



## LOSSES AND DAMAGES FROM CLIMATE CHANGE

### Workshop on Assessing socio-economic losses and damages

13 January 2021 – Virtual Zoom Meeting

#### Key Insights

This virtual workshop was organised as part of a new OECD project on *Losses and damages from climate change*. The aim of the project is to prepare a report that will explore climate impact projections as well as different types and levels of relevant uncertainties and what they mean for approaches to managing such impacts. The workshop focused on methodological approaches to assess the socio-economic losses and damages from climate change. It facilitated a discussion on the different methodological approaches of eliciting socio-economic losses and damages, their opportunities, limitations and possible complementarities. This included outcomes that can be quantified, but also broader welfare losses, which are harder or impossible to monetise. The discussion was informed by seven presentations and the comments of four discussants. Over 160 people from a wide range of institutions and governments connected to the workshop and several of them engaged with the issues presented. Key insights that emerged from the workshop are summarised below.

#### The advantages and disadvantages of quantification

One of the key discussions of the workshop revolved around the advantages, disadvantages, opportunities and challenges of quantifying different aspects of socio-economic losses and damages. Participants agreed that full quantification of the effects in monetary terms is impossible, as some values are context-specific or idiosyncratic. Some participants noted, however, that any policy judgement will be inherently based on comparison of implicit sets of values, as the cost of a policy is the opportunity cost of not implementing a different policy with different effects. It was argued therefore that decision makers and other stakeholders may prefer to have a vantage point which enables them to compare these trade-offs in policies, often in the form of figures or indices, to justify the choice of one policy over another and motivate policy action. On the other hand, it was argued that real-world narratives, as opposed to abstract projections, also influence decision makers. In fact, narratives and other unquantifiable information can sometimes influence decision-making more than only figures, and will do so in the future with the sustained rise of social media, which helps more stories surface. Some of the social effects can be quantified but in a different way than the economic damages, such as GDP.

Several participants made the point that GDP impacts cannot be equated with well-being impacts, especially since multiple approaches have shown that non-market effects of climate change outweigh the market effects. Quantification of certain aspects raises ethical and epistemological issues, for example with monetising the lives lost. The participants agreed that quantification is a desirable aspect of policy evaluation, but it needs to go further than simple monetary valuation (for example lives lost and psychological scales of well-being). In addition, only if complemented with qualitative methodologies and data can those monetary valuations provide a full picture of losses and damages from climate change. However if there are too many disjoint quantified aspects, which are not



aggregated or integrated, policy makers might have difficulty comparing options, and making an informed decision across alternative policies.

### The role of qualitative analysis

Relatedly, there was a discussion about the role of qualitative analysis. All participants agreed on the need and importance of qualitative analysis to examine those aspects which cannot be captured by quantitative methods. The broad variety of qualitative methods can draw out the complexities and underlying mechanisms of the quantified results in the present, but also about the future. For example, growing tensions before social tipping points, such as unrests, are phenomena, which are not likely to be captured by quantitative analyses, but qualitative approaches are likely to shed light on them. Ultimately, people base their personal decisions on their own perceptions and expectations, which are inherently subjective. A natural question, then, is how to integrate qualitative and quantitative analysis. Some participants called for ontological and epistemological pluralism, multiple approaches for same issue, as some methodologies may privilege certain voices; and that any attempt at integration or aggregation will impose a hierarchy of knowledge, with traditionally the weight of the qualitative aspects diminished or dismissed. Others argued that methodological pluralism would raise challenges to policy makers.

### The role of modelling

The role of modelling was also discussed in detail. Computational models have evolved and improved a lot, since their inception. For example, initial integrated assessment models simplified regional diversity of the world to only a few regions, whereas more recent models include several thousand regions. New empirical models have much improved identification strategies, compared to earlier models, though there are remaining challenges in the area, especially outcomes involving complex human responses. Participants agreed that modelling does not provide final answers. An argument was made that modelling tools are essentially for communication, meant to connect stakeholders, to provide a basis of future discussions and (welfare-enhancing) transactions. Participants agreed that models are indeed tools that can inform the policy dialogue by testing assumptions and beliefs, and by providing numerical projections of quantifiable outcomes. Some participants argued, however, that modellers come with their own biases, assumptions and socio-economic backgrounds and that model results need also to be considered with care. The lack of technical level of expertise makes it difficult for other people from different backgrounds to engage and actually evaluate these model results, and thus they are excluded from dialogues based on modelling.

There was an agreement about the diverse set of questions for modelling, but there was disagreement about their exact scope. Overall, it was noted that whether models are adequate tools or able to provide insightful answers much depend on the question it is addressing. Participants agreed that carefully applied modelling tools are needed and welcome, but there was a disagreement whether these tools could address complex, broader questions (such as the social cost of carbon) or whether their role should be kept to examine important questions of limited scope (such as debt sustainability). Some people argued that with the increase of computing power and better empirical evidence it is possible to create models which speak to complex broader questions. Others believed that approaches to broader questions are very heterogeneous across geographies and populations. Aggregation is impossible; the only way to integrate different types of knowledge is through the political process.