

Question & Answers: 4th EBRN Event: BIO-PLASTICS EUROPE AND SEALIVE EVENT:

Questions to the speakers

Dr. Silvia Maltagliati

1. can you please elaborate a little bit more on the concept of circular bio-based solutions? which are the most promising circular strategies in bio-based plastics value chain?
2. Why are bio-based biodegradable products banned as single used plastics? You mentioned there are other solutions. There are not many, and these are quite expensive. Also, reusable items are not always very efficient (e.g., packaging for to-go food). Can you give some examples? Because I have struggled to find other efficient and cost-effective solutions.
3. COMMENT: Unfortunately, also unintentionally littered biodegradable plastic materials need the right environment (temperature, microorganisms, humidity) to quickly disintegrate in such short times as it is foreseen for industrial composability facilities as set out by EN13432. Even though biodegradable plastics, such as PLA/PBS/PHA... etc. will be able to be disintegrated into CO₂ and water, under different environmental conditions (such as low temperatures in the oceans and different microorganisms than in soil) this process can also take decades, if not 100 years as well. So, first order in terms of preventing accumulating plastics in the environment is always to prevent leakage. (False) Claims on biodegradability might only cause consumers to (intentionally) litter more or care less about preventing it.

Dr. Prof. Walter Leal

1. You mentioned that BIO-PLASTICS EUROPE has developed already 5 prototypes (5 materials that will be used for production of 8 final products – reusable cutlery, agricultural mulch, soft and rigid food packaging, soft toys and AQUATIC materials (fishing baits, fish crates and geomembrane). Are there some preliminary results that you might share with us?

A: Yes, we started testing of those materials in September 2021, however we expect to have the final results and recommendations for modifications of the material in September this year. What I can say for now that we managed to detect those properties of some materials are better than for fossil-based reference materials. Regarding toxicity it is still in preliminary phase and we still cannot tell.

2. HOW BIO-PLASTICS EUROPE plans to support EU Policies?

A: The official deliverables about recommendations will be available nearly the end of the project (2 years from now), but in order to be in closer communication with the EU and offer transparency of our progress, we are planning to include one Advisory member specialised in EU policies, as well as to have 1/ year internal dialogue with the EU Policy officer to inform about the latest findings. In this way we can foster the communication before official documents are produced.

Dr. Miriam Gallur (SEALIVE)

1. You mentioned demonstrators in real environments. Would you like to explain a bit further what will be tested and what results you expect?

Answer: SEALIVE consortium will develop 8 demonstrators; those demonstrators have been selected by the consortium due to their high impact on plastic pollution. Some examples: thermoformed trays, flexible frozen films, mulching films, fishing crates and fishing nets. All the demonstrators have been produced using materials that can be compostable, biodegradable, recyclable and reusable; So, all of them will be validated (technical performance and economic feasibility) in each use. Example: fishing

crates will be tested in a fishing boat by the fishermen and its behaviour will be compared with conventional ones. Biodegradable mulching film will be tested its use in the soil and studied its biodegradability in soil including their ecotoxicity and commercial trays will be tested in a waste management plant to evaluate their sorting and their compostability.

2. HOW SEALIVE plans to support EU Policies?

Answer: SEALIVE policy team will be in contact at different forums to contributing by sharing the SEALIVE project results that could be used to support EU Policies.

Dr. Andrew Farmer

1. TÜV and DINCERTCO (biodegradability) certifications are referring to this EN13432 and are safe for disintegration in the needed timeframe in such industrial composting facilities (or in home composting, if respectively certified.)

Answer: The issue of standards is important and these are needed for different endpoints – industrial composting, home composting, marine environment, freshwater, soil, etc. Different bodies (not just in Europe) are working on these and there are the earlier standards, such as EN13432. However, for several end points standards are lacking.

2. When we talk about biodegradability, there are still many questions popping-up in your slides. Normally when people hear that something is biodegradable, they think it is better, but there are still doubts if biodegradable is the way forward. Are you personally worried that producing more biodegradable materials may lead to higher micro-nano plastics pollution?

Answer: This relates to the issue of being clear about terminology – in this case “biodegradable”. Clearly, plastics that simply break down, but persist as smaller particles, are not biodegradable. Biodegradation should result in microbial degradation at the molecular level. Therefore, it is important to be clear about claims of biodegradability and this relates to the issue of the use of European standards to ensure performance of these materials in the environment is as is claimed (including in relation to the conditions necessary for biodegradation to take place).

Ms. Jill Adams (BIO-PLASTICS EUROPE)

1. Regarding your experience working with stakeholders, how important is their active role in European projects especially when developing recommendations to the EU policies?

Answer: I do believe that EU policy makers strongly value having access to a diverse stakeholder group through EU research projects, because it helps them do their work. So having a stakeholders play an active role in European research projects is essential when developing recommendations for EU polices. But just being active is not sufficient. The activity needs to be focused - well timed, well designed with the stakeholder input well translated and integrated into the research and policy recommendations - and with a broad range of representative stakeholders to ensure legitimacy. And where possible joint approaches with say other EU funded research projects to avoid duplication.

2. Looking at the experience in the last 1.5 years: is it really possible to engage with stakeholders on-line and how does the future look like?

Answer: As I mentioned in my presentation a successful stakeholder engagement strategy has different levels of engagement from consultations to highly participatory scenario planning processes. So yes, I absolutely believe we can engage with stakeholders on line. But to do it

effectively, I hope we will have the opportunity and possibility in the near future to have more choice over which elements of the engagement we continue to do on-line and which we do face to face – a smart approach if you like, which combines the best of both worlds.