

# The Role of the Cape Town Convention in Promoting the United Nation's Sustainable Development Goals

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The Cape Town Convention on International Interests in Mobile Equipment (**CTC**) is one of history's most successful international commercial law treaties.<sup>2</sup> This paper argues that the CTC, through its existing four Protocols<sup>3</sup>, as well as two possible future Protocols, has the potential to contribute significantly towards global sustainable development and allow Contracting States to achieve their targets for the Sustainable Development Goals (**SDGs**) of the United Nations (**UN**).

## Key to Sustainable Development: Private Finance

The SDGs represent the world's most important campaign to advance universal sustainable development since their promulgation in 2015.<sup>4</sup> The UN's 2030 Agenda identified a total of 17 interconnected global goals and 169 targets, with the overall objectives to end poverty, protect the environment, and promote prosperity for all by 2030.

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<sup>2</sup> At the time of writing, the CTC has 83 Contracting States, and its first and most successful Protocol, the Protocol to the Convention on International Interests in Mobile Equipment on Matters Specific to Aircraft Equipment 2001 ("**Aircraft Protocol**"), has been ratified by 80 Contracting States.

<sup>3</sup> The four Protocols are (1) the Aircraft Protocol, (2) Protocol to the Convention on International Interests in Mobile Equipment on Matters Specific to Railway Rolling Stock 2007 ("**Rail Protocol**"), (3) Protocol to the Convention on International Interests in Mobile Equipment on Matters Specific to Space Assets 2012 ("**Space Protocol**"), and (4) Protocol on International Interests in Mobile Equipment on Matters specific to Mining, Agricultural and Construction Equipment 2019 ("**MAC Protocol**"). Except for the Aircraft Protocol which came into force on 1 March 2006, the other three Protocols have not yet entered into force at the time of writing.

<sup>4</sup> United Nations (2015), *Resolution adopted by the General Assembly on 25 September 2015, Transforming our world: the 2030 Agenda for Sustainable Development (A/RES/70/1)*.

Achieving these SDGs will require international public-private cooperation, and more importantly, significant investment. As **SDG17**<sup>5</sup> clearly states, to achieve these SDGs and targets, a “global partnership” is required, with the need for mobilization of additional financial resources for developing countries from multiple sources, and the implementation of investment promotion regimes for the least developed countries (**SDG17.3**<sup>6</sup> and **SDG17.5**<sup>7</sup>). In addition, **SDG17.4**<sup>8</sup> calls for coordinated policies aimed at fostering debt financing for developing countries. The necessity and demand for more private financing to achieve SDGs are unquestionably clear.

Unfortunately, as pointed out by the UN Secretary-General in the *Roadmap for Financing the 2030 Agenda for Sustainable Development 2019-2021*, adequate private financing is not channelled towards sustainable development at the scale and speed required to achieve these SDGs.<sup>9</sup> The financing gap to achieve these SDGs in developing countries is estimated to be US\$2.5 to 3 trillion per year.<sup>10</sup> Furthermore, according to the UN Inter-agency Task Force on Financing for Development, COVID-19 has significantly slowed down the progress of SDGs and impacted all aspects of development financing.<sup>11</sup> With the global economy experiencing its worst recession in 90 years, foreign direct investment and other forms of development financing have all been negatively impacted. There is an urgently need for private finance, and it needs to be at affordable rates if it is to fill the financing gap.

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<sup>5</sup> **SDG17**: Strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development.

<sup>6</sup> **SDG17.3**: Mobilize additional financial resources for developing countries from multiple sources.

<sup>7</sup> **SDG17.5**: Adopt and implement investment promotion regimes for least developed countries.

<sup>8</sup> **SDG17.4**: Assist developing countries in attaining long-term debt sustainability through coordinated policies aimed at fostering debt financing, debt relief and debt restructuring, as appropriate, and address the external debt of highly indebted poor countries to reduce debt distress.

<sup>9</sup> United Nations (2020), *United Nations Secretary-General’s Roadmap for Financing the 2030 Agenda for Sustainable Development 2019-2021*, Executive Summary, at p.1-3. The absence of “bankable” SDG investment projects owing to institutional impediments is cited as one main reason why otherwise private funding were not channelled towards the SDGs in the last decade.

<sup>10</sup> Ibid.. See also UNCTAD (2014), *World Investment Report*.

<sup>11</sup> UN Inter-agency Task Force on Financing for Development (2021), *Financing for Sustainable Development Report 2021*, at page v.

## The CTC and its Approach to Promoting Private Finance

To encourage further private financing and make SDG-related projects bankable, financiers and creditors must have confidence in their cross-border investments (and accordingly their security interests over the investments). It is crucial that creditors' rights will be protected and upheld by law, in the event of the debtor's default, no matter where the underlying assets are situated. This is particularly important in the financing of high-value mobile assets such as aircraft and railways, which are instrumental for sustainable development, especially for developing countries.

However, the much-needed creditors' confidence and stability are lacking as *“many such [mobile assets] may regularly cross-national borders ... the rights and interests of lenders and lessors have been inherently unstable. An interest validly created and perfected in the country of origin may prove invalid or unenforceable abroad... Moreover, not all countries possess a legal framework giving adequate protection to creditors in the event of default by debtors. Rules governing the priority of competing interests also differ from State to State... All these factors lead to uncertainty and consequent risk for a potential financier, who in consequence may decide either not to provide funds at all or to do so on onerous terms.”*<sup>12</sup>

This lack of a uniform system in governing cross-border security interests means that creditors will need to carefully evaluate their risks, conduct due diligence and obtain legal advice on local law, leading to increased financing costs and reductions in the level of available finance towards SDG-related projects.

The CTC was created to solve these problems. It established an effective and reliable international legal framework for protecting secured creditors'

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<sup>12</sup> Roy Goode, UNIDROIT (2021), *Official Commentary on the Convention on International Interests in Mobile Equipment and the Protocol thereto on Matters Specific to Mining, Agricultural and Construction Equipment* (“**OC - MAC Protocol**”), at para 1.

rights<sup>13</sup> and their investments in high-value mobile equipment. In short, the CTC:

- avoids complicated conflict of law issues in cross-border asset financing by creating a *sui generis* international interest in mobile assets, that is recognized in all Contracting States<sup>14</sup>;
- features clear and concise priority rules that allow creditors to safeguard their interests by registration in an International Registry<sup>15</sup>; and
- provides a set of clear and effective default remedies to secured creditors<sup>16</sup> in the event of a debtor's default.

Not only does the CTC provide a clear regulatory framework which promotes stability and confidence, the CTC also fosters financial inclusion and access to finance (**SDG 8.3**<sup>17</sup> and **SDG8.10**<sup>18</sup>). First, it allows smaller operators to access financing at affordable rates. Second, the CTC permits the creation of fractional interests for certain categories of assets, which allows smaller operators to pool their resources in seeking asset financing.<sup>19</sup> Third, greater confidence in granting credit leads to better credit ratings for such financed assets, which stimulates the demand for the repackaging of these financed assets into investment products through securitization – leading to further growth and interest from private investors to mobilize their capital towards SDG-related investment projects, such as the financing for green bonds.<sup>20</sup>

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<sup>13</sup> As well as those of conditional sellers and lessors.

<sup>14</sup> See Article 7 of the CTC.

<sup>15</sup> See Articles 16, 29 and 30 of the CTC.

<sup>16</sup> See Articles 8 and 9 of the CTC on the remedies of a chargee, and Article 10 on the remedies of a conditional seller or lessor.

<sup>17</sup> **SDG8.3:** Promote development-oriented policies that support productive activities, decent job creation, entrepreneurship, creativity and innovation, and encourage the formalization and growth of micro-, small- and medium-sized enterprises, including through access to financial services

<sup>18</sup> **SDG8.10:** Strengthen the capacity of domestic financial institutions to encourage and expand access to banking, insurance and financial services for all

<sup>19</sup> See OC – MAC Protocol, at para. 2.59.

<sup>20</sup> See OC – MAC Protocol, at para 2.67.

The growth in the financing of high-value mobile assets boosted by the CTC will also enhance innovation and development of more cost-effective mobile assets (**SDG9**<sup>21</sup>), bringing such high-value equipment, which were previously unavailable due to its high costs, within the reach of developing countries.

### **CTC's Asset Categories and Protocols**

The beneficial impact that the CTC has on financing sustainable development and the achievement of the SDGs is unquestionable. Yet, it is also important to understand how the CTC's unique framework tailors to the specific growth and characteristics of the covered categories of mobile assets and maximize its positive impact on the SDGs.

#### **Aircraft Protocol**

The CTC is expected to reduce global aircraft financing costs by up to US\$160 billion between 2009 and 2030.<sup>22</sup> The benefits of the CTC can be best seen in the granting of the Cape Town discount by the OECD, reducing the risk premium of export credits for aircraft by up to 10% and making aircraft financing more affordable.<sup>23</sup> Given the importance of air transport in international trade, this will lead to increased aircraft investment and economic development (**SDG8**<sup>24</sup>).

However, the aviation industry also contributes considerably to global carbon emissions. While recognising the role of aviation in economic growth, efforts must be made to encourage the industry's transition to reduced carbon emissions. Private finance can be mobilized towards combating climate

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<sup>21</sup> **SDG9**: Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation

<sup>22</sup> Vadim Linetsky (2009), *Economic Benefits of the Cape Town Treaty*, at p.2.

<sup>23</sup> OECD, *Aircraft Sector Understanding*, available at: <https://www.oecd.org/trade/topics/export-credits/arrangement-and-sector-understandings/>.

<sup>24</sup> **SDG8**: Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all.

change (**SDG13**<sup>25</sup>) and assisting the aviation industry's transition to a more sustainable future. The CTC has also helped lower aircraft financing costs, promoting the replacement of obsolete aircraft and stimulating investments in energy-efficient aircraft and innovative technologies (such as the use of sustainable aviation fuel) (**SDG9**<sup>26</sup>).

Green and sustainable financing options have also recently been utilised to fund new aircraft purchases, as seen through the Loan Market Association's promulgation of its Green Loan Principles (GLPs).<sup>27</sup> The GLPs also provide an indicative list of "Green Projects", which includes projects on "energy efficiency", "pollution prevention and control" and "clean transportation" – these have direct relevance for aircraft financing, as well as the financing of other mobile assets covered by the CTC, such as railway rolling stocks.<sup>28</sup> From a secured financing perspective, the framework of CTC would pose no impediment to the use of green finance. In fact, by lowering financing costs overall, the CTC would greatly contribute to further funding in green aircraft and other investment projects.

## Rail Protocol

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<sup>25</sup> **SDG13**: Take urgent action to combat climate change and its impacts.

<sup>26</sup> **SDG9**: Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation.

<sup>27</sup> In 2019, with financing from Deutsche Bank, the Singapore-based lessor, Avation, purchased three ATR 72-600s to be leased to Braathens Regional Airlines. The transaction was said to be the first commercial aircraft acquisition to be funded with a green loan. According to Vigeo Eiris, the ESG ratings agency that acted on the transaction, replacement of ageing jets with new aircraft was aligned with the Loan Market Association's Green Loan Principles, since the ATR 72-600 aircraft have a significantly lower environmental impact than other jets and turboprops, emitting 40% less carbon dioxide than a comparable regional jet. See Norton Rose Fulbright (Dec 2020), *Green and sustainable financing products for airlines*: <https://www.nortonrosefulbright.com/en-hk/knowledge/publications/de2464c2/green-and-sustainable-financing-products-for-airlines>. For the GLPs, see Loan Market Association (Feb 2021), *Green Loans Principles*.

<sup>28</sup> For example, in 2020, British multinational electricity and gas utility company National Grid raised €500 million through a green bond to fund sustainability projects, including financing clean transport infrastructure such as electrification of railways. In Europe, Danish passenger operator DSB signed a €400 million green loan in 2020 to finance the acquisition of new electric locomotives. See Stephenson Harwood (May 2021), *Green financing and green technology in rail*: <https://www.shlegal.com/news/green-financing-and-green-technology-in-rail>.

Sustainable transportation<sup>29</sup> plays an important role in combating climate change (**SDG13**<sup>30</sup>) while also encouraging economic growth (**SDG8**<sup>31</sup>). Rail transport is increasingly regarded as one of the most sustainable modes of transportation, providing mobility for people and goods, shaping urban development, and enabling economic development.<sup>32</sup>

While rail infrastructure usually requires state involvement, by contrast, railway rolling stocks (the focus of the Railway Protocol) does not have to be state-financed.<sup>33</sup> There is, therefore, a great opportunity for private sector financing.

The Rail Protocol would reduce financing costs and lead to real economic savings<sup>34</sup>, attracting more private investors to fund rail projects. The availability of cheaper finance will aid the further development of all kinds of rail networks<sup>35</sup>, particularly those in developing countries which are currently under-served by rail, unlocking the full potential of rail as a form of sustainable transport. Overall, the Rail Protocol promotes the following SDGs:

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<sup>29</sup> Sustainable transport is “*the provision of services and infrastructure for the mobility of people and goods - advancing economic and social development to benefit today’s and future generation – in a manner that is safe, affordable, accessible, efficient, and resilient, while minimizing carbon and other emissions and environmental impacts.*” See High-level Advisory Group on Sustainable Transport (2016), *Mobilizing Sustainable Transport for Development: Analysis and Policy Recommendations from the United Nations Secretary General’s High-Level Advisory Group on Sustainable Transport*.

<sup>30</sup> **SDG13**: Take urgent action to combat climate change and its impacts.

<sup>31</sup> **SDG8**: Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all.

<sup>32</sup> Railway Working Group (September 2019), *Promoting sustainable growth and combating global climate change: How the Luxembourg Rail Protocol to the Cape Town Convention supports the United Nation’s Sustainable Development Goals*, p.3.

<sup>33</sup> *Ibid.*, p. 6.

<sup>34</sup> The direct microeconomics benefits of the Railway Protocol in terms of savings (at present value) due just to the reduction in transaction and financing costs will amount to over EUR 19 billion for 20 countries in Europe. *Ibid.*, p.8. See also Oxera Consulting LLP, *Luxembourg Rail Protocol: estimated impact on rolling stock financing cost in Europe*: <https://www.railworkinggroup.org/wp-content/uploads/2018/02/Oxera-report.pdf>.

<sup>35</sup> For example, intra-urban and urban rail, regional and cross-country rail, high speed rail, freight train, passenger trains, metros, light rail, trams, even cableways etc.

- More rail investment would spur economic growth (**SDG8**<sup>36</sup>), facilitate cross-border commerce and eliminate poverty and hunger (**SDG1**<sup>37</sup> and **SDG2**<sup>38</sup>). Agricultural, industrial, and other economic activities rely on efficient freight transit to export commodities (**SDG17.11**<sup>39</sup>). The global pandemic has also shown that rail can provide affordable and dependable logistical services for delivering essential supplies when air transport is crippled.<sup>40</sup>
- Expanding railway networks would improve rural infrastructure and market access. Better access means greater mobility towards education and job markets. Enhanced railway networks would facilitate sustainable city and community planning (**SDG11**<sup>41</sup>).<sup>42</sup>
- Combating climate change (**SDG13**<sup>43</sup>) as rail is more eco-friendly and one of the greenest modes of transport in terms of CO2 emissions.<sup>44</sup>

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<sup>36</sup> **SDG8**: Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all.

<sup>37</sup> **SDG1**: End poverty in all its forms everywhere.

<sup>38</sup> **SDG2**: End hunger, achieve food security and improved nutrition and promote sustainable agriculture.

<sup>39</sup> **SDG17.11**: Significantly increase the exports of developing countries, in particular with a view to doubling the least developed countries' share of global exports by 2020

<sup>40</sup> Sandeep Raj Jain (4 May 2020), Economic and Social Commission for Asia and the Pacific (ESCAP): *COVID-19 pandemic: international freight trains lead the way into future*: <https://www.unescap.org/blog/covid-19-pandemic-international-freight-trains-lead-way-future>.

For example, the China-Europe Express Railway provided efficient transportation of essential medical suppliers to Europe. See also Nicola P. Contessi (April 2021), *Is Covid-19 Shifting the Future of Eurasian Rail?*: <https://reconasia.csis.org/is-covid-19-shifting-the-future-of-eurasian-rail/>

<sup>41</sup> **SDG11**: Make cities and human settlements inclusive, safe, resilient and sustainable.

<sup>42</sup> For example, urban tram or light rail systems could reduce the use of vehicles and hence improve urban air quality. See Jim Harkins (2019), *Why a tram system can significantly improve urban air quality*:

<https://airqualitynews.com/2019/10/11/why-a-tram-system-can-significantly-improve-urban-air-quality/#:~:text=Conversion%20of%20heavily%2Dtrafficked%20bus,a%20conventional%20train%20cannot%20do.>

<sup>43</sup> **SDG13**: Take urgent action to combat climate change and its impacts.

<sup>44</sup> For example, rail contributes less than 2.5% of total transport emissions in the UK and about 0.6 per cent of the UK's total emissions. See Stephenson Harwood (May 2021), *Green financing and green technology in rail*: <https://www.shlegal.com/news/green-financing-and-green-technology-in-rail>. See also Hannah Ritchie (Our World in Data, Oct 2020), *Which form of transport has the smallest carbon footprint?*: <https://ourworldindata.org/travel-carbon-footprint>.

A modal shift from road transport to the much safer public rail transport would reduce vehicle-related mortality rate (**SDG3**<sup>45</sup>),<sup>46</sup> and carbon emissions from traffic congestion in large cities (**SDG13.2**<sup>47</sup>). This would also lessen the harmful effects of air pollution on public health (**SDG3.9**<sup>48</sup>).

- In the case of rail technology, attempts have been made to advance towards **SDG7**<sup>49</sup> (affordable and clean energy) by exploring the use of greener energy (e.g., electrified or hydrogen-powered locomotives), which would entail low or even zero carbon emissions. The CTC system is expected to cut financing costs and increase investments in rail projects such as electrification of railway rolling stock fleets, which will foster industry innovation (**SDG9**<sup>50</sup>).

## MAC Protocol

The MAC Protocol covers mining, agriculture and construction (**MAC**) equipment, which are instrumental in supporting sustainable development, particularly in developing countries. It has direct relevance to achieving the SDGs as it addresses the urgent need in many developing countries to enhance the means of subsistence for the population at large.

By reducing the associated risks and costs of asset-based financing, governments and private companies in developing countries may acquire sophisticated, high-value MAC equipment which allows access to modernised agricultural equipment, which will greatly enhance food security

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<sup>45</sup> **SDG3**: Ensure healthy lives and promote well-being for all at all ages. Especially, see **SDG3.6**: By 2020, halve the number of global deaths and injuries from road traffic accidents.

<sup>46</sup> Railway Working Group (September 2019), *Promoting sustainable growth and combating global climate change: How the Luxembourg Rail Protocol to the Cape Town Convention supports the United Nation's Sustainable Development Goals*, p.9-13.

<sup>47</sup> **SDG13.2**: Integrate climate change measures into national policies, strategies and planning.

<sup>48</sup> **SDG3.9**: By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination.

<sup>49</sup> **SDG7**: Ensure access to affordable, reliable, sustainable and modern energy for all.

<sup>50</sup> **SDG9**: Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation.

(**SDG2**<sup>51</sup>), and reduce the cost of acquiring mining and construction equipment for industrial development (**SDG9**<sup>52</sup>). Lowered financing costs of MAC equipment will also assist small-scale enterprises, particularly those in developing countries, to have access to financial services and affordable credit, helping their integration into the value chains and markets (**SDG9.3**<sup>53</sup>). This will channel private financing into MAC-related investment projects (**SDG17.3**<sup>54</sup> and **SDG17.5**<sup>55</sup>), which is crucial for economic growth in developing countries (**SDG8**<sup>56</sup>).<sup>57</sup>

Further industrialization also means that such industries would be operated at a more productive and efficient manner (and with newer technology, in a more environmentally-friendly, innovative and sustainable manner)

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<sup>51</sup> **SDG2**: End hunger, achieve food security and improved nutrition and promote sustainable agriculture.

<sup>52</sup> **SDG9**: Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation.

<sup>53</sup> **SDG9.3**: Increase the access of small-scale industrial and other enterprises, in particular in developing countries, to financial services, including affordable credit, and their integration into value chains and markets.

<sup>54</sup> **SDG17.3**: Mobilize additional financial resources for developing countries from multiple sources.

<sup>55</sup> **SDG17.5**: Adopt and implement investment promotion regimes for least developed countries.

<sup>56</sup> **SDG8**: Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all. Especially, **SDG8.3**: Promote development-oriented policies that support productive activities, decent job creation, entrepreneurship, creativity and innovation, and encourage the formalization and growth of micro-, small- and medium-sized enterprises, including through access to financial services.

<sup>57</sup> See MAC Working Group (7 February 2017), *MAC Working Group's Position Paper in Support of and Commenting on the Cape Town Convention's Proposed Mining, Agriculture and Construction Protocol* (UNIDROIT, 2017, Study 72K – CGE1 – Doc. 8).

(**SDG2.3**<sup>58</sup>, **SDG2.a**<sup>59</sup>, **SDG9.2**<sup>60</sup> and **SDG9.3**<sup>61</sup>). This can translate into more products being exported from developing countries (**SDG17.11**<sup>62</sup>), generating more income to end poverty (**SDG1**<sup>63</sup>) and tackling the current food crises, ending hunger and achieving food security (**SDG2**<sup>64</sup>).

It has been suggested that the MAC Protocol will generate economic savings comparable to those of the Aircraft Protocol, approximately around US\$8 billion per year between 2009 and 2030.<sup>65</sup> The value of transnational trade in the high-value MAC equipment that is within the scope of the MAC Protocol is more than US\$117 billion according to UN Comtrade Data, which is comparable to the US\$125 billion in transnational trade of aircraft.<sup>66</sup>

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<sup>58</sup> **SDG2.3**: By 2030, double the agricultural productivity and incomes of small-scale food producers, in particular women, indigenous peoples, family farmers, pastoralists and fishers, including through secure and equal access to land, other productive resources and inputs, knowledge, financial services, markets and opportunities for value addition and non-farm employment.

<sup>59</sup> **SDG2.a**: Increase investment, including through enhanced international cooperation, in rural infrastructure, agricultural research and extension services, technology development and plant and livestock gene banks in order to enhance agricultural productive capacity in developing countries, in particular least developed countries.

<sup>60</sup> **SDG9.2**: Promote inclusive and sustainable industrialization and, by 2030, significantly raise industry's share of employment and gross domestic product, in line with national circumstances, and double its share in least developed countries.

<sup>61</sup> **SDG9.3**: Increase the access of small-scale industrial and other enterprises, in particular in developing countries, to financial services, including affordable credit, and their integration into value chains and markets.

<sup>62</sup> **SDG17.11**: Significantly increase the exports of developing countries, in particular with a view to doubling the least developed countries' share of global exports by 2020.

<sup>63</sup> **SDG1**: End poverty in all its forms everywhere.

<sup>64</sup> **SDG2**: End hunger, achieve food security and improved nutrition and promote sustainable agriculture.

<sup>65</sup> See MAC Working Group (7 February 2017), *MAC Working Group's Position Paper in Support of and Commenting on the Cape Town Convention's Proposed Mining, Agriculture and Construction Protocol* (UNIDROIT, 2017, Study 72K – CGE1 – Doc. 8), at paras. 1 and 7. See also Mooney, Dubovec and Brydie-Watson, *The Mining, Agriculture and Construction Equipment Protocol to the Cape Town Convention Project: the Current Status* at 347, Oxford University Press, 332-360 UNIF. L. REV., Vol. 21, 2016.

<sup>66</sup> See MAC Working Group (7 February 2017), *MAC Working Group's Position Paper in Support of and Commenting on the Cape Town Convention's Proposed Mining, Agriculture and Construction Protocol* (UNIDROIT, 2017, Study 72K – CGE1 – Doc. 8), at para. 7. The scope of the MAC Protocol is defined by reference to the terms of the Harmonized Commodity Description and Coding System, which is used internationally for establishing customs tariffs and compiling trade statistics by cataloging tangible objects into roughly 5,000 six-digits codes ("**HS Codes**"). The MAC Protocol's applicable scope is defined with a list of HS Codes that contain high-value, mobile MAC equipment. See also Mooney, Dubovec and Brydie-Watson, *The Mining, Agriculture*

## Space Protocol

The market for space assets is vast and will continue to grow in the coming years. According to Space Foundation and UNOOSA, the global space economy will be worth \$447 billion in 2020.<sup>67</sup> More investment in this sector will create more employment, boost economic development (**SDG8**<sup>68</sup>) and support long-term industrial innovation (**SDG9**<sup>69</sup>).

Satellites and other space assets are critical for monitoring environment and climate change (**SDG13**<sup>70</sup>). Earth observation and data monitoring, made easier by space technology, would improve the planning and coordination of other initiatives to advance the SDGs.<sup>71</sup> Satellite technology, for example, is used in disaster forecasting<sup>72</sup>, aiding the protection of human lives (**SDG3**<sup>73</sup>). It also facilitates the monitoring of the environment (e.g., deforestation and

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*and Construction Equipment Protocol to the Cape Town Convention Project: the Current Status* at 347, Oxford University Press, 332-360 UNIF. L. REV., Vol. 21, 2016, citing UN Comtrade Data, available at: <https://comtrade.un.org/>.

<sup>67</sup> United Nations Office for Outer Space Affairs (January 2022, UNOOSA), *Space Economy Initiative: Insights Report 2021*, at p.2: [https://www.unoosa.org/documents/pdf/Space%20Economy/2021\\_Space\\_Economy\\_Report\\_-\\_Africa\\_In\\_Focus.pdf](https://www.unoosa.org/documents/pdf/Space%20Economy/2021_Space_Economy_Report_-_Africa_In_Focus.pdf).

<sup>68</sup> **SDG8**: Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all.

<sup>69</sup> **SDG9**: Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation.

<sup>70</sup> **SDG13**: Take urgent action to combat climate change and its impacts.

<sup>71</sup> Phetole Sekhula and Lulu Makapela, 2013, *UNIDROIT Space Assets Protocol: A developing Country perspective*: <https://www.unoosa.org/pdf/pres/lsc2013/symp-03E.pdf>

<sup>72</sup> For example, tsunami or earthquake warning systems which make use of space technology.

<sup>73</sup> **SDG3**: Ensure healthy lives and promote well-being for all at all ages. In relation to this, see also **SDG1.5**: By 2030, build the resilience of the poor and those in vulnerable situations and reduce their exposure and vulnerability to climate-related extreme events and other economic, social and environmental shocks and disasters; **SDG11.5**: By 2030, significantly reduce the number of deaths and the number of people affected and substantially decrease the direct economic losses relative to global gross domestic product caused by disasters, including water-related disasters, with a focus on protecting the poor and people in vulnerable situations; **SDG11.b**: By 2020, substantially increase the number of cities and human settlements adopting and implementing integrated policies and plans towards inclusion, resource efficiency, mitigation and adaptation to climate change, resilience to disasters, and develop and implement, in line with the Sendai Framework for Disaster Risk Reduction 2015–2030, holistic disaster risk management at all levels; and **SDG13.1**: Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries.

oil spill detection), thereby protecting life on land and below the sea (**SDG14**<sup>74</sup> and **SDG15**<sup>75</sup>). Space assets also offer a cost-effective way to supply essential services, such as telecommunications and navigation.<sup>76</sup>

While funding for space assets has traditionally been provided by the government, in recent years, more private entities have shown an interest, resulting in rapid technological development and asset-based financing for commercialized space assets.<sup>77</sup> Nevertheless, such ventures are still highly risky and, consequently, their financing is currently still extremely expensive.

The CTC and the Space Protocol could help stimulate investments and enable the space sector to realize its full potential in terms of contributing to sustainable development. By establishing a uniform regime to govern the security interests in space assets, the financing cost will be reduced as a result of the increased transparency and predictability for financiers, making financing more widely available to more market players in the commercial space sector, and also providing the much-needed financial resources to emerging start-up space operators, which previously are denied access to

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<sup>74</sup> **SDG14**: Conserve and sustainably use the oceans, seas and marine resources for sustainable development.

<sup>75</sup> **SDG15**: Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss. Especially, **SDG15.1**: By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements; **SDG15.2**: By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally; and **SDG15.3**: By 2030, combat desertification, restore degraded land and soil, including land affected by desertification, drought and floods, and strive to achieve a land degradation-neutral world.

<sup>76</sup> Oliver M. Ribbelink, *The Protocol on Matters Specific to Space Assets*, 1 EURO. REV. PRIVATE L. 37, 38 (2004). Recognizing the crucial role that space assets play in offering essential public services, the Space Protocol incorporate provisions designed to ensure that a creditor cannot use its default remedies to cut off access to equipment used to provide public services. Similar provisions are included in the Rail Protocol for the same reasons. See OC – MAC Protocol, at para. 2.18.

<sup>77</sup> Indeed, space commercialization and privatization have become an irreversible trend in the space industry. See Zhao Yun, *Revisiting Selected Issues in the Draft Protocol to the Cape Town Convention on Matters Specific to Space Assets*, 76 J. AIR L. & COM. 805 (2011), at 806.

affordable financing.<sup>78</sup> The Space Protocol will also indirectly reduce the costs of space activities, providing a strong stimulus to further sustainable space exploration and innovation (**SDG9**<sup>79</sup>),<sup>80</sup> as well as advance the institutionalisation of international space law (**SDG16**<sup>81</sup>) as it is one of the few private international law instruments relating to commercial interests in space law.<sup>82</sup>

## The potential of extending the CTC to cover security over ships and renewable energy equipment

Article 51 of the CTC allows the possibility to adopt further Protocols covering new kinds of mobile equipment.<sup>83</sup> The MAC Protocol is one example. Two potential Protocols<sup>84</sup> that may greatly contribute to the SDGs is discussed below: renewable energy equipment and ships.

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<sup>78</sup> Holman Fenwick Willan (2012), UNIDROIT Draft Space Assets Protocol: <https://www.hfw.com/UNIDROIT-Draft-Space-Assets-Protocol>.

<sup>79</sup> **SDG9**: Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation.

<sup>80</sup> Zhao Yun, *Revisiting Selected Issues in the Draft Protocol to the Cape Town Convention on Matters Specific to Space Assets*, 76 J. AIR L. & COM. 805 (2011), at 830.

<sup>81</sup> **SDG16**: Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels

<sup>82</sup> Zhao Yun, *Revisiting Selected Issues in the Draft Protocol to the Cape Town Convention on Matters Specific to Space Assets*, 76 J. AIR L. & COM. 805 (2011), p.830: “While the public side of space activities has been well regulated by the U.N. space treaties, no private space laws have been made so far to deal with the ongoing space commercialization process. We urgently need rules to guide private space activities. The vague and unstable legal status will no doubt be detrimental to space commercial activities. In this regard, the UNIDROIT appears to be the right body to make uniform laws for private aspects of space activities. The Draft Protocol represents the efforts in this respect and offers a useful testing ground for future space legislation.”

<sup>83</sup> Article 51(1) of the CTC provides: “[t]he Depositary may create working groups, in co-operation with such relevant non-governmental organisations as the Depositary considers appropriate, to assess the feasibility of extending the application of this Convention, through one or more Protocols, to objects of any category of high-value mobile equipment, other than a category referred to in Article 2(3), each member of which is uniquely identifiable, and associated rights relating to such objects.” See also Article 51(2)-(6).

<sup>84</sup> See <https://www.unidroit.org/about-unidroit/work-programme/>. As adopted by the UNIDROIT General Assembly at its 78th session (12 December 2019), and integrated by the UNIDROIT General Assembly at its 79th and 80th sessions (17 December 2020 and 9 December 2021 respectively). The work programme of UNIDROIT for the triennial period 2020-2022 includes as its legislative activities in the area of secured transactions the preparation of other potential Protocols to the CTC. Both of these two possible Protocols are currently listed as a low priority item in the work programme of UNIDROIT.

## **A Possible Protocol on Renewable Energy Equipment (REE)**

The possibility of developing a Protocol on renewable energy equipment (REE) is directly relevant to **SDG7**<sup>85</sup> (affordable and clean energy). While REE categories are traditionally considered to be stationary<sup>86</sup>, mobile REE (such as offshore wind power generation equipment) has seen rapid developments in recent years.<sup>87</sup>

However, due to the high risks involved in such cross-border investment projects, REE projects are mostly sponsored by sovereign nations or state-owned enterprises. The effective private security rights offered by the CTC system will help facilitate further private investments.

Should an REE Protocol come into existence, it can be expected that investments in REE projects will significantly increase globally. Further investment in this growing sector would assist in promoting various SDGs including economic growth (**SDG8**<sup>88</sup>), enhancing trade and ending poverty (**SDG1**<sup>89</sup>), as well as promoting access to affordable, reliable and sustainable energy (**SDG7**<sup>90</sup>). **SDG7.a**<sup>91</sup> specifically requires the promotion of international cooperation and investment in energy infrastructure and clean

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<sup>85</sup> **SDG7**: Ensure access to affordable, reliable, sustainable and modern energy for all.

<sup>86</sup> For example, wind turbines, solar panels, hydropower or geothermal power plant, etc.

<sup>87</sup> For example, in 2021, Enova SF, a state enterprise owned by the Ministry of Climate and Environment of the Norwegian government, awarded a pre-project grant to a renewable energy firm Odfjell Oceanwind, as part of the former's innovative energy and climate technology program, to finance the construction of Mobile Offshore Wind Units (MOWUs) and to integrate the units to oil and gas installations on the Norwegian continental shelf. The further development of commercial floating wind power is expected to contribute the reduction of carbon emissions by providing greener energy solutions to "off-grid" or "micro-grid" consumers. See: <https://www.offshorewind.biz/2021/06/17/siemens-gamesa-and-siemens-energy-join-floating-wind-turbines-for-hire-project/>.

<sup>88</sup> **SDG8**: Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all.

<sup>89</sup> **SDG1**: End poverty in all its forms everywhere.

<sup>90</sup> **SDG7**: Ensure access to affordable, reliable, sustainable and modern energy for all.

<sup>91</sup> **SDG7.a**: By 2030, enhance international cooperation to facilitate access to clean energy research and technology, including renewable energy, energy efficiency and advanced and cleaner fossil-fuel technology, and promote investment in energy infrastructure and clean energy technology.

energy technology research. Further investment in REE infrastructure and technology, made more cost-effective by the CTC, would translate to more efficient renewable energy and increase the share of renewable energy in the global energy mix (**SDG7.1**<sup>92</sup> and **SDG 7.2**<sup>93</sup>) and allow developing countries the financial ability to explore REE projects (**SDG7.b**<sup>94</sup>). With more accessible renewable energy, this also reduces fossil fuel reliance and the hazardous effect of air pollutants on public health (**SDG3.9**<sup>95</sup>), and helps combat the impact of climate change (**SDG13**<sup>96</sup>).

While the difficulty in gathering sufficient governmental and industry support for an REE Protocol should not be underestimated<sup>97</sup>, the advantages that the CTC can bring to the growing REE market should not be overlooked either. In fact, the UNIDROIT has begun initial research on a potential REE Protocol<sup>98</sup> which indicated that the CTC would be suitable for regulating secured interests in REE.<sup>99</sup>

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<sup>92</sup> **SDG7.1**: By 2030, ensure universal access to affordable, reliable and modern energy services.

<sup>93</sup> **SDG7.2**: By 2030, increase substantially the share of renewable energy in the global energy mix.

<sup>94</sup> **SDG7.b**: By 2030, expand infrastructure and upgrade technology for supplying modern and sustainable energy services for all in developing countries, in particular least developed countries, small island developing States, and land-locked developing countries, in accordance with their respective programmes of support.

<sup>95</sup> **SDG3.9**: By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination.

<sup>96</sup> **SDG13**: Take urgent action to combat climate change and its impacts.

<sup>97</sup> For a discussion on this, see Ole Böger, *A possible Protocol to the Cape Town Convention on renewable energy equipment*, *Uniform Law Review*, Volume 23, Issue 2, June 2018, pp. 242–269.

<sup>98</sup> In 2011, the UNIDROIT Secretariat started taking preparatory steps in the area of REE, at the request by Germany to explore a possible Protocol on matters specific to off-shore power generation and similar equipment. This has subsequently been included in UNIDROIT's Work Programme, and UNIDROIT is currently exploring a Protocol on REE generally. See, UNIDROIT Secretariat (2018), *Item No. 5 on the agenda of the 97th session of the Governing Council: International Interests in Mobile Equipment – (c) Preparation of other Protocols to the Cape Town Convention (i) Ships and maritime transport equipment (ii) Renewable energy equipment* (UNIDROIT 2018 C.D. (97) 18).

<sup>99</sup> Also, it has been suggested that there are no general impediments to the extension of the CTC to REE, and the general principles of the CTC is flexible enough, with its 2-instrument structure, to cater for the needs of the REE industry. See Ole Böger, *A possible Protocol to the Cape Town Convention on renewable energy equipment*, *Uniform Law Review*, Volume 23, Issue 2, June 2018, pp. 267-268.

## **A Possible Protocol on Ships**

The development of a Protocol under the CTC for ships is not a new idea. During the early stages of the CTC's negotiation, its drafters considered covering ships within its scope to address the need for a common legal framework with respect to security interests over ships. That aspiration, however, did not materialize at the end.<sup>100</sup>

However, the potential benefits that the CTC can bring to sea transport development is huge. Sea transport is a core pillar for sustainable development and international trade – around 90% of traded goods are carried over the waves.<sup>101</sup> The CTC therefore can help reduce ship finance costs and encourage investments, thereby promoting cross-border commerce. Like aircraft, ships require significant investments and the possibility of a global framework for financiers and investors to register and secure their maritime assets will always be welcomed to provide further certainty and promote confidence for private investment.

Not only will the CTC enhance developing countries' ability to acquire more ship for trade and economic growth (**SGD1**<sup>102</sup>), it will also encourage the development of energy-efficient ships with cleaner energy technology, which will have positive long-term environmental impacts, such as the reduction of

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<sup>100</sup> See Ole Böger (2016): *The case for a new Protocol to the Cape Town Convention covering security over ships*, *Cape Town Convention Journal*, DOI: 10.1080/2049761X.2016.1256432: "It was argued then that the preparation of international rules governing ships and shipping was traditionally the preserve of specific international organisations with full participation of shipping circles. Moreover, there was concern about possible conflict with an already existing international instrument, namely the *International Convention on Maritime Liens and Mortgages* that was adopted only shortly before at the 1993 Geneva Conference of the United Nations (UN) and the *International Maritime Organization*."

<sup>101</sup> According to the OECD, the main transport mode for global trade is ocean shipping: around 90% of traded goods are carried over the waves. As such, the oceans provide the main transport arteries for global trade: <https://www.oecd.org/ocean/topics/ocean-shipping/>.

<sup>102</sup> **SDG1**: End poverty in all its forms everywhere.

marine pollution and related deaths and illnesses (**SDG3.9**<sup>103</sup>, **SDG6.3**<sup>104</sup> and **SDG14.1**<sup>105</sup>). Also, the CTC will promote developments of sea transport infrastructure (e.g. sea ports) to meet the growing demand for ships, which not only will reduce unemployment and poverty but will also encourage skilled employment and promote sustainable growth of shipping industries and related financing markets (**SDG8**<sup>106</sup>).

## Conclusion

It has been demonstrated that the CTC system has enormous potential for assisting Contracting States in achieving the SDGs. The CTC helps channel private funding towards the investment of high-value mobile assets that are covered by the CTC, by making the financing for such assets more affordable. The possible future Protocols on REE and ships also have huge potential in contributing to the SDGs. Continued and increased investments in these assets will considerably aid sustainable development by fostering economic growth, upgrading infrastructure, and combatting climate change by facilitating technological innovation and industry collaboration.

**Word count: 2997**

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<sup>103</sup> **SDG3.9:** By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination.

<sup>104</sup> **SDG6.3:** By 2030, improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally.

<sup>105</sup> **SDG14.1:** By 2025, prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution.

<sup>106</sup> **SDG8:** Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all. Especially, **SDG8.10:** Strengthen the capacity of domestic financial institutions to encourage and expand access to banking, insurance and financial services for all.