

Table 3. Sensitivity analysis of distributed external costs C_{ab} to the present-value discount rate r

Overfishing, 2005 US\$ billions				
	NPV rate, %			
	0	1	2	3
C_{LL}	0.026 0.059	0.032 0.072	0.039 0.088	0.048 0.11
C_{LM}	0.046 0.14	0.055 0.17	0.067 0.210	0.082 0.26
C_{LH}	0.038 0.18	0.045 0.22	0.054 0.260	0.065 0.31
C_{ML}	0.52 1.6	0.62 1.9	0.75 2.3	0.91 2.7
C_{MM}	100 320	120 400	150 490	190 610
C_{MH}	3.8 18	4.4 21	5.2 25	6.2 30
C_{HL}	1.2 2.4	1.5 2.8	1.8 3.3	2.2 3.9
C_{HM}	18 58	22 70	27 84	33 100
C_{HH}	19 90	22 110	27 130	32 150
C_w	140 490	180 600	220 740	270 910
Deforestation, 2005 US\$ billions				
	NPV rate, %			
	0	1	2	3
C_{LL}	58 300	64 330	71 360	79 400
C_{LM}	0.078 1.3	0.086 1.5	0.101 1.8	0.12 2.1
C_{ML}	1.2 5.9	1.3 6.4	1.4 7.0	1.5 7.6
C_{MM}	48 840	57 1,000	68 1,200	82 1,500
C_{HL}	1.4 7.1	1.5 7.8	1.7 8.7	1.9 9.6
C_{HM}	3.3 58	3.9 69	4.6 82	5.5 98
C_H	(15)	(16)	(17)	(18)
C_w	97 1,200	110 1,400	130 1,700	150 2,000
Mangrove loss, 2005 US\$ billions				
	NPV rate, %			
	0	1	2	3
C_{LL}	7.4	8.2	9.2	10
C_{LM}	0.055	0.061	0.068	0.076
C_{LH}	0.0017	0.0019	0.0021	0.0024
C_{ML}	0.29	0.32	0.36	0.40
C_{MM}	27	30	33	37
C_{MH}	0.18	0.20	0.22	0.24
C_{HL}	6.4	7.1	7.9	8.8
C_{HM}	21	24	26	29
C_{HH}	7.4	8.3	9.2	10
C_w	70	78	87	97
Agricultural intensification and expansion, 2005 US\$ billions				

	NPV rate, %			
	0	1	2	3
C_{LL}	360	420	490	580
C_{LM}	6.9	8.2	9.9	12
C_{LH}	3.3 11	4.0 13	4.8 16	5.9 20
C_{ML}	2.4	2.8	3.1	3.6
C_{MM}	3,800	4,500	5,400	6,600
C_{MH}	35 120	42 140	52 180	63 210
C_{HL}	5.1	5.9	6.8	8.0
C_{HM}	150	180	220	260
C_{HH}	580 2,000	710 2,400	880 3,000	1,100 3,700
C_W	4,900 6,400	5,900 7,700	7,100 9,300	8,600 11,000

Climate change, 2005 international \$ billions

	NPV rate, %			
	0	1	2	3
C_{LL}	(48) 3,100	(53) 1,500	(50) 740	(44) 390
C_{LM}	(2,000) 4,800	(1,600) 2,300	(1,300) 1,100	(1,100) 600
C_{LH}	(260) 2,200	(210) 1,100	(180) 640	(160) 390
C_{ML}	(160) 11,000	(180) 5,000	(170) 2,500	(150) 1,300
C_{MM}	(6,600) 16,000	(5,400) 7,700	(4,500) 3,800	(3,800) 2,000
C_{MH}	(860) 7,300	(720) 3,800	(620) 2,100	(540) 1,300
C_{HL}	(150) 9,900	(170) 4,700	(160) 2,300	(140) 1,200
C_{HM}	(6,200) 15,000	(5,000) 7,200	(4,200) 3,600	(3,600) 1,900
C_{HH}	(810) 6,800	(680) 3,600	(580) 2,000	(510) 1,200
C_W	(17,000) 76,000	(14,000) 37,000	(12,000) 19,000	(10,000) 10,000

Stratospheric ozone layer depletion, 2005 international \$ billions

	NPV rate, %			
	0	1	2	3
C_{LL}	2.2 5.0	1.1 2.5	0.58 1.3	0.33 0.73
C_{LM}	18 34	9.5 18	5.3 9.8	3.2 5.8
C_{LH}	4 165	24 37	15 23	10 16
C_{ML}	38 89	19 44	10 23	5.9 13
C_{MM}	320 610	170 310	94 170	56 100
C_{MH}	720 1,200	420 660	260 420	180 290
C_{HL}	94 220	48 110	25 57	15 32
C_{HM}	800 1,500	420 770	230 430	140 260
C_{HH}	1,800 2,900	1,000 1,600	660 1,000	460 720
C_W	3,800 6,500	2,100 3,600	1,300 2,200	870 1,400

Stratospheric ozone depletion, 1,000 DALYs

C_{LL}	840 1,700	470 930	280 540	190 340
C_{LM}	2,100 4,300	1,200 2,500	780 1,600	540 1,100

C_{LH}	1,700 3,400	1,100 2,100	720 1,400	530 1,000
C_{ML}	15,000 30,000	8,300 16,000	5,000 9,600	3,300 6,100
C_{MM}	37,000 76,000	22,000 44,000	14,000 28,000	9,800 19,000
C_{MH}	30,000 60,000	19,000 37,000	13,000 25,000	9,700 19,000
C_{HL}	37,000 75,000	20,000 41,000	12,000 24,000	8,200 15,000
C_{HM}	92,000 190,000	54,000 110,000	35,000 70,000	25,000 49,000
C_{HH}	75,000 150,000	47,000 93,000	33,000 64,000	24,000 49,000
C_W	290,000 590,000	170,000 350,000	110,000 220,000	81,000 160,000

The entries for overfishing, deforestation, mangrove loss, and agriculture are in 2005 US\$, whereas all entries in Table 1 are in 2005 international \$. (To convert entries in US\$ to international \$, multiply C_{aL} , C_{aM} , and C_{aH} by 4.3, 2.7, and 0.99, respectively.) For overfishing, the totals, rather than the net foregone revenues as in Tables 1 and 2, are given here (net/total = 0.16). The external costs associated with deforestation are allocated according to the consumption of agricultural and wood-based goods, equally weighted. Lower and upper bounds are separated by “|” where calculated. We also provide ozone layer impacts in disability-adjusted life years (DALYs).