The Baltic Sea Project of UNESCO ASP schools WebQuiz 2017

Organizer:
Foundation Tartu Environmental Education Centre (Tartu Nature House),
Estonia (www.tartuloodusmaja.ee)
Sponsors:
Republic of Estonia Ministry of Education and Research (https://www.hm.ee/en)
Web design and management:
Walk & Learn (http://www.mineavasta.ee/)

SHEET OF QUESTIONS AND CORRECT ANSWERS

Before starting the quiz, all participants were asked to check if they had access to 1) internet connection, 2) video software, and 3) headphones. Total score could be + 100 points. Each participant could submit their results only once. The organizers would count only the first submitted quiz for each person.
This sheet gives you the correct answers in green.

QUESTION 1:

Watch this video about flip flops made of algae (1,56 minutes) and answer this question: What makes algae flip flops sustainable*? (You can have more than one option.) Video:* https://www.youtube.com/watch?time_continue=116&v=gT4tjPVWIww

a) Flip flops were constructed with carbon that was pulled from the atmosphere, rather than underground oil reserves.
b) Flip flops are made of polyurethane.
c) Flip flops are made by students, and they cost only $3 a pair.
d) Flip flops are made of algae oil that is converted into polyurethane in manner that will allow the carbon bonds to be degraded by microorganisms.

(Reference: https://www.youtube.com/watch?time_continue=116&v=gT4tjPVWIww)

QUESTION 2:

The HELCOM Red List of Baltic Sea species in danger of becoming extinct (2013) is the first threat assessment for Baltic Sea species that covers all marine mammals, fish, birds, macrophytes (aquatic plants), and benthic invertebrates. About 1750 species were evaluated, and 4% of those were listed as threatened, which means that they are in danger of becoming extinct in the Baltic Sea. Three species were found to be already regionally extinct in the HELCOM area. Choose those three extinct species from the list:

a) The opossum shrimp *(Gastrosaccus spinifer)*
b) The Beluga (European) sturgeon *(Huso huso)*
c) American Atlantic sturgeon *(Acipenser oxyrinchus)*
d) The common skate *(Dipturus batis)*
e) European otter *(Lutra lutra)*
f) The gull-billed *tern (Gelochelidon nilotica)*

(Reference: http://www.helcom.fi/baltic-sea-trends/biodiversity/red-list-of-species)

QUESTION 3:

HELCOM hosts database of shipping accidents in the Baltic Sea reported by HELCOM contracting parties since the year 2000. According to the agreed procedure all accidents are reported irrespectively if there was pollution or not. This includes accidents which involved tankers over 150 gross tonnage and/or other ships over 400 GT. Open HELCOM interactive map: http://maps.helcom.fi/website/mapservice/?datasetID=d27df8c0-de86-4d13-a06d-35a8f50b16fa&features=MPA_ID:83

Using different data layers of the map find out how many shipping accidents have ended up with sinking?

a) 12
b) 14
c) 16
d) 18

(Reference:http://www.helcom.fi/baltic-sea-trends/data-maps/maritime-response/shipping-accidents/)

QUESTION 4:

One of the biggest problems with commercial fishing using modern equipment is by-catch. By-catch, also known as unwanted catch, is the action of catching other species than the ones targeted by fishing. Estimate, how many gray seals in total were by-caught in 2001 (Swedish Baltic Sea coastal fisheries, Lunneryd et al. 2005)? **Fortunately, alternative fishing gears can be used to reduce this danger to birds and seals.**

a) 4 gray seals
b) 40 gray seals
c) 400 gray seals

(Reference: http://helcom.fi/action-areas/fisheries/ecosystem-effects/bycatch)

QUESTION 5:

What does the term "ghost-fishing" mean?

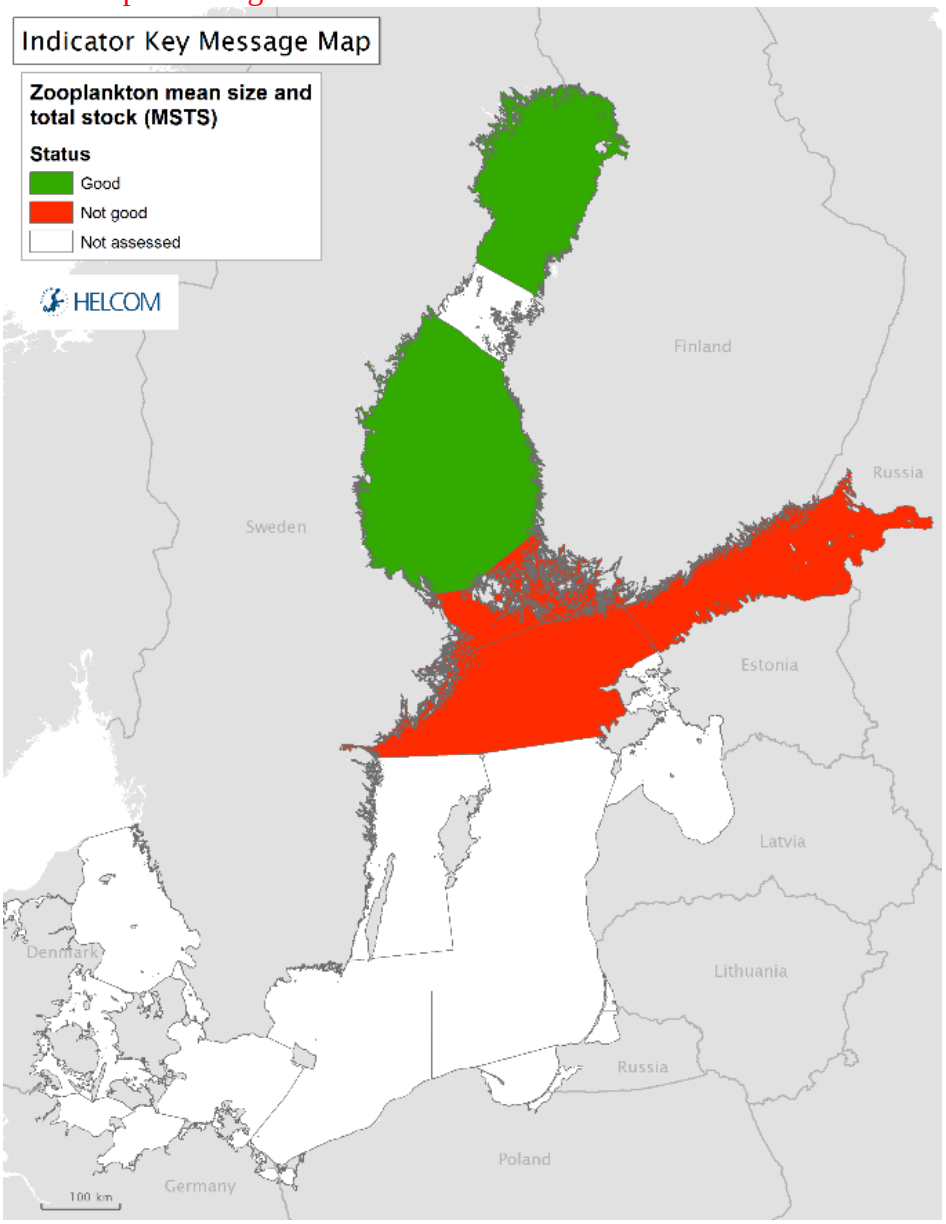
a) It means that fishermen are talking ghost stories while fishing commercially.
b) It means that lost, dumped or abandoned fishing gear gets snagged on a reef or a wreck and gets detached from the fishing vessel, then starts to catch sea animals without anyone profiting from the catches, killing all those animals.
c) It means that lost, dumped or abandoned fishing gear is made of materials that makes it invisible for animals.

(Reference: http://www.ghostfishing.org/the-problem/)

QUESTION 6:

Zooplankton includes an array of macro and microscopic invertebrates. They play a vital role in the marine food webs. Therefore, zooplankton is an essential link in aquatic food webs, influencing energy transfer in the pelagic food webs and recruitment to fish stocks as well as ecosystem productivity, nutrient and carbon cycling. Hence, the evaluation of zooplankton communities is a great for analysis of pelagic food web structure. For example, zooplankton-mean-size-and-total-stock-(MSTS) indicator evaluates zooplankton community structure to determine whether it reflects good environmental status of the sea. Look at the map of the indicator values and decide which of the sentences are TRUE?

a) In the Bothnian Bay MSTS values are above the threshold values indicating good status of the sea.
b) In the Åland Sea the MSTS values are significantly below the threshold values, which implies that good status has not been achieved.
c) Gulf of Finland the MSTS values are above the threshold values indicating good statusof the sea.
d) In the Bothnian Sea the MSTS values are significantly below the threshold values, which implies that good status has not been achieved.



(Reference: http://www.helcom.fi/baltic-sea-trends/indicators/zooplankton-mean-size-and-total-stock-(msts))

QUESTION 7:

Microbeads are the tiny plastic pellets present in many beauty scrubs, make-up products, toothpaste and household goods. They are made of non-biodegradable plastic, and can't be extracted during water treatment. They also don't dissolve in water. Therefore, they end up in the oceans. Forever. That's a serious environmental hazard, as well as a danger

to animal and human consumption. In USA, Kanada and Netherlands, the microbead products are already banned. What European country announced a ban on the sale of cosmetics containing microplastics at the United Nations Ocean Conference at the beginning of June 2017?

a) Estonia
b) Russia
c) Sweden
d) Lithuania

(Reference:https://www.indy100.com/article/microbeads-harmful-where-are-they-banned-countries-7549811)

QUESTION 8:

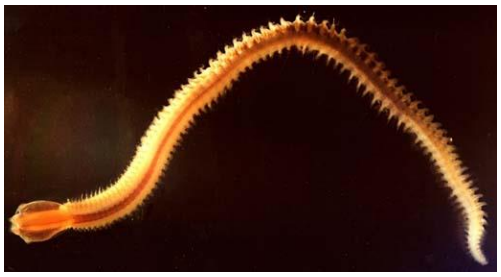
Species being introduced unintentionally by shipping in the ballast water tanks or by hull fouling, or spread from their primary sites of introduction in adjacent freshwater bodies, are called invasive species, also known as non-indigenous species (NIS) or alien species. There are 118 non-indigenous species (NIS) observed and approximately 90 established in the Baltic Sea. Look at the pictures of different species. Which of the followings are the invasive species in the Baltic Sea?

a) The warty comb jelly or sea walnut *(Mnemiopsis leidyi)*

b) Baltic herring *(Clupea harengus membras)*

c) Laver or seaweed (*Porphyra umbilicalis*)

d) Red gilled mud worm *(Marenzelleria neglecta)*



(Reference:http://caspian.iwlearn.org/caspian-1/mnemiopsis-leidyi-1/documents/invasive-species-in-the-baltic-sea)

QUESTION 9:

There are now more than 400 known dead zones in coastal waters worldwide, compared to 305 in the 1990s (National Geographic News, 2008). Earth's one of the largest dead zone is in the Baltic Sea, and it experiences oxygen deprivation year-round. Watch this video (https://www.youtube.com/watch?v=rSF7feoJ6ho**) and answer this question: What can we do to remedy dead zones?**

a) Eat more vegetables.
b) Eliminate the amount of excess fertilizer going to the sea from agricultural lands.
c) Find alternative methods for sewage systems.
d) Inject pure oxygen to the bottom of the ocean.

QUESTION 10:

Where will the UNESCO Baltic Sea Project's international conference in 2018 take place?

a) Åro
b) Damp
c) Aegna
d) Purekkari

(Reference: http://www.b-s-p.org/home/)

The Baltic Sea Project of UNESCO ASP schools is an international network among schools for a better environment in the Baltic catchment area. The countries bordering on the Baltic share many environmental problems, starting with the pollution of the Baltic Sea. In attempting to solve the environmental problems, education is one of the key factors. The Baltic Sea Project (BSP) has therefore initiated cooperation among schools in all the countries around the Baltic. Today, over 200 schools are active in the BSP. Most are secondary schools situated on the Baltic coast, but the number of inland schools from the entire catchment area is increasing. In many schools, the BSP has been organized as a joint effort including many subjects.

Objectives

- To increase the awareness of the students about the environmental problems in the Baltic Sea area and to give them an understanding of the scientific, social and cultural aspects of the interdependence between man and nature.
- To develop the ability of the students to study changes in the environment.
- To encourage students to participate in developing a sustainable future.

Practical measures

- To set up a network of schools and other educational institutions.
- To create and develop educational approaches and joint programmes for environmental and international education.
- To organize joint activities and events.
- To publish the BSP newsletter and other relevant information.

Educational approach

- To achieve a balance between a holistic view and individual subject studies.
- To change the role of the student from passive recipient to active constructor.
- To change the role of the teacher from supervisor to guide in a learning process.
- To use networks to provide participants with opportunities to learn and pass along new ideas.
- To use international cooperation as an inherent element of school work.

Your school is welcome to join! Contact your county's national coordinator.
The Baltic Sea Project's homepage: http://www.b-s-p.org/home/