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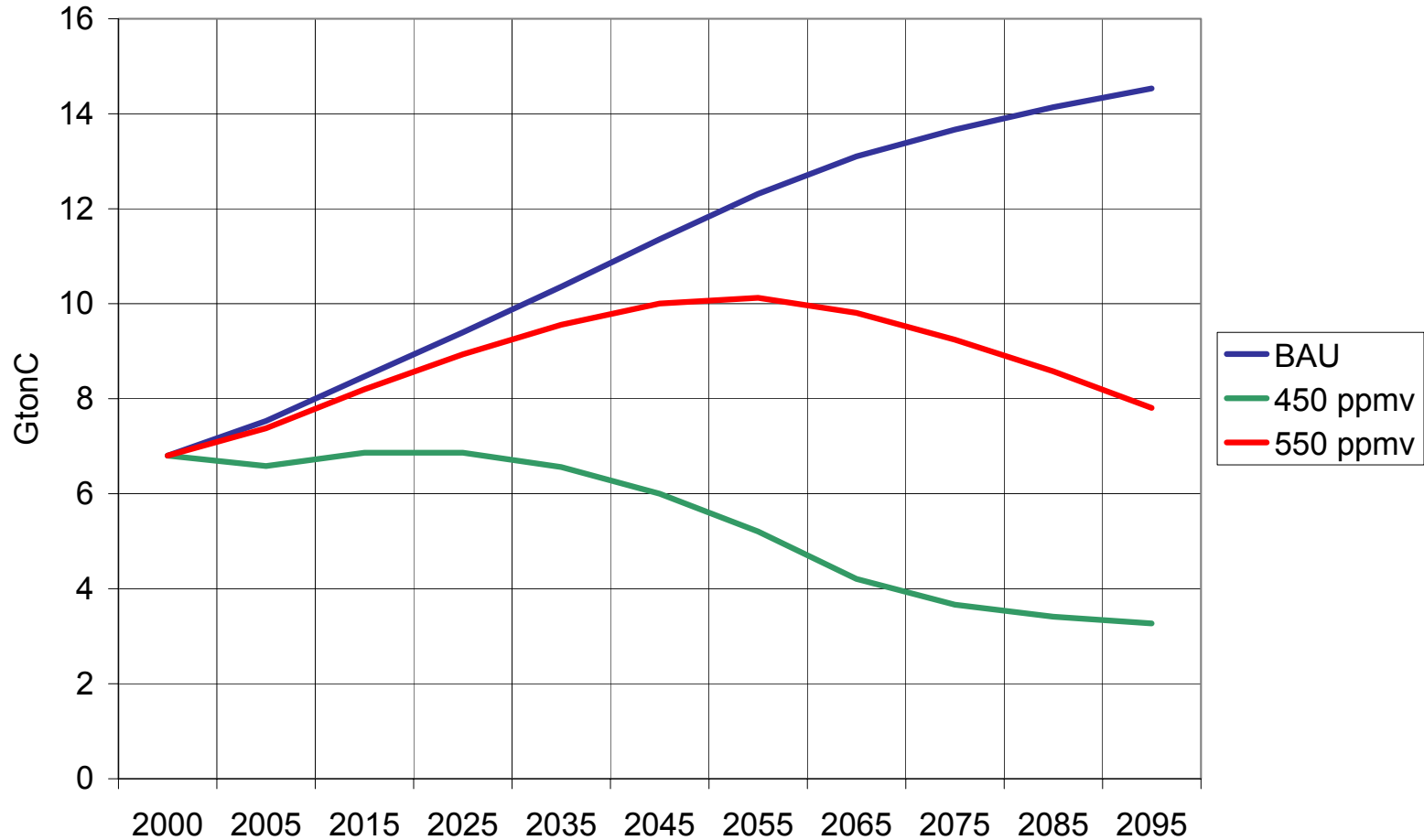
Costs and Risks of Low Stabilisation Scenarios: Lessons from IMCP

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- Measurement:
 - Role of the discount rate
 - Avoided climate damages
 - First best vs second best models
 - Underestimation of low stab scenarios
- The role of technological change:
 - Best available technologies vs backstop technologies
 - Distribution of costs

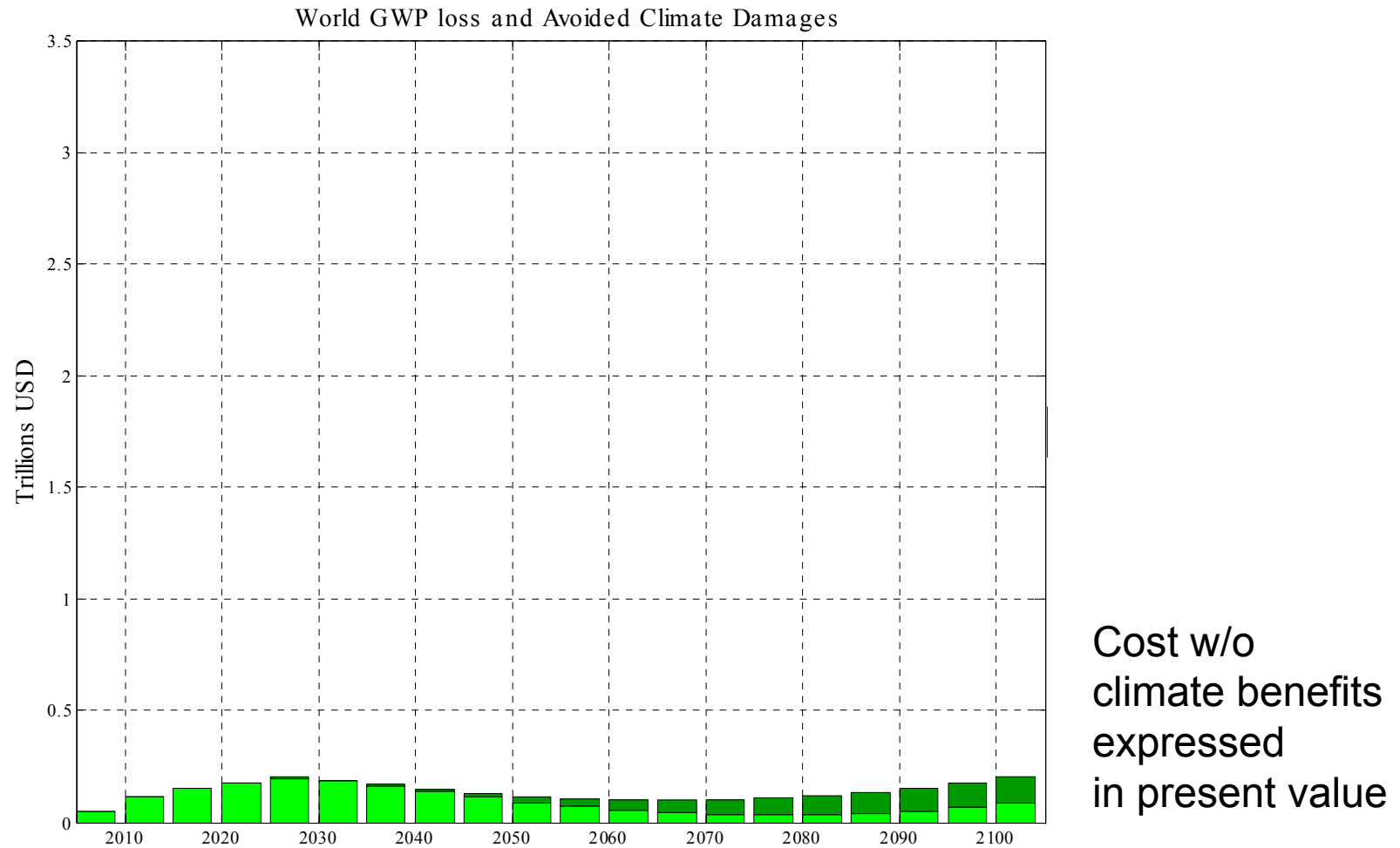
Emission Mitigation for Stabilization



- The role of the discount rate:
 - Shouldn't the baseline change when we measure net present value of stabilization costs using different discount rate?

- Avoided climate damages:
 - Should costs be measured incorporating the avoided climate damage or not?

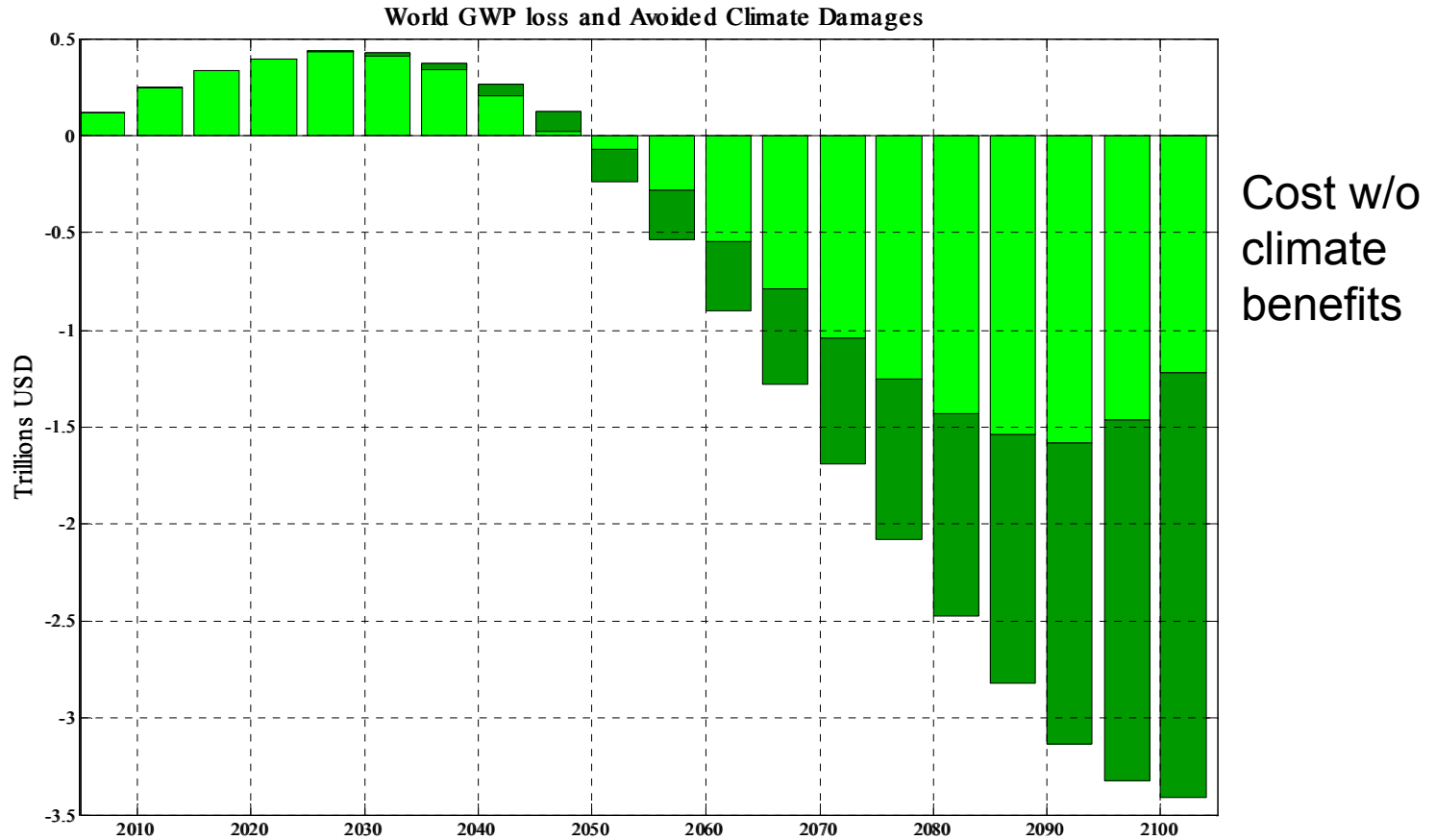
WITCH. 550 ppmv stabilization - discount rate: 5%



■ Higher discount rates imply lower cost of stabilization.

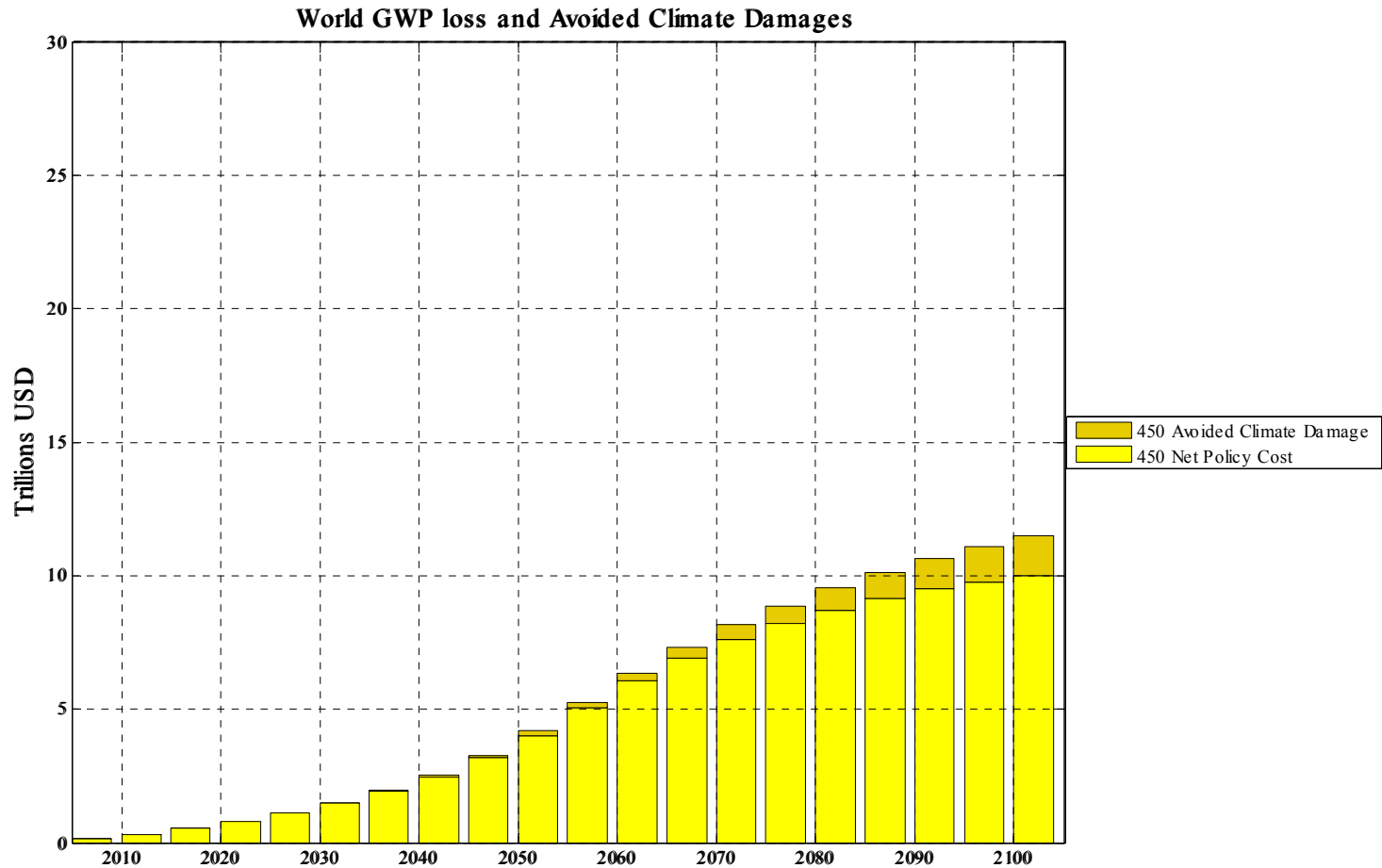
- However, in first best models any stabilization scenario will always imply a cost (growing in time) due to the sub optimality of adding a constraint
- BUT: In second best models the stabilization target might produce a positive effect. Then, lower discount rates might imply lower costs of climate policy (e.g. because of avoided climate damages, typically accruing in later periods)

WITCH. 550 ppmv stabilization - discount rate: 1%



- 450 ppmv – are costs underestimated?
- Average cost of 450 ppmv stabilization reported is 1% GWP Loss: Why not stabilizing then?

WITCH. 450 ppmv stabilization - discount rate: 1%



- The role of technological change:
 - Is the real focus of research, why not emphasizing it then?
 - Two answers to technological paths towards stabilization: Best available technologies vs backstop technologies; shouldn't the latter discount for some inherent uncertainty?
 - Distribution of benefit from ITC in stabilizing GHGs among different countries (are there any losers?).