

Template for comments on the Study on Financial Security Mechanisms under the Nagoya-Kuala Lumpur Supplementary Protocol

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Comments on the Technical Series on Synthetic Biology		
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Peer Review of "Draft Study on Financial Security Mechanisms under the Nagoya-Kuala Lumpur Supplementary Protocol [NKLSP]"

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Introduction:

In Notification #2021-038 the Executive Secretary requests peer reviews and will consider only those which conform to the provided template. The Secretariat inaugurated this requirement in Notification #2021-031 for peer reviews of the Draft Report on Synbio 82. Whereas my objection to the template was explicit, the objections of others were implicit. For example, the Deutsche Forschungsgemeinschaft (DFG) submitted one file with a condensed narrative and another with the template of 3,000+ words. One may infer that the DFG submitted the not-to-be-considered narrative to highlight its concluding thought: the Draft Report is "incoherent in itself"[1]. The force of that same statement does not come through in the simultaneously submitted template.

This Draft Study on NKLSP is of a higher calibre than that of Synbio 82. Is the requirement of a template then acceptable? The answer is still no. Any peer review of financial security mechanisms cannot stand alone from the peer reviews of commissioned studies on Digital Sequence Information (DSI), Synbio and transboundary situations, where the template was not obligatory [2]. *Templates promote the "silo-ing" of issues, which is a criticism heard in CBD circles* [3]. In contrast, narrative allows the de-siloing of issues and facilitates re-visiting Decisions by the Conference of the Parties (COP). Lest Parties and stakeholders forget, neither *stare decisis* nor *laches* make sense in a framework convention.

How to fit the previous two paragraphs into the obligatory three-column template of the Secretariat? I will answer my own question. The paragraphs above and those to follow will constitute one "General Comment" and thus correspond to page 0 line 0.

[1] Statement from representatives of expert committees of the German Research Foundation (DFG) Re: CBD Notification 2021-031. https://bch.cbd.int/synbio/peer_review/

[2] See, for example, my peer reviews in narrative format of the four inter-sessional studies on DSI in 2018-2020: <https://www.cbd.int/abs/DSI-peer/2019/Study1/JosephHenryVogel.pdf>, <https://www.cbd.int/abs/DSI-peer/2019/Study4/JosephHenryVogel.pdf>, <https://www.cbd.int/abs/DSI-peer/2019/Study2-3/JosephHenryVogel.pdf>. Peer review in narrative format of the 2020 study on transboundary situations can be found at <https://www.cbd.int/abs/Art-10/Peer-review/Vogel.pdf>.

[3] "'Reflection on the co-chairs panel: Discussion on potential criteria for assessing DSI policy options", The ABS Capacity Development Initiative, 24 March 2021 13:00 CET, http://www.abs-initiative.info/fileadmin//media/ABS_Simply_explained/Webinar_DSI/Synthesis_Report_-_DSI_Reflection_Webinar__-20210324.pdf

Economics is difficult:

Unlike the studies on DSI, etc., the Draft Study on NKLSP is grounded in economics. The authors skillfully explain how to apply economics to financial security mechanisms. Alas, economics is difficult even for economists. It remains to be seen whether such abstract reasoning will resonate with Parties and stakeholders.

Stakeholders who hail from anthropology and the biological sciences have long ignored economics in the silo which houses "access to genetic resources" and the "sharing of benefits" (ABS) [4]. Under the aegis of pluralism, non-economists are advocating cringe-worthy homilies like "mix[ing] and match[ing]" policies, [5] apparently unaware that "The General Theory of Second Best" inveighs against such cherry-picking [6]. The revised Draft Study should explain how and where "The General Theory of Second Best" applies to financial security mechanisms. The fallacy of authority also merits inclusion.

On the heels of the Draft Report on Synbio 82:

The peer reviews of the Draft Report on Synbio 82 are pertinent to the Draft Study on NKLSP. Many Parties and stakeholders will read one set of peer reviews and not read the other. The issues of the two commissions, despite being cross-cutting, may still get silo-ed. In acknowledgment of this reality, I extract a passage from my review of Synbio 82, which applies equally well to NKLSP. The ellipses are inserted to respect the request of the Secretariat not to cite passages from drafts of commissioned studies under review and revision. The footnotes inside the following passage are re-numbered:

"Because compulsory insurance would put the kibosh on a large swath of Synbio, lobbying will undoubtedly accompany investment in R&D [7]. The history of nuclear

[4] O. Oduardo-Sierra, et al., "Monitoring and Tracking the Economics of Information in the Convention on Biological Diversity: Studied Ignorance (2002-2011)." *Journal of Politics and Law* (11 May 2012). Available at <http://dx.doi.org/10.5539/jpl.v5n2p29>

[5] A. Scholz, U. Hillebrand, J. Freitag, I. Cancio, C. dos S. Ribeiro, G. Haringhuizen, P. Oldham, D. Saxena, C. Seitz, T. Thiele and E. van Zimmeren, "Finding Compromise on ABS and DSI in the CBD: Requirements & Policy Ideas from a Scientific Perspective" WILDSI (October 2020), p. 35. Available at https://www.dsmz.de/fileadmin/user_upload/Collection_allg/Final_WILDSI_White_Paper_Oct7_2020.pdf

[6] R.G. Lipsey and K. Lancaster, "The General Theory of Second Best", *Review of Economic Studies* vol. 24 issue 1 (1956): 11–32. For a non-technical explanation, see *Legal Theory Lexicon* (2003). Available at <http://legaltheorylexicon.blogspot.com/2003/11/legal-theory-lexicon-011-second.html>

[7] Expenditure on lobbying is unconstrained in the non-Party, under *Citizens United v. Federal Election Commission*, 558 U.S. 310 (2010).

energy policy in the USA is relevant [8]. Through regulatory capture, liability could be capped for worst-case scenarios. The capping shifts the costs of HILP [High Impact Low Probability] events to society whenever the damages exceed the cap. A caveat is in order: uninsurable activities do not necessarily mean that the expected losses are greater than the discounted value of the premia paid. Risk assessment is a 'public good' in the economic sense [9]. An efficiency argument can be made that the modeling of events be government-financed and placed in the public domain. Insurance ambiguity would thus be diminished and render economic many otherwise uninsurable activities. Is therefore compulsory insurance with government-financed risk assessment the solution to the HILP events of Synbio? The answer is nuanced.

Cognitive biases in personal risk assessment are common to all cultures. People tend to confuse the low probability of an event as if the expectation were also low (probability multiplied by the value of the event). The analysis of such uneconomic behavior earned the psychologist Daniel Kahneman the 2002 Nobel Memorial Prize in Economics. Non-rational patterns of risk perception justify seat belt laws, prohibitions of construction in floodplains, lugubrious images on cigarettes packages and so on.

Insurers are not inanimate conglomerations. They are composed of people who may sort out in dominance hierarchies, where cognitive biases are amplified, almost invariably from top to bottom. One suspects that non-rational decisions will also afflict insurers and re-insurers, albeit much less so due to corporate checks and balances. So, the societal problem is not that some Synbio activities will be uninsurable, but that they will be mistakenly insured.

Should HILP events be uncapped and even one insurer liberally underwrite HILP events..., liability would be limited through the insolvency of the insurer or re-insurer. Worries about regulations not being 'future-proof' pale against those about an insurer being 'judgement-proof'. The State must intervene to impede the gung-ho insurer who, at the right price, never says 'no'. In other words, compulsory insurance cannot stand alone as the mechanism of control due to HILP events that hazard global catastrophes. This is one of many places where the State must 'draw the line', to use Keynes's metaphor in response to Hayek's unbound enthusiasm for market-based solutions [10].

[8]. In the capstone oeuvre *Living Within Limits* (New York: Oxford, 1993), ecologist Garrett Hardin critiqued mid-twentieth century nuclear-energy policy with insights that are eerily prescient for Synbio.

[9] "A good that is non-excludible and non-depletable (non-rivalrous)". *Britannica*. <https://www.britannica.com/topic/public-good-economics>

[10] J.M. Keynes, 'Letter to Hayek' (28 June 1944) in Vol. 27 of *The Collected Writings of John Maynard Keynes*. (ed.), Donald Moggridge. (London, 1980), p. 385.

Compulsory insurance is thus a very large part of the solution, but not the whole solution...Risk assessment may bog down regulation for Synbio products that present no possibility of an HILP event. One imagines that the insurance premia for [examples from Draft Report] could be incorporated into the cost structure of a firm. One sincerely hopes that this is also not true of engineered bacteria...with its attendant possibilities for the grey-goo scenarios of sci-fi. Because grey-goo is an existential threat, the Keynesian line should be drawn on all such applications of engineered gene drives.

The question of intentions must also be asked: What for? Do we risk global catastrophe to clean up an oil spill, knowing that the contaminants will eventually disperse? Do we risk it to sequester carbon, knowing that cost-effective alternatives go unexploited (e.g., subsidizing a vegetarian diet, public transport, re-forestation)? Other than nuclear war, only Synbio portends a man-made doomsday within our lifetimes. And like the nuclear threat, the possibility is so awful that the public prefers not to think about it. Cognitive dissonance is real. The wisdom of the Russell-Einstein Manifesto of 1955 seems apropos 'All, equally, are in peril, and, if the peril is understood, there is hope that [all groups] may collectively avert it' [11]".

Conclusion:

This Draft Study is sound economic scholarship. Rigor is, however, a disadvantage if the peer reviewers are not economists! Command over the discipline is required to perceive the fault lines in the text. The cracks are three-pronged: the authors have misrepresented mandatory insurance as just one among many options for financial security; they do not say that the capping of liability is the socialization of costs that exploits a well established bias in perception; and they do not broach prohibition of activities which risk doomsday, no matter how unlikely is doom now or in the future.

The last of the three cracks is the most worrisome. It seems both enigmatic and hyperbolic. How can a prohibition in perpetuity ever be justified? The answer arises from deduction. The CBD does not define "conservation". We must therefore interpret this undefined term according to Article 31 of the 1969 Vienna Convention on the Law of Treaties. Any interpretation that allows biological kingdoms to be discounted over time, like cash flows in a financial spreadsheet, is extraordinary. When projecting outcomes over centuries, the cumulative probability of doom through releases of engineered gene drives is near certainty. One deduces that specific classes of gene drives should always be prohibited. Conservation means that future lives matter.

To conclude in 25 words: Uncapped liability and compulsory insurance should be married to government funded risk assessment; the Keynesian line should be drawn around specific classes of gene drives.

[11] "The Russell-Einstein Manifesto", issued in London, 9 July 1955, <http://umich.edu/~pugwash/Manifesto.html>

Please submit your comments to secretariat@cbd.int.