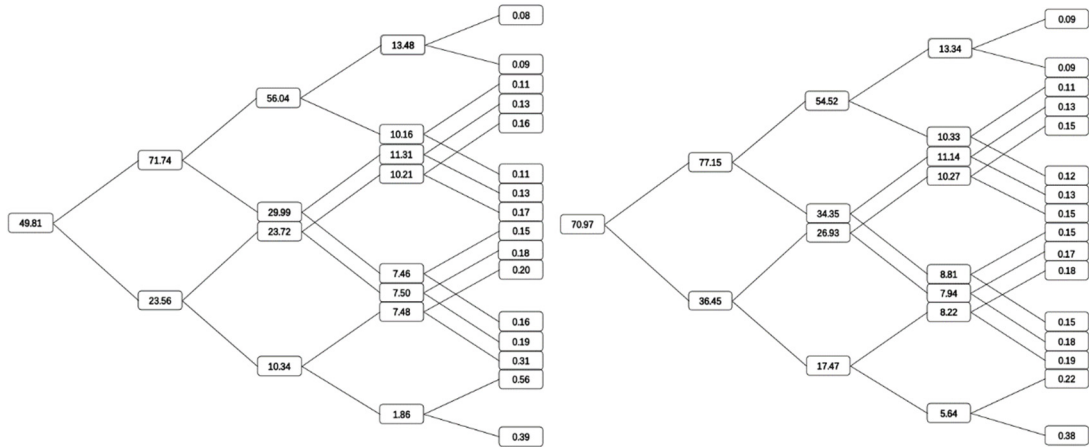
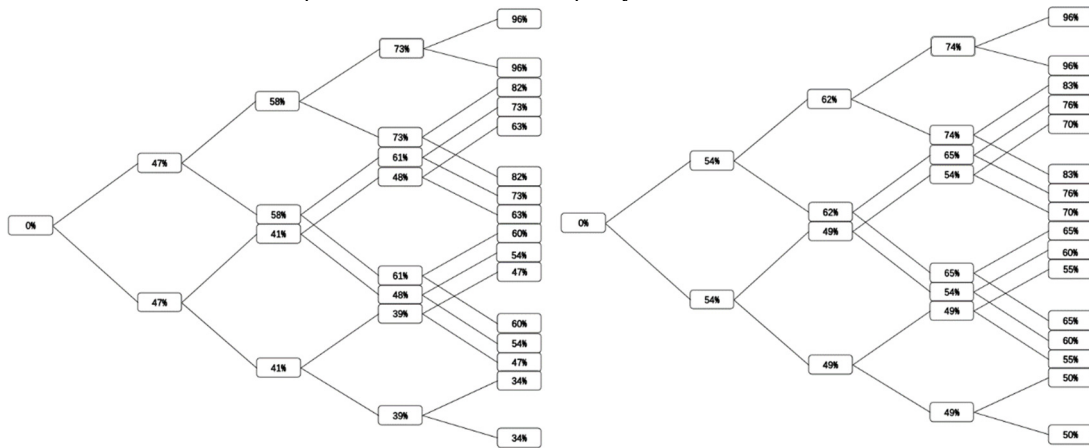


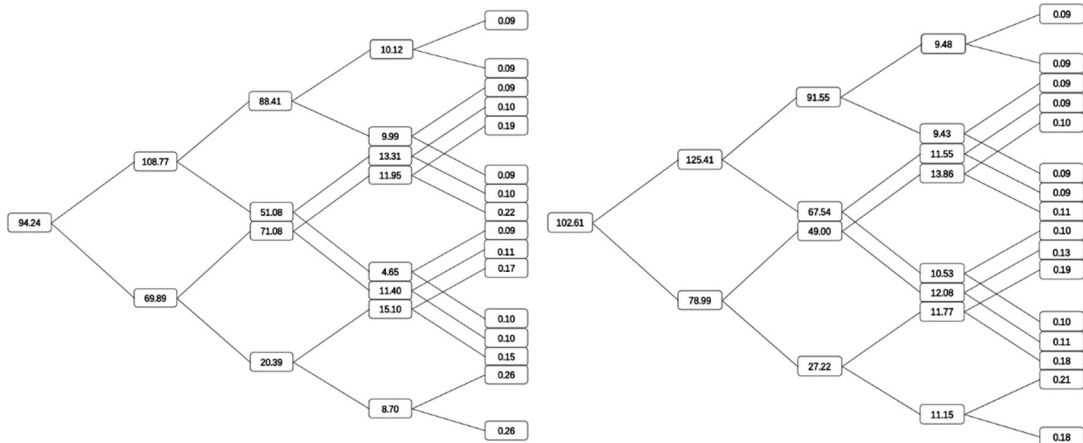
Supplementary Material



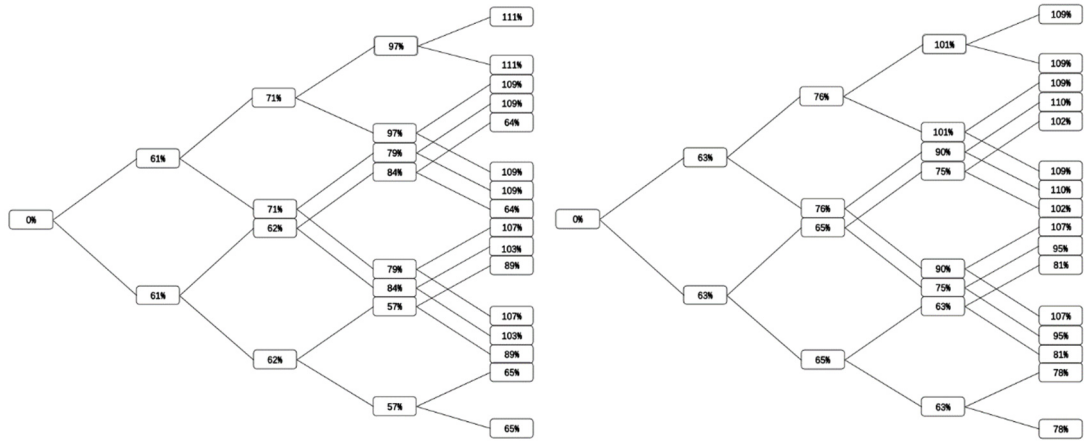
(a-1) Marginal abatement costs of the SPP1 under the economically optimal policy; (a-2) Marginal abatement costs of the SPP1 under the 1.5°C temperature increase constraint policy



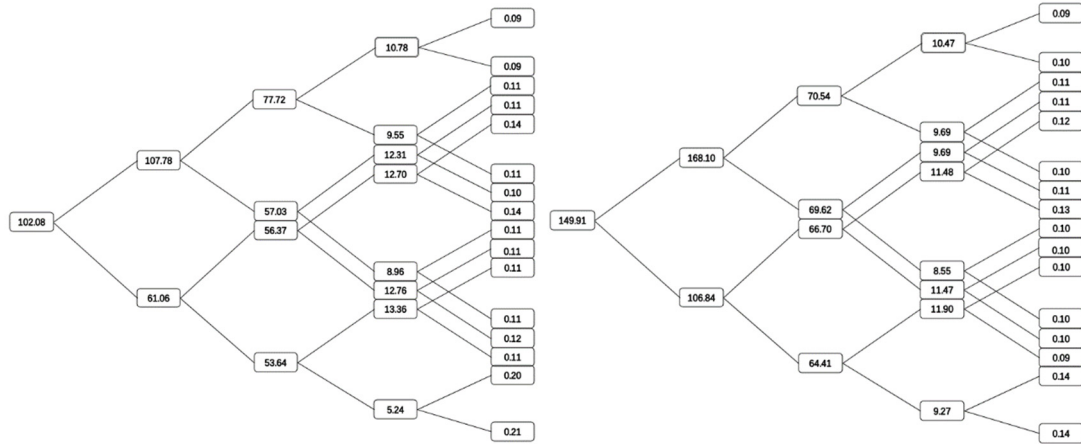
(a-3) Average mitigation rates of the SPP1 under the economically optimal policy; (a-4) Average mitigation rates of the SPP1 under the 1.5°C temperature increase constraint policy



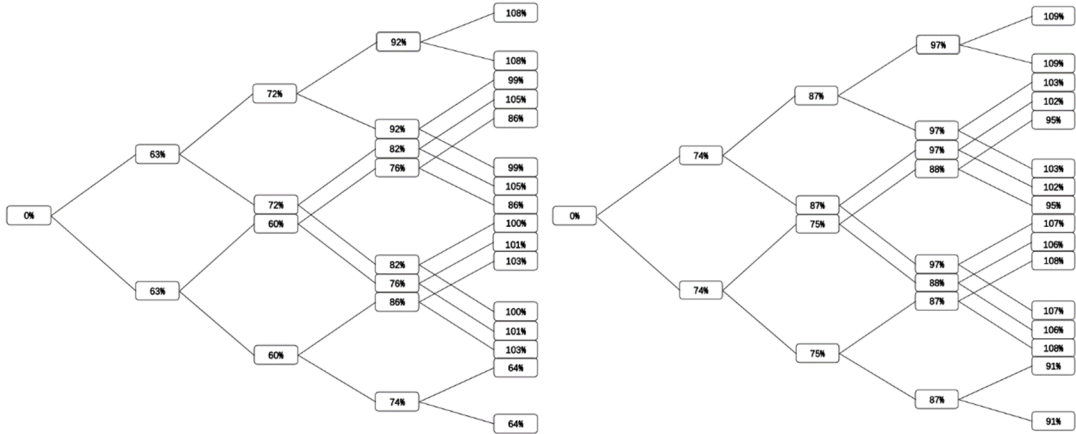
(b-1) Marginal abatement costs of the SPP2 under the economically optimal policy; (b-2) Marginal abatement costs of the SPP2 under the 1.5°C temperature increase constraint policy



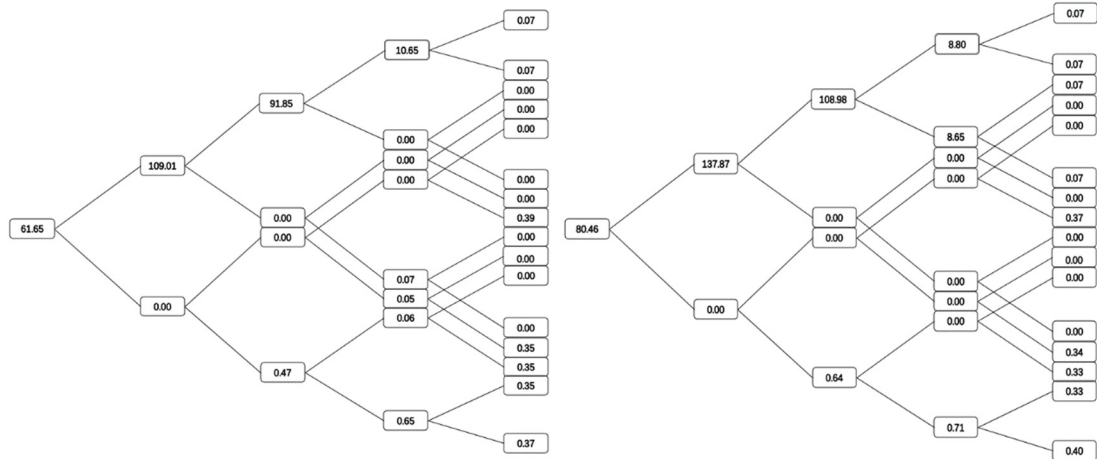
(b-3) Average mitigation rates of the SPP2 under the economically optimal policy; (b-4) Average mitigation rates of the SPP2 under the 1.5°C temperature increase constraint policy



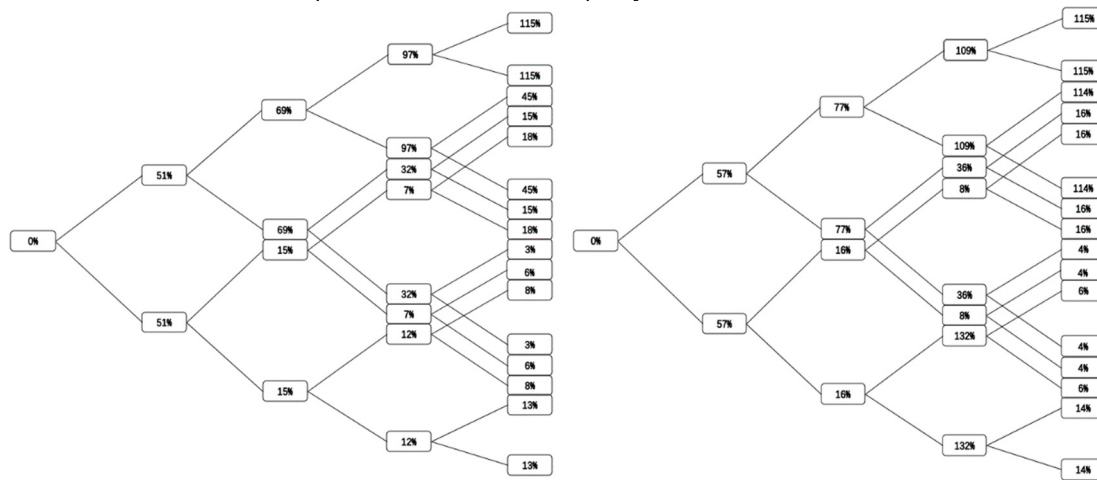
(c-1) Marginal abatement costs of the SPP3 under the economically optimal policy; (c-2) Marginal abatement costs of the SPP3 under the 1.5°C temperature increase constraint policy



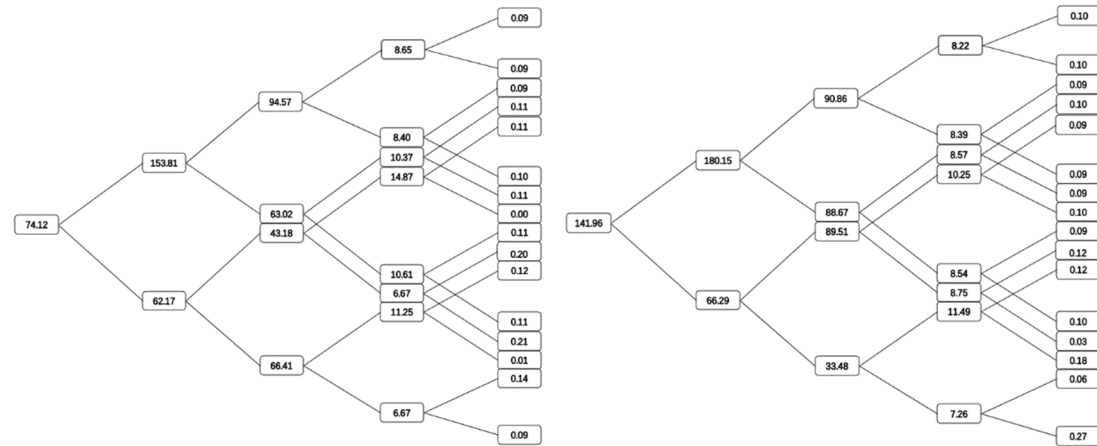
(c-3) Average mitigation rates of the SPP3 under the economically optimal policy; (c-4) Average mitigation rates of the SPP3 under the 1.5°C temperature increase constraint policy



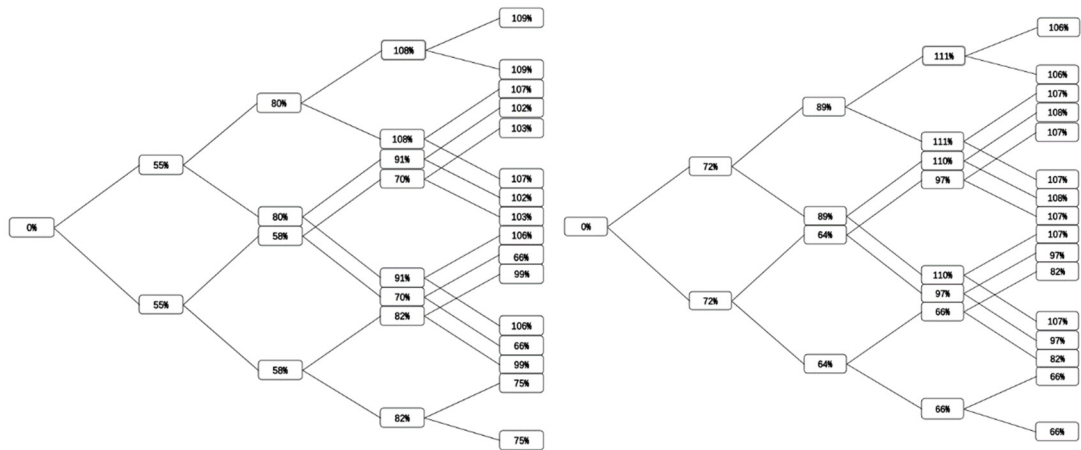
(d-1) Marginal abatement costs of the SPP4 under the economically optimal policy; (d-2) Marginal abatement costs of the SPP4 under the 1.5°C temperature increase constraint policy



(d-3) Average mitigation rates of the SPP4 under the economically optimal policy; (d-4) Average mitigation rates of the SPP4 under the 1.5°C temperature increase constraint policy



(e-1) Marginal abatement costs of the SPP5 under the economically optimal policy; (e-2) Marginal abatement costs of the SPP5 under the 1.5°C temperature increase constraint policy



(e-3) Average mitigation rates of the SPP5 under the economically optimal policy; (e-4) Average mitigation rates of the SPP5 under the 1.5°C temperature increase constraint policy

Figure S1. Marginal abatement costs and average mitigation rates of the five SSPs under the economically optimal policy and the 1.5°C temperature increase constraint policy