

Policy Briefing

New Plastics: Future Proofing Policy

Summary

- The issues that law and policy address constantly change and it is important to design law and policy not only for today's concerns, but also (as far as possible) to be still suitable for tomorrow's.
- This "future proofing" of law and policy requires careful consideration of exactly how it is framed and worded.
- There are many new plastics emerging all the time – such as using different biological source materials, with different biodegradability properties. Further, new products using these materials are being developed.
- Additionally, our understanding of how these new materials interact with the environment, consumer behaviour, etc., evolves rapidly.
- It is also important that law and policy reflect the precautionary principle, yet also support innovation. Framing them in the correct way can achieve this.
- Law and policy are best based on principles, objectives, aims, rather than based on specific materials. Doing this ensures they remain relevant. They can also be precautionary and stimulate innovation.
- Analyses exploring these issues should be included in the exploration of policy options within Impact Assessments.

Introduction

Law and policy are continuously evolving – at national, EU and international level. New laws and policies are adopted and existing ones evaluated and revised. These seek to tackle the many problems facing society. These problems change. New ones emerge. Our understanding of them changes. Hence the need for new and revised law and policy.

As law and policy are developed a range of different analyses to support this may be undertaken. At EU level, for example, new law may be subject to Impact Assessment and existing legislation subject to different types of ex-post review. These analyses need to recognise that law and policy operate in a shifting environment.

As a result, it is important to think about how to formulate law and policy in response to new developments. This means not only addressing an issue as it presents itself today, but also recognising that issues evolve and so it is important to formulate law and policy so that can accommodate further change. It is important to ensure that new law and policy is not out of date before the ink is dry on the paper.

There is currently much consideration of policy and law in relation to tackling the problems of plastics and, specifically, on the possible role of bio-based, biodegradable and compostable plastics.

This is a fast moving area – with new materials being developed and new information emerging on the impacts and roles of different plastics. As a result, there is a particular challenge to devise policy and law on plastics which is not quickly overtaken by innovation in those materials and in our improved understanding of how those materials interact with the environment, how consumers behave, etc.

The Precautionary Principle and the Innovation Principle in EU law making

In considering this, it is important to take account of different principles guiding EU policy making – in particular the precautionary principle and the innovation principle.

The European Commission has highlighted the importance that EU law supports innovation [1]. The 2015 Better Regulation Guidelines included a “Research and Innovation Tool” to help evaluate the positive and negative innovation implications of options for legislative proposals. The Commission has noted that is in line with the concept of an “innovation principle” and it has stated “that whenever policy is developed, the impact on innovation is fully assessed”.

However, as the concept of the “innovation principle” has become elaborated (including by other EU institutions), some have indicated that it could counter-balance the precautionary principle [2], which was felt by some to impede the adoption of novel activities or materials. The Commission explains the precautionary principle as “a precautionary approach captures the idea that regulatory intervention may still be legitimate, even if the supporting evidence is incomplete or speculative and the economic costs of regulation are high. Better safe than sorry.”

If one is producing a new material, there will be limits on how much is known about how it behaves in the environment, for example. Evidence will be incomplete. A precautionary approach requires research to be undertaken to gather evidence, but also to not fail to action while that evidence is being gathered.



There are some who have suggested that there could be some equivalence between the two “principles”. However, legally this is far from the case. The precautionary principle is enshrined in the EU Treaty. It is a principle that should guide the formulation of all EU law. The innovation principle is a concept promoted by some EU institutions. It has no legal standing. There is, therefore, no legal equivalence between them. Having said that, it is still important to consider how to support innovation in law making consistent with the principles enshrined in the Treaty.

The challenge, therefore, is how to meet the objectives of the precautionary principle in formulating law and still support innovation.

A recent evaluation [3] of the innovation principle for the Commission continued to stress its importance, but also that in practice its application has been limited. In particular, it stressed problems arising from “the lack of awareness among EU officials and stakeholders, and the lack of adequate skills among those that are called to implement the innovation principle”.

This briefing, therefore, aims to help:

- In formulating policy and law on new plastics, what impacts would there be on innovation?
- How might one formulate law and policy that is consistent with the precautionary principle, yet also apply the innovation principle?
- What types of legal formulation might be inconsistent?

Bio-based, biodegradable and compostable plastics

The importance of designing law and policy that is future proof, precautionary and supports innovation is particularly evident when considering bio-based, biodegradable and compostable plastics. While some have been around for several years, many of these materials are new and, importantly, newer ones are emerging all the time. Innovation is key. However, there is concern about the behaviour of plastics in the environment, but there are many unknowns. Therefore, decisions should also be precautionary in their approach.

These materials are not a single type of plastic, but encompass many materials with different sources and properties. Bio-based plastics can be derived from a variety of different biological material sources. Biodegradable and compostable plastics degrade at different rates in different conditions. These materials include some very different polymers.



On environmental behaviour, for older materials some of this is researched. For newer materials, less is (obviously) known. Official standards (e.g. for biodegradability) are established for some environments, but not for others.

In every respect, the development of bio-based, biodegradable and compostable plastics and our understanding of their behaviour in the environment, consumer chains, waste management, etc., is a fast moving area.

Law and policy need to keep up with these changes. In some cases, these changes mean that existing law may need updating. In other cases, completely new law and policy may be needed. However, it is important to ensure that any changes in law and policy reflect the fact that there are many different materials and many different behaviours. One size fits all may not be appropriate.

However, law and policy need to do more than this. The list of polymers (and products made from them) of these materials now and our understanding of their behaviour in different environments is very unlikely to be the same in a few years' time.

Research is taking place on new polymers, the role of different additives, new products, performance in the environment, and more. Furthermore, other important conditions may change (and our understanding of these may change), including technologies for waste management/circular economy, consumer behaviour, etc. It is, therefore, essential that law and policy relating to these materials is future proofed.

Future proofing law and policy for new plastics

Future proofing law and future proofing policy have similar approaches, but particular care needs to be taken in setting out law in particular. Policy statements guide action, but are not binding. Therefore, if situations change and a policy statement is out of date, it is possible to depart from it with little problem. Law is binding, even if it is out of date. Changing it may be time-consuming. Better to avoid this, if at all possible.

Therefore, we need law and policy to remain as relevant as possible, but at the same time to be precautionary on issues which are rapidly evolving and be supportive of innovation.

Let's take an example. There is much research on the behaviour of biodegradable plastics in the open environment. There are concerns about how well some polymers may degrade in the some environments (to an acceptable timetable). As a result, some stakeholders have argued that policy should state that biodegradable plastics should not be used where they could reasonably enter those environments. What are the future proofing implications of such a view for policy and law? How to be precautionary and support innovation?

For a policy statement, such a situation is not difficult to set out in a way which is future proofed. Rather than state that "biodegradable plastics should not be used where they could reasonably enter that environment", a future proofed policy could state "biodegradable plastics based on polymers currently available and future ones with similar properties should not be used where they could reasonably enter that environment" (or something similar). This would present a clear statement, but recognise change is possible. As new materials emerge with different behaviours, the policy is flexible. It is precautionary based on what we know and don't know, yet allows for innovation.

For law, a different approach is needed. Statements like those for policy are not appropriate in law – they are not specific enough (what is used? Where? Etc). Further, leaving the door open to future developments as in the policy statement is not interpretable in law – who would make a decision based on what changes? Law requires a different approach. Law can readily state that biodegradable plastics entering a particular environment must meet certain conditions (e.g. degradation within a certain timescale or adherence to a specific standard). If no materials currently meet this requirement, that is fine and would effectively be a ban based on current materials. However, if new materials were to be developed that do meet those conditions, the law would allow their use and the law would still be relevant.

This approach is consistent with the precautionary principle. It also supports innovation. The two ideas are not in conflict if law is well formulated.

Future proofing law and policy on these materials is important at EU level, not least to ensure coherence in the EU's overall policy framework. Within Horizon 2020 (and other funding), the EU



has adopted a policy to support research and innovation into bio-based, biodegradable and compostable plastics and has invested significant funding. As a result, the EU is a major engine for innovation in this area. It therefore is important that its environmental, product and other policies reflect the fact that there is innovation and are designed in such a way that, firstly, these policies are not rapidly outdated by that innovation and, secondly, that they do not stifle that innovation. However, that law must respect precaution and meet policy objectives for the circular economy, plastics, marine protection, etc.

If law is well framed, it can act as a spur to innovation and also deliver strong environmental protection. Furthermore, being future-proofed, it will not require EU law makers to revisit it again not long after it is adopted.

Recommendations

- Ensure that law and policy are formulated to remain as relevant in the future as possible.
- Draft law and policy based on principles, objectives, aims, rather than based on specific materials – principles and objectives last.
- Explore how to act in a precautionary way in developing law and policy so as to stimulate innovation – helping to solve social and environmental concerns.
- Build these analyses into the exploration of policy options within Impact Assessments.

[1] 2016 Commission Staff Working Document on “Better Regulation for Innovation-Driven Investment”.

[2] European Commission 2017. FUTURE BRIEF: The precautionary principle: decision-making under uncertainty.

[3] DG Research 2019. Study supporting the interim evaluation of the innovation principle. Final report.

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This project has received funding from the European Union's Horizon 2020 Research and Innovation programme under grant agreement No. 862910 (SEALIVE). This output reflects only the authors' views and the European Union cannot be held responsible for any use that may be made of the information contained therein.