Criteria to Consider for Policy Options on Digital Sequence Information on Genetic Resources

April 2021

Summary of webinar

BACKGROUND

The 4th webinar in the DSI series is Organized by the Secretariat for the Convention on Biological Diversity under the leadership of the co-chairs of the post-2020 Global Biodiversity Framework and focuses on criteria for the evaluation of policy options with regards to Digital Sequence Information on Genetic Resources (DSI). This webinar also kicked off an informal online discussion forum for Parties and stakeholders to share information and views on policy options and evaluation criteria, and the use of criteria to assess DSI policy options.

The previous 3 webinars in the series introduced the concept of DSI and information on the production, distribution and use of DSI; shared the results of the AHTEG, including groupings of DSI definition and capacity-building needs and finally looked at the different types of policy options for addressing DSI in the literature. This series of webinars on DSI sets the stage for productive discussions at the Open-Ended Working Group 3 meeting leading up to the COP and is organized by the Secretariat for the Convention on Biological Diversity, under the leadership of the co-chairs of the post-2020 Global Biodiversity Framework. Decision 14/20 had established in 2018 a science- and policy-based process to address digital sequence information on genetic resources during the intersessional period leading up to COP15.

OBJECTIVES

1. Introduce the rationale for criteria to evaluate and assess policy options for access and benefit-sharing and digital sequence information on genetic resources.
2. Review of the criteria put forward in the literature on DSI policy, and other related topics.
3. Based on this analysis present a proposal of criteria categories that could be used to evaluate the policy options presented in webinar 3.
4. Encourage Parties and stakeholders to participate in the online discussion forum and hold their own discussions on policy options, criteria, and assessment with their domestic and other stakeholders and partners.

A RATIONALE FOR CRITERIA

It is good practice to assess and compare proposed policy options in a systematic way, based on an agreed methodology, and inclusive of all stakeholders: government, who have to see their own citizens served fairly; academia and research agencies, which will have to follow new rules about access and use in their own research work; industry, which has to be able to comply with regulatory policies in a simple and cost efficient manner, and towards a just outcome; and finally indigenous people and local communities, who have to see their values and input reflected in the equitable sharing of benefits from the use of DSI. Criteria, their categorization, and definitions also provide a common language for Parties

and stakeholder to engage in productive discussions on the value and ranking of those proposed policies.

Finally, it is important to keep in mind that the criteria are here to assess not just the policies themselves, but the potential outcome of those policies. The discussions around DSI should be practical and rooted in reality to allow for the policies to be feasible, plausible and realistic.

HOW AND WHY CRITERIA ARE USED

When assessing proposed policy options – which is different than evaluating an existing policy – several approaches are commonly used:

- Screening of options: A matrix is used to reduce the number of options to analyze. Pre-established evaluation criteria such as effectiveness, cost, feasibility, benefit by-products etc. are agreed by the community. Here we can envision some 'cut-off' criteria, such as higher principles that HAVE to be met to reduce the number of options to analyze using other, more thorough methods.

- Policy Exercise: Future scenarios are used to test policy options as a bridge between academia, scientists and policy makers.

- Cost Effectiveness: The least expensive way to accomplish a pre-determined objective is favored. This method is favored when it is not easy to monetize the most important policy impact.

- Cost-benefit analysis: Identifies, quantifies, and monetizes the costs and benefits associated with a measure and calculates whether the benefits outweigh the costs, and compares options. This method can lead to high levels of uncertainty, particularly for nonmarket goods and services. This is often used as a decision tool for single-criterion approach, or single objective decisions.

- Multi-criteria Analysis (MCA): This method is used for options that seek to accomplish several objectives. Attributes of indicators corresponding to the objectives are defined, as is their measurement (monetary, or based on quantitative analysis such as scoring, ranking, weighing). MCA have become increasingly popular when trying to assess complex policy solutions, and a range of techniques are used to implement them.

Whichever analysis framework one decides to adopt, criteria are the basis in all cases. Therefore, it is a logical step for Parties, experts and stakeholders to look at these options through a set of predetermined criteria. Not all Parties or stakeholders will value or look at all the same criteria. But a criteria-based methodology will help future discussions.

The criteria themselves can be categorized to help stakeholders create a list of objectives, criteria, their corresponding indicators and measurements. Here, we look at some methods that are being proposed in textbooks and guidelines, and 3 examples of institutions and project that have explicitly listed and categorized criteria for the justification of their project and policy choices.

Kraft & Furlong	Salamon	STAPLEE	UNFCCC	PAHO-WHO	EU FUSION
Effectiveness	Effectiveness	Social	Efficiency	Legal feasibility	Effectiveness
Efficiency	Unintended effects	Technical	Effectiveness	Political viability	Efficiency
Equity	Equity	Administrative	Equity	Sustainability	Relevance
Liberty/Freedom	Cost	Political	Urgency	Social/Cultural feasibility	Coherence
Political feasibility	Feasibility	Legal	Flexibility	Technical feasibility	
Social acceptability	Acceptability	Economic	Robustness	Administrative feasibility	
Administrative feasibility		Environmental	Practicality	Cost effectiveness	
Technical feasibility			Legitimacy	Economic efficiency	
			Synergy		

Figure 1: table of criteria categorization. The first 3 columns are theoretical frameworks while the 3 columns on the right are examples of projects that have used criteria to justify their evaluations and choices. This table is an illustration of some examples of categorization of criteria and is not exhaustive.

METHODOLOGY

We searched the literature on DSI for criteria, either defined explicitly, or discussed in the description and evaluation of policy options. The 1st global dialogue on DSI commissioned by Norway and South Africa did engage its participants in a reflection on criteria and points of consideration, which was later categorized. The UK-commissioned study by Smith and ICF interviewed domestic stakeholders to assess and compare policy options proposed by the 1st global dialog, and criteria were few, but explicitly categorized. Other parts of this study, as well as several other reports and papers do describe and discuss criteria and link them to objectives for the proposed policies. We listed all these criteria and pooled them where there was redundancy or overlap. It was clear that some of these criteria were more prevalent than other (see Key Criteria further).

It is important here to note that the list of criteria we worked from is not considered complete. Apart from the studies mentioned above which mention criteria as part of their presentation of policy options, we are not aware of any published work that is explicitly addressing criteria for assessing proposed policy on DSI. More work will hopefully be done on this in the near future, and the framework we are presenting will aim at helping to classify these criteria and might itself evolve with the addition of more or different criteria to the list.

How to categorize criteria for DSI proposed policies? Trying to crate categories, we first used existing methods (i.e., the STAPLEE method) but had a difficult time fitting the list of criteria under these existing categories. We ended up figuring that there were two ways of classifying the criteria from the literature. One is by category, such as social, environmental, financial, etc.... and the other is by 'phase' of the policy, such as effectiveness and governance, which address longer term objectives and goals, efficiency and feasibility, which address the implementability of the option, and a coherence category that addresses the broader context in which DSI and its policy options rests.

Key Criteria

Several key criteria came up in several papers on DSI:

1. Fair and equitable sharing of benefits from the use of DSI from GR

2. Open data

3. Contribution to conservation and sustainable use of biodiversity

4. Linking across biodiversity regimes and international fora

5. Financial feasibility of monetary benefit-sharing

6. Simplicity of solution

Looking at this and thinking through the 'phases' of policy development, the first 3 criteria can be defined as addressing the 'why' for the policy options (which constitute the what), in terms of goals and measurement of success. The last 3 can be attributed to the 'how', and treat the way in which a policy option can address these objectives.

The first 2 key criteria were systematically addressed in DSI papers and require particular attention as potential overarching criteria:

- <u>Fair and equitable sharing of benefits resulting from the use of DSI from GR</u> can be defined around two points: the benefits from the use of Digital Sequence Information coming from Genetic Resources should be shared, and this sharing of the benefits should be fair and equitable
- <u>Open data</u> is a goal for the access to data to remains open and not to impede science and research. All papers describe data as being discoverable and accessible but proposed policies differ on cost and permission for use.

These two goals reflect the pillars of Access and Benefit Sharing, and a policy solution should aim at finding a balance between these two notions, and, if Parties agree, to not work against either of those.

CATEGORY	CRITERIA	MEANS FOR ASSESSMENT
Effective in achieving Goals (Note: goals may be agreed, or to be agreed)	**1. Delivers fair and equitable benefits from DSI (associated with GR)**	Quality and quantity of benefit sharing (monetary and non-monetary) Timeliness of benefit sharing Specificity/targeting of benefit sharing (to providing community; to providing country; shared broadly, formula for sharing)
	2. Facilitates access to DSI and does not disrupt R&D	Open access (with or without conditions; burden of conditions) Promotes R&D partnerships in support of technology transfer and capacity building
	3. Contributes to the conservation and sustainable use of biodiversity	Directly or indirectly (through incentives)
	4. Contributes to sustainable development	Note: achieves 4 as a consequence of achieving 1, 2 & 3 (no separate evaluation needed)
Efficient & Feasible to implement	**5. Cost-efficient in achieving goals**	Transaction and administration costs minimized relative to benefits shared Institutional/infrastructural/governance costs minimized relative to benefits shared
	6. Feasible and practical to implement	Technical requirements minimal or feasible to meet (these might include need for tracking, capacity building tools, Degree to which existing infrastructure and processes can be built upon
	7. Easy to enforce	Inbuilt incentives for compliance (self-enforcing) If enforcement needed, enforcement costs minimal
Enabling of **good governance**	**8. Legally Sound**	Legal certainty/predictability Dispute resolution mechanism
	9. Just	Positive and negative consequences for IPLCS, stakeholders Reducing information asymmetry amongst countries and users
	10. Transparent	Simplicity, transparency, ease of understanding
Comprehensive and coherent	**11. Coherent**	Degree of coherence with existing systems of ABS Degree of coherence across international agreements covering different sectors (environment, food & agriculture, health, oceans etc)
	12. Comprehensive and/or compatible	Degree to which option covers all needs/scope, or compatibility of option with others such that overall system covers all needs/scope Future proof (adaptability of system; likelihood to remain effective and efficient in face of future technological developments

Figure 2: Proposed Criteria Framework Summary Table

We ended up coming up with a bespoke sui genesis framework, inspired by several that exist in the literature, and that we felt best reflected the issues raised in DSI policy papers and reports. We have 4 groupings/categories, which reflect 4 'steps' of a policy option analysis, implementation and context.

1- The first one is the WHY, the end-goal, objectives. This encompasses objectives already common to all literature on DSI, but also those that will be determined through consultation, discussions, and eventually negotiations.

2- The second is more on the HOW, the feasibility, the implementability of policy options. This is an important point as we can have the best goals, but if the tools we choose to make those objectives actionable are not anchored in practicality and realistic expectations, we could fail.

3- the good governance is also a HOW, but overarching both goals and tools. These are key criteria, almost guiding principles on the way whatever we choose should be governed and managed: being transparent, emphasizing communication and inclusion will lead to a more just and transparent system.

4- the last grouping is about context. It encompasses the comprehensiveness which takes a look at the set of policy options that make up the solution, and how much their complement each other into something wholesome. The coherence is more about a global context where the policy solution the Parties will decide upon will fit into the effort of other bodies and other issues on DSI and ABS.

CONCLUDING REMARKS

This framework was created in the hope that it will help Parties and stakeholders think through their own criteria, weigh them and discuss them with their stakeholders and partners to assess policy options on DSI. The proposed framework should be used as an inspiration and should be modified and evolve as discussions take place. It is important to keep in mind that we should not wait to find the perfect criteria list, framework, or even policy option (s) before we take action and sit at the negotiation table at the Open-Ended Working Group meeting, and then at COP.
Preferred policy options should be compared in terms of established goals, desired outcomes, and importantly, compared to the outcome of doing nothing.

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