

# Plastics on trial:

a briefing series on evolving liability risks related to plastics.

Brief 2 Hazardous chemicals



# Introduction to this briefing series

Since plastics first started being used commercially in the 1950s, the material has become ubiquitous in modern life. However, with single-use plastic products accounting for over around half plastic produced each year,<sup>1</sup> the world has experienced an exponential increase in plastic production and waste. These plastics are contributing to climate change, degrading our ecosystems, threatening biodiversity, harming economies and impacting on human health.<sup>2</sup>

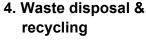
The damage caused by plastics, and the corresponding costs for governments, businesses, and society,<sup>3</sup> is increasingly recognized by the public, by governments, and in courts. The first wave of legal cases on plastics have now been launched.<sup>4</sup> We predict that these will evolve rapidly as public and government concern around the impact of plastics continues to grow, bolstered by the ongoing negotiations for a legally binding treaty on plastic pollution, the mandate for which was established in an historic resolution at the United Nations Environment Assembly in March 2022.<sup>5</sup>

This series of four briefs explores the developments in plastic-related legal action targeting companies. We have identified four themes around which plastic-related cases converge:

1. Greenwashing















Each brief outlines developments in legal action against companies relating to the relevant theme, and also considers how these trends may unfold in the future. Such legal cases have knock-on impacts on the financial sector, including banks and investors that provide financing for these companies, as well as the insurers that underwrite the risks they face.



## Geographic focus and other research limitations

Our research has identified many plastic-related legal cases converging around the four themes identified above against corporate actors in the United States (US), Europe and to a lesser extent other countries and regions. We have identified very few cases challenging corporates in other regions that relate to these themes. The geographic focus of these briefs reflects this. In part, the higher concentration of plastic-related litigation against companies in the US and Europe is likely to arise from characteristics of these legal systems, which may make it easier – or, in some cases, more desirable from a claimant's perspective – to bring claims in these jurisdictions.

However, we fully acknowledge that our research has been limited by linguistic factors and the regional expertise of the authors of these briefs. We note from our consultations with experts from around the globe on developments in plasticrelated litigation that there are several highly significant cases in other regions, particularly in Asia. To our knowledge, to date, these cases name state actors as defendants, as opposed to corporate actors, and therefore fall outside the scope of these briefs. Nevertheless, such cases are likely to have direct and indirect implications for corporate actors (as we note with reference to specific examples in Brief 3 on Plastics in the environment and Brief 4 on Plastic waste disposal & recycling) and may foreshadow future legal claims directly challenging companies in the future.

The briefs focus on reporting the existence and/or likelihood of claims, allegations and actions, and not on their merits. In some cases, we describe legal actions that have already concluded (whether through a finding by the courts, settlement out of court or otherwise) and others that are ongoing. We cannot discount the possibility that there have been developments in ongoing cases that occurred since the research was carried out. Where readers identify such omissions and any resulting inaccuracies, we would be grateful for this to be brought to our attention.

It also highly likely that developments in climate litigation and environmental litigation on topics other than plastics will influence future legal cases on plastics. Throughout the briefing series, we occasionally refer to litigation on other topics where there are clear parallels to plastic, but note that such parallels could be explored in greater depth.

Regional analysis on how trends in environmental or other public interest litigation could affect future plastic lawsuits would be a particularly interesting complement to the findings of these briefs.

The web of national, regional and international legislation and agreements affecting the production, use and disposal of plastics is complex and, in many cases, subject to change, particularly in light of the ongoing plastic treaty negotiations referred to above. We have considered some relevant regional and supra-regional policy trends that may impact the type of frequency of plastic-related litigation but acknowledge that the complexity of the global policy landscape renders comprehensive consideration of its impact on plastic litigation beyond the scope of these briefs.

Finally, as described by UN Special rapporteur on toxics and human rights, Dr Marcos Orellana, "every stage of the plastics cycle has adverse effects on the full enjoyment of human rights". 6 Increasingly, civil society academia and governments are recognising the substantial human rights and environmental justice implications of the plastics crisis. We have not explored this angle in depth in these briefs — principally because human rights arguments are not yet widely used in the legal cases we refer to but would welcome future research exploring how an improved understanding of the human rights implications of plastics may impact plastic-related litigation.



## Plastics and hazardous chemicals<sup>i</sup>

Plastics have been described as "the super-villain of chemical products". Around 25% of the 10,500 chemical substances found in plastics have been identified as substances of potential concern to human health and/or the environment. These substances include additives intentionally added to give plastics certain properties, such as heat resistance, softness and flexibility, as well as so-called 'non-intentionally added substances' that are present due to impurities in raw materials, chemical reactions, production processes and break-down of chemicals as a result of exposure to air or light.

In this Brief, we focus on two commonly-used groups of plastic additives – **bisphenols and phthalates**. We selected these substances due to:

- the increase in legal claims relating to their use and/or presence in consumer products
- the tightening of the regulatory framework governing their use in the US and the European Union (EU), which, as we explain in this Brief, we consider is likely to catalyse further legal claims in these jurisdictions.

However, the chemical concerns related to plastics are much broader than these two groups of chemicals alone. For example, to prevent plastic from burning too easily, flame retardants are added, including brominated dioxins – which have been linked to a number of health conditions. Two types of plastics – polyvinyl chloride (PVC, or vinyl) and polystyrene – have also been singled out, not just due to the myriad of harmful additives used in their manufacture, but also the carcinogenic properties of the monomers that underlie their chemical structure.

"Hazardous chemicals" means substances or mixtures capable of having an adverse effect on human health and/or the environment due to their intrinsic properties. This includes (i) substances or mixtures fulfilling the criteria relating to physical hazards, health hazards or environmental hazards, laid down in Parts 2 to 5 of Annex I of Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures, (ii) substances or mixtures fulfilling the criteria for Persistent, Bioaccumulative and Toxic or very Persistent and very Bioaccumulative properties (PBT/vPvB) under Annex XIII of Regulation (EC) No 1907/2006, and substances listed as substances of very high concern under Article 57(f) of Regulation (EC) No 1907/2006 (iii) substances or mixtures with hazards not codified in EU law yet but identified as hazards according current scientific knowledge e.g. immunotoxicant, neurotoxicant, or persistent, mobile and toxic (PMT), very persistent and very mobile (vPvM) substances.

ii As with the other briefs in this series, our analysis on plastics and hazardous chemicals focusses on developments in the US and the EU. As explained in the general introduction to this briefing series, the US is generally understood to be the most active jurisdiction for consumer and public interest litigation, and litigation on plastic additives is no exception. As such, our research identified a number of cases relating to bisphenols and phthalates in the US. Whilst there are fewer EU legal cases on this topic, the EU is generally considered to have the most restrictive regulatory framework for chemicals in the world, which has a strong influence on chemicals regulation elsewhere (including, as we note in this Brief in relation to BPA, potentially the US, too). For example, the EU's REACH regulation has had a notable impact on chemicals regulation in Korea, Turkey, and to a lesser extent, China. As set out in this Brief, planned significant changes to the restriction of bisphenols and phthalates in the EU may give rise to future litigation. Whilst the US regime (especially at the federal level) is less restrictive, it is also highly influential on global chemicals regulation due its importance as a trading partner and as the world's largest consumer market (in monetary terms).

PVC is a very hard plastic. To achieve the softness and flexibility generally associated with PVC, large amount of phthalates are added to PVC. Lead is another problematic additive associated with PVC.



## Background

#### Bisphenols and phthalates

Recently, plastic has taken centre stage in concerns around the effects of exposure to 'endocrine disrupting chemicals' or EDCs. These are chemicals that can mimic or block hormonal messages, upsetting the many critical hormone-driven processes in the body. Bisphenols and phthalates are two endocrine disruptors. EDCs have been linked with developmental, reproductive, brain, immune and other problems. Analysis conducted by researchers in 2016 found that "endocrine disrupting chemical exposures in the EU are likely to contribute substantially to disease and dysfunction... with costs in the hundreds of billions of Euros per year". 11 Plastics are "a pervasive and widespread source of exposure to EDCs", 12 including bisphenols and phthalates.

#### **Bisphenols**

Bisphenols are used to make plastic products hard and shatterproof, including bottles, cups, can liners and other food containers. To date, BPA is the most widely known bisphenol. As concern around BPA mounts, and regulation targets certain uses of the chemical, it is increasingly being replaced by other bisphenols, such as BPS, BPF, BPAF and BPZ.<sup>13</sup> Along with similar chemical structures and properties, these bisphenols have been found to have similar endocrine-disrupting properties.<sup>14</sup> BPA has been linked with health conditions such as cancer, cardiovascular diseases, infertility and obesity, as well as neurological disorders in children.<sup>15</sup>

#### **Phthalates**

Phthalates are a group of chemicals commonly used to soften and add flexibility to plastics. Such is the prevalence of plastics that phthalates are found "everywhere – from food packaging to shower curtains to gel capsules". <sup>16</sup> As a consequence, "almost everyone is exposed to phthalates almost all of the time and most people have some level of phthalates in their system". <sup>17</sup> Scientists have linked exposure to phthalates with multiple health problems, such as asthma, obesity, insulin resistance and attention deficit hyperactivity disorder. <sup>18</sup>

Most legal cases on BPA and phthalates have a human health lens. However, the same substances that could potentially harm human health also have implications for wildlife and eco-systems. It is therefore probable that cases seeking to hold companies accountable for the environmental and biodiversity impacts of plastic-related chemicals will arise in the future.

In terms of their impact on human health, this Brief identifies key ways in which the legal landscape around the use of bisphenols and phthalates is developing:

- Planned and/or potential regulatory restrictions, including in the US and the EU, limit the use
  of chemicals, while also increasing the likelihood of claims against companies that use them,
  even before restrictions are imposed.
- 2. Where regulatory restrictions are in force, they open up avenues for private litigation as well as product liability claims. Such claims are already being seen in California and France, jurisdictions where biphenols and/or phthalates are subject to stricter regulation than elsewhere in the US (in the case of California) and the EU (in the case of France).
- 3. The first wave of class action cases on phthalates are being heard in the US courts. These actions have focused on misleading advertising, on the basis that claims made about a product are incompatible with the presence of hazardous substances.



- 4. Fear of consumer backlash will likely result in corporate missteps that lead to legal claims. In response to public concern, companies are making public commitments to eliminate harmful substances from packaging. Companies in the US are already facing legal action for the alleged inaccuracy of these commitments.
- 5. Chemicals in plastics are likely to prove fertile ground for mass litigation. Cases are expanding from focusing on manufacturers to corporate users of plastics and from human health to environmental impacts of chemicals. At the same time, growing scientific evidence, increasing public concern and government action are accelerating developments around liability cases for the impacts of chemicals in plastics.

# Regulatory changes

The legislation governing the use of bisphenols (especially BPA and phthalates) is changing in the EU, and subject to building pressure to become more restrictive in the US. These changes, as well as activity from civil society seeking to accelerate action from regulators may give rise— to an increased likelihood of legal claims against the companies that use them.<sup>iv v</sup>

Even before restrictions are imposed, increased regulatory scrutiny can make legal claims more likely to occur:

- In order to reach a decision, regulators gather data on the capacity of substances to cause harm.
   They do this either directly, by commissioning studies, or indirectly, by requiring companies to test their substances and notify them of the findings. This increases the amount of data available publicly, and the body of evidence available on which to base claims.
- Historically, the gathering of data on substances has almost always led to the same conclusion: "that harm occurred at lower exposure levels than previously believed". Vi Early warning signs that a chemical has hazardous properties generally are confirmed later on, and companies that fail to act on such warnings may be open to being held liable for continuing to use them.
- The decision-making process invariably involves public debate around the use of such substances, generating media coverage and leading to an increase in awareness among consumers of issues linked to the chemicals in question. Companies seeking to assuage consumer concern can expose themselves to legal challenges when they make safety commitments about products that do not stand up to scrutiny.

<sup>™</sup> As lawfirm Dechert LLP stated in relation to increased scrutiny of PFAS by the Biden Administration, "as a general matter, private plaintiffs, as well as local and state governments, may rely on and leverage the attention to PFAS at the federal level to add momentum and justification to their claims… with the Biden Administration's greater attention to PFAS, the litigation trends that have developed over the past decade are expected to persist and likely spur new ones." See Dechert LLP, "PFAS: Expected Litigation Trends" (April 2021). Available online: https://www.dechert.com/knowledge/onpoint/2021/4/pfas--expected-litigation-trends.html.

v "As demonstrated in the case of PFAS, growing public concerns about chemical exposure can result in the widespread adoption of disparate regulatory standards and create unexpected litigation risks". See: Pillsbury, 'The "Everywhere chemical" – might phthalates become the next PFAS?', 16 June 2021. Available online: https://www.pillsburylaw.com/en/news-and-insights/might-phthalates-become-next-pfas.html.

vi European Environmental Agency, *Late lessons from early warnings: science, precaution, innovation* (Luxembourg: Publications Office of the European Union, 2013) Chapter 26, p. 624.



#### US

In the US, the Food and Drug Administration (FDA)<sup>vii</sup> amended its regulations to no longer provide for the use of BPA in certain consumer products in 2012 and 2013.<sup>viii</sup> These amendments were not based on considerations regarding the safety of BPA as an additive, but rather, evidence that industry had abandoned its use of the additive, meaning that its regulatory authorization is no longer required.<sup>19</sup> Since then, the FDA has supported various research trials on migration and potential health impacts of BPA, but to date, maintains its position that the use of BPA in food packaging is safe. As such there is no federal restriction on use of BPA in food packaging in the US, but several US states do have in place restrictions on the use of BPA.<sup>20</sup>

Indicating building pressure on the FDA to introduce restrictions on BPA in food packaging, a coalition of NGOs and scientists filed a formal petition to the FDA in January 2022 calling on the agency to set strict limits on its use in plastic food contact materials.<sup>21</sup> The petition followed the publication of findings of a panel of experts convened by the FDA's EU equivalent, the European Food Safety Authority (EFSA) indicating that harmful effects of BPA exposure can occur at level 100,000 times lower than previously thought, meaning that the proposed "safe level" of exposure "is more than 5,000 times below what FDA says most Americans are exposed to."<sup>22</sup> (See more on the EFSA findings below, under 'EU').

Similarly, there are indications that the regulatory framework on phthalates in the US is set to tighten, under increasing pressure from consumer advocates, for whom "phthalate exposure through food has become a trending topic".<sup>23</sup> In December 2019, the US Environmental Protection Agency (EPA) set out its list of 20 high-priority chemicals undergoing risk evaluation pursuant to the Toxic Substance Control Act, which included seven phthalates.<sup>24</sup> Since this process began, the EPA's policy on risk evaluations has become more robust.<sup>25</sup> EPA documents relating to two of the seven phthalates published in late 2021 were described as "clearly of immediate concern to those who manufacture those chemicals".<sup>26</sup>

In December 2021, the FDA was taken to court by health advocates for its "continued delay in responding to a petition to ban the use of phthalates in food contact materials".<sup>27</sup> The petitions were submitted in 2016. Following the court action, the FDA responded to the petitions in May 2022, rejecting them, stating that they "did not demonstrate the propose class of additives is no longer safe for the approved uses".<sup>28</sup> However, now that the FDA has made a formal decision, this decision can be legally challenged. Moreover, as it rejected the petitions, the FDA issued a request for information seeking information on the use of phthalates in food contact applications and safety information, which it said it

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<u>nttps://www.epa.gov/cnemicals-under-tsca.</u>; and (III) the Occupational Safety and Health Administration (OSHA) in charge of workers protection including from hazardous chemicals in the workplace. See: <a href="https://www.osha.gov/aboutosha">https://www.osha.gov/aboutosha</a>.

vii In the US, there are three main federal regulatory bodies responsible for different aspects of chemicals regulation and enforcement: (i) the Food and Drug Administration (FDA), which is responsible notably, for the regulation of food additives, including substances that migrate to food from packaging and other sources, as well as cosmetics. See: <a href="https://www.fda.gov/about-fda/fda-basics/what-does-fda-regulate">https://www.fda.gov/about-fda/fda-basics/what-does-fda-regulate</a>. ; (ii) the Environmental Protection Authority (EPA), which in addition to a broader environmental regulation and enforcement remit, also is responsible for assessing and addressing the risks that chemicals may have on human health and the environment, under the Toxic Substances Control Act (TSCA), the regulatory framework governing the production, importation, use and disposal of chemicals in the US. TSCA provides EPA with authority to require reporting, record-keeping and testing requirements, and restrictions relating to chemical substances and/or mixtures, See:

<a href="https://www.epa.gov/chemicals-under-tsca.">https://www.epa.gov/chemicals-under-tsca.</a>; and (iii) the Occupational Safety and Health Administration (OSHA) in charge of workers protection including from hazardous chemicals in the workers protection.

viii Notably, baby bottles, sippy cups and packaging for infant formula.



"may use... to update the dietary exposure estimates and safety assessments for the permitted food contact uses of phthalates".<sup>29</sup>

#### EU

As referred to above in relation to the BPA petition to the FDA, BPA is also under scrutiny by the EFSA. At present, BPA can be used in food contact materials in the EU, provided it does not surpass 'migration limits' i.e. limits on how much of the substance can leach into the product to be consumed.<sup>30</sup> In December 2021, EFSA announced its proposal to dramatically reduce the 'tolerable daily intake' of BPA by 100,000 times, citing research that has emerged since 2013 on adverse health impacts.<sup>31</sup> If the proposal stands, commentators have observed that the resulting migration limit would have the effect of "all but ensuring the chemical cannot be used in any product coming into contact with food".<sup>32</sup>

BPA has also now been labelled a substance of very high concern by the European Chemicals Agency (ECHA) – a categorisation plastics industry alliance PlasticsEurope sought to have overturned several times in the courts, to date unsuccessfully, though with one case still pending final appeal.<sup>33</sup> Germany is now preparing a proposal for a restriction on BPA to apply across the EU, which would also include "structurally-related bisphenols" i.e. other bisphenols that are commonly used as substitutions for BPA. This is expected to be discussed at ECHA by the end of year.<sup>34</sup>

Altogether, 14 different phthalates are regulated in the EU,<sup>35</sup> and four of the most widely used are banned, subject to some limited exceptions.<sup>36</sup> Blanket restrictions on phthalates look increasingly probable since the European Commission (EC) published its new Chemicals Strategy for Sustainability in 2020. In this policy document, the EU set out a number of ambitious commitments, including banning hazardous chemicals from all consumer products (including plastic packaging) and regulating chemicals on a group basis, rather than one by one.<sup>37</sup> The EC has shown a clear willingness to adopt more ambitious restrictions than in the past in terms of scope, with its roadmap published in April 2022 listing the restrictions in the EU pipeline.<sup>38</sup> In that context, the EC identified both phthalates and bisphenols as priority groups of substances for restrictions. The initiative has been described as the world's "largest ever ban of toxic chemicals" and has garnered a strong reaction from industry.<sup>39</sup> Notably, Cefic, a European chemicals industry alliance commented that "[s]ome of the restrictions may have a significant impact on the industry and value chains".<sup>40</sup>

# Legal action

Once restrictions come into force, they may open up new avenues for private litigation, or increase the likelihood of product liability claims for "running afoul of a concentration limit or a duty to warn". <sup>41</sup> The State of California and France<sup>42</sup> are two jurisdictions that are out in front when it comes to chemicals regulation, and provide interesting learnings for predicting future trends on phthalate and BPA litigation.

## Proposition 65

California's Proposition 65 law requires companies that sell products in California to provide "clear and reasonable warnings" on products that contain chemicals known to cause cancer, birth defects or other reproductive harm – a list which includes BPA and several phthalates.<sup>43</sup> Private citizens are permitted to



bring actions under the law, and penalties for companies found to be in violation include fines of up US\$ 2,500 per day, reformulation of products, removal of products on sale and the recall of products that have been sold,<sup>44</sup> as well as cost-shifting for plaintiffs. According to the Center of Accountability in Science, between 2010 and 2020, businesses spent over US\$ 182 million on settlement of Proposition 65 lawsuits.<sup>45</sup>

#### French BPA ban

Meanwhile, France's total ban on BPA in food and drink packaging, introduced in 2015, has potentially set the scene for consumer claims against over a hundred companies.<sup>46</sup>

In October 2021, the French Competition Authority alleged that 14 trade associations and 101 companies (including certain Nestlé subsidiaries in France) colluded in staying silent over whether packaging contained BPA "to the detriment of consumers".<sup>47</sup> If the authority reaches a finding of collusion, this intervention – against what may be the largest potential cartel ever investigated by the French Competition Authority – could give rise to "numerous follow-on claims for damages by private parties against the 100+ undertakings".<sup>48</sup>

### The first wave of class actions in the US

Developments in the US also demonstrate building momentum in plastic additive claims, as the first wave of class actions on phthalates are heard in the US courts.

Class actions filed to date on phthalates have alleged misleading advertising on the basis that claims made about the product are incompatible with the presence of the chemical substance. Food manufacturer General Mills was hit with a class action in New York in 2021 relating to the claim "Made with Goodness!" on its macaroni and cheese products, <sup>49</sup> with the plaintiff alleging that more than twenty products were mislabelled and falsely advertised due to the presence of phthalates.<sup>50</sup>

Three similar lawsuits were filed against General Mills in California and the cases were consolidated as "In re Annie's Mac & Cheese Litigation" and remain pending.<sup>51</sup> Starting in April 2021, similar actions were brought against food giant Kraft Heinz for the presence of phthalates its macaroni and cheese products in California,<sup>52</sup> Massachusetts,<sup>53</sup> New York,<sup>54</sup> and Illinois.<sup>55</sup> The courts in these cases are currently in the midst of various motions to consolidate and transfer venues.

The claims against General Mills and Kraft Heinz followed research published in 2017 revealing the presence of phthalates in 29 out 30 cheese products tested, with the highest concentrations found in boxes of macaroni and cheese.<sup>56</sup> This demonstrates how new scientific research can directly trigger litigation.

ix As described by Cornell Law School, class actions are "a procedural device that permits one or more plaintiffs to file and prosecute a lawsuit on behalf of a larger group, or 'class'." (Source:

https://www.law.cornell.edu/wex/class action.) The US is the most established jurisdiction for bringing class actions. Other common and civil law jurisdictions permit class (or collective/representative actions), but they may be subject to restrictions that make class action lawsuits challenging to bring in practice.



#### Trends to watch

As demonstrated by the French Competition Authority's probes into the alleged collusion of major companies in the food and drink industry to stay silent on the presence of BPA in packaging (see above), fear of consumer backlash over BPA and phthalates is likely to lead to corporate missteps that may lead to legal claims.

Major companies are already acting to assuage consumer fear by making public commitments to eliminate harmful substances such as BPA and phthalates from packaging.<sup>57</sup> Lawsuits could arise where such a claim is challenged for inaccuracy. In 2019, such allegations were made against US drinks manufacturer, LaCroix.<sup>58</sup> An ex-employee of the company alleged that the company's claims BPA had been phased out were made prematurely. The case, which began in state court in New Jersey, was transferred to federal court<sup>59</sup> where the parties are currently pursuing a settlement.

Scientists and NGOs have called out companies for responding to consumer concern over chemicals by replacing them with other chemicals from the same family.<sup>60 61</sup> This practice is particularly rife when it comes to BPA. The chemical is often replaced with the bisphenols BPS or BPF, which evidence suggests may be as harmful to human health as BPA.<sup>62</sup> Companies making 'BPA-free' commitments on this basis should expect legal challenges – most likely on the basis of false advertisement or failure to warn – as scrutiny over these practises heats up.

# "Fertile ground" for mass litigation

As observed by one legal commentator in relation to BPA, the substance provides "fertile ground for a mass tort suit" due to "[t]he widespread detection of BPA in the U.S. population and the ubiquitous nature of the diseases reportedly linked to BPA". <sup>63</sup> Proliferating phthalate and bisphenol litigation would present serious challenges for defendants, as "[it] would likely involve sympathetic plaintiffs, negative publicity, difficult discovery matters, sophisticated scientific questions... and complex case management concerns". <sup>64</sup>

The trajectory of PFAS<sup>x</sup> lawsuits – more established than those relating to bisphenols and phthalates – can help to build a picture of how plastic-additive litigation could develop:

• The pool of defendants for PFAS lawsuits has widened over time. The first major lawsuits were against manufacturers (mainly 3M and Dupont), but over time, the attention of plaintiffs has shifted downstream. Last year saw one of the first lawsuits against a corporate user (rather than manufacturer) of the chemicals, resulting in a US\$ 17.5 million settlement. As one commentator noted, "... one need only look to the evolution of the asbestos litigation to see that plaintiffs' attorneys will seek to hold liable an ever-expanding pool of manufacturing companies in tort cases that involve chemicals or substances that are ubiquitous and alleged to be harmful to human health". 65

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<sup>\*</sup> PFAS – per-and polyfluoroalkyl substances – are a group of thousands of chemical compounds known for their water- and stain-resistant properties. PFAS have been used in a wide range of products for several decades. They are known to persist in the environment, resulting in their moniker, "forever chemicals" and exposure to them has been linked to a number health conditions. There has been extensive litigation on PFAS in the US.



• The bases for claims have also expanded. In 2020, two class actions were launched looking at the environmental (rather than human health) impacts of PFAS against two retailers, Kroger and Amazon. In both cases, the plaintiffs allege that they bought a product based on the representation that, after its disposal, the product would decompose in the environment over time, a claim incompatible with the presence of PFAS, the so-called 'forever chemical'.<sup>66</sup> 67 68

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- <sup>20</sup> For example, Washington state has banned the use of BPA in plastic sport bottles. See: https://tinyurl.com/bdeaemud.
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  4-8b68-4ed7-83ac-e8f3312b01de. The petition demands the levels of BPA be reduced to below the threshold for what can accurately detected by tests, meaning that in effect, such a restriction would amount to a ban. Notably, according to this article, the petition was "largely based on" the European Food Safety Authority's draft opinion on BPA, referenced below, demonstrating that building pressure on chemicals regulation in one jurisdiction is likely to be leveraged in another.
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- <sup>28</sup> https://www.fda.gov/food/cfsan-constituentupdates/fda-limits-use-certain-phthalates-foodpackaging-and-issues-request-information-aboutcurrent-food.
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- 33 (i) Case T-185/17 in which PlasticsEurope contested the inclusion of BPA as a substance of very high concern (SVHC) under EU law (a categorisation which leads to additional obligations for users of such chemicals and other potential restrictions) for its reprotoxic properties. PlasticsEurope lost at first instance and did not appeal; (ii) Case T-636/17 in which PlasticsEurope contested the inclusion of BPA as an SVHC due to its endocrine disrupting properties for human, which it lost at first instance, and subsequently appealed (C-876/19 P) and which it also lost at appeal; and (iii) Case T-207/18 in which PlasticsEurope contested the inclusion of BPA as an SVHC due to its endocrine disrupting properties for the environment which it lost at first instance and has appealed (C-119/21). This appeal is pending.
- <sup>34</sup> European Chemicals Agency (ECHA), "Registry of restriction intentions until outcome" (n.d.). Available online: <a href="https://echa.europa.eu/registry-of-restriction-intentions/-/dislist/details/0b0236e1853413ea.">https://echa.europa.eu/registry-of-restriction-intentions/-/dislist/details/0b0236e1853413ea.</a>
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- <sup>40</sup> Heather Kiggins, Cefic spokeswoman, also quoted in "EU unveils plan for 'largest ever ban' on dangerous chemicals", The Guardian (April 2022).
- <sup>41</sup> Jones Day, "BPA, phthalates, and the law" (March 2010). Available online:
- https://www.jonesday.com/en/insights/2010/03/bpa-phthalates-and-the-law.
- <sup>42</sup> Due to division of legislative power between state and federal level in the US, US states are able to legislate on all matters except those which are delegated the federal government under the Constitution. In terms of chemicals regulation, the results is that the State of California legislature is empowered to provide for more prescriptive chemicals regulation to apply within State borders. EU law works a similar way: EU Member States are able to legislate freely provided that such legislation does not contravene the EU Treaties or legislation by which those Member States have agreed to be bound. When France introduced a ban on BPA in 2015, the European Commission considered legal action against France on the basis that its BPA restriction could create legal uncertainty, disrupting the internal market, but decided not to proceed. See: Peter Teffer, "How France escaped EU legal action over chemical ban", euobserver (May 2018). Available online: https://euobserver.com/health-andsociety/141830
- <sup>43</sup> California Health Office of Environmental Health Hazard Assessment (OEHHA), "About Proposition 65" (n.d.). Available online:
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 <sup>51</sup> *In re Mac*, No. 21-cv-02415-EMC, 2021 U.S. Dist. LEXIS 206525 (N.D. Cal. Oct. 26, 2021).

<sup>52</sup> Complaint, *Clarke v. Kraft Heinz Co.*, No. 21-cv-02437-RS (N.D. Cal. Apr. 5, 2021), ECF No. 1.
<sup>53</sup> Complaint, *Francione v. Kraft Heinz Foods Company*, No. 4124, av. 40232 (P. Massallaria 2, 2021), ECF No. 1.

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<sup>68</sup> Order Granting Administrative Motion for Dismissal, *Nguyen v. Amazon.com, Inc.,* No. 4:20-cv-04042-YGR (N.D. Cal. Dec. 3, 2020) ECF No. 23.