

The Cononect Water Chronicle



October, 2017
4th and last edition

Editorial

For you, dear readers

We proudly present the fourth and last edition of our e-zine. With mixed emotions however.

This final publication is dedicated to the water theme, which should have been dealt with by the students during the fourth exchange in Burdur. Because of the developments in Turkey after the 15th of July 2016 we transferred this topic and the exchange to Larissa last May.

During several months before the exchange the students did research on the theme of water and recycling. In Larissa they debated on the results of the questionnaires they made on consuming energy and water. They found out that the high cost of a cubic meter of water does not necessarily stimulate people to spill less water. You can read now about their results of the research on items such as the quality of water, algal bloom, water as a means of transportation, the economical cost of water, the problems with lack of water.



No Lake No Burdur!

<https://www.youtube.com/watch?v=EaooUUK1oA>



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THIS EDITION WAS MADE BY:

Anders Larsson, Adam Lambertsson, Frida Heinz, Linnea Wahlström, Rebecca Gustavsson, Stina Lindberg,, Carl-Johan Andréasson, Andreas Sjöstedt, Helen Rengman, Carina Tomasen, Anders Olsson, Glenn Johansson, Louis Artois, Yoshi Bousse, Tim Devaere, Roan Gevaert, Louise Hagers, Kain Ide, Keana Stockmans, Aïscha Swinnen, Max Vangeel, Johan Verstraete, Carine Dergeloo, Ezgi Bulutkal, Ezgii Bilhan, Elif Boz, Hüsseyin Korkmaz, Ramazan Yeli Kayabunar, Emine Cag, Mehmet Kosar, Fotios Bouroutzikas, Valentinos Gkiouris, Viktoria Efthymiopoulou, Anna Niania, Dimitrios Theodourou, Eudoxia Gkarlemou, Filippos Makridis, Paraskevas Bagkas, Elisavet Mangou, Konstantina Nteoudi, Maria Papayianni, Fania Alexoudi, Christos Sakavos, Konstantinos Pipinis, Vasso Boumpouraka, Mina Exarchou, Zoe Gallou, Natasa Gialama, Litsa Simogianni, Patrick Ghyselen



„Water is Life!” A theater play from Burdur

Announcer: „Dear audience! The water resources are getting lower day by day! According to the recent results of the surveys, every fourth person has only 500 ml water in total. This drought is causing people fight each other. Let’s listen to the people about this problem! Sir, how do you feel about this drought?”

1st man in the street: „It is very hot and it’s getting hotter day by day and we have hardly any water. We try not to go out, so as not to get thirsty. We are waiting for help. I don’t know how long we can survive without water.”

2nd man in the street: „I agree with you. We are in a hard situation. We need to find water. When we are thirsty and can’t drink water, the tension is rising.”

Announcer: „Well, thank you. And what other things are happening here? “

3d man in the street: „Water banks have been started. There are many crimes, such as water smuggling, water theft and water snatching. In many places we don’t find water nor meals. As there is no water, we have to eat dry food; it affects our health negatively.”

4th man in the street: „There is something up to me.” (falls down and the others gather around him)

Announcer: „Quick! Bring water urgently!” (other men suddenly fall down)

1st man in the street: „Ah! I am feeling terrible.”

2nd man in the street: „So am I!”

3d man in the street: „I’m dying. Please, bring me water, please!”

Announcer: „Is there anyone having water? People are dying.”

Hero: „I have! Hang on!”

Announcer: „Oh! In the end! (the hero gives water to the people on the ground. People who drink water, stand up and leave the stage)

Announcer: „Dear audience! Here is the hero! Lady, you helped people to survive by giving water to them. Congratulations!”

Her: „We should share what we have. Water is Life! We should share life!”

1st man in the street: „Life begins when we first meet the water in our mother’s womb. Water is our first heart and home, then the world. Eyes opening on the world, bring two eye drops of water...”

2nd man in the street: „We fulfill our needs with water. Nature gets cleaned and comes to live with water.”

3d man in the street: „Our body is composed of 70% of water. And this means it is impossible to have life without water.”

4th man in the street: „We can’t give up water. It has countless benefits.”

Altogether: „Water is life! Live your life and share! And everything comes to live!”

Announcer: Elif Boz
1. man: Ramazan Veli Kayalar
2. man: Hüssein Korkmaz
3. man: Ege Bilhan
4. man: Ege Bulutkal
Hero: Emine Çiğdem
Director: Kübra Nur Balbawer

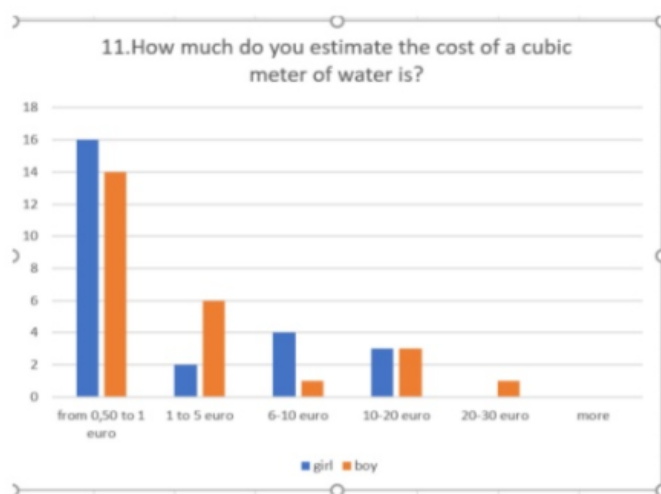


Research results from Larissa:



<https://www.slideshare.net/zoegallou/research-in-our-school-about-environment-and-preservation>

Research results from Burdur:



<https://twinspace.etwinning.net/9538/pages/page/224424>

Water and hospitals

In Sweden:

All hospitals in Sweden are recommended to have double water supplies to ensure that there is always water for the hospitals. If the normal supply of water is not enough, there should be another way of water entering the hospital. Without water it is difficult to exercise care, the dialysis is clearly affected, but also all forms of cleaning (sterile, for example) are stagnant without water supply. So even if you think you can handle patients in departments, it's hard to do treatments if you cannot clean instruments etc. Current dialysis, it is a very special part of health care that is completely dependent on the fact that we have water. Without water, we cannot perform the treatments on the patients and then we have to start moving the entire operation to other hospitals, which in practice is reversed if possible. The dialysis also has its own water treatment plants that further purify incoming water to use it in dialysis. Even the dialysis water treatment plants have two of them so that we can switch everything on the other if you break down.

Here at the hospital, we will soon have two water supplies to the hospital. A pipeline has been taken from Degerfors waterworks to provide the hospital. To operate a new wire, it must be flushed for a long time and after that there are a lot of sampling, etc. to ensure the water quality before the water is well connected to the hospital. We will have an entrance with Degerforsvatten to the hospital, but still two or more entrances of Karlskoga water. If there is a stop on the water from Degerfors, you can start one of the Karlskoga entrances and drive it to the hospital.

WATER CLEANING PROCESSES in Turkey and Sweden

pH level of water decreased dramatically in Sweden

If we look at the water in the bare nature such as in rivers and lakes it is quite healthy but it is not drinkable if you haven't filtered and boiled it first because it still contains bacteria. And sadly because of the uses of fossil fuels the pH level of the water has decreased dramatically. This affects both the nature and the animals in the Swedish eco system, because a very few species can survive under those conditions. One natural detector that show us that the water has a lower pH is waterlilies because the really "enjoy" sour water and therefore grows quite fast.

As one way to counteract the decreasing pH we add "lime" because of its high pH and it also dissolve pretty easily in water. The lime will then react with the Oxonium ion in the sour water and then creates carbon dioxide and water.

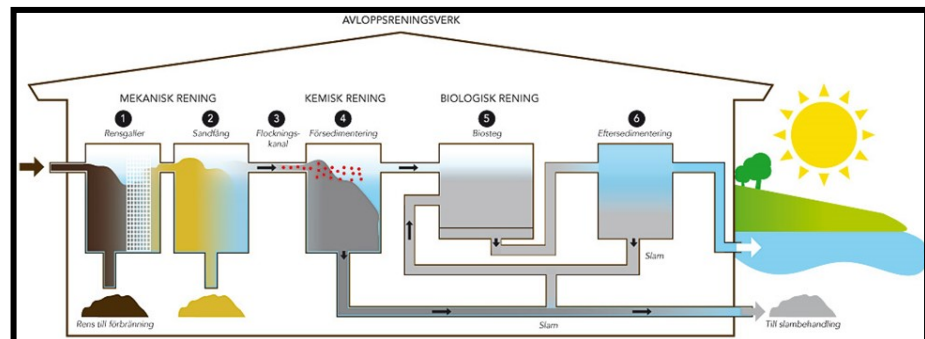


Our tap water on the other hand is one of the healthiest and cleanest in the entire world. One of the reasons is that we have effective way of cleaning our sewage water. And the cleaning process is basically divided in these 3 main steps:

WATER PRESENTATION BY HÜSEYİN KORKMAZ



<https://twinspace.etwinning.net/9538/pages/page/224424>



1) Mechanical cleaning

A fence for the really big things that for some reason have been thrown in the water.

Sand for the particles that slip through the fence

Early sedimentation. (a comical is added to make the remains sink to the bottom)

2) Biological cleaning

In these stages "friendly bacteria and microorganisms" is added to break down materials that consume oxygen.

Extra oxygen is also added to make up for eventual loss.

3) Chemical cleaning

This parts main job is to get rid of the phosphorus in the water. They do that by adding chemicals to make salts that don't dissolve in the water.

And finally the water is let out in to the nature again.

Algal bloom

Sweden:

When different species of algae start to grow very fast and makes big populations.

Often close to the surface because of the sun and during calm weather. Not bound to season or time of the year, but are mostly harmful from late summer to the beginning of the autumn.

Happens naturally but over-fertilization causes much phosphorus and nitrogen.

Looks like a green-yellow or blue-greenish layer on the surface.



Not dangerous to bathe in but shouldn't be swallowed. It might cause irritations or, in big quantities, be poisonous for humans or animals. Some algae can be found in clams which are eaten by humans.

Cyanobacteria is, a little misleading, a type of algae which are ordinary in the Baltic Sea.

Belgium:

In the North Sea there are hundred thousand to hundred million plankton algae per liter of sea water.

Every year around spring, when the days get longer, millions of microscopic weeds develop in the sea. They use the nutrients (nitrates and phosphates) that are present in the water for their growth. If our rivers dispose to many of these nutrients in the sea, there will be an overgrowth of algae.

The consequences of algae bloom are diverse:

Oxygen deficiency in the water

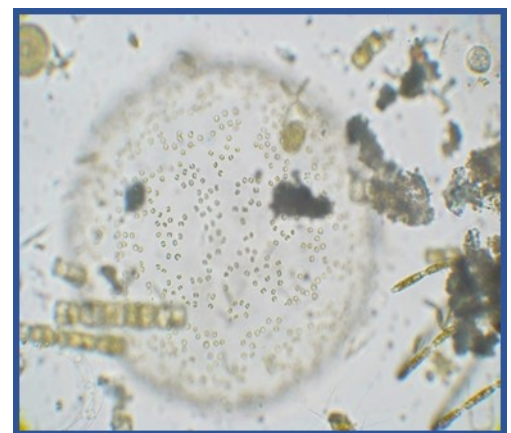
Changes in the ecosystem

Development of algae species that produce toxins that can be harmful to humans and animals

Deterioration of water quality (bad smell and taste), the water becomes brown à sometimes impossible for divers to see something

The algae growth that occurs in spring in front of are cost is visible through the foam flakes (img.1) that form when remains of foam algae (scientific name: Phaeocystis) get whipt it by the waves.

Phaeocystis are single cell algae's (img.2) their measurements vary between 3 and 7 μm in diameter. Around spring, especially on the windy days, a lot of the times the beach is covered with large amounts of foam, sometimes these piles can become over 50cm tall. A lot of people have questions about this matter. What is this? Where does it come from? Is it pollution, or harmful?



The Algae on our cost mainly consist of one kind Phaeocystis pouchetti, these are very slimy. there are two possibilities, either they come as a single cell, which is not visible to the human eye, or they come in groups, which is visible to the human eye. These groups of algae are covered in some kind of gelatine. If the algae die, a lot of gelatine comes free and then the waves clutch it up to a big pile of foam.

Epilogue

Our project Cononect has come to its end. It got a difficult start, because initially it was refused by the jury twice for grants. Actually it got enough points, but the credits by the EU were not high enough to grant every good project. But we persevered and thanks to my Swedish colleagues it was reworked and finally, two years later, we got the money to start. I learned a lot from it, it was far more than worth the effort. The students had a unique experience, but we the teachers perhaps even more.

Moments to cherish?

I'll never forget that day in that gracious Kalambaka oak wood, the truffle hunt with the well trained Brio. Everybody astonished about the infallible nose of that dog, helping mankind to find the treasures of this earth. And an hour later our students found two families of ten blind pups, born only few hours before, let behind for a certain death by that same mankind. My students rescued the dogs. But in almost one and the same moment we learned how mankind behaves towards animals: in the most exquisite way, but also very brutal... A thrilling experience.

Canal Locks

A canal gate is a device for raising and lowering boats, ships and other watercrafts between stretches of different levels of rivers and canal waterways.

The advantages with canal locks is the ability to go from different water levels, that you can travel against the tide, it takes care of the arrangements between the tides and it can shorten the distance between places.

4 X WATER



Moments to cherish?

BURDUR LAKE. PRESENTATION BY HÜSEYİN KORKMAZ

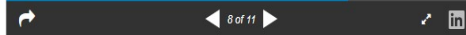
Living creatures in Burdur Lake

Dikkuyruk's



This duck is known from Spain, North Africa, western and central Asia. Populations are declining, mostly due to loss of habitat and hunting, and the International Union for Conservation of Nature has raised the bird's status as "endangered".

- They are mostly found in burdur.
- Most than 66% of the winter in populations around the world is founded in Lake Burdur
- One of the protected species and hunting is prohibited.



Living creatures in Burdur Lake

Living creatures in Möckeln Lake



Living creatures at the Aegean Sea

Living creatures at the North Sea