



**Bio-
plastics:**

**The future of
food packaging?**

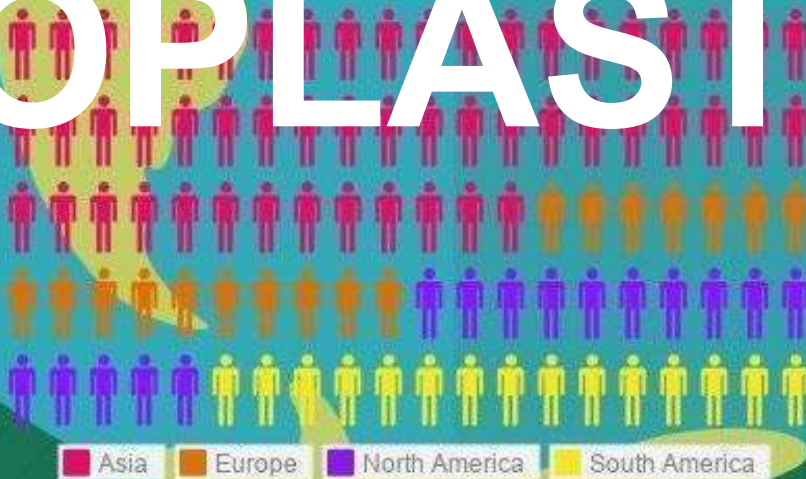
**Do you know how big of a
problem plastic pollution is
nowadays?**

**Well, they found out and are
trying to fix it. How?**

**Students from Germany,
Romania, Greece and the UK
came together through an
ERASMUS+ project to find a
way to help the
environment. And they found
it: BIOPLASTICS.**

BIOPLASTICS

Total 2.05 million tonnes
of bioplastics



Global production capacities of bioplastics in 2017 (by region)



ADVANTAGES OF BIOPLASTICS



• **REDUCED CO₂ EMISSIONS**

IT TAKES ONLY 0.8 METRIC TONS OF CO₂ TO CREATE BIO-PLASTICS WHICH IS 3.2 METRIC TONS LESS THAN NORMAL PLASTICS

• **CHEAPER ALTERNATIVE**

BIOPLASTICS ARE CHEAPER THAN NORMAL PLASTICS ESPECIALLY WITH THE SOARING OIL PRICES.

• **WASTE**

BIOPLASTICS DON'T GENERATE AS MUCH TOXIC RUN-OFF



• **REDUCED CARBON FOOTPRINT**

OIL BASED PLASTICS NEED FOSSIL FUELS AND BIO-PLASTICS DON'T

• **MULTIPLE END-OF-LIFE POINTS**

VALUABLE RAW MATERIAL CAN BE RECLAIMED AND RECYCLED INTO OTHER PRODUCTS.



Meeting in Germany

What were the plans?

We tried to get an insight into **BIOPLASTICS** and how to create them. We used a number of different approaches, combining water, starch, glycerin and other biodegradable compounds.



What did we do?

We chose some recipes that were successful because some did not come out right and were not good for use.

What were the results?

After experimenting with the recipes and perfecting them in the school labs, we now had the foundation to create actual food packages...colourful, practical and sustainable.





Group 1: Sweet Future

The advantages of their products:

- some of them are waterproof
- packaging for gravy powder dissolves in water
- easy to colour
- transparent
- solid and strong

Group 2: Bionited

"We want to produce eco-friendly BIOPLASTIC for everyday use. We also want to improve the idea that nature is very important and that we have to protect it. The future is for everyone!"



Group 3: Think Future

"We are creating cool eco-friendly lunch bags which are suitable for teenagers who take their lunch to school and employees who don't have time to leave the office for a consistent meal."

Group 4: BP-Tech

"Momentarily, our main product is a packaging for Tic-Tac mints, but our R&D department is working on perfecting the package. We hope that in the future we manage to make food packaging for foods like nuts, dry foods and bread sticks."





Group 5: EURECO

"By creating a bridge between the factory, logistics, marketing, R&D, client and the waste disposal companies, Eureco aims to achieve sustainability, help the environment and create renewable plastic with a biodegradable formula."

Group 6: Eco Wrap

The advantages of their products:

- durable
- renewable
- non-toxic
- 100% biodegradable and recyclable



Group 7: GerRom

"We aim to reduce the use of conventional plastic by replacing it with our handcrafted one. As for the future we want to become a worldwide company because the most important thing is to make everybody aware that plastic is a real problem."

Why?

Pollution and other environmental issues are a threat to life on earth. Especially plastic packaging causes a lot of damage. This is why our groups decided to make a difference through their work.



Erasmus+

Meeting in Romania

What were the plans?

We intended to create small "companies" which produce food packaging such as wrappers and bags that decompose in a much shorter period of time.



What did we do?

Our seven international groups worked on business plans and marketing strategies, alongside statistics about people's thoughts on BIOPLASTICS.

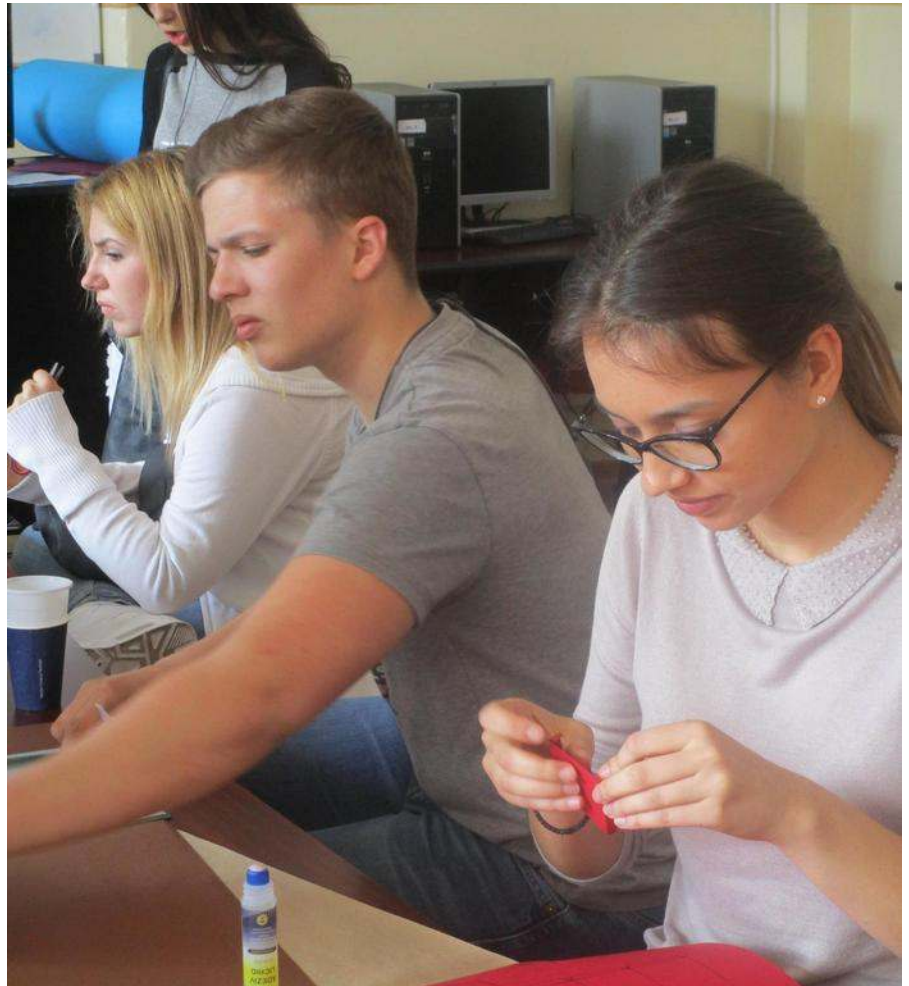
What were the results?

We gained an insight into public opinion through surveys and questionnaires.



Surveys

We asked people of all ages and genders questions about **BIOPLASTICS** and what they thought of it.



Results

The majority was excited to find out that there is an actual way to save the world from plastic pollution.



Meeting in Greece

What were the plans?

We wanted to create different websites for the BIOPLASTIC products we made and promote them through the internet and the media.



What did we do?

The seven international groups made websites and linked them to our company website to promote the BIOPLASTIC products.

What were the results?

We finalised the websites and put our company webpage in the top result in google search through the links.



Bioplastic future

Through all the website links from the different groups, we managed to put the company website on the top results when searching "Bioplastic future" on google.

The website is called "Bioplastics - The Future of Food Packaging"

<http://bioplastics-future.eu/>



bioplastic future

Bioplastics, on the other hand, are derived from plant-based sources. They can be made from sugar, corn, or from plant byproducts like wood bark and corn husks. ... Some types of bioplastics are biodegradable, some aren't. Some bioplastics will degrade in your home compost bin, while others require industrial composting.

<https://science.howstuffworks.com> › Science › Environmental Science › Green Science
Bioplastics are most frequently used in packaging, although bioplastics could potentially be used in any way that regular plastics are used. The performance ...

<https://oceans.taraexpeditions.org/en/m/.../bioplastics-an-alternative-for-the-future>
Stéphane Bruzaud, Laboratory of Materials Engineering of Brittany (LIMATB), Université de Bretagne Occidentale
Are bioplastics a solution for the future? Can.

[Bioplastics - The Future Of Food Packaging](https://bioplastics-future.eu/)

bioplastics-future.eu/ ▼

the laboratories and an expected mass production of bioplastics in the future. One issue affecting the spiral growth of bioplastics is the fear of individuals ...

[The Future Of Plastic Lies In Its Reinvention As Bioplastics - Forbes](https://www.forbes.com/.../the-future-of-plastic-lies-in-its-reinvention-as-bioplastic)

<https://www.forbes.com/.../the-future-of-plastic-lies-in-its-reinvention-as-bioplastic>
16 Jan 2019 - As harmful as plastic is for the environment, it is virtually impossible to completely eliminate it. What we need is to produce alternatives to ...

[The Future of Bioplastics | Floreon Transforming Packaging | Floreon](https://floreon.com/resources/articles/the-future-of-bioplastics)

floreon.com/resources/articles/the-future-of-bioplastics ▼
Floreon Transforming Packaging created the game changing additive for bioplastics through the desire for a cleaner and safer bioplastic.



Meeting in the UK

What were the plans?

Our aim was to see the actual reactions of the people to our BIOPLASTICS packaging.



What did we do?

We went to London to interview the public and see their opinions on our work, explaining them the process and our purpose.

What were the results?

After talking to quite a few people, we were happy to find out that they had a positive response to what we were doing.



What did we learn?

Through public interviews we got to know what ordinary people think, not only about the concept or the idea of **BIOPLASTICS** but also about actually using it.



Ready?

Now that we have done our full research, statistics and studies on the impact of **BIOPLASTICS** on society, we are ready to present our finalised work to the whole world, hoping it would help build a cleaner and brighter future.





Impacts

BIOPLASTICS are made from renewable biomass sources, such as vegetable fats and carbohydrates.

of

BIOPLASTICS can be made by micro-organisms which can produce lactic acids out of biomass.

BIO-PLASTICS

Fish that accidentally consume BIOPLASTICS are not harmed.

Impacts

Approximate number of litter at sea per square meter:
 100-150kg/km²

At Corfu beach, for example, 6.5 tonnes of rubbish were found!

of

Thousands of birds and mammals live and die with plastics in their stomach!

plastic

Plastic takes over 450 years to decompose!

Solutions to the problem



1

Less rubbish

Everyone should watch out that they don't produce too much rubbish. For our environment!



2

More recycling

Reusing and recycling is a good way to help the environment.



3

Using **BIOPLASTICS**

BIOPLASTICS are a solution to have less plastics in the environment.



4

Voluntary actions

Participating in voluntary actions is something everyone could and also should do.



The teachers



The students

THANKS!





This project has enabled students from across Europe to collaborate and find ways of reversing the damaging impact we are having on the environment.



If they can do it, with a little imagination and with a positive outlook, may be we can too...
