



Mitigation and MRV Partnership Summer School
Transparency and Implementation – Future Proof Rules for Climate Policy

What Rules in What Context do We Need Now? A Proposal for Variable Convergence

Jose Alberto Garibaldi
Cuernavaca, Mexico, September 2015.



What is Energeia?

- Network of negotiators and researchers, mostly from like-minded LAC countries – meet regularly in a workshop & informal meeting format
- Meet and write down issues and responses together – this then used –or not at all- by each as it sees fit.
- Using discussion to frame research and assessment of circumstances
- Tried to build bridges and dialogues across groups and UNFCCC divides along these ideas
- Uses some ideas developed by a consortium of 9 organizations – ACT2015.

What do I plan to do?

- Present some research that highlights the collective benefits of cooperation – in terms of mitigation, adaptation, and reduced impacts
- Suggest regime rules that guide a diversity of approaches towards a common goal in taking advantage of collective and local benefits
- Outline some consequences on rules, transparency, the relations between mitigation and adaptation, and the evolution of the climate regime.

Rules, A Veil of Ignorance, and local conditions - Cuernavaca

Some questions

- What if we can actually see our own contexts - a twilight zone?
- What if the context is saving on the major cost for the majority of parties?
- Can a positive contribution to the regime emerge from difference in costs between parties?
- What opportunities arise for a regime to make the most advantage of differences?

An invitation to consider in rules context, substance, and goals – taking into account our common interests

Taking care of our own home

“Tragedy of the Commons”
villagers’ exploitation of their common land in pursuit of their own self-interest ends up destroying the commons;

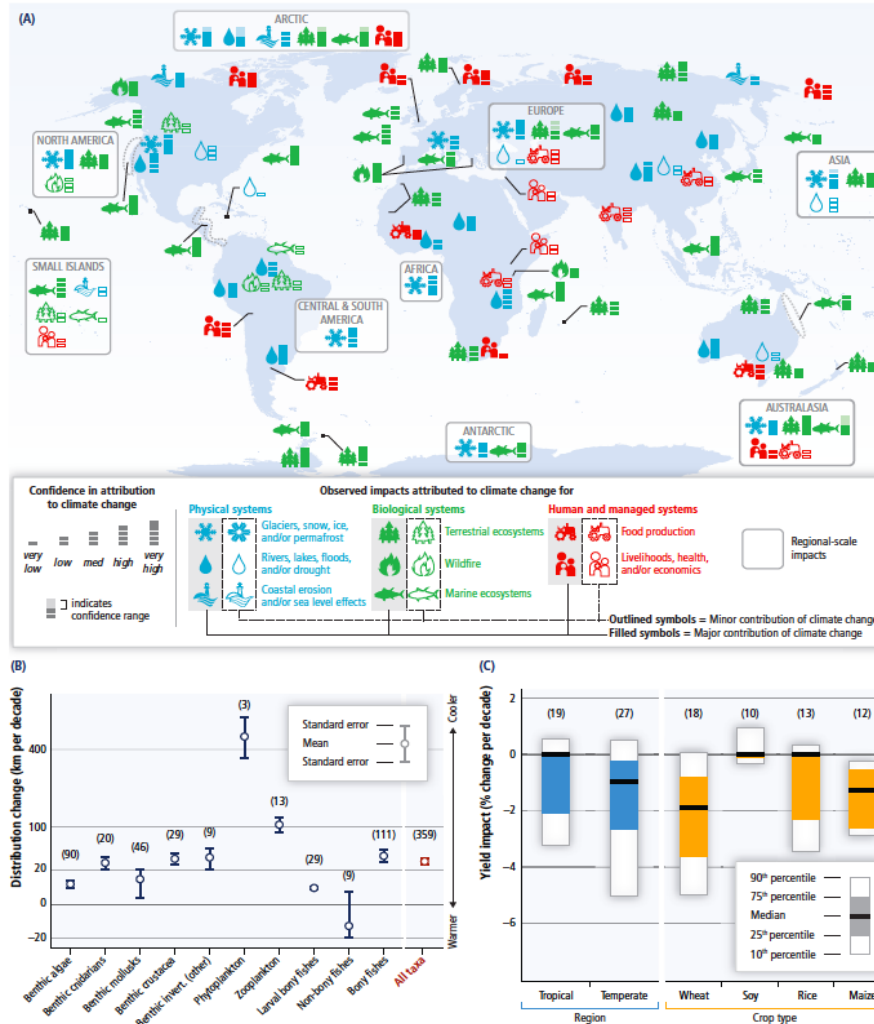
“Collective Action”

Aligns incentives and transparency with regional and individual Parties’ long-term interests to pursue both individual and common goals

“Focus on Outcomes”

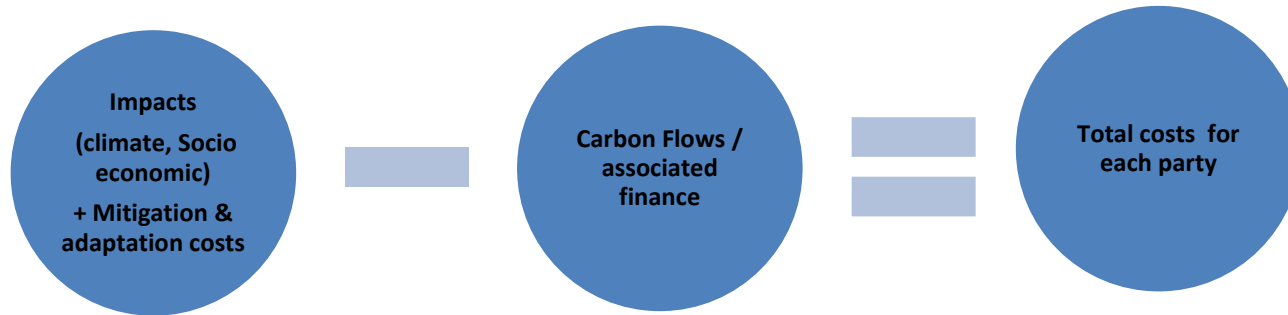
Focus on resulting collective and local costs – including impacts, adaptation, mitigation, and MOI.

Major Climate Change Impacts Observed, 2014



Are Incentives Aligned?

Exploring options



- Individual costs for each party result from the collective action by each and all parties
- Increased collective action reduces costs for most parties; more free riding increases costs
- MICs and LDCs gain the most from collective action

Thought experiments

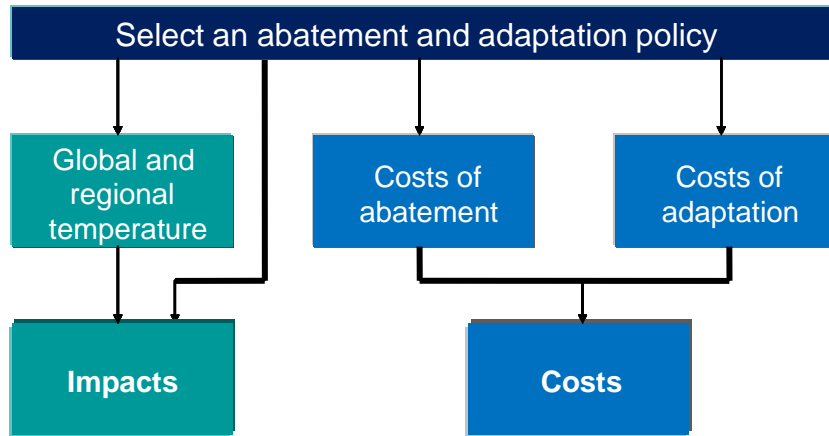
Case 1. 5 Differentiated A!/NA! mitigation scenarios - explore resulting costs

Case 2. 3 Scenarios 1) Copenhagen plus expected INDCs, emissions constant after 2050 2) lower earlier peak with partial plateau; zero by 2100, and 3) further mit ad synergies

Modeling Approach

Step 1: model emissions reduction scenario

Step 2: Model scenarios for regional impact, abatement, and adaptation costs in PAGE2009



•Input parameters are uncertain. All results are probability distributions.

Step 3: Model financial and carbon flows, prices costs, by region

	Region	Sectors (22 in total)		
1. Business As Usual Emissions (BAU)	19	Energy CO2 (16)	Forestry CO2 (2)	Non CO2 GHGs (4)
2. Abatement Costs	19	Energy CO2 (16)	Forestry CO2	Non CO2 GHGs
3. 2015 Scenarios - GHG reductions - Mitigation strategies	?	?	?	?

Capri model

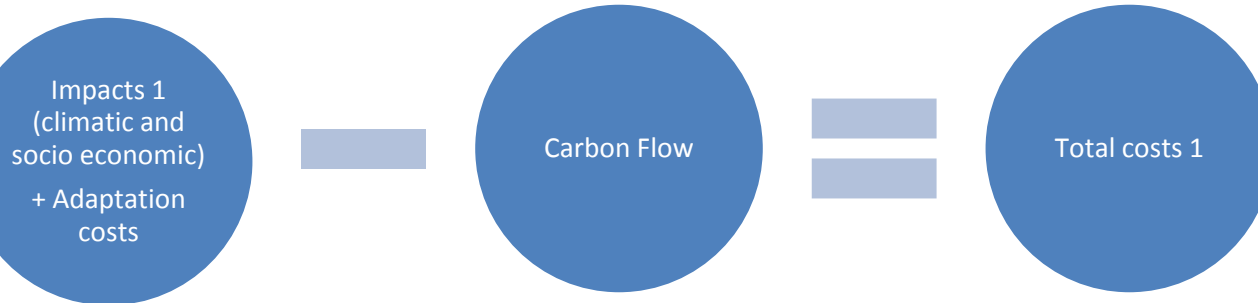


•Input parameters are certain. Model tries to optimize results based on MACC curves.

Step 4: compare results from models by regions and on the aggregate

Case 1: Would a majority be better off the more ambitious the regime?

Shy scenario (low ambition)

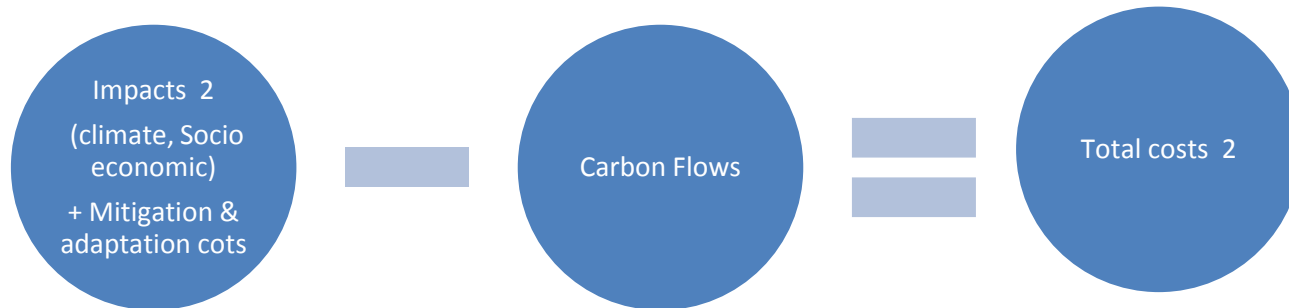


5 scenarios, with differentiated low to very high ambition:

A1 from:

- -5% and -35% (2020 & 2050) to
- -35% and -95% (idem)

Bold scenario (high ambition)



NA1 from:

- doing nothing to
- -10, -15, and -20% BAU deviation (2020, 2030, and 2050) to
- -35, -45, and -45% (idem)

While in the 5 scenarios, carbon markets went from having no trading at all, to having perfectly flexible, encompassing forest and all sectors

In Middle or Low Income Countries Seems to be mostly the case:

Latin America – holds in all cases

Forestry fungibility, expansion of trading sectors and
supplementarity restrictions crucial

Scenario	2020
Very Low	15,419
Low	14965
Effort	11774
High	-2236
Very High	-36952
Costs in US\$ Million dollars, 2005.	

South East Asia -holds in all cases

Idem. Impacts reduced by 6 GDP points
per year

SE Asia	2020	2030	2040
Low	76207.1	188263	628539
Current	75773	181467	599709
Effort	74167.2	174509	544640
High	72818.2	170290	529927
V. High	69068	169810	472868

Africa -holds up to Effort, and then up to Very high scenario

Much room to manoeuvre, with a financial bridge
allowing taking very high scenarios

Africa	2020	2030	2050
Low	35975,08	96672,89	328613,8
Current	35647,55	92175,03	312537,1
Effort	34122,1	87810,3	268579,1
High	34908,56	87987,78	292073,2
Very High	38816,41	104654,8	276520

All costs in US\$ Millions, 2005

Robust Results –similar outcome with subsequent models / frameworks

ACT 2015

- Similar analysis distinguishing evolution between various costs: mitigation, adaptation, finance
- But using completely different models - FAIR and IMage
- And assuming instead that all costs are distributed along most parties based on an equity principle
- Nevertheless - similar results –
 - middle income and LDCs receive majority of financial transfers, with
 - impact and adaptation costs larger than mitigation costs – except for emerging economies, where they tend to be equal.

Equity Reference Framework - Council of Scientific and Industrial Research

- Xolisa Ngwadla – similar results, even if different emphasis:
 - Relation between adaptation and mitigation: the less mitigation, the more adaptation
 - Opportunity to combine both towards high ambition

Same results - a majority of parties do benefit in a high ambition, 2 degree deal

Robust Results – similar outcome also in regional costs literature

LAC - Impact is larger cost

- Vergara et al. (2013) 5 study survey – impacts between 1,5 to more than 4 GDP points, adaptation no more than 0,4 percentage points; mitigation, no more than 0,2.
- Impacts at 100 billion by 2050 (i.e. 0,5 per cent of the region's 2050 GDP or 2,2% of 2010) include coral biomes, glacial melting, Amazon Savannas, agricultural yield reductions, increased flooding, recurrent low intensity and extreme weather events.
- Even at 2 tons pc (down from 7 to 9 tons pc in BAU) costs no more than impacts (100 bn) by 2050 – without considering gains from cooperation in carbon markets or finance.

SEA – impacts are larger costs

- ESCAP (2012) 2012 Asia costs at 35 US bn. Climate-related to increase as people move into higher-risk areas in larger numbers
- ADB (2010) SEA climate impacts equivalent to 6.7% of GDP by 2100; benefit to exceed annual cost by 2060,; benefit reaching 1.9% of GDP, compared to 0.2% of GDP cost.
- Mitigation, win wins and invest about \$9.5 billion—approximately 0.9% of GDP in 2020 to realize them.
- Impacts costs higher than those of mitigation and adaptation

Case 2: What if we model the current context?

USA goes further down along its INDC; China changes growth rates early and enters plateau;

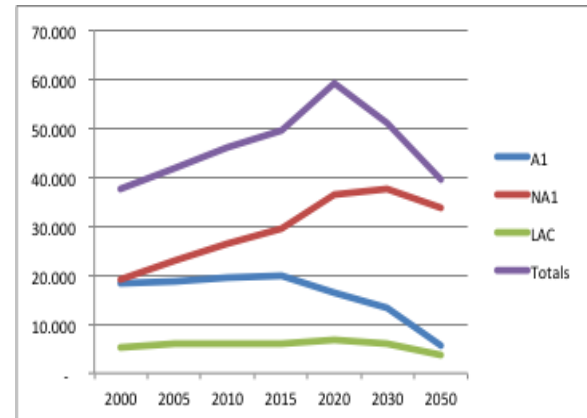
Other A1 countries avoid backsliding and Russia makes an effort;

India, Africa and MENA region start reducing emissions by 2030;

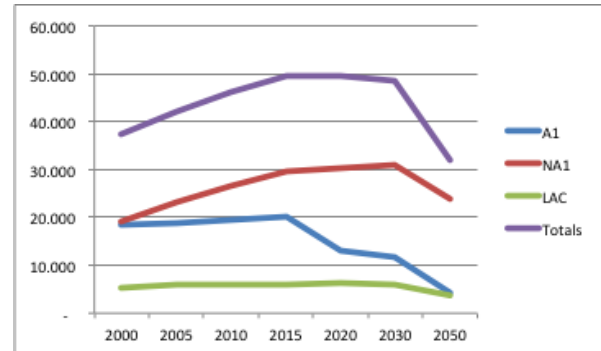
LAC and Africa & MENA reduce emissions earlier by 2020 and 2030, and then more between 2040 and 2050.

Emissions drop to 0 by 2100

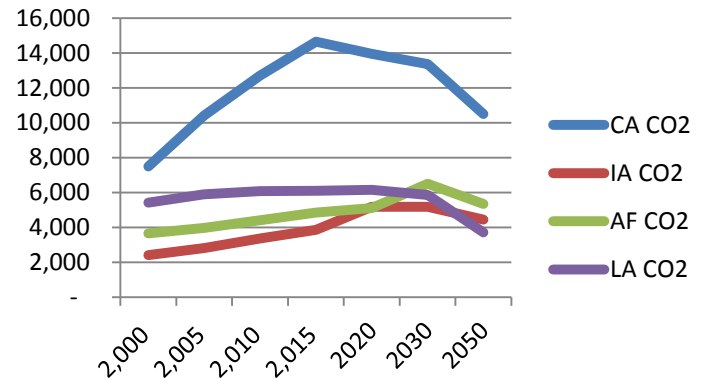
Baseline



Scenario 1



Regional South division



Can adaptation be done sustainably before mitigation?

Not Really

If mitigation is done early,

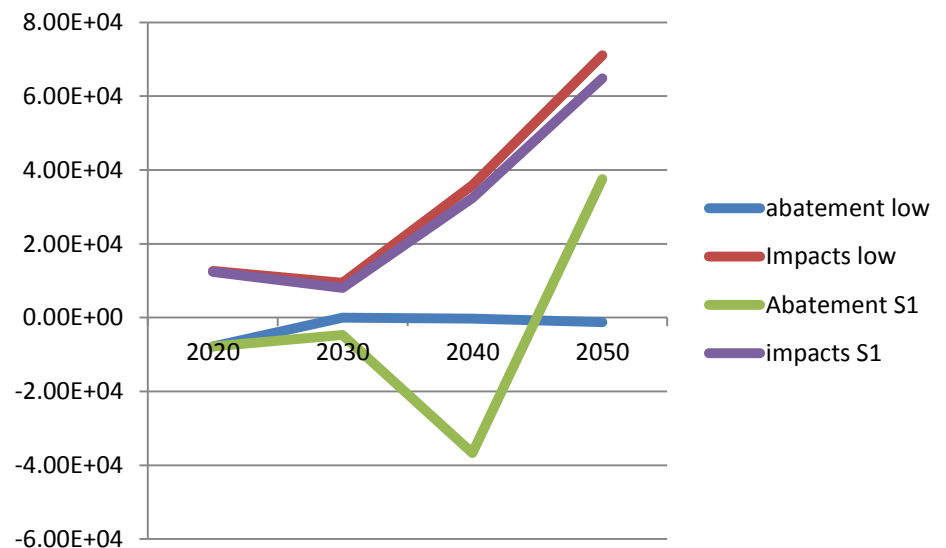
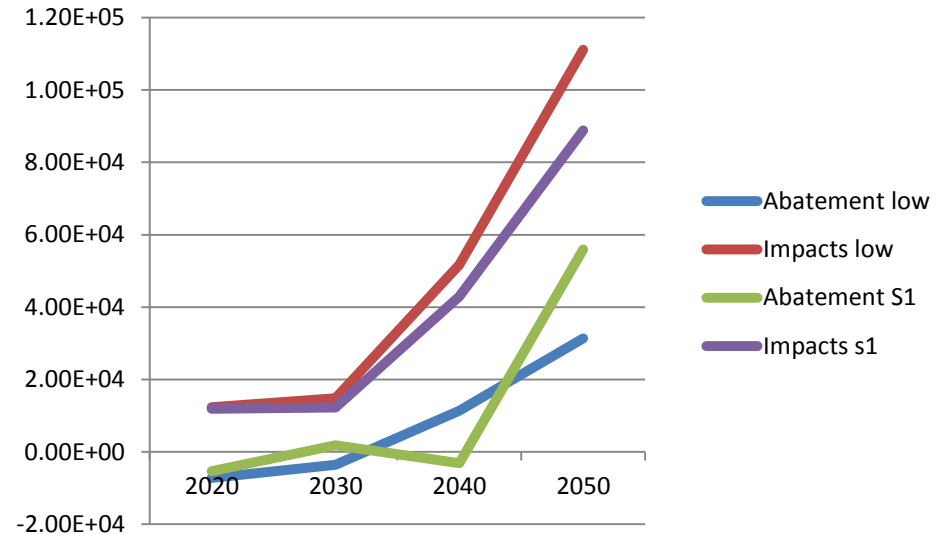
- a) Climate impacts (red and purple lines) go down
- b) Abatement (green line) less pronounced

Signals more mitigation collective action; if more parties follow, impacts will be reduced further, and adaptation become more effective

If mitigation is done later,

- a) less impacts early, but
- b) Less later impact reduction;
- c) still need to fund more mitigation later

Signals free riding: if others follow, climate impact costs will grow further, and adaptation become less effective



Would Mitigation reduce collective costs?

Yes.

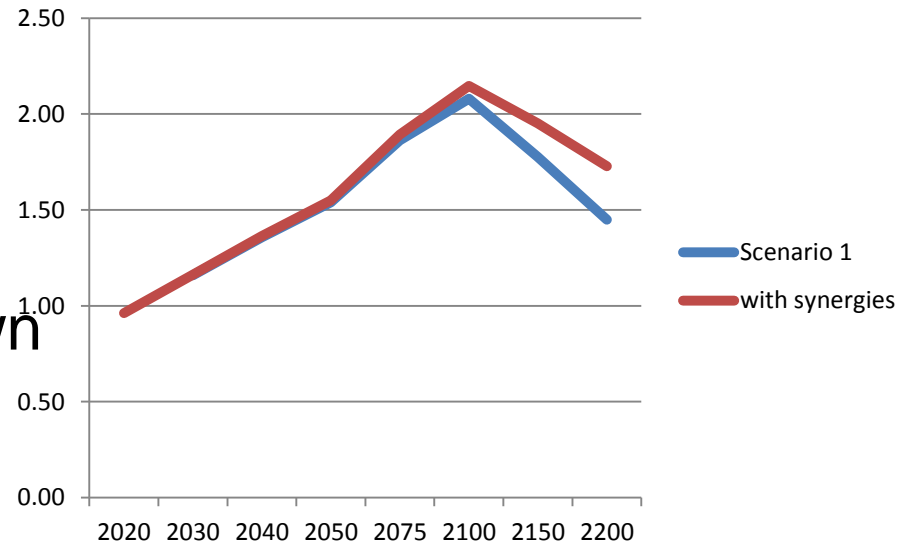
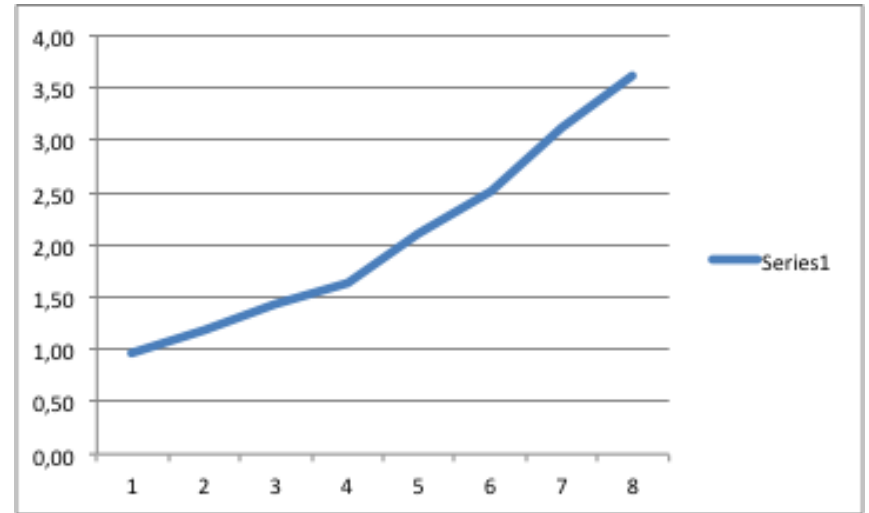
Base scenario 3.68 degrees - and going up...

Mitigation alone – peak at 2,15 degrees...but going down

Scenario 1 costs 53 trillion dollars more, but reduces impacts in 60 trillion – a 7 Trillion collective difference

Scenario 2 – with only 15% synergies peak goes further down to 2,08...

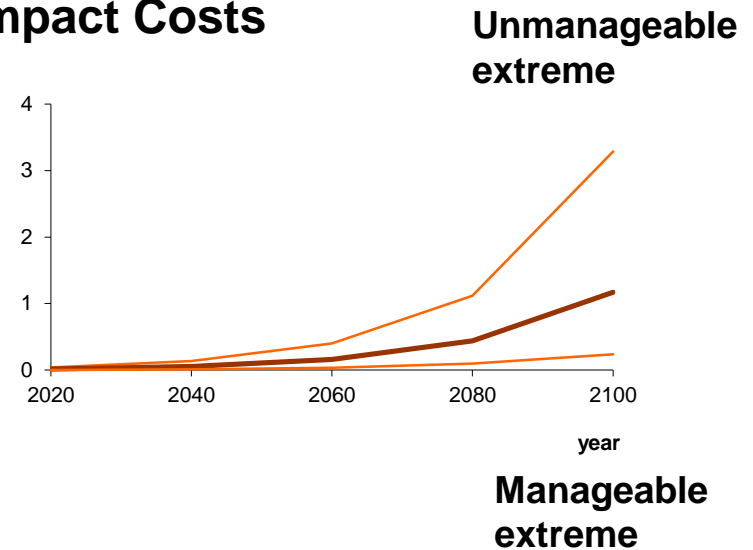
And an additional 4.4 trillion dollars less in impacts in DCs...



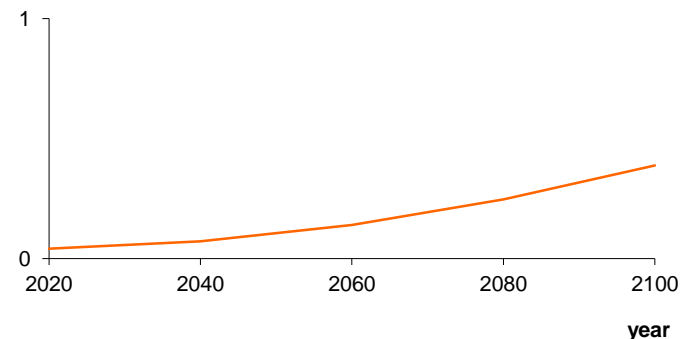
Adaptation, Mitigation & MOI: Synergies rather than Trade-offs

- **Climate** impact risks will grow much faster than the capacity and funds available **in order** to adapt to them.
- Risks **need to be kept within a manageable** range through vigorous mitigation and adaptation.
- For the most part, synergies **should be encouraged and** tradeoffs avoided.

Impact Costs



Adaptation Costs



The Global benefit I

Collective action benefit all, but more those with high impact and relatively low emissions – the majority

Blending mitigation, adaptation and means of implementation further reduces costs

- In the region advancing it
- In the global collective costs

Synergies deliver a better global result than mitigation alone – all costs considered.

There is a collective –and not only local- benefit in integrating actions.

The Global Benefit II

- Collective Climate action is not a zero sum game
- We should focus on extracting the benefits, not highlighting the conflicts
- Focus in the various aspects of Climate Action and their interrelation – mit/ad/MOI

Action is most likely to be good for you...

Rules: Linking substance, process & context

A Variable Geometry/Convergence regime

Key aspects

- A Common Floor for all, with universal, if differentiated, action.
- Setting that common floor as high as possible – it is in the collective interest
- Allowing for divergence of starting points – but pushing for convergence towards the end goals

Characteristics

- A common purpose, with initially diverse pool of nationally determined contributions and policy pathways & ratchet mechanisms to increase ambition
- Directs all parties towards higher ambition and transparency: Regime changes shape through subsequent cycles to support and encourage those gaining from action and wishing to move forward faster,
- focus debate on enhancing long-term cooperation and transparency and deterring free-riding.
- Without prejudice to any principle of the Convention, the required transparency, or the achievement of a less than 2°C goal.

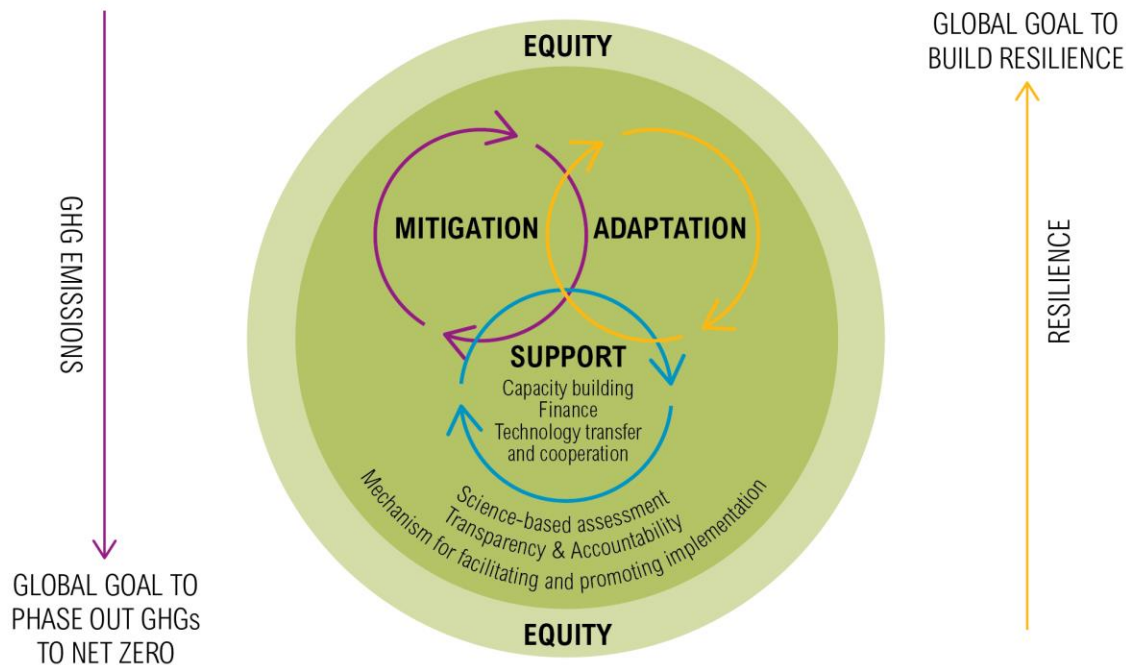
Treatment of Key Regime Aspects

Aspect	Treatment
<i>Principles / equity</i>	Focus on ultimate objectives, goals; principles spur action ;equity linked to outcomes, no backslide, self differentiation.
<i>Contributions</i>	Universal mitigation -those with more capacity / responsibility do more
<i>Transparency and MRV</i>	A key central management tool of the regime encompassing Mit/Ad/MOI
<i>Depth of rules</i>	Common floor with self determined depth - those willing to move more can do so
<i>Pressure</i>	Any party build up; larger parties, stringer rules; but small parties can use them too.
<i>Mit. / Ad / MOI linkages & incentives</i>	Adaptation, mitigation and MOI linkages; mechanisms focused on coop; sequenced finance
<i>Groups and partnerships</i>	Investment partnerships, carbon markets, Redd+, Mit/Ad - include others iteratively.
<i>Compliance / Enforcement</i>	Active and passive Free riding deterrance

A Variable Geometry Regime Incentive Operation

- Cooperation creates gains – incentives and benefits are intrinsic to action
- Enabling environment expands as action expands to facilitates collective achievement of temp goal
- Mechanisms / support enable individual or groups to move beyond minimum legal requirements floor,
- More resources naturally flow to most action-oriented Parties,
- More-developed parties hold a stake in iterative creation of enabling environments for mutually beneficial cooperation.
- Support early movers as they advance / no backsliding

Using Cycles in a GLOBAL AGREEMENT – The ACT- 2015 proposal



The package: Binding Agreement + decisions + political declaration

Further discussion on this later in the School.

Who is ACT2015?

ACT 2015 Partners:



ACT 2015 is supported by:



The Prospect Hill Foundation



Transparency – a key variable convergence tool

- A common benefit in increasing transparency – benefitting more those with less emissions / more vulnerable
- Enhances cooperation and understanding of goal achievements
- Encompasses Mit/Ad/MOI – within the varying priorities

Not predefined rules, but rules that lead to an increasingly transparent and comprehensive regime – based on your own contributions.

An Evolving floor

from a diversity of contributions

- Accompanies the diversity, but increases common understanding
 - How it suits the specific contribution type presented
 - How it contributes to collective goals /adding up/ gap coverage
- Various INDCs types:
 - Considers mitigation, adaptation, mitigation, support
 - Accompanied with parallel improvement of data and transparency
 - Increasingly comprehensive collective information through subsequent cycles

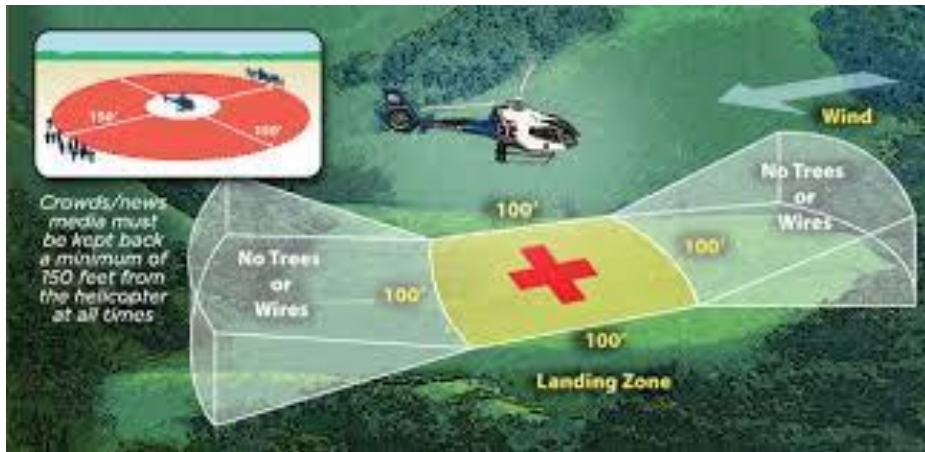
Where can you advance the most?

- Your type?
 - Intensity, base year, peaks, budget?
 - Gases, sectors, sources goals?
 - What inventory being used? What GDP? Coherence between BAU and Scenario calculation?
- Use of MXS / LULUCF?
 - Use and destiny of markets/cooperation mexs.
 - LULUCF: type of approach, categories, etc.
- **Adaptation:** your own actions, other climate action interactions, synergies et al.
- **Conditionality and support** – how can domestic and int. measurement improve?

Evolution

- Use of existing institutions and processes to advance them and cooperation more
- Differentiation addressed by own parties actions and self determination
- How can you improve your own MRV contribution?
- What do you need to advance even more?
- What do you expect from others?

Potential Landing Zone



- Frequency of cycles (5 years)
- Commitment period-revisited target
 - Fixed 2025 and indicative 2030 (to be revisited in 2020)
- Political moment for mitigation, adaptation, support at the same time – considering differences and roles
- More than a stock-take – but details of assessment figured out after Paris
- What the Political snapshot look like will be decided after Paris, but acknowledgment of existing inputs