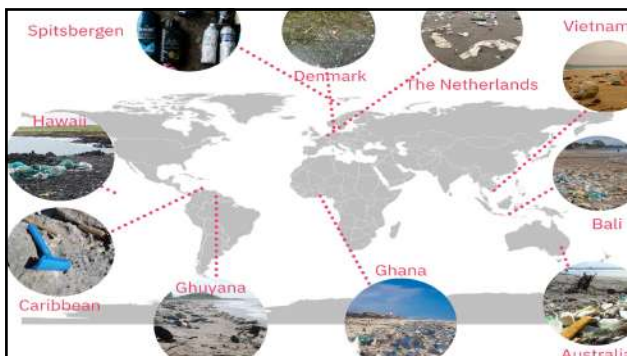
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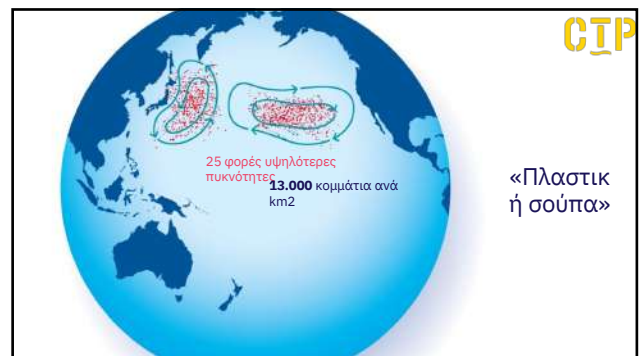
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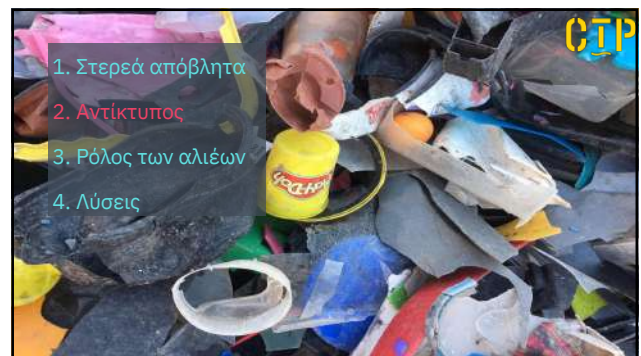
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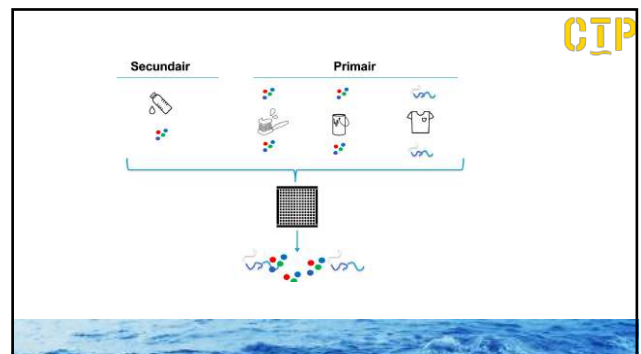
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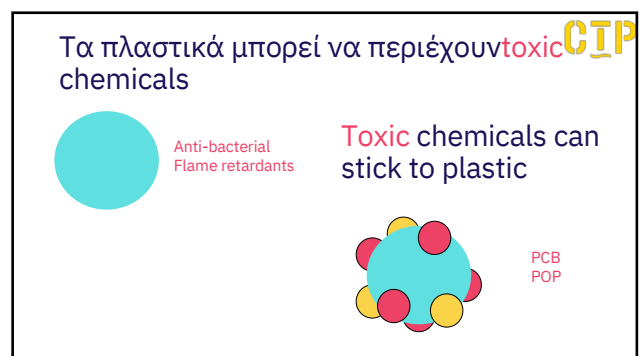
50



51



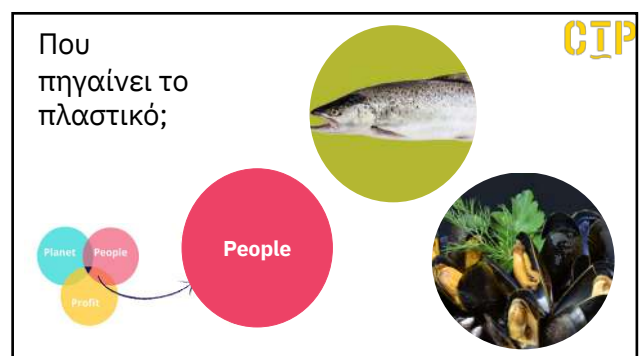
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CTP

Το κόστος του καθαρισμού παραλιών είναι τεράστιο!

Κόστη καθαρισμού €18.000 την ημέρα

Planet People Profit

Κέρδος

56

CTP

1. Στερεά απόβλητα
2. Αντίκτυπος
3. Ρόλος των αλιέων
4. Λύσεις

57

CTP

Regulations - Marpol

Allowed:

- ❖ Food
- ❖ Cargo residues
- ❖ Washing water
- ❖ Carcasses of animals

Revised Annex V (2013):
Discharge of **any type of solid waste in sea is prohibited**

Information signs
Garbage management plan
Garbage record book
Port facilities

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CTP

Απαιτήσεις επισημάνσεων

Απαγόρευση προϊόντων πλαστικού

Υπεύθυνοι παραγωγοί

Αλιευτικός εξοπλισμός

Μείωση κατανάλωσης

Αύξηση της ευαισθητοποίησης

90% συλλογή πλαστικών μπουκαλιών

Reducing single-use plastics

59

CTP

Αλιευτικός εξοπλισμός

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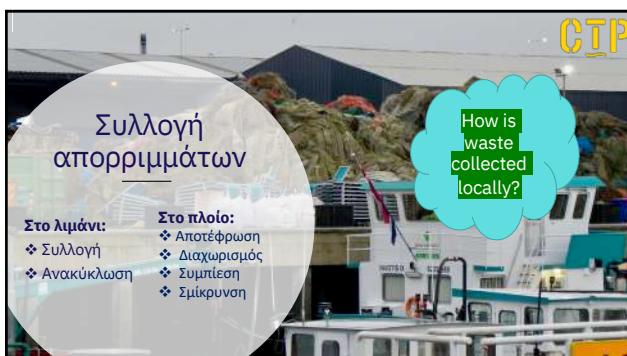
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Attachment 4e - Fishing and society in Greek

08-12-2021



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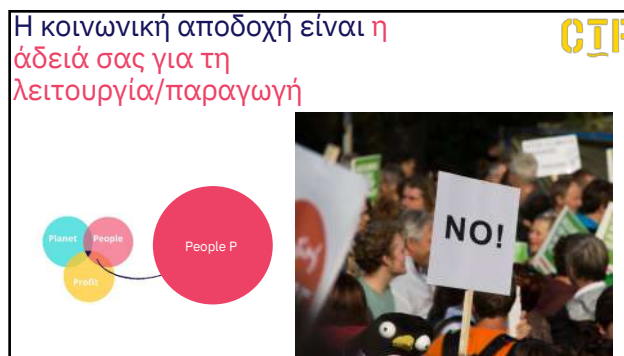
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❖ Η έρευνα ολοκληρώθηκε
 ❖ Τα αποθέματα ψαριών ήταν σταθερά
 ❖ Οικονομικά πλεονεκτήματα

Οπότε τι συνέβη...

People P

Μέσα
Ενημέρωση
Πολίτες
Καταναλωτές

9

Η επιλογή των καταναλωτών είναι η άδειά σας για παραγωγή

❖ Κοινωνικά πρότυπα
 ❖ Περιβαλλοντικά πρότυπα
 ❖ Πρότυπα καλής διαβίωσης των ψαριών

CTP

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Ghanaians deceived by Danish shipowner: 'We were treated like slaves'

14 JUL 2018

By Anna Birch-Schmidt for SF Fagbladet. Reprinted with permission.

A shipowner in Thyborøn, Denmark has been charged with human trafficking and violation of the Danish Aliens Act after exploiting two Ghanaian sailors and subjecting them to labour under slave-like conditions.

CTP

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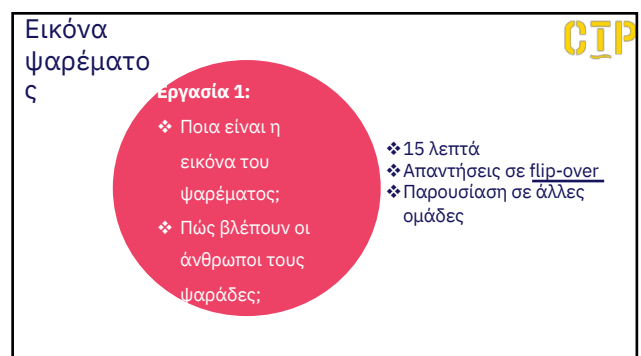
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Ταυτότητα αλιείας/ψαράδων

Εργασία 2:

- ❖ Πώς βλέπω εγώ το ψάρεμα/τους ψαράδες;

❖ 15 λεπτά

❖ Απαντήσεις σε flip over

❖ Συμφωνείτε?

❖ Παρουσίαση σε άλλες ομάδες

CIP

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Φήμη (εικόνα) = αυτό που πιστεύουν οι άλλοι ότι είσαι

Ταυτότητα = αυτό που είσαι!

Είναι διαφορετική η ταυτότητα και η εικόνα; Γιατί;

CIP

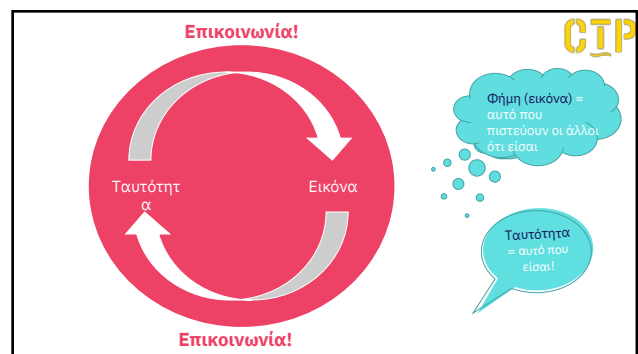
22

Food for thought

1. Τι /ποιος καθορίζει την εικόνα της αλιείας/των ψαράδων;
 - Καθορίζεται από τα ΜΜΕ, την πολιτική ή τις ΜΚΟ;
2. Μια καλή εικόνα είναι σημαντική;
 - Γιατί, γιατί όχι;
3. Πώς μπορείτε (να προσπαθήσετε) να αλλάξετε/βελτιώσετε την εικόνα σας;

CIP

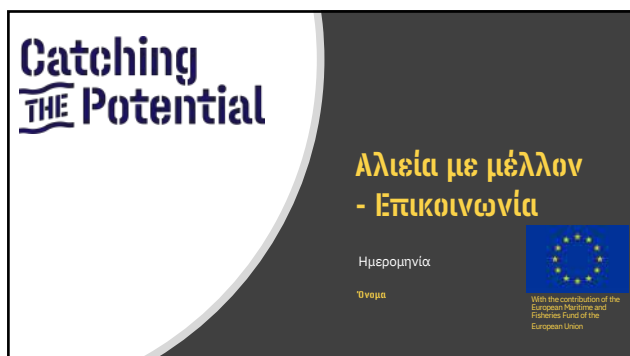
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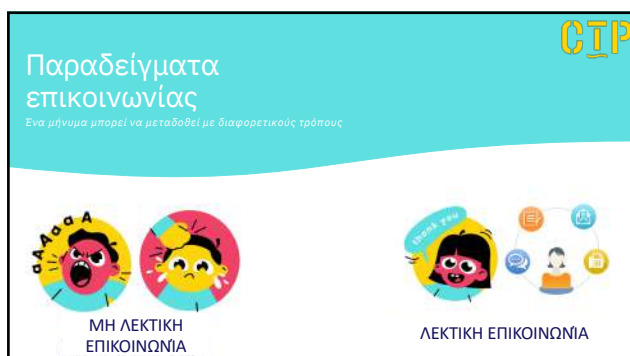
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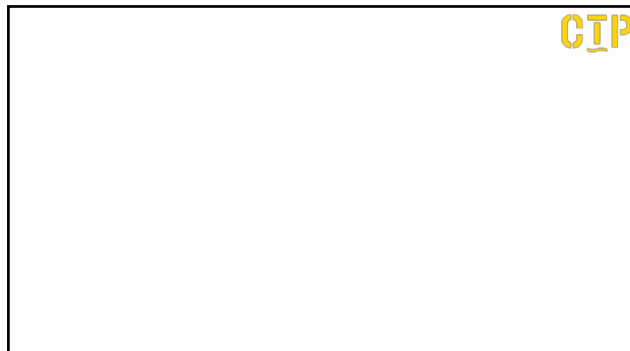
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Παραδείγματα επικοινωνίας



Πώς επικοινωνείτε;



Τι θα θέλατε να επικοινωνήσετε;



Με ποιον επικοινωνείτε;

8

1. Παραδείγματα επικοινωνίας

2. Εργαστήριο επικοινωνίας



9

Τι βλέπετε;



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Τι βλέπετε;



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Τι βλέπετε;



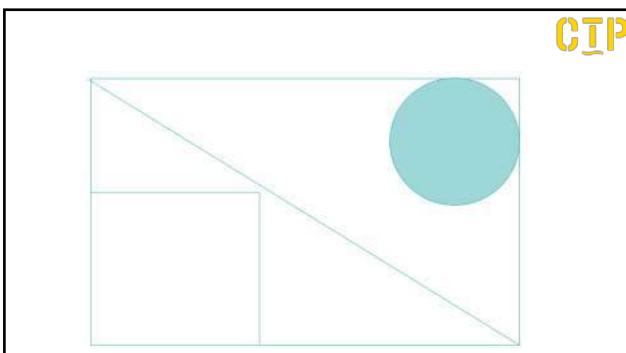
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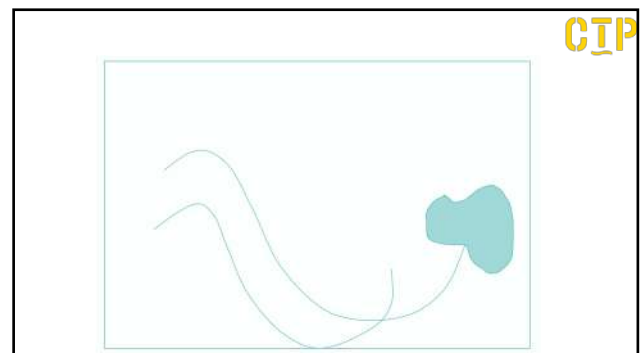
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Εργαστήριο: επικοινωνία

Τρεις δηλώσεις:

1. Τι κάνει ... το ψάρεμα υπέροχο?
2. Πρέπει να βελτιώσουμε την εικόνα του ψαρέματος!
3. Τι πρέπει να γνωρίζουν όλοι για το ψάρεμα;

Προσαρμόστε τις δηλώσεις στην τοπική κατάσταση

CTP

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Attachment 4g - Air emissions and Climate change in Greek

08-12-2021



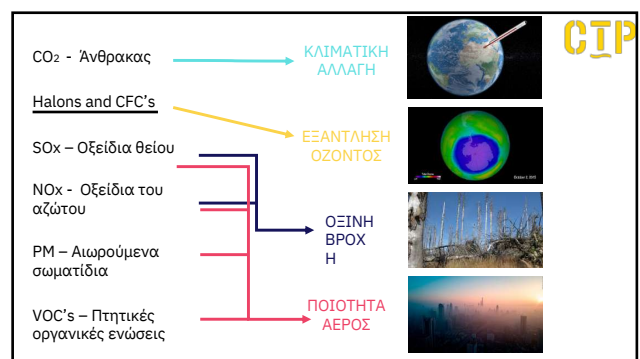
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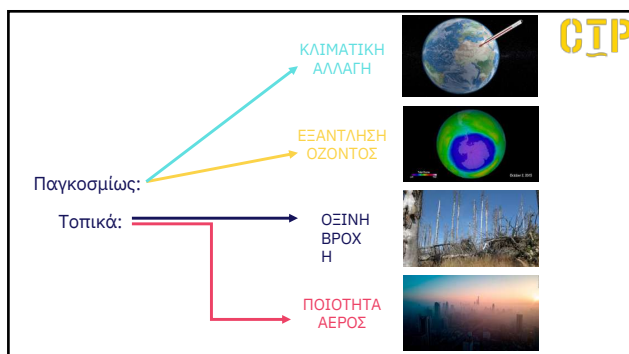
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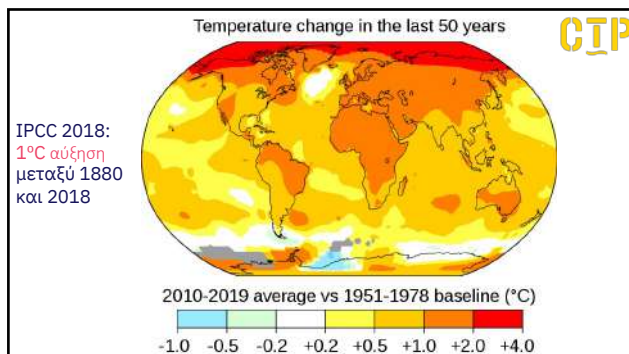
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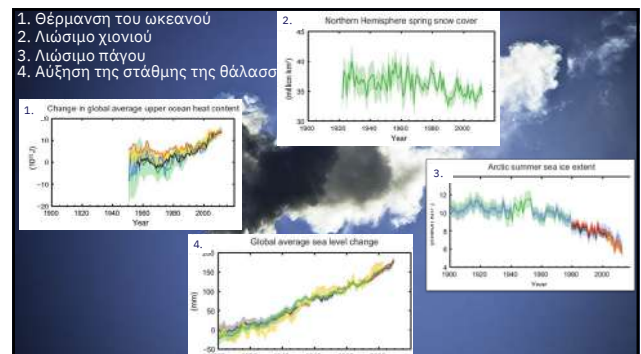
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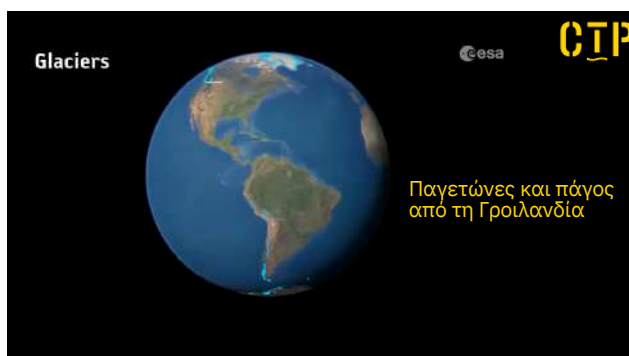
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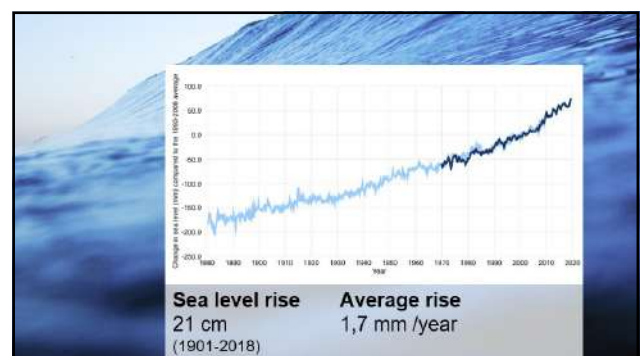
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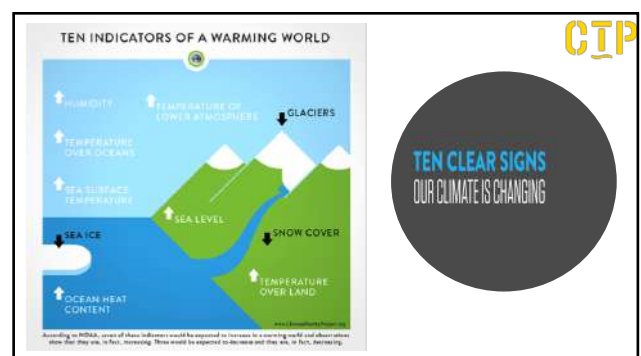
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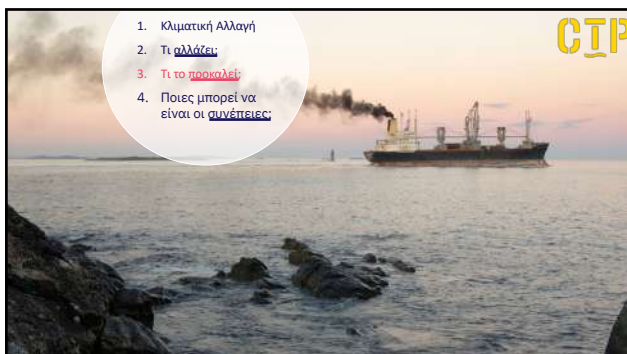
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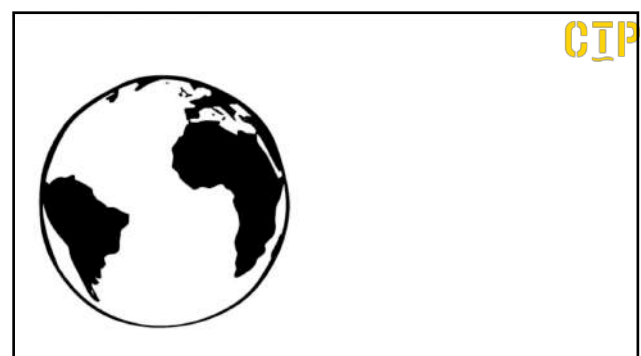
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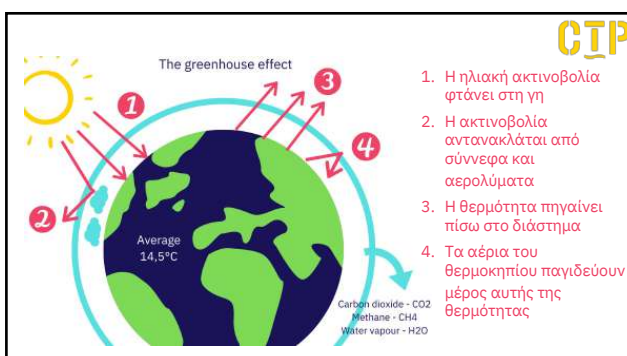
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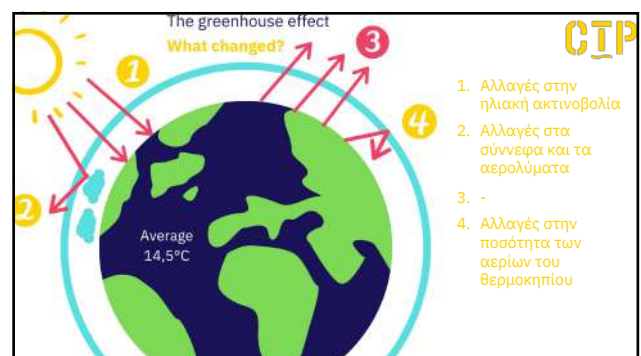
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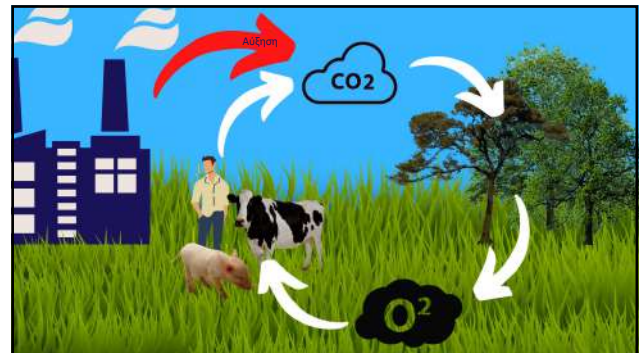
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CTP

IPCC 2013: “Είναι **εξαιρετικά πιθανό** ότι η ανθρώπινη επιρροή ήταν η **κυρίαρχη αιτία** της παρατηρούμενης θέρμανσης από τα μέσα του 20ού αιώνα”.

Μεγαλύτερη συγκέντρωση αερίων θερμοκηπίου ενισχύει το φαινόμενο του θερμοκηπίου: η **μέση θερμοκρασία αυξάνεται**

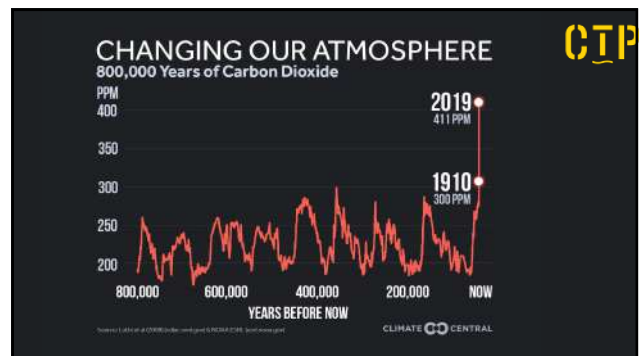
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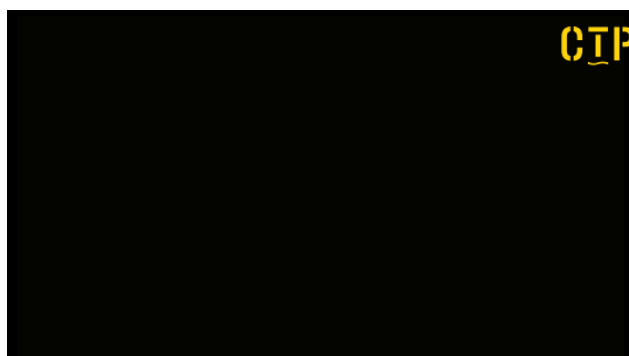
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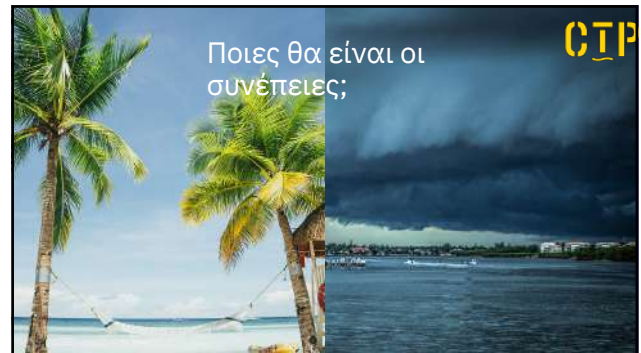
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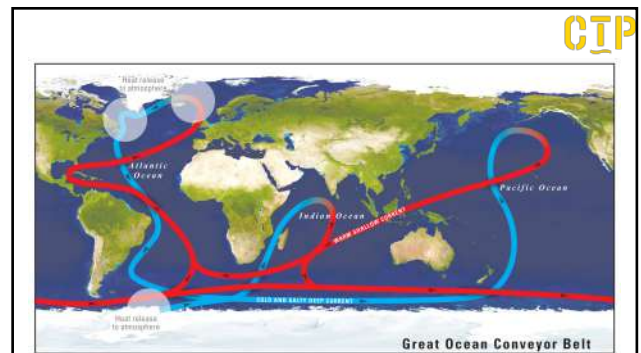
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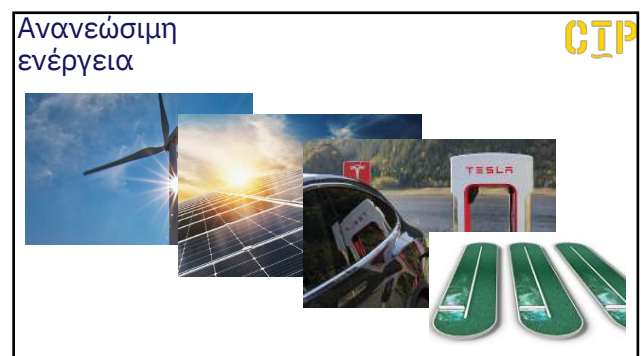
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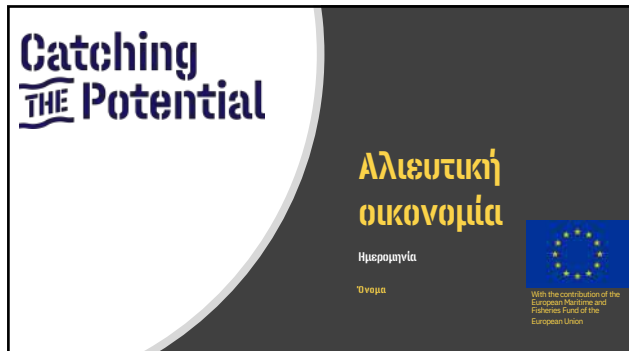
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Attachment 4h - Fisheries economy in Greek

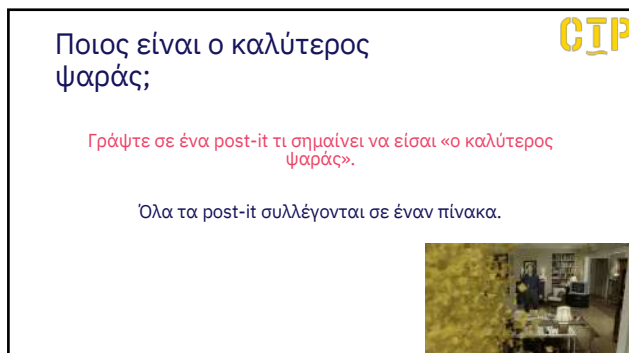
08-12-2021



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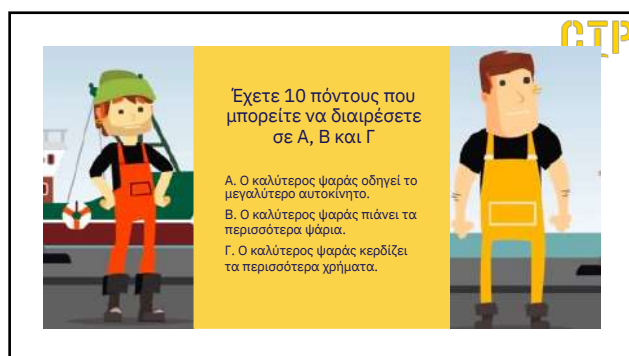
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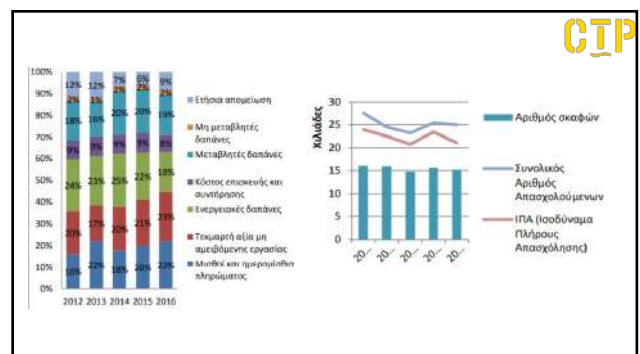
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Οι επόμενες διαφάνειες θα πρέπει να δώσουν μια επισκόπηση των οικονομικών του στόλου

Για παράδειγμα, δείχνουμε τον ελληνικό στόλο:

Κατηγορία αλιείας και τύπος αλιευτικού εργαλείου	2018	2019	Μεταβολή (%) 2019/2018
Σύνολο	14.030	13.877	-1,1
Μέση αλιεία	485	485	0,0
Μηχανότρατες	246	246	0,0
Γρι-Γρι	239	239	0,0
Παράκτια αλιεία	13.545	13.392	-1,1
Βιντότρατες	222	221	-0,5
Λοιπά εργαλεία	13.323	13.171	-1,1

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Μέγεθος του στόλου

Κατά μέσο όρο, οι άνθρωποι στην Ελλάδα καταναλώνουν... κιλά θαλασσινών ετησίως

Υπάρχουν... άνθρωποι στην Ελλάδα

Πόσα θαλασσινά πρέπει να ψαρεύουμε κάθε χρόνο;.....

2. Ψαρεύουμε αρκετά;

Πόσα θαλασσινά πρέπει να ψαρεύονται κάθε χρόνο;.....



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Εκφορτώσεις σε κιλά τόνους ετησίως

- Προσθέστε ένα γράφημα με τις εκφορτώσεις ανά έτος

20

Ποιος καταναλώνει θαλασσινά; Ποιοι είναι οι αριθμοί εξαγωγής;

21

Οικονομικά της αλιείας

- ❖ Ποιος είναι ο καλύτερος ψαράς;
- ❖ Μέγεθος στόλου και οικονομικά
- ❖ Έσοδα και έξοδα
- ❖ Εφοδιαστική αλυσίδα



22

Επισκόπηση του συνολικού εισοδήματος της αλιείας

Πίνακας Α.1.α.5. Δομή του στόλου της αλιείας με βάση τον τύπο της Ελλάδας για τα έτη 2012-2016, ετήσια μέση προσέλευση, αποπλοκή και παραγωγή

Μεταβλητή	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Αριθμός σκαφών	13.116	13.030	13.154	14.768	14.319	-7,3%	-3,4%			
Αριθμός σκαφών σκαφών	1.488	1.258	1.188	1.341	1.447	-26,9%	-2,9%			
Μέση ηλικία σκαφών (έτη)	27	26	26	26	26	2,6%	11,1%			
Συνολική παραγωγή (t)	16.116	29.997	27.613	29.486	29.661	-1,2%	-0,6%			
Συνολική αξία (€)	287.564	285.458	265.010	286.965	274.820	-2,0%	-4,4%			
Συνολική Αριθμός Αποπλοκή (t)	23.526	19.788	18.222	20.426	19.611	-4,0%	-4,2%			
ΑΠΑ (συνολικά σκάφη)	18.724	17.888	15.782	18.486	17.999	-2,1%	-8,7%			
Ετήσια μέση αξία εισοδήματος	7.744	7.590	6.280	6.218	6.540	5,8%	14,3%			
Ετήσια μέση, 30%	3.029	2.896	2.421	2.430	2.512	40,6%	37,4%			
Ετήσια μέση, 50%	1.921.836	2.600.840	1.928.834	2.119	2.119	21,9%	9,0%			
Ετήσια μέση, 70%	101.557.176	80.548.282	62.567.930	60.969.974	41.545.877	-1,5%	-21,3%			
Ετήσια μέση, 90%	26.283.599	48.702.416	42.752.140	47.823.948	43.629.699	-5,8%	-10,4%			
Ετήσια μέση, 95%	8.244	6.290	6.290	6.290	6.192	-11,9%	-21,4%			
Ετήσια μέση, 99%	6.213	6.210	6.226	6.210	6.191	-11,9%	-10,6%			
Ετήσια μέση, 99,9%	215.877.167	152.286.624	302.663.119	122.546.957	216.329.149	6,2%	6,2%			

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Επισκόπηση του συνολικού εισοδήματος της αλιείας

Πίνακας Α.1.α.6. Δομή του στόλου της αλιείας με βάση τον τύπο της Ελλάδας για τα έτη 2012-2015, ετήσια μέση προσέλευση, αποπλοκή και παραγωγή

Μεταβλητή	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Αριθμός σκαφών	924	924	924	924	924	-0,9%	-0,9%			
Αριθμός σκαφών σκαφών	61	61	61	61	61	21,2%	19,4%			
Μέση ηλικία σκαφών (έτη)	24	23	24	27	28	1,9%	14,8%			
Συνολική παραγωγή (t)	46.872	45.689	47.231	45.292	42.686	-5,7%	-7,3%			
Συνολική αξία (€)	180.879	189.189	183.240	181.877	170.966	-6,0%	-6,1%			
Ετήσια μέση, 30%	3.051	4.779	3.819	4.087	3.562	1,9%	6,0%			
Ετήσια μέση, 50%	4.221	4.081	4.996	4.291	4.229	-2,4%	14,3%			
Ετήσια μέση, 70%	11.191	19.615	9.714	9.991	10.746	19,5%	11,9%			
Ετήσια μέση, 90%	10.148	19.373	9.951	9.503	11.927	10,4%	14,4%			
Ετήσια μέση, 95%	51.699	186.421	111.969	182,2%	140,6%					
Ετήσια μέση, 99%	21.489.644	47.942.322	36.878.712	15.421.666	39.443.838	-14,1%	-48,9%			
Ετήσια μέση, 99,9%	64.812.857	94.968.084	61.547.555	89.191.799	99.048.483	1,0%	17,6%			
Ετήσια μέση, 99,99%	6.266	6.256	6.271	6.171	6.138	-21,2%	-28,3%			
Ετήσια μέση, 99,999%	6.196	6.139	6.419	6.286	6.262	-8,8%	-12,3%			
Ετήσια μέση, 99,9999%	191.919.081	185.784.012	147.393.463	206.681.784	228.254.914	10,6%	18,9%			

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Επισκόπηση του συνολικού εισοδήματος της **ΕΤΡ** αλιείας

[illegible]

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Επισκόπηση του συνολικού εισοδήματος της αλιείας

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Έσοδα και κόστος

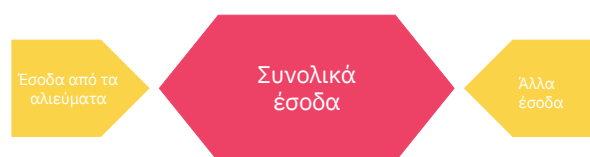
Εργασία 1:

Κάντε μια λίστα με όλα τα έσοδα μιας αλιευτικής εταιρείας. Πώς κερδίζετε χρήματα;



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Έσοδα



28

Έσοδα και κόστη

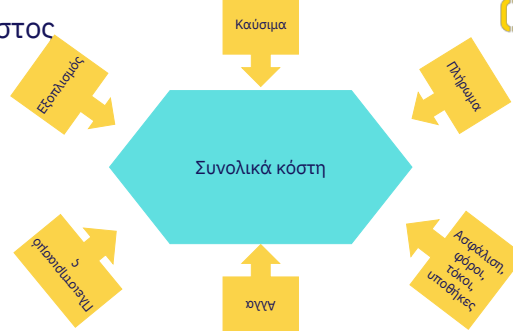
Εργασία 2:

Κάντε μια λίστα με όλα τα έξοδα λειτουργίας μιας αλιευτικής εταιρείας.

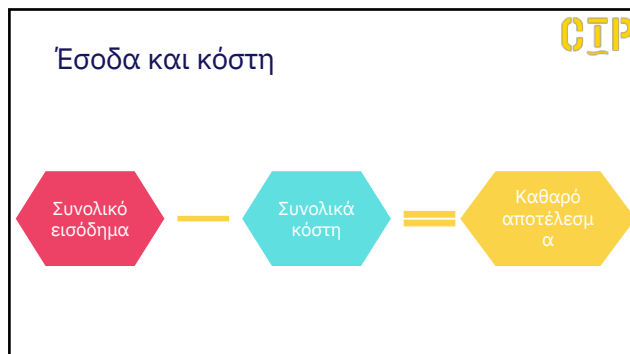


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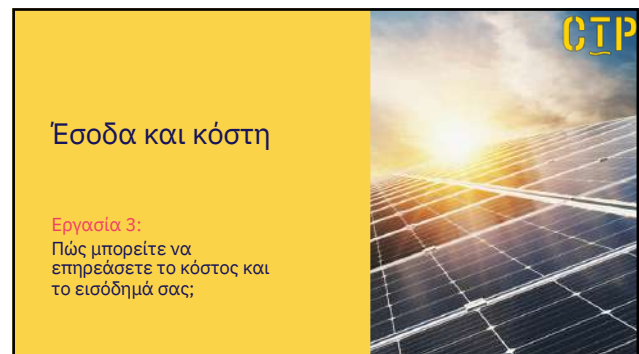
Κόστος



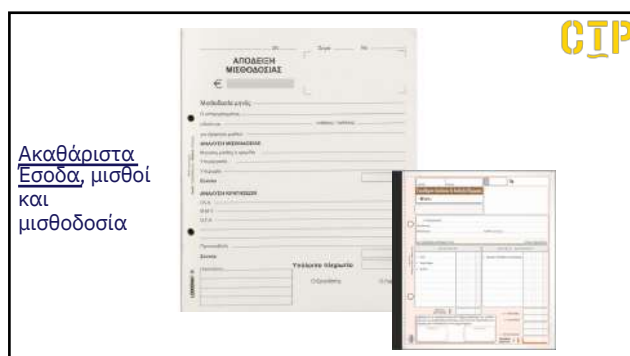
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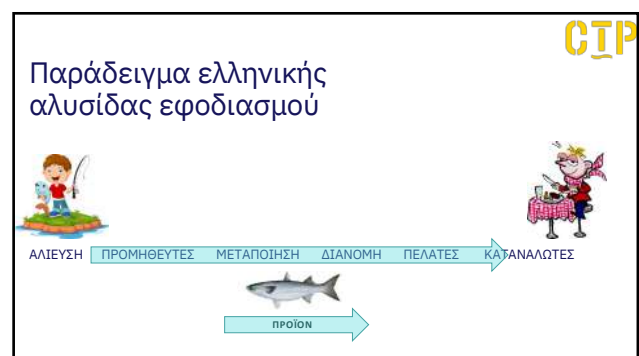
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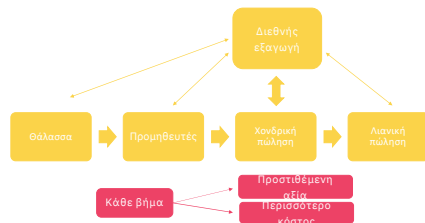
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Εξηγήστε την τοπική αλυσίδα εφοδιασμού

CIP



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Ερωτήσεις για σκέψη:

CIP

Πώς είναι δυνατόν οι καταναλωτές να πληρώνουν περισσότερα από 12 ευρώ για ένα φιλέτο ψαριού, όταν λαμβάνετε μόνο 1,17 ευρώ για το ψάρι;

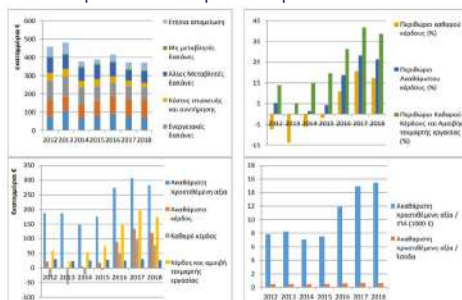
Σκεφτείτε τα διαφορετικά βήματα στην αλυσίδα αξίας των ψαριών - ποιος κάνει τι και τι κοστίζει αυτό;



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Έσοδα, δαπάνες και οικονομικά αποτελέσματα του ελληνικού στόλου για τα έτη 2012-2018

CIP



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Flag country	GSA	Year	Fishing activity category Level 6	Specify MSC / OTH	Landings (kg)	Effort (days-at-sea)	Value (€)
GRC	GSA20	2018	FPO_DEF_0_0_0		208666	8400	1314597
GRC	GSA20	2018	GNS_DEF_>=16_0_0		911647	95536	7694312
GRC	GSA20	2018	GTR_DEF_>=16_0_0		2756793	386292	25150833
GRC	GSA20	2018	LIS_DEF_0_0_0		399035	54732	1800231
GRC	GSA20	2018	OTB_DEF_>=40_0_0		1004705	5695	9262965
GRC	GSA20	2018	PS_SFF_>=14_0_0		2466491	4867	8407721
GRC	GSA20	2018	SB-SV_DEF_0_0_0		306974	4692	1131271
GRC	GSA22	2018	FPO_DEF_0_0_0		2005271	40589	15949468
GRC	GSA22	2018	GNS_DEF_>=16_0_0		6055588	353904	48221755
GRC	GSA22	2018	GTR_DEF_>=16_0_0		6526480	525604	54083067
GRC	GSA22	2018	LIS_DEF_0_0_0		1558335	185256	15910423
GRC	GSA22	2018	OTB_DEF_>=40_0_0		11653572	38161	84175400
GRC	GSA22	2018	PS_SFF_>=14_0_0		24858524	30010	83982985
GRC	GSA22	2018	SB-SV_DEF_0_0_0		612484	10463	2654338
GRC	GSA23	2018	GNS_DEF_>=16_0_0		45792	8063	476762
GRC	GSA23	2018	GTR_DEF_>=16_0_0		455682	51787	369140
GRC	GSA23	2018	LIS_DEF_0_0_0		22298	14503	152907
GRC	GSA23	2018	OTB_DEF_>=40_0_0		364606	1514	3024779
GRC	GSA23	2018	PS_SFF_>=14_0_0		98733	773	352575
GRC	GSA23	2018	SB-SV_DEF_0_0_0		32251	437	137219

CIP

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Ευκαιρίες για βελτίωση του κέρδους

- ❖ Δημιουργήστε ένα νέο προϊόν
- ❖ Βρείτε νέους καταναλωτές
- ❖ Συντομεύστε την αλυσίδα



41

Δημιουργήστε ένα νέο προϊόν

CIP



42

Βρείτε νέους καταναλωτές

CTP



Σούσι με μπαρμπούνι!

43

Παραδείγματα μικρότερης αλυσίδας

CTP



44



Twelve years ago, I started my own business, De Jonkman.

45

Ομαδική εργασία

CTP

1. Επιλέξτε ένα προϊόν ψαριού (όπως γλώσσα, μύδια, γαρίδες).
2. Περιγράψτε πώς θα θέλατε να δημιουργήσετε επιπλέον αξία για το προϊόν σας στην αλυσίδα αξίας.
3. Περιγράψτε την αλυσίδα αξίας για το προϊόν σας.
4. Πώς επηρεάζει το σχέδιό σας να δημιουργήσετε επιπλέον αξία στα 3 P (People, Planet, Profit);
5. Ποιοι συνεργάτες χρειάζεστε για να εκτελέσετε αυτό το σχέδιο;
6. Πιστεύετε ότι το σχέδιό σας είναι ρεαλιστικό;

46

Ως επιχειρηματίας αλιείας μπορείτε να κάνετε περισσότερα από ό, τι νομίζετε!




47

Attachment 5 - CV Nathalia Athineou



Date of birth: 24/07/1998 | **Gender:** Female | **Nationality:** Greek, Austrian

 **Mobile:** (+30) 6934966669

 **Email address:** nathineou.marine@gmail.com


 **Home:** Miltiadou 6, 19005 Nea Makri, Greece

WORK EXPERIENCE

Divemaster- Marine Biologist

Zoumbosub

30/05/2020 – 25/10/2020


 Volos, Greece

- Project manager on a marine biodiversity and conservation project about the local fish species and the artificial reef- fish identification and admeasurement actions
- Training of new divers
- Assisting shore and boat dives

Office support at the Prefecture of Eastern Attica on Fisheries Supervision section

University of Thessaly

01/07/2019 – 31/08/2019


 Pallini, Greece

- Small scale coastal fishing data analysis
- Admeasurement and classification of catches

Marine Biologist- Ichthyologist

Archipelago - Institute of Marine Conservation

01/08/2018 – 12/09/2018

 Samos, Greece

-
- Participating in the Artificial Reef project by monitoring the fish diversity and abundance around the structure, through snorkel and freediving based Underwater Visual Census surveys
 - Assisting in the Microplastic Research by preparing, filtering and observing samples of digestive systems of marine stranded animals, in order to quantiflz and categorise the microplastic items
 - Developing research about the habitat, nutrition, characteristics and reproduction methods of fish, marine mammals cetaceans and invasive species, for its use in reports and other materials ofthe organization

Divemaster - Discover Scuba Diving Leader

Zoumbosub

22/05/2021 – 04/10/2021

 Volos, Greece |  <https://www.zoumbosub.gr/ypiresies-w-53775>

| Contact email: info@zoumbosub.gr

-
- Executing Discover Scuba Diving programs
 - Assisting shore and boat dives
 - Accounting management of the diving center

Catching the Potentials, Pro Sea- Marine Education

ENALEIA

Current


 Greece

Teaching fishermen what sustainable fishing means and what they could actually do about it.

Aquarist

GlassBox Aqua

04/11/2021 – Current

 Marousi, Greece

LANGUAGE SKILLS

Mother tongue(s)

Greek

German

Other language(s)

English

Listening



B2

Reading



B2

Spoken interaction



B2

Spoken production



B2

Writing

B2

EDUCATION AND TRAINING

Enaleia

Redefending fishing

01/09/2020 – Current

National and Kapodistrian University of Athens

Techniques and Methodologies of Scientific Diving

26/10/2020 – 24/05/2021

University of Thessaly Department of Ichthyology and Aquatic Environment

Ichthyology and Aquatic Environment

03/10/2016 – Current

PADI

Specialty Diver- Night Diver

10/2021

PADI

Freediver

10/2020

PADI

Specialty Diver- Deep Diver

07/08/2020 – 19/08/2020

PADI

Divemaster

02/2020 – 07/2020

PADI

Enriched Air Diver- Enriched Air Nitrox MAX 40% O2

11/2019

EMERGENCY first response

Primary & Secondary Care, CPR/AED/First Aid- Adult

06/2019

SSI

Scientific Diver

22/09/2021 – 26/09/2021

PADI

Specialty Diver- Drysuit Diver

10/2021

PADI

Discover Scuba Diving Leader

12/2020

DIGITAL SKILLS

Other

Microsoft Word

Microsoft Excel

Power Point

Google Drive

Zoom

Instagram

Microsoft Powerpoint

Facebook

Skype

JASP

Libre Office Calc

FISAT II

Gmail

MEGA (Molecular Evolutionary Genetics Analysis)

Aliview

COMMUNICATION AND INTERPERSONAL SKILLS

Work, studies & every day life

- Communicative
- Cooperative in group work
- Willing to work
- Good presentation skills
- Decisive
- Patient
- Dedicated
- Friendly
- Caring
- Animal lover
- Sensitive
- Trustfull

DRIVING LICENCE



ORGANISATIONAL SKILLS

Organisational Skills

- Problem solving
- Multi-tasking
- Prioritising tasks
- Proper time management
- Taking initiatives

VOLUNTEERING

«ENALEIA» Social Enterprise - Mediterranean Clean-Up

15/10/2020 | Athens- Piraeus

Big scale underwater port clean-up

«NO BARRIER TOUR» - Disabled Divers International

22/02/2020 – 23/02/2020 | Volos- Magnesia

DDI, Scuba Diving Society of Volos and Diving Center ZOUMBOSUB, collaborated in order to inform disabled people about their opportunities in scuba diving and gave them the chance to try it out and feel this amazing experience

«Ghost Net Fishing»

15/10/2019 | Nea Makri

Local port underwater Clean-up

«Scuba Diving Society of Volos»

02/06/2019 | Magnesia- Platanias

Underwater clean-up with the collaboration of locals

«AEGEAN REBREATH»

12/05/2019 | Magnesia- Pelion

Underwater clean-up organised by the Scuba Diving Society of Volos in collaboration with AEGEAN REBREATH

«Archipelago» Marine Conservation Institute

01/08/2018 – 12/09/2018 | Samos

- Marine Conservation projects
- Artificial reef surveying
- Fish ID
- Lab work

«Save Your Hood»

28/03/2021 – Current | Volos

Voluntary beach and mountain clean-up

CONFERENCES AND SEMINARS

5 th International Conference on Marine Mammal Protected Areas

08/04/2019 – 12/04/2019 | Messinia, Greece

International Committee on Marine Mammal Protected Areas (ICMMPA), WWF Greece

To Deco or not To Deco?

26/01/2019 | Volos, Greece

How much does it affect the human body breaking the limits during recreational scuba diving

Hydromedid- 3rd International Congress on Applied Ichthyology & Aquatic Environment

08/11/2018 – 11/11/2018 | Volos, Greece

University of Thesally, Department of Ichthyology and Aquatic Environment

Diving Tourism - Benefits for the marine environment and the local communities

01/06/2018 | Volos, Greece - UTH

A one-day conference organised by the Scuba Diving Society of Volos

68th Congress of the Hellenic Society of Biochemistry and Molecular Biology

10/11/2017 – 12/11/2017 | Athens, Greece

HSBMB

Invasive Species in the Mediterranean

11/12/2020 | Webinar

University of Aegean- Department of Oceanography and Marine Life Science

American Cetacean Society Biennial International Conference

30/01/2021 | Webinar


Science of Whales: Understanding the History - Informing Conservation Today
Confirmation

 <https://www.acsonline.org/2021-conference>

Marine Mammal Student Symposium

09/04/2021 | UiT - The Arctic University of Norway- Webinar

Nammco- Environmental Conservation Organisation

 <https://nammco.no/topics/events/nammco-marine-mammal-student-symposium/>

Scientific Diver: Present and Prospects in Greece

06/04/2021 | Webinar

Science Diver

EMD- European Maritime Day in my Country

SOCIAL AND POLITICAL ACTIVITIES

MARINE POLUTION How much do we care? How much does it threaten us? How much does it cost us?

22/05/2019 | Volos, Greece - UTH Department of Ichthyology and Aquatic Environment

«Helmepa» Greece collaborated with the Scuba Diving Society of Volos to conduct a succesful one-day conference about marine polution

HOBBIES AND INTERESTS

Extreme ones

- Scuba diving
- Free diving
- Horse riding
- Wind surfing
- Winter swimmer

Non extreme ones

- Music
- Yoga
- Meditation
- Drawing
- Cooking
- Running
- Sports
- Volunteering

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Attachment 6 - Attendance list pilot



Catching THE Potential

Τρίτη 9 Νοεμβρίου/Tuesday 9 November

	Ονοματεπώνυμο	Full Name	Υπογραφή/Signature
1	Ζέτα Καμπάρδη	Zeta Kabardi	
2	Νίκος Θεράπος	Nikos Therapos	
3	Κωνσταντίνος Γιαννακόπουλος	Konstantinos Giannakopoulos	
4	Roos Swart	Roos Swart	
5	Erik Bogaard	Erik Bogaard	
6	Βαγγέλης Κάκαρης	Vaggelis Kakaris	
7	Γιάννης Αθηναίος	Giannis Athinaios	
8	Γιάννης Κιλτζόγλου	Giannis Kiltzoglou ✓	
9	Γιάννης Κυριακού	Giannis Kiriakou ✓	
10	Γρηγόρης Πιπίνης	Grigoris Pipinis ✓	
11	Δημήτρης Κλαδοβασιλάκης	Dimitris Kladovasilakis ✓	
12	Δημήτρης Στούπας	Dimitris Stoupas	



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13	Κοσμάς Παπαγεωργίου	Cosmas Papageorgiou	
14*	Κώστας Μαστρόκαλος	Costas Mastrokalos	
15	Κώστας Παπαδημητράκης	Costas Papadimitrakis	
16	Λουκάς Σακαρίκος	Loukas Sakarikos	
17	Μαχμούντ Μούσα	Machmood Musa	
18	Μιχάλης Μαγγίνας	Michalis Maginas	
19	Νίκος Σταμούλος	Nikos Stamoulos	
20	Περικλής Κατσάμπας	Periklis Katsabas	
21	Πέτρος Κατσάμπας	Petros Katsabas	
22	Πέτρος Τζίμας	Petros Tzimas	
23	Τάσος Καραμάντουλας	Tasos Karamantoulas	
24*	Τόνυ Πλατόνε	Toni Platone	
25	Φίλιππος Μπαγλατζής	Fillipas Baglatzis	
26*	Χρήστος Πιπίνης	Christos Pipinis	
27	Ναταλία Αθηναίου	Natolia Athinaiou	
28	ΤΑΤΙΑΝΑ ΑΘΗΝΑΙΟΥ	TATIANA ATHINIOU	
29	ΠΕΤΡΟΠΟΥΛΟΣ ΘΕΩΔΩΡΟΣ	Petrooulos Theodoros	
30	ΤΣΟΥΚΑΛΗΣ ΑΓΓΕΛΟΣ	Aggelos Tsoukalas	



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Catching THE Potential

Τετάρτη 10 Νοεμβρίου/Wednesday 10 November

	Ονοματεπώνυμο	Full Name	Υπογραφή/Signature
1	Ζέτα Καμπάρδη	Zeta Kabardi	
2	Νίκος Θεράπος	Nikos Therapos	
3	Κωνσταντίνος Γιαννακόπουλος	Konstantinos Giannakopoulos	
4	Roos Swart	Roos Swart	
5	Erik Bogaard	Erik Bogaard	
6	Βαγγέλης Κάκαρης	Vaggelis Kakaris	
7	Γιάννης Αθηναίος	Giannis Athinaios	
8	Γιάννης Κιλτζόγλου	Giannis Kiltzoglou	
9	Γιάννης Κυριακού	Giannis Kiriakou	
10	Γρηγόρης Πιπίνης	Grigoris Pipinis	
11	Δημήτρης Κλαδοβασιλάκης	Dimitris Kladovasilakis	
12	Δημήτρης Στούπας	Dimitris Stoupas	
13	Κοσμάς Παπαγεωργίου	Cosmas Papageorgiou	



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14	Κώστας Μαστροκάλος	Costas Mastrokalos	
15	Κώστας Παπαδημητράκης	Costas Papadimitrakis	
16	Λουκάς Σακαρικός	Loukas Sakarikos	
17	Μαχμούντ Μούσα	Machmood Musa	
18	Μιχάλης Μαγγίνας	Michalis Maginas	
19	Νίκος Σταμούλος	Nikos Stamoulos	
20	Περικλής Κατσάμπας	Periklis Katsabas	
21	Πέτρος Κατσάμπας	Petros Katsabas	
22	Πέτρος Τζίμας	Petros Tzimas	
23	Τάσος Καραμάντουλας	Tasos Karamantoulas	
24	Τόνυ Πλατόνε	Toni Platone	
25	Φίλιππος Μπαγλατζής	Fillipas Baglatzis	
26	Χρήστος Πιπίνης	Christos Pipinis	
27		Tatjana Athineos	
28	Πετροπούλου (Σούδα) ΠΕΤΡΟΠΟΥΛΟΣ	ΠΕΤΡΟΠΟΥΛΟΣ	
29	ΤΣΟΥΚΑΛΑΣ ΑΓΓΕΛΟΣ	TSOUKALAS AG	
30	Ναταλία Αθινάιου	Natalia Athinaïou	



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Attachment 7 - Program pilot sustainable fishing training greece

Marathon, Greece

2021/11/09 – 2021/11/10

Tuesday November 9: Sustainability, marine ecology, fisheries management

Time	Activity
17:00	Gathering of participants
17:30	Introduction to participants
17:45	Introduction ‘Sustainable fisheries course’
18:00	Group assignment sustainable fisheries – Workshop 1 ❖ Split up in small groups & discuss about the main challenges in fisheries
18:15	Presentations group assignment
18:30	Break
18:45	Marine ecology: How does the sea work?
19:15	Break
19:30	Fisheries management ❖ The fishing game
20:00	Recap
20:30	Remaining question and end



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Wednesday November 10: Fisheries economics, marine litter, oil, fishing and society, communication

Time	Activity
17:00	Gathering of participants
17:30	Fisheries economy
18:00	Break
18:05	Fisheries & Society ❖ Image workshop
18:45	Break
18:55	Communication workshop ❖ A different perspective ❖ A common language ❖ A conversation in the bar
19:30	Overview of air emissions and climate change
20:00	Break
20:05	Oil and solid waste
20:45	End of pilot ❖ Feedback and evaluation



Evaluation form

First pilot course

Thank you for participating in the first pilot course of the Catching the Potential project! We are happy to receive feedback on the contents, teaching methods or trainers of this course.

QUESTIONS

WHAT DID YOU THINK OF THE COURSE IN GENERAL?

						Remarks
Lectures						
Marine Ecology						
Fisheries Management						
Oil & Solid Waste						
Fishing & Fishing Society						
Communication						
Climate Change						
Fisheries economy						
Sea the future						
Workshops						
Top 5 Challenges						
Communication						
Final workshop						
Excursions						
1.						
2.						

HOW FAMILIAR WAS THE CONCEPT OF SUSTAINABLE FISHERIES **BEFORE THIS COURSE?**

- ☐ 0 – 2,5
- ☐ 2,5 – 5
- ☐ 5 – 7,5
- ☐ 7,5 – 10

HOW FAMILIAR IS THE CONCEPT OF SUSTAINABLE FISHERIES **NOW?**

- ☐ 0 – 2,5
- ☐ 2,5 – 5
- ☐ 5 – 7,5
- ☐ 7,5 – 10

WHAT TOPICS DID YOU LIKE THE **MOST**? WHY?

WHICH TOPIC DID YOU LIKE THE **LEAST**? WHY?

HOW DID YOU LIKE THE VARIOUS TEACHING METHODS?

(LECTURES, WORKSHOPS, EXCURSIONS, ETC.)



WHICH ROLE DO YOU SEE FOR YOURSELF IN MAKING FISHERIES MORE SUSTAINABLE?

HOW DO YOU KEEP TRACK OF NEW DEVELOPMENTS IN FISHERIES?

- ☐ News show (tv)

Which one? _____

- ☐ News application (phone)

Which one? _____

- ☐ Newsletters

Which one? _____

- ☐ Eurofish Magazine

- ☐ Colleagues

- ☐ Other: _____






DO YOU HAVE ANY COMMENTS OR SUGGESTIONS FOR IMPROVEMENT?



EVALUATION BY THE FISHERS

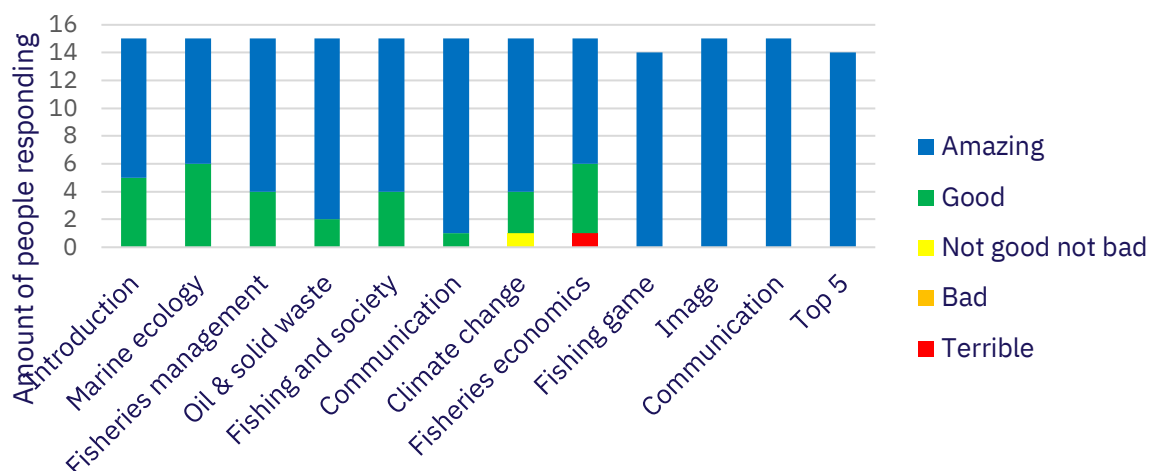
Remarks and comments

WHAT DID YOU THINK OF THE COURSE IN GENERAL?

						Remarks
Διαλέξεις						
Introduction				5	10	
Marine Ecology				6	9	
Fisheries Management				4	11	
Oil & Solid Waste				2	13	
Fishing & Fishing Society				4	11	
Communication				1	14	
Climate Change			1	3	11	
Fisheries economy	1			5	9	
Workshops						
Fishing Game					14	
Images					15	
Communication					15	
Top 5					14	



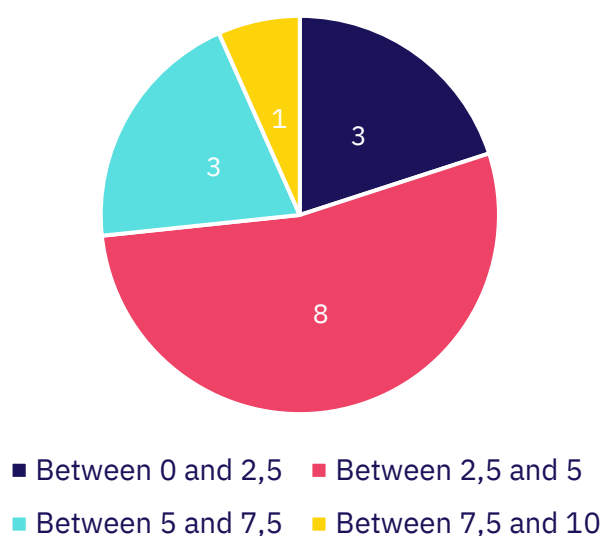
What did you think of the course in general?



How familiar was the concept of sustainable fisheries before this course?

- 0 – 2,5 = 3 answers
- 2,5 – 5 = 8 answers
- 5 – 7,5 = 3 answers
- 7,5 – 10 = 1 answers

How familiar was the concept of sustainability before this course?

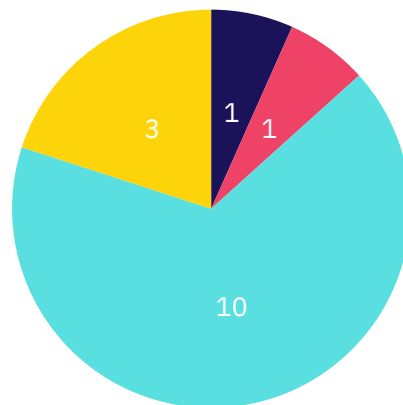


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How familiar is the concept of sustainable fisheries now?

- 0 – 2,5 = 1 answers
- 2,5 – 5 = 1 answers
- 5 – 7,5 = 10 answers
- 7,5 – 10 = 3 answers

How familiar was the concept of sustainability after this course?



- Between 0 and 2,5
- Between 2,5 and 5
- Between 5 and 7,5
- Between 7,5 and 10

What topics did you like the most? Why?

1. Everything was very important
2. Everything
3. Everything because of good communication
4. The fishing game, because of the greedy feeling that we felt
5. Marine ecology
6. Fishing and fishing society
7. Climate change and solid waste
8. Climate change because i think it was the most interesting
9. Everything was great
10. Climate change and its analysis
11. No answer
12. Oil and solid waste, fisheries management, marine ecology.
13. Fishing and fishing society and communication. Until now, nobody has been paid attention to these subjects
14. No answer



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15. The fishing game, because it taught us not to be greedy

Which topic did you like the least? Why?

1. No answer
2. None
3. No answer
4. I liked everything because everything had its one meaning.
5. Fishing economy
6. Fishing economy
7. Fishing economy
8. The subject about plastic pollution (solid waste), because not everyone behaves the same
9. No answer
10. No answer
11. No answer
12. No answer
13. Everything was very helpful
14. Everything was really good
15. Everything was interesting, each subject had its one meaning.

How did you like the various teaching methods?

1. Everything was great
2. Great
3. It was great
4. Very good
5. Very interesting
6. Excellent
7. Everything was great
8. Very interesting and informative
9. Very good
10. Familiar and easy to follow
11. Good
12. It was excellent
13. Very clever and easy to follow
14. Very good
15. Very good



Which role do you see for yourself in making fisheries more sustainable?

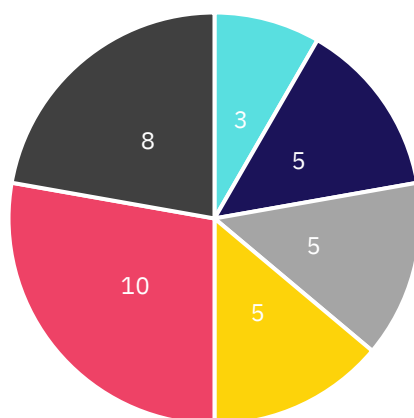
1. First of all we should be more humans
2. We should be more careful in fishing
3. More careful with marine litter
4. Less fishing tools in the sea
5. To collect plastic from the sea
6. The government should communicate more with people and find ways for us to help
7. Collect plastic from the sea
8. I do not need any specific role, but more consistency from myself
9. Respect for the environment
10. A fisherman with respect to the sea and to pass on that respect to the next generations.
11. No answer
12. No answer
13. I believe that i am already very sensitive about these subjects, so i will pass on that information and the information i learn from you to my colleagues
14. To use less fishing gear and not overfish
15. Less fishing gear and more legal tools

How do you keep track of new developments in fisheries?

- News show (tv) **3 answers**
 - Which one?
 - News application (phone) **5 answers**
 - Which one?
 - Newsletters **5 answers**
 - Which one?
 - Eurofish Magazine **5 answers**
 - Colleagues **10 answers**
 - Other: **8 answers**
1. From the fishing union (3 answers)
 2. I am in a fishing union and I learn new information straight from the relevant ministry.



How do you keep track of new developments in the fisheries sector?



■ News shows (TV)
 ■ News application (phone)
 ■ Newsletter
■ Eurofish magazine
 ■ Colleagues
 ■ Other

Do you have any comments or suggestions for improvement?

1. No answer
2. No answer
3. More lecture all over greece
4. No answer
5. Repeat this lecture all over greece
6. More patrolling
7. Scientists should leave their offices and go to the real place, the sea, to see with their eyes the real numbers
8. Everything was great
9. More information from various seminars for the fishers
10. More seminars and participation of many fishers
11. No answer
12. Everything was great
13. The training was excellent and i believe it must be taught to more fishers.
Congratulations!
14. No answer
15. No answer



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Attachment 9 - Tips for the course leader

When you get more confident with the content, try to focus more on the group dynamics. Our course is a mix of information (lectures) and involvement (workshops). We think that is essential. So, some tips and tricks:

1. Keep that balance between information and involvement in mind. It is very tempting to share all the information that you/we have with the participants - it is all good and important stuff. But it is even more important to engage them and let them share the information and opinions that they have. It is easier for them to listen to you when they can also share - the TOP 5 workshop is essential in that. The workshops are great. Asking questions and group assignments are important. Keep that balance in mind in the entire course.
2. Keep an eye on all the people in your group - how engaged are they, are they listening, or doing something else? Are they talking to each other about the course subject (good) or about something else (less good). If your group is engaged, you can continue sharing information and presenting, if they are not, sharing information does not help because they are not listening anyway. You might have to change the subject, ask questions or even give them a group assignment to get their attention again.
3. Take more time to involve the group. You will notice that most of the time, the same people answer your questions - but we want everyone to be involved. When you ask a question, give them some time to think about it (1 or 2 minutes) individually or let them talk about it with one other person or in a group. Then ask someone for their answer, and another one. Make an inventory of different answers before you respond, so more people get to share. This gives participants time to think about the subject and shows them that you are interested in their ideas and opinions.
4. It is hard when some people are talking too much, especially when they are really engaged. You do not want to ignore them if they are talking about the course subject, because that would show you are not interested, but they are overpowering others. A good way to deal with this is to not ask questions to the entire group (they will answer first), but to either work in groups, or to ask others first - after that they should get the opportunity to share.

