

# The Role of Intellectual Property in Sustainability

## An International report

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### 1. Introduction

Sustainability increasingly dominates social discourse and influences commercial strategy. The term ‘sustainability’ is used in a variety of contexts and does not have a clearly defined meaning, but many commentators agree that in modern use it may refer to all or any of environmental, economic or social sustainability. The National Reports focused largely (although not exclusively) on environmental sustainability, and I will do the same.

The question posed was “*What is the role of intellectual property in sustainability*”.

This question seeks to evaluate what role intellectual property rights (‘IPR’) have, could have, or should have, in sustainability and is posed in the context of the rights IPR give to their holders. Although IPR remain fundamentally national rights - with their scope, subsistence and mechanisms of enforcement governed by national legal regimes - a host of international treaties to which the majority of countries are signatory means that a high degree of international harmonisation has been achieved, but more so in the case of some IPR than others.

An IPR provides the holder with a legal right to exclude other persons from defined activities for a period of time. This amounts to a state-condoned monopoly over activity and therefore potentially over a product or service that may, in certain cases, comprise or dominate a market.

The traditional justification for IPR is based principally on providing an economic (and moral) reward, for the creativity or innovation underlying IPR, in order to stimulate further creativity or innovation. The underlying question of this report therefore is directed, at least, to whether this reward is justified or achieved in the field of sustainability.

To understand the following discussion, it is helpful to have an understanding of the differing IPR available. Each protect a form of creativity or innovation, possessing differing criteria for subsistence and restricting different activities of third parties for differing periods of time. The main forms of IPR are described below.

### 2. Kinds of IPR

#### 2.1 Patents

A patent may be granted for an invention, which may be “*in all fields of technology*” (Art. 27(1) TRIPS Agreement).<sup>1</sup> The inventor of the invention is the person entitled to the patent right although in most countries an invention made in the course of employment will, either by operation of law or according to typical employment contracts, be vested in the employer.

Making a suitable invention is the first stage in securing a patent but much more is required. Patents are registered IPR, meaning that they are registered by a state authority (a patent office or IP office) following an application.

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<sup>1</sup> Agreement on Trade-Related Aspects of Intellectual Property Rights, Apr. 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 1C, 1869 U.N.T.S. 299, 33 I.L.M. 1197 (1994).

In some legal systems, a pending application may confer some rights on the applicant but typically the rights conferred by a patent do not fully crystallise until the right is registered. The application is subject to examination against specified legal criteria (such as requirements for the invention to be novel, inventive and industrially applicable), typically by skilled public servants called examiners. The applicant may be allowed to amend the details of the application, within specified bounds, in order to secure registration if the application as originally filed is not accepted by the examiner.

If granted, a patent provides its holder with the right to exclude others from activities (such as making, importing, selling, or using products, or using or offering for use methods or processes) relating to the invention. The patent's monopoly lasts for up to twenty years from the date the application was filed.<sup>2</sup>

Being concerned with inventions in technology, the subject matter of patents ranges considerably; from high profile technology such as medicinal products, communication and consumer electronics, to industrial chemicals, products in the defence sector, tools and construction materials, consumer goods and more. In the field of sustainability, besides the above which frequently engage sustainability issues, technology such as renewable energy generation, batteries and novel fuels, recyclable or biodegradable plastics and much more may be subject to patent protection.

## 2.2 Designs

Design rights are less internationally harmonised than patents. These rights are concerned with the appearance or shape of products. Typically, there are exclusions for purely functional shapes (e.g., which could be subject to patent protection). Nevertheless, design rights are not used to protect only industrial items: in many countries, a form of design right is used to protect the appearance of clothes, fabric patterns and luxury goods such as handbags or watches. Design rights are also often used to protect the shape or form of leading consumer electronics or other goods, such as mobile phones.

The designer of a design is the first entitled person to a design right in most IP systems; like patents, the rights often accrue to employers in suitable circumstances. In many IP systems a design right requires an application and registration process (typically much less rigorous than the process applied to a patent) but in some IP systems unregistered rights are also available.

Unregistered design rights have a degree of similarity with copyright, discussed below, in that the activity these rights prohibit is the *copying* of the design: independent creation of the same design is permitted.

Under the TRIPS Agreement, WTO countries are obliged to provide protection for at least ten years for design rights,<sup>3</sup> though many offer protection for longer, e.g., up to 25 years. Typically, unregistered design rights offer a shorter period of protection than registered rights in those countries that provide them.

The range of application of design rights engages with sustainability in a variety of ways, explored below.

## 2.3 Copyright

Copyright is typically an unregistered IPR that protects works of an artistic nature, such as literary, musical or graphical creations ('works'). In many IP systems the threshold for artistic merit is low and copyright is thus used to protect, for example, computer source code as a literary work, or certain kinds of databases.<sup>4</sup>

Protection is provided for works that are in some way fixed – written, painted, sculpted, and the like. Further rights have now been provided to certain recognised forms of recording, such as sound recordings and films. The term of copyright protection is calculated from the year of the author's death (in the case of literary works, musical

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<sup>2</sup> Patents typically require renewal during their life and may lapse before their 20 year expiry if not renewed. Like other registered IPR, a patent may also be invalidated during its life.

<sup>3</sup> Art. 26(3) TRIPS Agreement.

<sup>4</sup> In the European Union and the United Kingdom a *sui generis* 'database right' also exists, offering enhanced protection to the content of databases that fulfil the criteria for subsistence of this IPR.

works, etc) or from a period related to the recording being made. The terms vary considerably between works and countries, from 25 years at the lower end, to the author's lifetime plus 70 further years at the higher end.

As discussed below, copyright may have a lower significance in considering the role of IPR in sustainability compared to other IPR.

## 2.4 Trade marks

Trade marks serve to distinguish the products or services of one trader from another: they protect brands. Trade marks relate to the products or services of entire corporations or divisions (Apple, Kodak, Tesla) or to specific products or services (Pentium, Guinness, Minecraft). Trade marks properly so called are registered rights requiring an application and examination process the rigour of which differs between countries. Many countries also recognise some form of unregistered trade mark rights or use other legal concepts (such as 'unfair competition' in many continental European legal systems) to protect unregistered brands from being ripped off.

Certification marks are a particular kind of trade mark right which are used to signify that products or services comply with a standard or specification, rather than indicating that they have a particular commercial origin. For example, certification marks may be used to show that food products are 'organic'. Collective marks are another kind of trade mark used by industry bodies or groups.

Registered trade marks typically expire 10 years after filing but may be renewed for further terms, usually without limitation on the number of renewals. They are therefore capable of perpetual subsistence if renewed and not subject to invalidation or revocation.

Besides trade marks, geographical indications are a separate form of IP having some similarity with certification marks. They are used to show that a food or drink (in most cases) was produced by a process or originated from a region which is thought to lend particular qualities to the product not available by producing a similar product elsewhere – various wines, cheeses, hams and the like use geographical indications.

As discussed below, trade marks may have a lower significance in considering the role of IPR in sustainability compared to other IPR. However, trade marks may be associated in the minds of consumers near synonymously with the businesses using them and therefore public perception of a business' behaviour or credentials in sustainability may interact substantially with its trade mark rights.

## 2.5 Trade Secrets

In many countries trade secrets are not strictly IPR since they are not property rights but nevertheless are normally treated, in a general sense, as part of the suite of IPR protecting creativity and innovation. The TRIPS Agreement mandates the protection of trade secrets among WTO countries,<sup>5</sup> protecting information that is kept secret and has value by virtue of its secret character.

Besides the TRIPS requirements, trade secrets law is not substantially harmonised around the world (although the EU's Trade Secrets Directive 2016 has provided a substantial degree of harmonisation within Europe; and among common law countries, trade secrets case law from other common law countries is often cited and relied upon). However, the TRIPS requirements should ensure that secret information concerning technology, at least, may be protectable as a trade secret, and other kinds of valuable business information are often capable of protection too. Trade secrets are protected from their *misuse*, i.e., in a broadly similar way to copyright or unregistered design rights discussed above, the rights only apply to persons who derive the information from the trade secret holder, not persons who independently create or discover the same information.

In many technology-based industries, trade secrets represent an important alternative to patents for protecting technological information. That some secrets are better left unsaid may apply in particular to processes (e.g., in manufacture or analysis) that cannot readily be ascertained by outsiders buying the products.. To patent such a process would (if successful) lead to up to 20 years protection but would require describing the process sufficiently to enable another to use it. If the subject of the patent is likely to be of perpetual or near-perpetual value, this may

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<sup>5</sup> Art. 39 TRIPS Agreement.

be unattractive. As well as an alternative in some technology-based industries, trade secrets may provide an important adjunct to patents, being used to protect associated information required to make best use of a patented invention.

### 3. The role of IPR in Sustainability

Although IPR laws have been revised, updated and harmonised over a considerable period of time,<sup>6</sup> the essential nature of the rights described above have not changed substantially since the nineteenth century. IPR were not designed with sustainability in mind although, as discussed below, in some countries certain details of the IPR system have been adjusted with reference to sustainability objectives.

Analysing the role of IPR in sustainability may be approached by considering at least:

- the justification and objectives of IPR systems (discussed in general above);
- the processes employed to acquire IPR in practice (e.g., processes and costs for application, examination and registration, where applicable);
- the effect of IPR enforcement on third party potential innovators;
- the nature and scope of existing IPR, including whether new IPR are required or the existing IPR require change.

More fundamentally, IPR were not designed with reference to sustainability. With certain exceptions they are technology-, content- or business-neutral. Therefore consideration must be given to whether it is desirable to assign a special role to IPR in sustainability, different to the role of IPR generally, re-designing the IPR system to do so if needed.

Absent the prospect of societies worldwide de-technologising or de-capitalising, sustainability must be seen in the context of continued technological development and consumerism. To that extent, that IPR already has a role in sustainability is undoubted: patents may protect more sustainable technology; trade marks may promote more sustainable brands; copyright may protect literature or other media promoting sustainability as a concept or methodology for sustainable practices. That role, however, is neither specific to sustainability, nor tailored to it; it is the same role that IPR may serve in relation to other aspects of society – public health; entertainment; etc. As noted by the Hungarian Report,<sup>7</sup> by supporting “*fast paced economic and technological development*” patents (and to a degree other IPR) “*can ... have an adverse effect on both society and the environment by significantly increasing ... humanity’s ecological footprint*”.

Some National Reports noted specific, existing, aspects of their countries’ IPR systems that were for, or had a particular relevance to, the role of IPR in sustainability.

The Swedish Report noted that the Swedish Patent Office has, as part of its mission statement, the objective of using IP to achieve a more sustainable society.<sup>8</sup> However, Swedish public authorities are required to act neutrally (meaning in particular that they must not have regard to considerations immaterial to the proper exercise of their function), which makes concrete fulfilment of this mission statement challenging since examination of IPR does not, as a matter of law, require consideration of sustainability.

### 3.1 Aspects of the Patent System

#### 3.1.1 Dissemination of Information

The UK Report noted the public availability of information in patent applications and granted patents through the patent register and associated documentation.<sup>9</sup> Following a patent’s expiry or lapse (or if a patent application is

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<sup>6</sup> Some form of IPR are believed to have existed as earlier as the fifteenth century in Italy. In England, IPR of some kind have existed since at least the early seventeenth century. The late-eighteenth century US constitution recognises IPR.

<sup>7</sup> Section 2.1.

<sup>8</sup> Section 2.2.1.

<sup>9</sup> Section 2.1.1.

not granted, or a patent invalidated), this information is free to use for everyone. Even prior to that, the information is also available internationally and thus may in practice be usable in many countries during the life of the patent in another country – most businesses file patents only in those countries they perceive as most valuable to them.

This existing characteristic of the patent system can be contrasted with trade secrets protection, where information is deliberately kept secret. The publication of patents’ - and patent applications’ - content is part of the “patent bargain” often referred to in patent legal or economic theory: rewarding the inventor for a period of time in exchange for making the invention available for general use following that period. Any move to interfere with the “patent bargain” so as to reduce the availability of information could be detrimental to sustainability, leading to the need to re-invent existing technologies (e.g. if they had been previously economically unattractive and therefore had not been pursued).

The Austrian Report noted<sup>10</sup> the Austrian Patent Office’s efforts to spread information and educate the public about the role of IPR and how to obtain them,<sup>11</sup> as well as<sup>12</sup> the “WIPO Green” initiative of the World Intellectual Property Organisation (WIPO) that seeks to bring together information or technology exchange innovators in sustainable technologies (the latter also discussed by the Swedish Report).<sup>13</sup> The Swiss Report also noted the Swiss IP Office’s contribution to ‘WIPO Green’,<sup>14</sup> by providing assistance to IP authorities in developing countries,<sup>15</sup> provision of templates for technology transfer agreements,<sup>16</sup> strategy (in conjunction with the Swiss University Conference) for open access to information,<sup>17</sup> support for innovation agency, Innosuisse, which assists SMEs with sustainability development,<sup>18</sup> the drafting of a Cleantech Report on the green patent landscape in Switzerland,<sup>19</sup> and proposed future measures.<sup>20</sup> The Hungarian Report also supports sharing information and a green ‘marketplace’, like ‘WIPO Green’.<sup>21</sup>

### 3.1.2 Advantageous Application System

The UK Report reported the existence of a ‘green channel’ providing for an accelerated pathway for patent applications for ‘green’ inventions.<sup>22</sup> This is a measure designed to enhance the utility of the existing patent regime to innovators or sustainable technologies. The Malta Report makes a similar proposal.<sup>23</sup> The Brazilian National Report notes that a similar scheme exists in Brazil,<sup>24</sup> while the Swiss Report noted the possibility of accelerated examination in the Swiss Patent Office for applications generally.<sup>25</sup>

### 3.1.3 Parallel Innovation

The UK National Report noted the effect of the patent system,<sup>26</sup> in the short term (i.e., during the life of a patent) of shutting out third parties from using patented technology – which may be a more sustainable technology than a pre-existing, off-patent technology. This effect may go either way – competitors may continue to use older, less-sustainable technologies or may be able to innovate themselves in an alternative or parallel direction. The former is *prima facie* detrimental to sustainability (although if the new technology is only marginally better than the old,

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<sup>10</sup> Section 3.2.

<sup>11</sup> Section 3.2.

<sup>12</sup> Section 4.

<sup>13</sup> Section 2.1.

<sup>14</sup> Section 3.2.1.

<sup>15</sup> Section 3.2.2.

<sup>16</sup> Section 3.2.3.

<sup>17</sup> Section 3.2.4.

<sup>18</sup> Section 3.2.5.

<sup>19</sup> Section 3.2.6.

<sup>20</sup> Section 3.3.

<sup>21</sup> Section 2.2.

<sup>22</sup> Section 2.1.2.

<sup>23</sup> Section 2.4.

<sup>24</sup> Section 1.

<sup>25</sup> Section 2.3.3.

<sup>26</sup> Section 2.2.

the waste associated with unnecessary replacement should not be ignored either). Even the latter may be regarded as detrimental to sustainability goals in that the resources used to research, develop and alternatively manufacture an alternative (substantively equal) solution are, from a sustainability perspective, potentially wasted.

Patent holders' behaviour is a significant factor here: as the UK Report noted,<sup>27</sup> patent holders may choose to license their patents to third parties at a reasonable cost or for free, thereby facilitating access to sustainable technologies protected by those patents. Where a patent holder makes its patented technology freely available to others, it may be questioned what the role of the patent system is; yet, presuming the patent system should still exist, facilitating free access to the technology is aided by filing patents for that technology because this prevents others - who may not be so altruistically minded - from subsequently obtaining patent rights over the same technology. In these circumstances, it may be questioned why the patent holder needs to maintain and license the patents rather than permitting them to lapse, as the act of filing (and publishing) the patent applications has prevented alternative monopolisation of the technology by another.

The Austrian Report notes the possible "blocking" effect of a patent on the uptake of a technology<sup>28</sup> with the requirements for compulsory licensing being very strict, and notes the significance of the patent holder's behaviour since they may permit others to use their patented technology.<sup>29</sup> Nevertheless, the authors do not favour compulsory licensing as a solution.<sup>30</sup> In a similar theme, the German Report noted that the existence of IPR (e.g. patents) protecting sustainable technology or practices may slow its adoption, thereby reducing its positive effect on sustainability outcomes.<sup>31</sup> The Report notes that even compulsory licensing regimes have not solved this problem, and that there is an inevitable tension between the rights of patent holders and society, which is particularly acute in the case of sustainable technologies owing to the public interest in their adoption.<sup>32</sup> The importance of patent holder behaviour is again noted, citing another example of free-licensing of patent rights to third parties.

The Swedish Report expresses similar ideas concerning the role of right-holders' behaviour in the consideration of IPR "blocking" third parties,<sup>33</sup> and makes the interesting observation that many environmentally damaging technologies are likely to have been patented and therefore (potentially) disseminated more slowly,<sup>34</sup> reducing their harmful effects.

The Swiss Report records disappointment that "*compulsory licences are very little used*", opining that "*this type of measure is directly in line with a logic of sustainability*".<sup>35</sup>

Similarly, the Hungarian Report notes the benefits of cross-licensing between patent holders for a circular economy and the promotion of more innovative solutions in parallel.<sup>36</sup>

### 3.1.4 Economically Unattractive Sustainable Technologies

The UK Report refers to the problem that sustainable disruptive technologies are often unprofitable (giving the example of carbon capture technology),<sup>37</sup> a problem not addressed by the IPR system according to the report. This author notes that the position may be more nuanced: initially unprofitable activity may become attractive owing to sustainability-oriented regulation (e.g., requiring carbon off-set) and securing IPR to protect such activity may

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<sup>27</sup> Section 3.

<sup>28</sup> Section 2.2.

<sup>29</sup> Section 2.2.

<sup>30</sup> Section 2.2.

<sup>31</sup> Section 3.1.2.

<sup>32</sup> Section 3.1.4.

<sup>33</sup> Section 2.4.

<sup>34</sup> Section 5.

<sup>35</sup> Section 2.3.1.

<sup>36</sup> Section 2.2.

<sup>37</sup> Section 5.1.4.

provide reward in the longer term. The short-term problem of investing in that technology – and the IPR besides – is freely acknowledged.

### **3.1.5 Protection for Traditional Knowledge**

The Swiss Report, with an eye to social sustainability,<sup>38</sup> noted a number of international instruments directed towards the use of genetic material and information derived from traditional knowledge. These require, in particular, specifying the source of traditional information where this is used in a patent application, with the possibility of a fine for disregarding this requirement.

### **3.1.6 Recognition**

The Austrian Report mentions the Austrian Patent Offices' prize,<sup>39</sup> awarded jointly with the Climate Protection Ministry, for patents (or trade marks) contributing significantly to sustainability. The Malta Report refers favourably to a similar scheme in Malta,<sup>40</sup> and the Italian Report to a similar scheme for designs.<sup>41</sup>

### **3.1.7 Plant Variety Protection**

The Hungarian Report notes that plant variety protection rights (typically effected via rights separate from patents) may be beneficial to sustainability in food production, but that such rights are often in the hands of large, international businesses to the potential detriment of developing countries.<sup>42</sup>

## **3.2 Aspects of the Design Right System**

### **3.2.1 Reduction of Waste**

The UK Report noted – in a rare example of IPR being circumscribed for the purpose of promoting sustainability – that the UK's Ecodesign for Energy-Related Products and Energy Information Regulations 2021 have excluded design right protection for spare parts, intending to reduce waste of electronic goods by permitting third parties to manufacture spare parts even if the originator has discontinued manufacture of the part.<sup>43</sup>

### **3.2.2 Increasing Importance**

The German Report suggests that the design right system will become increasingly important in the context of future sustainability efforts owing to the increasing ease of 3D printing rendering the manufacture of (for example) replacement parts or small scale products easier.<sup>44</sup>

## **3.3 Aspects of the Copyright System**

### **3.3.1 Reward by Dissemination**

The German Report contrasts the copyright system with the patent system in relation to its effects on sustainability-related material.<sup>45</sup> The Report's authors opine that copyright is rewarded by dissemination in contrast to patent monopolies. I interpolate that, in both cases, the reward comes from using the IPR to limit dissemination or use of the protected subject matter unless payment is provided. The German National Report goes on to note that, owing to the more limited monopoly granted by copyright (based on *copying*) that IPR possesses a lower intrinsic risk of monopolising sustainable materials since these may be created independently by others. In principle this is true, but such independent creation is itself potentially wasteful of resources.

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<sup>38</sup> Section 2.3.2.

<sup>39</sup> Section 3.2.

<sup>40</sup> Section 1.1.

<sup>41</sup> Section 3.

<sup>42</sup> Section 2.2.

<sup>43</sup> Section 2.1.3.

<sup>44</sup> Section 3.3.

<sup>45</sup> Section 3.4.1.

### 3.3.2 Text and Data Mining

The Swiss Report sets out the permitted act (under Swiss law but with corresponding provisions under EU and UK law) of mining text and data for the purpose of scientific research. This dilution of copyright is potentially beneficial for research and development in sustainability, as it is in other technologies.<sup>46</sup>

### 3.3.3 Collecting Traditional Information

The Hungarian Report highlights the importance of traditional knowledge in sustainable practices, such as in farming, and the importance of preserving such knowledge for social sustainability.<sup>47</sup> The Report indicates support for protecting such knowledge through databases or other collections of information. Potentially, this could require licensing or other arrangements to ensure that, while protected, the information may be used in order to promote widespread sustainable farming.

## 3.4 Aspects of the Trade Mark System

### 3.4.1 Certification and Collective Marks

The Austrian,<sup>48</sup> Brazilian,<sup>49</sup> Italian,<sup>50</sup> German,<sup>51</sup> Hungarian,<sup>52</sup> Swiss,<sup>53</sup> and UK<sup>54</sup> Reports cited certification marks as having a particular role in facilitating consumer choice to buy products or services with sustainability credentials.

Notwithstanding the above positive commentary on certification marks in particular, the Austrian Report records significant concern over the possible role of trade marks in “green washing”.<sup>55</sup> Noting the role for the prohibition on trade mark registration of misleading signs, the Austrian Report notes also the prohibition under the Austrian Trademarks Act of “aggressive business practices” which is relevant to addressing this concern.

The Swiss Report also discussed collective marks, used in Switzerland for marks such as ‘Swiss Organic Fabrics’.<sup>56</sup> The Swiss Report’s authors noted that collective marks “offer less guarantees compared to guarantee [certification] marks” because they do not require compliance with specific requirements, only membership of a group. The Hungarian Report also refers to collective marks alongside certification marks as assisting consumers.<sup>57</sup>

### 3.4.2 Prohibition on Misleading Trade Marks

The German Report notes the prohibition of registration for trade marks that are misleading as to a characteristic of the products or services they relate to.<sup>58</sup> This prohibition may assist in combating “greenwashing” by businesses in some circumstances. This point is referred to also by the Brazilian<sup>59</sup> and Hungarian Reports.<sup>60</sup>

The Swedish Report also discusses “green washing” and the role of unfair competition law in combating this.<sup>61</sup>

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<sup>46</sup> Section 2.5.

<sup>47</sup> Section 2.3.

<sup>48</sup> Section 2.3.

<sup>49</sup> Section 1.

<sup>50</sup> Section 4.

<sup>51</sup> Section 3.5.

<sup>52</sup> Section 4.

<sup>53</sup> Section 2.4.1.

<sup>54</sup> Section 2.1.4.

<sup>55</sup> Section 2.3.

<sup>56</sup> Section 2.4.2.

<sup>57</sup> Section 2.2.

<sup>58</sup> Section 3.5.

<sup>59</sup> Section 1.

<sup>60</sup> Section 1.

<sup>61</sup> Section 4.



The Italian Report goes so far as to suggest that trade marks used deceptively (for “greenwashing”) should be forfeit, potentially implying something more than just invalidation of the right.<sup>62</sup>

### **3.4.3 Geographical Indicators**

The Swedish National Report refers to geographical indications, noting that in order to benefit from a geographical indication a producer must use the approved process, potentially inhibiting sustainable innovation in the production of food and agricultural products protected by geographical indications.<sup>63</sup>

The Brazilian National Report takes a different view of geographical indications to that of the Swedish National Report, noting that the requirement to follow particular practices in order to use a geographical indication typically requires following more traditional and hence sustainable practices.<sup>64</sup> A similar view is expressed in the Hungarian Report.<sup>65</sup>

## **3.5 Aspects of the Trade Secrets System**

### **3.5.1 Enhancement of Protection Beyond Contractual Rights**

The German Report refers to the importance of trade secrets law offering additional safeguards (beyond those afforded by contract) for cooperative innovation, particularly for collaborations between parties of differing size.<sup>66</sup> Such collaborations are often important in bringing technology concepts to market. The German Report notes, however, that trade secrets may limit the dissemination of sustainable technologies since they intrinsically require the technology to be kept secret. For example, a sustainable manufacturing process may be less widely adopted owing to it being kept secret. The German Report likens this “dilemma” to that of the patent system (see Section above at 3.1.3), an inherent tension between how the innovation is protected or rewarded and the public interest in adopting and disseminating sustainable technologies.<sup>67</sup>

## **4. Should IPR have a Greater Role in Sustainability?**

As noted above, at a surface level IPR already have a role in sustainability in as much as IPR have a role in many forms of technological, economic and social activity. However, whether IPR should have a greater role in sustainability (whether that would be incentivising or rewarding sustainable activities or disincentivising unsustainable activities) is the more interesting issue.

National reporters views on this issue differ but there was a degree of consensus that (i) fundamental change to IPR systems to promote or support sustainability was unnecessary or undesirable, but some changes could be considered; and (ii) use of IPR to disincentivise unsustainable activities should be limited.

### **4.1 Changes to IPR to Promote Sustainability**

The Austrian Report argued against changing the subsistence requirements for IPR to assist securing protection for those related to sustainable subject matter.<sup>68</sup> As noted below (Section 4.4), the Austrian National Report made various proposals for enhancing the IPR system more generally, in the context of arguing against disincentivising less sustainable technologies or practises.

The UK Report argued against any change to the conditions for IPR to subsist; likewise considering the available IPR should not be significantly altered, other than suggesting the potential for introducing utility model patents into UK law (rights falling partway between design rights and patents, available in some jurisdictions).<sup>69</sup> The UK Report noted successful interaction between the UK’s existing IPR system and sustainability goals in at least the

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<sup>62</sup> Section 3.

<sup>63</sup> Section 3.1.

<sup>64</sup> Section 1.

<sup>65</sup> Section 2.1.

<sup>66</sup> Section 3.2.1.

<sup>67</sup> Section 3.2.2.

<sup>68</sup> Section 3.

<sup>69</sup> Sections 4.4.2 to 4.4.3.

‘green channel’,<sup>70</sup> but noted that IPR enforcement was expensive and often beyond the reach of SMEs,<sup>71</sup> potentially stifling such businesses.

Similarly, the Italian and Swedish Reports conclude there is no need for additional *sui generis* IPR to incentivise innovation in sustainability.<sup>72, 73</sup> The Malta Report opines that the existing conditions for IPR need not be altered but the framework or environment for obtaining them should be improved for applications with sustainability subject matter.<sup>74</sup> The Brazilian Report expresses a similar view.<sup>75</sup>

#### **4.1.1 Changes to the Patent System**

The UK Report praised the UK IPO’s ‘green channel’ for patent applications and notes the existence of an exclusion from the UK’s ‘patent box’ tax scheme (designed to encourage UK-based innovation) for profits derived from oil extraction or oil rights.<sup>76</sup> The UK’s ‘green channel’ also received positive comment from other countries’ reports.<sup>77</sup> As did similar proposals made such as the Malta Report proposing<sup>78</sup> a dedicated section of the IP office to process applications with sustainability subject matter or a ‘green channel’ application route.<sup>79</sup> The Hungarian Report records a ‘green channel’ in the Hungarian IP Office but notes that few applications have used it.<sup>80</sup>

The German Report noted the substantial fees for maintaining patents in force,<sup>81</sup> including that these fees increase at an accelerated rate over the life of the patent, a particular problem for SMEs. This may affect the sustainability of an SME’s business, or the technology it produces, which may be more sustainable than an incumbent alternative technology, and the report indicates support for measures to address this. The current proposal for a Green Impact Fund Technology, providing payment to patent holders from public funds in return for them permitting use of their (green) technology is noted. The Report also argues in favour of reduced application costs for inventors of sustainable technologies.<sup>82</sup>

Additionally, the German Report argues in favour of a licensing regime to ensure dissemination of sustainable technologies,<sup>83</sup> and for the development of a licensing system or legal doctrine (potentially akin to, or extending, exhaustion of rights) to facilitate the ‘circular economy’ of re-use, refurbishment and recycling without the potential for interference by IPR. The Swedish Report also refers to the ‘circular economy’ and proposes the use of exhaustion of rights,<sup>84</sup> or the introduction of a ‘right to repair’ to address this. A further suggestion is the mitigation of infringement in the context of *improvements in sustainability of existing technology* that nevertheless fall within the scope of existing rights (particularly patents).<sup>85</sup>

The German Report discusses but ultimately rejects the notion of permitting ‘easier’ patenting for sustainable technologies on the basis that not only would this undermine legal certainty but potentially create additional barriers to entry in relation to trivially modified technology.<sup>86</sup>

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<sup>70</sup> Sections 5.1.2 and 5.1.4.

<sup>71</sup> Section 5.1.5.

<sup>72</sup> Section 4.

<sup>73</sup> Section 5.

<sup>74</sup> Section 2.4.

<sup>75</sup> Section 3.2.

<sup>76</sup> Section 4.4.1.

<sup>77</sup> Germany, Section 4.1.2.3.

<sup>78</sup> Section 3.3.

<sup>79</sup> Section 3.3.

<sup>80</sup> Section 2.2.

<sup>81</sup> Sections 3.1.2 and 4.1.1.

<sup>82</sup> Section 4.1.2.4.

<sup>83</sup> Section 4.1.2.6.

<sup>84</sup> Section 4.2.

<sup>85</sup> Section 5.2.

<sup>86</sup> Section 4.1.2.1.

The Malta Report and Italian Report also argue in favour of enhancing compulsory FRAND-terms licensing for patents with great sustainability value.<sup>87, 88</sup>

The Hungarian Report refers to the Bolar exemption (providing a defence to patent infringement for certain activities in medicinal research, e.g., clinical trials) and indicates support for a broader defence to patent infringement for activity for research purposes with a focus on sustainable or green technology.<sup>89</sup> The same report suggests promoting sustainable agriculture through dissemination of suitable plant varieties.<sup>90</sup>

#### **4.2.2 Changes to the Design Right System**

The German Report argues in favour of a form of compulsory licensing to permit more widespread use of the same design (which is potentially less wasteful) while still providing reward for the designer.<sup>91</sup> It goes on to suggest also that the ability, under German law, to require destruction of infringing products could be abrogated. Such an approach could potentially be applied to other IPR (e.g. patents) too, as recognised by the Swedish Report which refers to the same issue.<sup>92</sup> See also the Swiss Report's reference to the Swiss IP Office's forthcoming initiative to recycle (rather than destroy) counterfeit goods.<sup>93</sup> The Hungarian Report notes the potential polluting effect of the system of destruction when applied to physical goods and recommends recycling where possible.<sup>94</sup>

The Hungarian Report notes that design rights are often important in the clothing and fashion industry,<sup>95</sup> recommending that IP offices should provide additional information about how to protect designs that incorporate sustainable materials into their design.

#### **4.2.3 Changes to the Copyright System**

The UK Report notes certain exceptions in UK copyright law aimed at promoting access to copyright works by people with disabilities and the relatively narrow (e.g. compared to the US) concept of 'fair dealing'.<sup>96</sup> The UK Report suggests the possibility of some exception to copyright to facilitate dissemination of works providing details of sustainable practices, or to permit research for sustainable purposes, even if commercial. The UK Report drew attention to the important issue of proportionality, in this context requiring consideration of whether there would be sufficient real benefit to sustainability from such measures to justify undermining copyright.

The German Report notes the crucial importance of *data* to many modern activities and queries whether the duration of database rights or copyright in database should be reduced so that such data more rapidly becomes usable by others.<sup>97</sup>

The Hungarian Report notes the role of education in promoting sustainability and expresses the view that permitted acts related to educational use or materials could be expanded.<sup>98</sup> Likewise, the Hungarian Report proposes a database or platform for sharing green software (e.g. analytics on emissions).<sup>99</sup>

#### **4.2.4 Changes to the Trademark System**

The UK Report touches on proposals by both the UK's Competition and Markets Authority and its Advertising Standards Agency to address false or unsubstantiated sustainability claims or credentials by businesses (i.e.

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<sup>87</sup> Section 2.2.

<sup>88</sup> Sections 2 and 3.

<sup>89</sup> Section 2.2.

<sup>90</sup> Section 2.2.

<sup>91</sup> Section 4.3.

<sup>92</sup> Section 3.2.

<sup>93</sup> Section 3.3.

<sup>94</sup> Section 3.

<sup>95</sup> Section 2.2.

<sup>96</sup> Section 4.4.1.

<sup>97</sup> Section 4.4.2.

<sup>98</sup> Section 2.2.

<sup>99</sup> Section 2.2.

“greenwashing”).<sup>100</sup> Not strictly a matter for the registered trade mark system (except to the extent that trade mark systems typically prohibit registration of trade marks that are misleading as to a product’s or services’ characteristics), claims made in promotion of advertising may be regarded as part of a business’ or product’s/service’s brand and may in some countries engage unfair competition, comparative advertising or similar issues that are related partly to the trade mark system.

The German Report argues in favour of using the existing law (not least certification marks) to address “greenwashing” but does not propose amendment.<sup>101</sup>

The Hungarian Report proposes that, not only should trade marks used in ‘greenwashing’ be subject to cancellation,<sup>102</sup> but that certification or collective marks relating to sustainability could have a discounted fees regime. The same report proposes that geographical indications could be made available to other products besides food, where this would encourage sustainable production materials or methods.

#### **4.2.5 Changes to the Trade Secrets System**

The German Reports argues in favour of three measures to improve the dissemination of trade secrets related to sustainability:<sup>103</sup> extension of the scope of freedom of information laws; exempting from trade secret protection certain categories of information (related to sustainable technologies for example); or more narrowly interpreting the requirement for information to have (economic) value in order to be protected as a trade secret, i.e. where the information’s real value lies in sustainability. I query whether, assuming the basic premise of IPR protection is justified, such measures might reduce efforts to innovate in this area unless such efforts were otherwise rewarded, or required - e.g. for regulatory compliance.

The Swedish Report refers to the potentially perpetual nature of a trade secret,<sup>104</sup> noting that this may prevent dissemination of useful information forever and implying that this is potentially problematic. The Hungarian Report also notes this problem.<sup>105</sup>

The Hungarian Report notes that AI may be important for many sustainability matters but,<sup>106</sup> if AI algorithms are protected as trade secrets, this prevents their dissemination and hence dissemination of tools for sustainability. The report’s authors note that this problem could potentially be addressed by a suitable *sui generis* right for AI algorithms.

#### **4.3 Changes to the Enforcement System**

The Italian Report proposes that courts encourage settlement of disputes concerning IPR for sustainability,<sup>107</sup> thereby promoting licensing (and thus dissemination) of the subject matter.

The Hungarian I Report emphasises the importance of licensing and proposes voluntary licensing on non-discriminatory terms as an objective for sustainable technologies.<sup>108</sup> The report notes, however, that geographical indications do not require licensing owing to their use by those who fulfil the relevant criteria, but to the extent that these rights may be important for consumer confidence in sustainable products, authorities should be equipped to enforce them.

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<sup>100</sup> Section 5.1.5.

<sup>101</sup> Section 4.5.

<sup>102</sup> Section 2.2.

<sup>103</sup> Section 4.2.

<sup>104</sup> Section 3.1.

<sup>105</sup> Section 2.2.

<sup>106</sup> Section 2.2.

<sup>107</sup> Section 5.

<sup>108</sup> Section 2.2.

The Hungarian Report also suggests that enforcement of rights against counterfeits can contribute to sustainability owing to the lower quality of counterfeit goods and their economic impact.<sup>109</sup>

#### 4.4 Changes to IPR to Disincentivise Unsustainable Activities

The UK Report argues that IPR should remain “neutral”,<sup>110</sup> noting (i) that perspectives on sustainability may shift (citing blue hydrogen as an example); and (ii) that the burden of assessing sustainability should not fall on an examiner, who may be unable to assess whether a given (particularly new) technology is unsustainable in nature - , as noted also by the German National Report and the Swedish National Report.<sup>111,112</sup> The latter does, however, consider the possibility that patents should be denied to climate-damaging technologies.<sup>113</sup> Many patent laws already contain an exclusion (typically little used) for inventions contrary to *ordre public*, which the German National suggests could be used. Albeit noting that this should (if at all used) be limited only to clear cases with marginal cases ignored, left to be dealt with by government regulation on the use or exploitation of such technologies. The Swedish and Hungarian Reports make a similar reference to the possible use of *ordre public* to exclude environmentally damaging technologies from patent protection, noting that this is potentially justified under TRIPS article 27(2).<sup>114,115</sup>

The Austrian Report argues that IPR should encourage innovation in sustainability rather than be denied to less sustainable innovations.<sup>116</sup> It goes on to propose that this could be done by reducing the fees associated with IP registration in this area, especially for SMEs or even providing them with funds,<sup>117</sup> educating them about the benefits of IPR,<sup>118</sup> introducing a grace period for patent protection, adopting a permissive approach to the requirement for industrial applicability for new (sustainable) technologies,<sup>119</sup> adopting a “TRIPS waiver” for sustainable technology patents (akin to that adopted for COVID vaccines, to enable proliferation of these technologies to poorer countries), easier licensing of “standard essential patents” in this area,<sup>120</sup> potential protection for AI-generated or compiled data with sustainability applications,<sup>121</sup> or tax reliefs.<sup>122</sup> This last point is also raised in the Brazilian and Italian Reports.<sup>123, 124</sup>

### 5. Common Themes

A number of National Reports refer to the need for international efforts in this area, not national ones.<sup>125</sup> In this regard, the Swedish<sup>126</sup> National Report refers to the obligation under Art.66(2) TRIPS Agreement for the incentivisation of technology transfer from developed to less developed countries. The Swedish National Report notes that the debate about this obligation – recently recurrent in relation to COVID vaccines – is highly relevant also to sustainable technologies.

Within that framework, I detected four principal common themes:

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<sup>109</sup> Section 3.

<sup>110</sup> Section 4.3.

<sup>111</sup> Section 3.1.

<sup>112</sup> Section 5.1.1.

<sup>113</sup> Section 4.1.2.2.

<sup>114</sup> Section 2.3.

<sup>115</sup> Section 2.2.

<sup>116</sup> Section 3.1.

<sup>117</sup> Section 3.2.

<sup>118</sup> Section 3.2.

<sup>119</sup> Section 3.4.

<sup>120</sup> Section 3.5.

<sup>121</sup> Section 3.6.

<sup>122</sup> Section 3.3.

<sup>123</sup> Section 3.1.

<sup>124</sup> Section 5.

<sup>125</sup> Germany, section 5; Austria, Section 5; Malta, section 4.

<sup>126</sup> Section 2.3.1.

## 5.1 Licensing

As noted above in sections 3.1.3, 4.1.1 and 4.3, the desirability of licensing patents (in particular) was discussed by a number of National Reports, including with reference to existing licensing schemes such as compulsory licensing or licensing on FRAND terms.

Compulsory licensing is permitted (but not required) under Art. 30-31 TRIPS Agreement, which set out certain minimum conditions that must be met for such licensing. Taken at face value, the minimum conditions required under Art. 31 TRIPS are not onerous to potential licensees and depend in large part on the potential licensee having unsuccessfully sought a licence on reasonable terms. However, many countries have more onerous conditions in their national laws which make it more difficult for potential licensees to obtain a compulsory licence: for example, in the UK, s.48A Patents Act 1977 requires the potential licensee to show that there is an unmet commercial demand for a product on reasonable terms with the effect that an important technical advance of considerable economic significance is not being exploited or the establishment or development of a commercial or industrial activities is unfairly prejudiced. The effect of this is that a patentee who meets commercial demand for a product on reasonable terms can, as is usual for a patent, exclude others from using the technology. I assume that the compulsory licensing regimes of many jurisdictions will likewise be more onerous than the minimum requirements provided in the TRIPS Agreement and this assumption is backed up by some of the National Reports.

One option that the LIDC could explore for the development and adoption of sustainable technology is to consider the conditions for compulsory licensing. In doing so, due consideration would need to be given to the potential effect on the incentive for research and development that the patent right is intended to provide.

Compulsory licensing is, however, a relatively blunt instrument for addressing a general technology area. A number of National Reports referred to the concept of FRAND licensing used in relation to standards essential patents (SEPs), in particular in the communications industry. I note that the communications industry represents an unusual case: standardisation is *inherently necessary* in order for the market to function well because, absent standardisation, communications equipment comprising a multitude of functional parts produced and operated by different undertakings cannot interact with each other unless one permits either a communications monopoly to develop or fragmentation into markets for each undertaking with (literally) no communication between them.

This *inherent necessity* for standardisation does not characterise many, if any, other industries even if it may apply to some individual products.<sup>127</sup> Even taking an example such as automotive fuel (heavily dominated by petrol and diesel, with substantial requirements for supporting infrastructure to obtain, distribute and supply fuel, which one might think would lead to a *de facto* standard), alternative fuels or propulsion such as liquid gas or battery-powered vehicles, have been commercially successful. A sustainability-related example could be the standardisation of charging cables or associated technology for electric vehicles, where again interoperability between different manufacturers is highly desirable for public charging stations.

In my view, for the above reasons, consideration of the SEP/FRAND licensing model is useful but such a model requires refinement to apply to sustainable technologies. For example, one could imagine a scenario in which regulatory obligations imposed to further a sustainability objective lead to a situation where only one technology is viable. Of course, in principle something new may be invented but waiting for that to occur that may not be practical over a short- or medium-term timeframe. Maintaining the automotive fuel example, regulation requiring zero tailgate CO<sub>2</sub> emissions would impose a *de facto* requirement to use battery driven vehicles (or potentially hydrogen fuelled vehicles – but these are not currently viable for most use cases). This would come closer to a SEP scenario, whereby IPR relating to battery technology and electric drivetrains could be essential to producing a viable battery-powered vehicle, owing to the rapid improvements in those technologies in recent years: the difference (compared to communications) would remain in that there would not be a detailed prescription, with patents covering each detail, of how the battery or drive technology must be implemented. It is also unlikely that the IPR would all be in the hands of a single undertaking and therefore cross-licensing could be encouraged. As

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<sup>127</sup> For example, the European Parliament has recently announced adoption of USB-C as a legally imposed standard for charging consumer electronics devices – see further below.

seen in the communications fields where cross-licensing is common, however, that does not negate the role of FRAND licensing where SEPs are concerned.

Perhaps a more pertinent example could relate to parts or components. To reduce waste, regulation might impose a limited choice on manufacturers: the recent move by the EU's to regulate charging cables being a clear example. Here, a prescriptive standard is imposed requiring all manufacturers to use a single solution. IPR covering that solution (patents or design rights, perhaps) become essential. While in the communications industry there is a sophisticated system for declaring essential patents and consequences for not declaring, this form of regulation-driven essentiality would need to be treated differently because the IPR would not have been essential at the time it was filed: the adopted solution is a known one at the time it becomes standardised and any IPR will have been filed in the past.

Nevertheless, for third parties, that IPR becomes essential via such regulation and consideration should be given to a FRAND or FRAND-like model to ensure all manufacturers of products incorporating those parts or components can continue to participate in the market, provided they are willing to pay FRAND-based royalties.

As noted in the UK Report, some moves have already been made to open up the market for spare parts.

Cross-licensing in the context of litigation was also noted by the Italian Report. Of course, this is a method used already by litigants in settling disputes, especially where both sides have alleged infringement of their IPR. Consideration of whether a formal scheme could be introduced through court rules or other means would be beneficial.

In licensing contracts, where the patent holder is remunerated under its terms, the Hungarian Report raised the prospect of a Bolar-type defence to patent infringement for research and development in sustainable technologies. This is certainly an interesting idea: while traditional Bolar defences are linked to research activities done in furtherance of regulatory approval for medicinal products, in some countries this has been widened to cover other products requiring regulatory approval. Many sustainable technologies do not necessarily require regulatory approval but it might be possible to adapt the Bolar approach: this could be the subject of further study. In addition, some countries have a defence to patent infringement based on performing research but typically this is narrow in scope. Great consideration would be needed before widening such a defence in order to avoid undermining the patent system completely, especially when an alternative such as increased use of compulsory licensing may be an option, and one which would preserve the return on investment for the patent holder by way of royalties.

## **5.2 Facilitating Access to IPR for Sustainable Technology**

A number of National Reports refer to encouraging or promoting access to securing IPR for sustainable technologies: 'green channels' for accelerated patent examination, lower fees,<sup>128</sup> providing information and support to SMEs engaged in sustainable activity, and the like.

I agree that these kinds of initiatives are desirable. In relation to accelerated examination or lower fees, consideration should be given to how (i) the boundary of 'sustainability' is defined; and (ii) how to apply the concept to technologies that are more sustainable than what came before but ultimately still unsustainable in nature.

As to (i), for patents at least, the 'Y' classification under the CPC classification system is one way to do this. The examiner will assign the classification after initial review of the application, and so this will not enable an application to be fast-tracked right at the outset. Under the UK's 'green channel' system referred to in several National Reports, the applicant must make a statement "*indicating how their application is environmentally friendly...*" at the time of filing, or later. This system enables applications to be diverted into a 'green channel' immediately at the point of filing, if applicants choose to use this option.

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<sup>128</sup> Austria, section 3.7; Germany, section 4.1.2.4; Malta, section 3.3; Italy, section 5.

As to (ii), the UK Report discussed this issue.<sup>129</sup> There may be technical advances that are more sustainable than what they improve upon but only to a limited degree – for example, a more energy efficient version of a machine that manufactures polluting chemicals. The ‘open’ nature of IPR at present – i.e. that IPR acquisition and subsistence is almost wholly blind to the field of technology other than a few exceptions – means that this presents no problem. However, if IPR applications systems are revised so as to substantially promote the acquisition of IPR for sustainable technology, these kinds of issues must be addressed.

A thornier problem is the one identified by some of the National Reports: whether acquisition of IPR (particularly patents) should be made more difficult or even impossible in relation to non-sustainable technologies. Points (i) and (ii) would apply again, in reverse and more acutely.

As regards fees, it is true that, for SMEs in particular, the costs are significant. However, these are typically exceeded by the costs of professional legal assistance. Various National Reports referred with approval to initiatives by their national IPOs to spreading information, or providing education, about IPR and their acquisition. While general information cannot substitute for professional advice and assistance, better informed businesses are likely to make better decisions about their IP strategy with less reliance on professional advice. For businesses with limited resources, this may be a significant advantage.

### **5.3 Dissemination of Accurate Information About Sustainability**

Above, I touched upon the dissemination of information about IPR. However, several National Reports remarked upon the role of IPR in the dissemination of information about sustainability – new technologies, new ideas of methodologies, the sustainability credentials of products or services, and the like. I will pick up on three of these points in this section.

First, the role of patents and the counter role of trade secrets. One of the fundamental characteristics of the patent system is the exchange between an inventor who must put his or her idea into the public domain and the state who grants a time-limited monopoly for the idea. It is part of the essence of this transaction that the idea is public and therefore available for general use after the monopoly expires. To that extent, patents promote the exchange of information. While that information may be monopolised, many applications, even once published, do not proceed to grant or are allowed to lapse because they are not commercially valuable at the time and therefore the information may be available for use earlier.

While patents in force give a monopoly to their holders, licensing is an option which should be encouraged – see above.

Trade secrets by definition involve hiding the information from the public. While this is not always feasible (because of processes such as reverse engineering) it is used successfully by many technology companies. A system that would favour the filing of patents – e.g. as discussed above by accelerating examination or reducing costs – could incentivise the conversion of trade secrets into patents, bringing the information into the public domain and – ultimately – allowing its wider use. Whether overall such a change in the balance would be of benefit – taking account the need to incentivise research to be done; the monopoly period that would result from a successful patent; following that period, the availability of the information that might otherwise remain secret indefinitely – would require careful study.

In practice, patents and trade secrets are not separated by a wide gulf. In some cases, patents may be filed for core ideas which are best or most efficiently implemented by detailed processes that are kept secret. The patent system requires that inventions claimed are sufficiently disclosed such that they can be put into practice – otherwise the patent is invalid, or the application should be refused – but typically the inventors do not need to disclose everything that is known in order to satisfy this requirement, nor of course does an application cover information that the inventors subsequently develop for better processes which might be reserved as a trade secret. In principle, it would be possible to introduce more onerous requirements for disclosure (e.g. of the ‘best mode of practice’ of

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<sup>129</sup> Section 4.4.1.



the invention), thereby encouraging more information sharing, but this would have far-reaching implications for the patent system.

Second, the role of copyright which may subsist in works containing important information about sustainable practices or methodologies. The German Report questions the current breadth of permitted acts – are the current permitted acts too restrictive,? Are they stifling the sharing of information?<sup>130</sup> Given the pace of technological progress generally, I question whether this is a major concern in developed countries but possibly it acts to reduce the flow of information to developing countries where in some cases such information is vitally needed.

Third, the use of trade marks. By ‘trade marks’, I here include certification and collective marks and geographical indications, notwithstanding that the latter are a separate IPR in their own right. All these kinds of trademarks have a role in communicating information about products, services or the undertakings offering them. Several National Reports referred to the existing possibility for trade marks to be revoked if they are misleading, enabling ‘greenwashing’ trade marks to be revoked. The UK Report took this idea further and suggested that, to reduce ‘greenwashing’, an applicant should be required to demonstrate some level of evidence for any suggested green or sustainability credentials claimed or implied by a trade mark.<sup>131</sup> This idea may merit further consideration. In relation to geographical indications, the Swedish Report referred to the possible preservation of non-sustainable practices that are required to meet the conditions for use of a geographical indication. (This point could also apply to a certification mark.) To address this, consideration could be given to how the qualifying conditions for using geographical indications may be updated and whether it would be appropriate to limit such process in relation to its sustainability impact. For example, it could be made easier for the conditions to be amended such that the production process that qualifies is a more sustainable one, and difficult to amend the conditions to make the qualifying production process less sustainable in nature.

#### **5.4 Adequacy of existing IPR**

The majority of National Reports did not favour the creation of new IPR to protect innovation in sustainability. I agree with this assessment: at present, there is a wide variety of IPR that cater for a correspondingly wide range of technological and commercial activity. As the above discussion indicates, it appears more profitable to consider whether the way IPR are acquired and used may be varied so as to increase the rate of finding more sustainable solutions, having them adopted at scale, and ensuring that illegitimate claims of sustainability (i.e. ‘greenwashing’) are not supported by IPR.

### **6. Conclusions**

On the basis of the studies carried out for the National Reports and the discussion during the international meeting in Milan during October 2022, the areas set out below were identified as meriting further consideration:

- Defining “sustainable”/“sustainability”. If IP is to have a role in “sustainability”, a definition of this term would promote legal certainty and facilitate some practical measures. One proposal made in discussion at the international meeting was to adopt a closed list of sustainable technologies/activities, potentially using the UN’s Agenda 2030 goals.
- The international harmonisation of IP should not be overlooked – any desire for substantial change might not be permissible without amendment to international treaties (principally the Paris Convention and TRIPS but potentially others).
- Most national reporters considered that radical change to IPR was undesirable and that rights should generally remain technology-neutral. Some national reporters noted the possibility to classify polluting or other unsustainable technologies as contrary to *ordre public*, thereby denying patent protection. This is a difficult issue (not least because of point (1), and likely controversy about a further class of ‘damaging’ technologies) but because denial of patent protection for damaging but commercially attractive technologies could indeed increase the use of that technology, with counterproductive results, as noted in the reports. It should be noted that certain aspects of the patent system are modified

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<sup>130</sup> Section 3.4.1.

<sup>131</sup> Section 5.1.5.

- preferentially for (e.g.) medicinal products and therefore the patent system does not have complete neutrality on technology at present.
- There was support for making less radical changes to the IP system, e.g. to encourage or facilitate the acquisition of IPR over sustainable technologies, or to promote wider use of that technology, e.g. via licensing of IP. Specific areas for further consideration include:
    - Accelerated examination for patent applications for “sustainable” technology, and/or lower fees;
    - Incentives such as ‘patent box’ or other tax reliefs for sustainable technologies that are patented;
    - Incentivisation of licensing, e.g. by further incentivising licences or right, making licence royalties tax-beneficial, etc;
    - The interaction between patents (through which information is ultimately made available to all) and trade secrets (through which information may be protected indefinitely from use by others).
  - Licensing was discussed at length. Besides the points mentioned above, consideration should be given to:
    - The applicable conditions for compulsory licensing, as applied to sustainable technologies;
    - The model of FRAND licensing, applied to a different situation. In particular, there may be a few examples where a prescribed solution is mandated (typically by regulation, rather than by an industry-adopted standard) but more typically a regulatory restriction will lead to a more limited pool of potential solutions but will not prescribe one solution that must be followed. Thus the FRAND model would require refinement, at least in respect of what is considered standard-essential, but also in relation to details such as declaring SEPs.
    - Other tools for incentivising licensing (in particular cross-licensing behaviour) of sustainable technologies, to encourage more widespread use of those technologies.
  - Destruction of infringing goods is potentially wasteful and should at least be substituted for recycling.
  - Greenwashing may be addressed in part through revisions to trade marks and allied rights. Points to consider include:
    - Requiring evidence of any sustainability characteristics of a product/service express or implied by a trade mark;
    - Looking at how certification and collective marks may be defined to ensure that any marks that endorse sustainability have sufficiently strict requirements for their use to ensure consumer confidence in their sustainability claims;
    - The possibility of introducing an international certification mark for sustainably produced goods, for example, to increase international recognition and confidence in such endorsement;
    - Further prominence or recognition of the possibility of revocation of trade marks for being misleading in the context of ‘greenwashing’.
  - Consideration of the open-source model used for software, and whether such a model could be applied to other (i.e. sustainable) technologies to promote (1) further innovation; and (2) use of those technologies by more persons.
  - Consider an expansion of the defence to patent infringement of research, where the research is for sustainable purposes or in sustainable technology, somewhat like the *Bolar* exemption.