



Our common future under climate change
Day 4. collective action and transformative solutions

Parallel session

**Sustainable Development Goals and the New Climate Regime:
Synergies for Change**

**« Allocation of Resources for Adaptation:
Using a Physical Vulnerability to Climate Change Index »**

By

Patrick Guillaumont

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The allocation of adaptation resources a major issue of climate finance

- One of the three major issues: mobilization of concessional resources, sharing between mitigation and adaptation, allocation between countries
- Allocation issue quite different for adaptation (a country goal) and mitigation (global public good)
- But interactions and synergies: mobilization/allocation, adaptation/ mitigation, adaptation/development, concessional /market finance



Allocation of concessional resources: three principles and their application to adaptation

- Three allocation principles to be met and combined, with possible trade-off: needs (or equity), performance (or effectiveness), and transparency
- Needs and performance criteria and trade-off differ according to the goal of the resource use (ODA, adaptation, mitigation,...)
- For adaptation, the needs (or equity) criteria reflecting the possible negative impact of climate change, of which the receiving country is not responsible, should be given a major weight
- A relevant criterion is the countries vulnerability to climate change



The allocation model for adaptation resources

- Global envelope of concessional resources for adaptation is supposed given (as well as for mitigation)
- With a minor weight, *performance or effectiveness criteria* will be designed from the observed capacity to implement adaptation projects or in more general or climate policy indicators (instead of a major weight to be given in the allocation of mitigation resources)
- With a major weight, *needs or equity criteria for adaptation resources* will include an index of income per capita (or any development index reflecting the capacity to mobilize other resources) and an *index of vulnerability to climate change* (not relevant for mitigation)*
- Which kind of index?



Which kind of index of vulnerability to climate change for the allocation of adaptation resources?

- Many indices of vulnerability to climate change: needed is an index to be used for the allocation of adaptation resources (more to the most vulnerable countries)
- Should be *independent of the current and future policy*: if policy lowers/increases vulnerability, it should not be a factor of lower/increased allocation, but rather the opposite, as an indicator of performance (not to reward for poor policies)
- For this reason, and because vulnerability is to be assessed on a long term it should be captured *through physical components*
- This is the main feature of the Ferdi *Physical Vulnerability Index to Climate Change* (PVCCI), still tentative

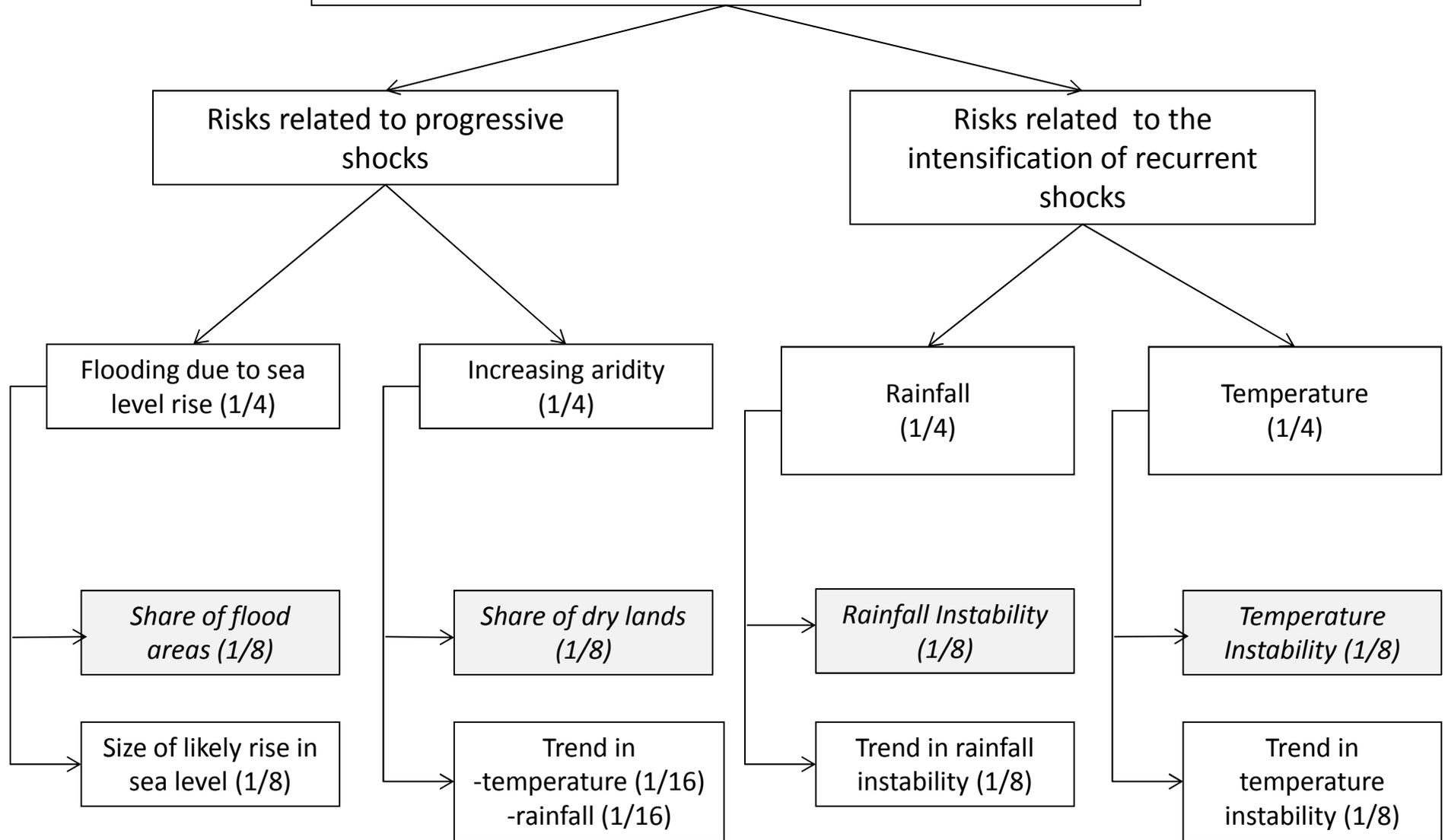


A physical vulnerability to climate change index: main features

- Forward-looking and likely to capture long term risks
- Relies only on geo-physical components, without any debatable socio-economic component,
- Makes a distinction between two kinds of risks due to climate *change*
 - risks related to *progressive shocks* (such as sea level rise or desertification)
 - risks related to the *intensification of recurrent shocks* (such as rainfall or temperature shocks, or typhoons)
- Makes another distinction between the shocks and the exposure to the shocks, because the impact of the shocks depends on the initial exposure,
- And uses a quadratic averaging to capture interactions
- Still tentative (new version in progress and change in data basis)



Physical Vulnerability to Climate Change Index PVCCI



NB. The boxes corresponding to the two last rows of the graph respectively refer to exposure components (*in italics*) and to size of the shocks components



Analogy with EVI, an index of structural economic vulnerability, and with ODA allocation

- The EVI (Economic Vulnerability Index) is an index of *structural* economic vulnerability (as PVCCI is physical), supposed to only depend on long lasting factors not linked to country present policy, and relying on indices of the recurrence of shocks and exposure to the shocks
- As such it has been set up at the UN for the identification of the LDCs, being one of the three identification criteria
- It has recently been also proposed (UN GA resolution on smooth transition) and used (by EU for EDF and CDI) as a criterion for the allocation of the ODA
- Leading to challenge the pure « PBA » used by the MDBs



Low structural adaptive capacity treated separately, as a need factor

- (Weak) adaptive capacity often considered as a part of climate vulnerability indicators, but kept aside in the PVCCI (as weak economic resilience in the EVI)
- To some extent, adaptive capacity depends on broad structural factors, such as the relative level of income per capita or human capital, and not only on policy factors
- Structural factors of a weak capacity to adapt are better taken into account in the allocation model through specific indicators of needs or equity (same as economic resilience with EVI for the allocation of development assistance)
- On the opposite when a low capacity to adapt or to implement is linked to present policy, it is rather an indicator of weak performance and then a factor of lower allocation



**Low capacity to implement,
a negative factor of allocation of adaptation resources:**

- While a weak *capacity to adapt* for reasons not depending on present policy (ie a low structural resilience), legitimates a higher allocation, a low *capacity to implement*, as an effectiveness criterion , may lead to a lower allocation (with a small weight for adaptation)
- It may also lead to *specific modalities* of support (projects vs budget)
- However not clear what kind of performance is relevant for allocating resources for the adaptation to climate change : environmental performance? general performance? Performance in project implementation?



Allocation to LDCs according to the PVCCI

- Consensus among donors to give a priority to LDCs in the allocation of development assistance (various goals and resolutions, enhanced by a use of an EVI as an aid allocation criterion)
- Similarly, emerging idea that a priority should also be given to LDCs in the allocation of concessional resources for adaptation
- A rationale can be found in the evidence of a higher average PVCCI in the LDCs (Guillaumont and Simonet, 2014)
- But the priority can be implemented more continuously by using an index as PVCCI in an allocation model or formula, avoiding to leave behind the poor and vulnerable (to climate change) countries which are not LDCs
- Criteria better than categories: usefulness of an index



Mixing the two allocation processes?

- Economic development and adaptation in poor countries are very close goals
- Although additionality is officially supposed, resources for the two goals are likely to be partial substitute
- If the two kinds of resources were merged, their geographical allocation would need to be treated simultaneously and the two kinds of vulnerability be measured through a synthetic index (while the allocation for mitigation would be treated differently)
- Anyway, a trade-off between development and adaptation goals, is unescapable, that will be reflected in the time horizon and the component weights of the index,
- Allocation of international resources is a policy choice ,



Some references on the topic by the author in

- Guillaumont P. « Measuring structural vulnerability to allocate development assistance and adaptation resources », *Ferdi Working Paper*, 68, 2013, Revised, 2015
- Guillaumont P. and C.Simonet, « Designing an index of physical vulnerability to climate change », *Ferdi Working Paper*, I 08, 2011
- Guillaumont P. and C.Simonet, « Facing Climate Change in the LDCs: Howto Fit the Istanbul Programme of Action » in LDC IV Monitor, *Istanbul Programme of Actionfor the LDCs (2011-2020). Monitoring Deliverables, Tracking Progress-Analytical Perspectives*, 2014, pp287-317