

Sustainability of fish production and fish consumption

EXERCISE

0

Subject Social Studies and Citizenship

Level high

Duration 150 minutes

Learning Opportunity

Field of Competence	Detailed description
Social and civic competence	On the example of fish, pupils recognize how individual behaviour, entrepreneurial practice and political regulation influence sustainable production and consumption patterns as one of the sustainable development goal (SDGs). They learn to read packaging information and get the background knowledge for a conscious consumer decision. In addition, the economic link between Europe and Greenland is being recognised.
Basic competences in science	The pupils have detailed knowledge about fish stocks and fishing methods and know about sustainability aspects and challenges in fish production.

Timetabled Schedule

Min.	Work-steps	Topic	Activity for Students	Activity for Teachers	Material
10	1	Consumer information on fish packaging. Analyse outer carton.	Look at the packaging and answer questions from worksheet O3	Give guidance	Outer packaging of shrimps from Greenland (Original in the Box) or Printout (USB-Stick) Material O 1; Material O 2 fish species or the cards in the box Worksheet O 3
95	2	World-Café to the themes 1. Fishing policy, 2. Boats and catching methods 3. Quality aspects 4. Labels	Read up on the themes (4 x 10 mins), work on the questions (4 x 10 minutes), present results and discuss (15 mins)	Give guidance, hand out questions, clarify questions of understanding and initiate discussion	Material O 4, O 5, O 6 and O 7, flip chart paper on the tables. Printed question cards or paper distributed O 8
30	3	Analyse and evaluate consumer information on the packaging	Record information on the packaging in the list on worksheet O 9. Discuss questions in the plenary	Give guidance, hand out questions, clarify questions of understanding and encourage discussion	Worksheet O 9. Consumer information with mandatory and optional labelling
15	4	Conclusion with closing question. What are the relevant factors for sustainable fishing?	Note and discuss aspects	Moderation	Flip chart paper

Schedule

POSSIBLE EXAMPLE FOR THE BEGINNING OF THE EXERCISE

In the previous exercise I (catching methods and value chain) methods for catching and processing halibut and the value chain were considered. This exercise considers sustainable fish production and consumption. From the point of view of consumers students will analyse the information on the packaging of shrimps (Arctic Ocean shrimp). Students will develop a better understanding of packaging information and learn more about fishing policy, ships and catching methods, quality aspects and labels for sustainable fish products. They will also learn about the impact of companies and consumers, research on fish and political decisions on the sustainability of fish production and fish consumption.

STEP 1

Students are split into groups and deal with the information on the packaging of deep sea prawns which have been caught in Greenland. In addition, they get an enlarged print out of the original packaging of the box (material O1) which is for inspection next to other materials such as pictures of fish species (material O2).

Task for the students

Look closely at the fish packaging. What information could you find on sustainable fishing? Write it down on worksheet O3 question 1.

Note down any questions which you have about the information on the packaging.

The group then set aside the sheet; the theme of packaging information is picked up again after the World Café at the end of the exercise.

STEP 2

Students work according to the 'World Café' methods concentrating on sustainability and giving an overview of fishing policy, fishing methods and further aspects of fishing. The class is divided into four groups. On the four tables are laid out the areas of "fishing policy", "ships and fishing methods", "quality of fish" and "identification and labels" from information sheets (material O4, O5, O6, O7). They learn about each respective area. In handling the four issues, 3 questions are formulated. The first question is descriptive, the second an analytical question and the third question an evaluative task that students should answer. Only one question will be processed per run through. During the fourth run through all pupils and students can complete pre-prepared questions for all the topics.

Exercise for all students

The groups go to one table at a time (all students run through all tables together with the exception of the moderators). For the moderation of individual tables, two students are selected (for example the moderator determines the proposal and choice of students or the teacher) The moderators remain at their table whilst the rest of the group change themes / tables.

One or more of the group reads out the text from the information sheet to the other students (10 minutes).

Alternatively, every student receives the information sheet and reads through it themselves (8 minutes). The teacher gives the moderator question 1. The moderators read the question out and the students work on the exercise at the table, discuss if necessary, clarify issues, or record them for the later plenary. They can write aspects of questions down on flip chart paper. The moderators lead the discussion and notes the results (10 minutes). The groups then change tables with the exception of the table moderators.

Students read up and work on the second theme. The moderators present the results of the first group and ask the second group question 2. The students work on the task and change to the third table.

The students read up on the third theme and answer question 3 after the moderators have presented the results of the two previous groups.

The students read up on the fourth topic and discuss the results from the earlier rounds and contribute amendments and questions for the subsequent plenary.

When the four student groups have run through each theme table, they stay at their final table and with the help of the moderators, combine the results of the 3 questions from their table onto a flip chart paper for the plenary session.

One person at a time from each group presents and explains the flip chart in the plenary. The students are allowed to ask questions and discuss the results.

Questions for Material O4 – Information sheet on Fishing Policy

1. With which regulations, laws and policy agreements does European Fishing Policy regulate fishing?
2. Which sustainable objectives do the European Fishing Policy pursue? Where are the weaknesses and problems?
3. From your perspective are the existing laws and agreements sufficient to protect fish stocks in the future. How sustainable is fishing in Greenland?

Questions for Material O5 – Information sheet on ships and fishing methods

1. With which type of ships and fishing methods are fish caught?
2. What are the advantages and disadvantages of the different methods?
3. How economical are the methods and how sustainable are they?

Questions for Material O6 – Information sheet on quality

1. What aspects play a role in the quality of the fish?
2. Which aspects affect the spheres of consumer protection, environment, economy and society?
3. What aspects of quality are important to you and why?

Questions for Material O7 – Information sheet on labels

1. Where do the labels come from for sustainable fish?
2. How do they differ from each other?
3. Are they a shopping help for you? Which information is important to you?

STEP 3

Back to the fish packaging from the start of the exercise.

Question to students: Have the comprehension questions about the information on packaging been clarified? In case there are still questions, they will be clarified in the plenary.

4.0 COOPERATION FOR SUSTAINABILITY

Sustainability of fish production and fish consumption

The students meet together in their original groups (step 1) and work on worksheet O8. They enter the information found on the packaging into the second column of the table and order them according to the legally prescribed and voluntary information.

Questions to the students. Discussion on the following issues is required.

1. Is the information on the packaging understandable or do you need further clarification?
2. Has all required information been provided? What is missing?
3. What information on the packaging is especially important for you?
4. Who has the responsibility for sustainable fish production? (customers, fisheries, supermarkets, the fishing industry, governments?)

Results Step 3 for the teacher

Example for selecting the information on the packaging into the categories of worksheet O8

Mandatory information for all types of fish products	Information on the Packaging:
Trade description and scientific name of the species	Ocean Sea, Greenland Atlantic Cod, Shrimp
Production methods ("caught" or "from Inland Fishery"...(for example Lakes) or "gained in aquaculture")	Caught
Catch area / country of origin and water of origin / country of production (FAO Fishing regions and sub areas)	Prawns (<i>pandalus borealis</i>) caught by trawls in the north west Atlantic (FAO Number 21) West Greenland
Fishing gear (wading nets, trawling nets, gill nets, circling nets, lift nets, hooks and long-lines, dredges or pots and traps)	Caught by trawls
Defrosted product must be described as such	Deep frozen product
Expiry date / use by date / best before	30.11.2017
Allergens (Describe any allergens)	No information
In addition obligatory for pre-packaged products	
List of ingredients	Shrimps, water, salt
Quantity of ingredients	88,5 % shrimps
Net amount (Net weight)	225 g
Storage and usage conditions (for example after defrosting do not re-freeze)	Storage conditions for the fridge, freezer compartment and freezer (refer to brackets)
Name or company name and address of food business	Royal Greenland Vertriebs GmbH, Otto-Lilienthal Str. 23, D-28199 Bremen
Country or place of origin	Illulissat
Nutrition declaration (obligatory from 13/12/16)	Available
Identity signs (the oval sign indicates the business that last processed the food; with the authorisation number of the business which works to EU wide hygiene standards and is monitored just like a symbol of an EU member state)	available
Packaging date	Information not available.

In certain cases:	
Instructions for use (only on request)	none
Date of freezing (only for raw manufacture)	Processed product
Water content	Water as protective icing
Additional proteins sourced from another animal	No additions
Pressed fish	No pressed fish
Voluntary information:	
Time period of catch	None
Day of landing, Port in which the fish manufacture landed	none
Detailed information about the catching devices	none
Flag of origin of the fishing vessel	Greenland trawler
Environmental, ethical or social information (sustainability)	MSC certified fishery F
Production techniques and methods	Cooked and skinned

STEP 4

Conclusion

What are the relevant factors for sustainable fishing and sustainable fish consumption?

Variations

Students can do research on the internet on what the environmental groups (WWF, Greenpeace) call for on the subject and then discuss in class. Are the demands realistic? Could they be fulfilled? What stands in their way? How can fish catches and consumption become more sustainable?

Background information for the teacher

For the teacher: Material O 1 page 2: Different information found on the packaging

Possible key words and background information for the discussion of step 4:

1. Political

Protection of species: Fishing bans for endangered species, quotas to regulate size of catches, prescribed technical methods to reduce unwanted catches, establish protection areas and expand for regions which are endangered by fishing using such methods, like coral reefs, spawning regions for fish, landing requirement (all catches must come on land, fish should not be thrown back into the sea). Control of fishing, especially big trawlers, pursue scientific research into fish stocks and pursue their preservation, improve consumer information

2. Economic

Support local processing, minimise food miles (rather than, for example, Greenland shrimps being skinned in Thailand). Use sustainability labels, if possible not only for fish quality but also for ecological and social conditions.

4.0 COOPERATION FOR SUSTAINABILITY

Sustainability of fish production and fish consumption

3. Trade

Switch over to a certified sustainable range of fish types, do not sell endangered species. Improve communication to consumers and for example convey that fish are not a mass produced product, create transparency in the journey of the fish from being caught to the consumer.

4. Consumer

Purchase sustainably produced fish, eat fish consciously, avoid endangered species and over fished stocks, inform yourself about the subject, and use the fish advisor from environmental organisations.

5. Environmental Organisations

Call for sustainable fishing, fish purchasing and consumption through politics, the economy, trade and consumers; make sustainable practices, developments and violations public; providing comprehensive consumer information generally contributes to a better state of information.