

Identifying potential cropland losses when conserving 30% and 50%

Earth with different approaches and spatial scales

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Supplementary Tables

Supplementary Table 1

The sum of global total calorie interpolated under different future scenarios. Before interpolation, the sum of global total calorie is 9.45315E+15.

	2030	2050
SSP1-RCP1.9	1.20332E+16	1.20031E+16
SSP1-RCP2.6	1.20415E+16	1.20124E+16
SSP2-RCP4.5	1.20950E+16	1.20505E+16
SSP3-RCP7.0	1.20835E+16	1.20336E+16
SSP4-RCP3.4	1.20533E+16	1.19965E+16
SSP4-RCP6.0	1.21074E+16	1.20291E+16
SSP5-RCP3.4	1.21073E+16	1.20536E+16
SSP5-RCP8.5	1.21027E+16	1.20437E+16

Supplementary Table 2

Percentage of cropland losses for countries under nature-only approach in 2030 at biome scale(%)

	country	ISO3	SSP1_RCP19	SSP1_RCP26	SSP2_RCP45	SSP3_RCP70	SSP4_RCP34	SSP4_RCP60	SSP5_RCP34	SSP5_RCP85	max	min	mean
1	Afghanistan	AFG	0	0	0	0	0	0	0	0	0	0	0
2	Aland	ALA	3.09	2.86	2.83	9.16	9.15	7.39	8.21	9.19	9.19	2.83	6.49
3	Albania	ALB	0	0	0.02	0.11	0.01	0.04	0.1	0.12	0.12	0	0.05
4	Angola	AGO	0	0	0	0	0	0	0	0	0	0	0
5	Antigua and Barbuda	ATG	0	0	48.29	8.81	11.28	33.99	48.29	39.9	48.29	0	23.82
6	Argentina	ARG	0	0	0.24	0	0	0.36	1.47	1.21	1.47	0	0.41
7	Armenia	ARM	0	0	0.65	0.09	0.16	0.53	1.21	1.07	1.21	0	0.46
8	Australia	AUS	0.57	0	2.92	2.5	2.32	3.37	2.54	2.43	3.37	0	2.08
9	Azerbaijan	AZE	0.01	0	0.8	0.39	0.48	0.52	1.12	1.14	1.14	0	0.56
10	Belarus	BLR	0	0	0.39	0.11	0.07	0.17	0.62	0.58	0.62	0	0.24
11	Belgium	BEL	0	0	0	0	0	0	0	0	0	0	0
12	Bhutan	BTN	4.65	0	21.38	6.69	1.39	15.62	45.98	28.65	45.98	0	15.55
13	Bolivia	BOL	12.88	10.44	21.3	18.46	18.28	20.54	18.91	18.19	21.3	10.44	17.37
14	Bosnia and Herzegovina	BIH	0.17	0	0.97	1.01	0.27	0.6	1.2	1.16	1.2	0	0.67
15	Brazil	BRA	1.09	1.01	1.44	1.28	1.22	1.35	1.43	1.42	1.44	1.01	1.28
16	Bulgaria	BGR	0	0	0.32	0.11	0.22	0.09	0.41	0.44	0.44	0	0.2
17	Cambodia	KHM	8.03	7.26	8.06	7.66	7.91	8.09	7.6	7.96	8.09	7.26	7.82
18	Canada	CAN	0.01	0	0.42	0.53	0.17	0.4	0.57	0.53	0.57	0	0.33
19	Cape Verde	CPV	0.25	1.31	0.22	0.21	0.37	0.66	0.16	0.27	1.31	0.16	0.43
20	Chile	CHL	1.36	0.01	5.71	2.92	3.28	3.36	5.1	5.27	5.71	0.01	3.38
21	China	CHN	0	0	0.31	0.12	0.12	0.24	0.42	0.36	0.42	0	0.2

22	Colombia	COL	4.04	3.82	4.68	4.53	4.59	4.59	4.71	4.28	4.71	3.82	4.4
23	Croatia	HRV	0	0	0	0	0	0	0.01	0	0.01	0	0
24	Czech Republic	CZE	0	0	0	0	0	0	0	0	0	0	0
25	East Timor	TLS	1.69	1.45	7.05	3.51	3.44	4.66	4.62	4.31	7.05	1.45	3.84
26	Ecuador	ECU	4.17	4.41	4.22	5.24	4.67	5.01	4.44	4.89	5.24	4.17	4.63
27	Estonia	EST	0	0	3.52	0.5	0.19	0.96	5.52	5	5.52	0	1.96
28	Faroe Islands	FRO	0	0	0	0	0	0	0	100	100	0	12.5
29	France	FRA	0	0	0.13	0.09	0.07	0.09	0.15	0.15	0.15	0	0.09
30	Georgia	GEO	0.06	0	1.78	0.95	0.97	1.21	2.15	2.25	2.25	0	1.17
31	Greece	GRC	0	0	0	0	0	0	0	0	0	0	0
32	Honduras	HND	0	0.01	0.01	0.01	0.01	0.01	0	0	0.01	0	0.01
33	India	IND	0	0	0	0	0	0.01	0.01	0.01	0.01	0	0
34	Indonesia	IDN	0.02	0.02	0.06	0.03	0.04	0.07	0.07	0.05	0.07	0.02	0.04
35	Iran	IRN	0	0	0.51	0.09	0.08	0.2	0.59	0.43	0.59	0	0.24
36	Iraq	IRQ	2.52	0	12.19	10.52	10.21	11.36	19.73	17.92	19.73	0	10.56
37	Ireland	IRL	0	0	0.33	0.02	0.03	0.02	4.93	3.88	4.93	0	1.15
38	Italy	ITA	0	0	0.01	0.02	0.02	0.01	0.01	0.01	0.02	0	0.01
39	Japan	JPN	0.01	0	0.59	0.3	0.38	0.42	0.73	0.71	0.73	0	0.39
40	Kazakhstan	KAZ	0	0	2.51	0	0	3.86	8.54	6.72	8.54	0	2.7
41	Kyrgyzstan	KGZ	0	0	0	0	0	0	0.47	0.17	0.47	0	0.08
42	Laos	LAO	5.41	4.57	7.57	6.22	6.18	6.7	6.52	6.06	7.57	4.57	6.15
43	Latvia	LVA	0.01	0	4.3	0.84	0.9	1.17	6.4	5.46	6.4	0	2.38
44	Lithuania	LTU	0	0	0.46	0.1	0	0.16	0.85	0.81	0.85	0	0.3
45	Macedonia	MKD	0	0	0.08	0.07	0	0.11	0.17	0.25	0.25	0	0.09
46	Madagascar	MDG	7.74	6.15	12.02	10.46	12.21	13.13	10.63	9.13	13.13	6.15	10.19
47	Mexico	MEX	0.69	0.55	1.15	0.89	1.08	1.07	0.83	0.6	1.15	0.55	0.86

[illegible]

74	Venezuela	VEN	18.61	18.49	21.13	18.06	19.6	19.3	20.21	19.25	21.13	18.06	19.33
75	Vietnam	VNM	1.35	1.03	1.87	1.53	1.68	1.7	1.67	1.63	1.87	1.03	1.56
76	Zambia	ZMB	5.99	6.29	5.93	5.39	5.26	5.29	6.09	5.79	6.29	5.26	5.75

Supplementary Table 3

Percentage of cropland losses for countries under nature-only approach in 2050 at biome scale(%)

	country	ISO3	SSP1_RCP19	SSP1_RCP26	SSP2_RCP45	SSP3_RCP70	SSP4_RCP34	SSP4_RCP60	SSP5_RCP34	SSP5_RCP85	max	min	mean
1	Afghanistan	AFG	0.06	0.09	0.08	0.08	0.04	0.04	0.08	0.08	0.09	0.04	0.07
2	Aland	ALA	52.92	100.00	59.55	55.34	59.02	55.80	54.51	66.05	100.00	52.92	62.90
3	Albania	ALB	25.74	27.60	27.58	26.31	18.96	25.62	24.31	23.18	27.60	18.96	24.91
4	Algeria	DZA	13.61	13.28	14.90	13.66	13.19	13.34	8.48	7.67	14.90	7.67	12.27
5	Angola	AGO	0.34	0.44	0.39	0.39	0.46	0.50	0.38	0.37	0.50	0.34	0.41
6	Antigua and Barbuda	ATG	1.04	1.00	8.52	1.04	2.42	3.23	48.29	11.74	48.29	1.00	9.66
7	Argentina	ARG	6.90	6.11	9.52	10.29	7.48	9.28	9.02	8.99	10.29	6.11	8.45
8	Armenia	ARM	19.33	21.20	22.54	23.60	17.50	24.82	29.68	31.01	31.01	17.50	23.71
9	Australia	AUS	27.19	25.34	27.98	28.58	24.07	29.91	25.64	24.40	29.91	24.07	26.64
10	Austria	AUT	0.10	0.12	0.16	0.10	0.20	0.14	0.25	0.25	0.25	0.10	0.17
11	Azerbaijan	AZE	7.11	8.47	8.44	8.32	8.07	8.32	9.05	9.62	9.62	7.11	8.43
12	Belarus	BLR	62.23	62.17	65.40	63.30	63.07	64.82	67.57	67.55	67.57	62.17	64.51
13	Belgium	BEL	0.21	0.22	0.15	0.13	0.39	0.28	0.13	0.08	0.39	0.08	0.20
14	Bhutan	BTN	31.60	36.69	36.43	35.53	48.23	30.20	42.38	30.42	48.23	30.20	36.43
15	Bolivia	BOL	55.68	56.36	50.24	53.20	54.60	51.25	48.83	50.02	56.36	48.83	52.52
16	Bosnia and Herzegovina	BIH	23.95	25.30	24.44	23.22	19.07	23.50	24.83	24.71	25.30	19.07	23.63

17	Brazil	BRA	3.11	3.09	3.15	3.15	2.29	3.05	3.30	3.32	3.32	2.29	3.06
18	Brunei	BRN	0.03	0.04	0.04	0.03	0.04	0.04	0.22	0.03	0.22	0.03	0.06
19	Bulgaria	BGR	4.93	4.66	6.01	3.59	6.62	5.18	6.61	6.48	6.62	3.59	5.51
20	Cambodia	KHM	37.02	34.84	36.07	33.11	37.82	34.30	33.31	33.92	37.82	33.11	35.05
21	Canada	CAN	1.99	2.54	4.85	5.75	0.54	3.68	4.81	4.78	5.75	0.54	3.62
22	Cape Verde	CPV	25.26	25.84	26.32	41.18	34.25	35.93	33.16	32.72	41.18	25.26	31.83
23	Chile	CHL	18.24	19.33	26.75	23.39	22.97	24.54	25.79	23.56	26.75	18.24	23.07
24	China	CHN	5.06	4.57	5.88	4.49	6.48	5.47	6.26	6.35	6.48	4.49	5.57
25	Colombia	COL	19.53	20.09	18.63	19.38	19.20	19.56	19.26	19.49	20.09	18.63	19.39
26	Costa Rica	CRI	0.01	0.03	0.03	0.02	0.03	0.03	0.02	0.01	0.03	0.01	0.02
27	Croatia	HRV	9.78	10.07	10.14	9.03	6.90	9.67	11.01	11.12	11.12	6.90	9.71
28	Cuba	CUB	3.17	2.91	3.56	3.47	3.47	3.51	3.25	3.13	3.56	2.91	3.31
29	Cyprus	CYP	100.00	89.48	69.22	86.30	79.21	70.69	72.84	72.26	100.00	69.22	80.00
30	Czech Republic	CZE	0.71	0.65	0.99	0.81	1.04	0.88	0.88	0.86	1.04	0.65	0.85
31	Democratic Republic of the Congo	COD	0.00	0.01	0.01	0.02	0.01	0.01	0.01	0.01	0.02	0.00	0.01
32	Denmark	DNK	0.24	0.23	0.22	0.21	0.19	0.22	0.23	0.22	0.24	0.19	0.22
33	Dominican Republic	DOM	5.78	5.89	5.34	5.96	5.81	5.94	5.22	5.64	5.96	5.22	5.70
34	East Timor	TLS	90.96	92.31	91.92	91.46	91.23	90.95	91.20	91.06	92.31	90.95	91.39
35	Ecuador	ECU	12.22	11.44	10.17	13.63	10.16	11.01	9.34	10.49	13.63	9.34	11.06
36	El Salvador	SLV	2.54	2.55	2.45	2.45	2.58	2.64	2.67	2.54	2.67	2.45	2.55
37	Estonia	EST	63.89	60.42	71.57	67.32	72.99	70.77	71.16	70.55	72.99	60.42	68.58
38	Faroe Islands	FRO	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00	100.00	0.00	12.50
39	Fiji	FJI	32.30	31.97	32.22	32.95	37.14	34.77	35.61	35.52	37.14	31.97	34.06
40	Finland	FIN	1.55	1.41	1.82	1.43	1.59	1.69	1.70	1.63	1.82	1.41	1.60
41	France	FRA	3.46	3.07	4.58	2.78	4.89	3.90	3.78	3.74	4.89	2.78	3.78
42	French Guiana	GUF	0.00	0.00	25.02	0.00	0.00	0.00	11.72	21.00	25.02	0.00	7.22

43	Gabon	GAB	0.01	0.01	0.02	0.22	0.05	0.05	0.03	0.01	0.22	0.01	0.05
44	Georgia	GEO	14.00	14.61	14.08	15.25	14.92	15.64	15.69	15.88	15.88	14.00	15.01
45	Germany	DEU	0.30	0.27	0.42	0.31	0.38	0.33	0.35	0.36	0.42	0.27	0.34
46	Ghana	GHA	0.06	0.06	0.06	0.05	0.05	0.05	0.05	0.05	0.06	0.05	0.05
47	Greece	GRC	4.45	4.09	6.42	4.60	6.16	5.13	4.49	4.03	6.42	4.03	4.92
48	Guatemala	GTM	0.53	0.53	0.46	0.45	0.47	0.48	0.55	0.47	0.55	0.45	0.49
49	Guinea	GIN	0.63	0.64	0.71	0.70	0.72	0.65	0.71	0.60	0.72	0.60	0.67
50	Guinea Bissau	GNB	12.03	12.20	13.84	17.25	15.25	18.74	12.25	10.48	18.74	10.48	14.00
51	Haiti	HTI	2.79	3.32	2.58	2.62	2.45	2.35	2.71	3.20	3.32	2.35	2.75
52	Honduras	HND	6.60	5.68	8.17	7.81	7.58	7.37	6.31	5.86	8.17	5.68	6.92
53	Hungary	HUN	0.78	0.66	0.80	0.79	0.84	0.71	0.79	0.77	0.84	0.66	0.77
54	India	IND	4.55	4.57	4.87	5.12	5.23	4.88	5.18	5.21	5.23	4.55	4.95
55	Indonesia	IDN	1.91	2.05	1.81	1.87	1.67	2.01	2.01	2.07	2.07	1.67	1.92
56	Iran	IRN	36.89	36.42	38.57	37.53	35.73	37.67	38.18	36.67	38.57	35.73	37.21
57	Iraq	IRQ	24.31	24.03	22.40	24.35	22.08	23.85	29.76	32.13	32.13	22.08	25.36
58	Ireland	IRL	6.21	6.23	12.11	6.16	19.61	9.07	11.84	9.59	19.61	6.16	10.10
59	Israel	ISR	2.11	2.16	2.16	1.75	2.53	2.19	1.03	0.74	2.53	0.74	1.83
60	Italy	ITA	7.19	7.09	8.01	7.12	7.71	7.34	6.88	6.70	8.01	6.70	7.25
61	Ivory Coast	CIV	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
62	Japan	JPN	4.75	4.70	5.16	3.72	8.81	5.95	6.25	7.36	8.81	3.72	5.84
63	Jordan	JOR	24.99	23.37	27.28	25.97	24.22	25.85	16.87	15.34	27.28	15.34	22.99
64	Kazakhstan	KAZ	32.62	31.35	41.61	42.20	37.57	42.75	45.34	44.86	45.34	31.35	39.79
65	Kenya	KEN	0.54	0.47	0.64	0.65	0.47	0.46	0.63	0.56	0.65	0.46	0.55
66	Kosovo	KOS	4.03	5.11	4.32	3.53	2.52	4.04	4.77	4.41	5.11	2.52	4.09
67	Kyrgyzstan	KGZ	25.45	24.70	36.14	34.55	30.89	36.74	41.74	41.79	41.79	24.70	34.00
68	Laos	LAO	36.72	37.51	38.13	38.53	36.29	37.88	38.48	38.18	38.53	36.29	37.72

69	Latvia	LVA	71.85	70.68	76.31	60.94	75.65	72.46	78.14	77.67	78.14	60.94	72.96
70	Lebanon	LBN	14.70	10.78	10.40	12.98	13.45	11.72	13.40	15.36	15.36	10.40	12.85
71	Liberia	LBR	0.13	0.12	0.13	0.25	0.12	0.38	0.12	0.12	0.38	0.12	0.17
72	Libya	LBY	6.46	6.35	7.64	7.15	6.83	7.31	5.10	4.11	7.64	4.11	6.37
73	Lithuania	LTU	31.40	30.83	35.66	26.16	35.00	33.49	36.58	36.20	36.58	26.16	33.16
74	Luxembourg	LUX	6.58	6.88	16.18	4.76	10.35	12.22	14.09	14.68	16.18	4.76	10.72
75	Macedonia	MKD	31.08	30.53	30.65	27.70	28.21	29.40	30.05	29.13	31.08	27.70	29.59
76	Madagascar	MDG	18.47	20.88	26.06	27.49	25.77	26.03	24.02	22.69	27.49	18.47	23.93
77	Mexico	MEX	5.41	5.13	5.91	5.68	6.75	6.33	5.61	5.12	6.75	5.12	5.74
78	Mongolia	MNG	12.51	12.83	12.39	9.44	15.72	13.91	13.79	13.18	15.72	9.44	12.97
79	Montenegro	MNE	6.65	13.48	8.63	8.10	3.47	6.14	11.09	11.36	13.48	3.47	8.61
80	Morocco	MAR	19.51	18.84	16.04	16.09	15.03	12.60	8.70	5.39	19.51	5.39	14.03
81	Mozambique	MOZ	0.59	0.68	0.69	0.87	0.83	0.95	0.66	0.58	0.95	0.58	0.73
82	Myanmar	MMR	2.11	2.06	2.08	2.09	2.00	2.15	2.03	2.02	2.15	2.00	2.07
83	Nepal	NPL	1.83	2.43	1.94	1.83	2.80	1.38	2.72	2.97	2.97	1.38	2.24
84	Netherlands	NLD	0.10	0.10	0.23	0.05	0.23	0.24	0.21	0.22	0.24	0.05	0.17
85	New Caledonia	NCL	68.12	67.26	70.18	69.53	67.89	69.42	67.87	69.15	70.18	67.26	68.68
86	New Zealand	NZL	5.92	6.12	31.16	31.56	11.71	37.58	20.21	26.07	37.58	5.92	21.29
87	Nicaragua	NIC	51.67	51.12	53.35	54.73	52.33	52.68	50.38	50.84	54.73	50.38	52.14
88	North Korea	PRK	20.47	21.27	21.79	23.43	32.57	22.87	29.68	30.77	32.57	20.47	25.36
89	Northern Cyprus	CYN	0.00	100.00	94.27	98.88	99.39	96.36	92.64	95.63	100.00	0.00	84.65
90	Northern Mariana Islands	MNP	43.38	37.76	43.14	42.86	42.86	42.86	35.98	35.98	43.38	35.98	40.61
91	Norway	NOR	1.16	1.50	1.24	1.33	2.42	2.24	2.08	2.17	2.42	1.16	1.77
92	Oman	OMN	1.32	1.27	1.34	1.61	1.55	1.58	1.14	1.50	1.61	1.14	1.41
93	Pakistan	PAK	0.01	0.00	0.05	0.01	0.04	0.02	0.02	0.06	0.06	0.00	0.03
94	Panama	PAN	7.74	7.71	6.35	6.80	6.94	6.12	6.00	6.72	7.74	6.00	6.80

95	Papua New Guinea	PNG	0.26	0.32	0.30	0.33	0.63	0.25	0.48	0.53	0.63	0.25	0.39
96	Peru	PER	36.54	17.93	14.20	23.44	22.23	13.96	15.98	13.50	36.54	13.50	19.72
97	Poland	POL	10.24	9.83	10.50	10.32	10.47	10.45	10.72	10.60	10.72	9.83	10.39
98	Portugal	PRT	17.63	17.08	19.65	17.68	18.53	18.00	15.71	14.81	19.65	14.81	17.39
99	Republic of Serbia	SRB	2.40	2.63	2.62	2.23	1.32	2.20	2.99	3.06	3.06	1.32	2.43
100	Romania	ROU	1.71	1.56	2.02	1.36	2.07	1.80	2.12	2.09	2.12	1.36	1.84
101	Russia	RUS	28.46	27.53	34.25	32.82	23.62	33.81	35.86	35.51	35.86	23.62	31.48
102	Sierra Leone	SLE	0.52	0.52	0.66	0.78	0.79	1.11	0.79	0.41	1.11	0.41	0.70
103	Slovakia	SVK	1.28	1.25	1.68	1.53	1.84	1.54	1.63	1.55	1.84	1.25	1.54
104	Slovenia	SVN	6.91	7.04	7.47	7.18	7.67	7.29	8.17	8.37	8.37	6.91	7.51
105	Somalia	SOM	0.09	0.10	0.10	0.09	0.08	0.09	0.09	0.09	0.10	0.08	0.09
106	South Africa	ZAF	2.74	2.74	2.96	3.90	1.36	2.92	2.58	3.11	3.90	1.36	2.79
107	South Korea	KOR	12.01	12.13	14.34	13.84	14.28	13.19	14.64	14.34	14.64	12.01	13.60
108	Spain	ESP	5.03	5.08	6.58	4.93	6.10	5.40	4.79	4.37	6.58	4.37	5.29
109	Sri Lanka	LKA	15.90	16.04	16.52	17.55	19.29	16.30	16.83	16.85	19.29	15.90	16.91
110	Suriname	SUR	0.00	0.00	0.31	0.00	0.00	0.00	0.32	0.26	0.32	0.00	0.11
111	Sweden	SWE	22.09	20.64	28.37	22.22	28.64	25.02	25.93	25.97	28.64	20.64	24.86
112	Switzerland	CHE	0.03	0.03	0.07	0.03	0.07	0.03	0.03	0.04	0.07	0.03	0.04
113	Syria	SYR	0.75	0.61	1.32	0.96	0.46	0.96	0.92	0.73	1.32	0.46	0.84
114	Tajikistan	TJK	19.62	19.60	29.30	31.58	27.66	30.57	33.31	33.43	33.43	19.60	28.14
115	Thailand	THA	1.68	1.69	1.73	1.93	2.11	1.76	1.82	1.81	2.11	1.68	1.82
116	The Bahamas	BHS	0.00	0.00	11.66	0.00	0.00	0.00	0.00	5.22	11.66	0.00	2.11
117	Tunisia	TUN	6.55	6.47	7.35	6.57	6.02	6.51	3.25	1.88	7.35	1.88	5.57
118	Turkey	TUR	18.45	18.13	21.55	20.67	18.55	20.31	19.91	19.82	21.55	18.13	19.67
119	Turkmenistan	TKM	0.00	0.00	0.07	0.07	0.00	0.06	0.06	0.05	0.07	0.00	0.04
120	Ukraine	UKR	2.27	2.14	2.72	2.24	2.28	2.52	2.94	2.86	2.94	2.14	2.49

121	United Kingdom	GBR	0.43	0.36	0.52	0.30	0.57	0.44	0.45	0.42	0.57	0.30	0.43
122	United Republic of Tanzania	TZA	0.23	0.23	0.25	0.30	0.27	0.31	0.29	0.29	0.31	0.23	0.27
123	United States of America	USA	1.16	0.86	2.25	3.22	3.71	3.66	3.11	3.06	3.71	0.86	2.63
124	Uzbekistan	UZB	2.34	2.21	3.59	3.70	3.67	3.84	3.86	3.81	3.86	2.21	3.38
125	Venezuela	VEN	36.70	37.13	34.24	29.92	36.30	34.42	35.80	35.47	37.13	29.92	35.00
126	Vietnam	VNM	10.89	10.29	10.86	9.62	11.34	9.66	9.56	9.99	11.34	9.56	10.28
127	West Bank	PSE	3.57	3.21	3.60	4.05	3.92	3.65	0.46	0.24	4.05	0.24	2.84
128	Zambia	ZMB	4.38	4.40	4.46	3.61	3.12	3.54	4.53	4.39	4.53	3.12	4.05

Supplementary Table 4

Percentage of cropland losses for countries under shared approach in 2050 at biome scale(%)

	country	ISO3	SSP1_RCP19	SSP1_RCP26	SSP2_RCP45	SSP3_RCP70	SSP4_RCP34	SSP4_RCP60	SSP5_RCP34	SSP5_RCP85	max	min	mean
1	Aland	ALA	52.92	100.00	2.96	55.34	9.35	36.85	11.15	14.88	100.00	2.96	35.43
2	Albania	ALB	0.22	0.55	0.29	0.45	0.14	0.34	0.35	0.47	0.55	0.14	0.35
3	Antigua and Barbuda	ATG	1.04	1.00	8.52	1.04	2.42	3.23	48.29	11.74	48.29	1.00	9.66
4	Argentina	ARG	0.01	0.01	0.02	0.01	0.02	0.02	0.03	0.02	0.03	0.01	0.02
5	Armenia	ARM	11.40	10.94	12.49	10.52	11.33	13.28	17.12	18.03	18.03	10.52	13.14
6	Australia	AUS	8.01	6.79	7.60	7.50	6.89	9.35	6.85	7.20	9.35	6.79	7.53
7	Azerbaijan	AZE	4.91	5.20	5.60	4.91	6.10	6.01	6.41	6.95	6.95	4.91	5.76
8	Belarus	BLR	20.83	16.12	22.86	17.30	21.53	24.45	25.73	26.91	26.91	16.12	21.96
9	Belgium	BEL	0.01	0.02	0.12	0.01	0.16	0.10	0.11	0.05	0.16	0.01	0.07
10	Bhutan	BTN	31.60	36.69	36.43	35.53	48.23	30.20	42.38	30.42	48.23	30.20	36.43
11	Bolivia	BOL	44.75	40.66	45.15	50.37	53.62	43.97	45.44	47.36	53.62	40.66	46.41

12	Bosnia and Herzegovina	BIH	12.37	12.58	13.17	10.62	8.88	12.17	13.65	13.82	13.82	8.88	12.16
13	Brazil	BRA	2.25	2.08	2.57	2.75	2.13	2.36	2.84	2.92	2.92	2.08	2.49
14	Bulgaria	BGR	1.73	1.59	2.47	1.02	2.94	1.85	2.53	2.72	2.94	1.02	2.11
15	Cambodia	KHM	14.72	11.65	16.98	16.37	24.24	12.84	15.54	17.13	24.24	11.65	16.18
16	Canada	CAN	0.67	0.82	1.31	1.57	0.16	0.98	1.30	1.38	1.57	0.16	1.02
17	Cape Verde	CPV	5.09	3.23	25.19	41.18	34.25	35.93	33.16	32.72	41.18	3.23	26.34
18	Chile	CHL	4.60	4.24	9.49	6.42	8.10	9.19	10.87	10.17	10.87	4.24	7.88
19	China	CHN	1.81	1.41	1.89	1.19	2.35	1.92	2.15	2.26	2.35	1.19	1.87
20	Colombia	COL	7.84	6.89	11.36	14.08	15.58	10.16	13.30	14.15	15.58	6.89	11.67
21	Croatia	HRV	1.74	0.90	1.85	0.92	1.79	2.25	2.44	2.42	2.44	0.90	1.79
22	Cuba	CUB	0.00	0.00	0.12	0.49	0.65	0.12	0.34	0.48	0.65	0.00	0.28
23	Czech Republic	CZE	0.05	0.05	0.08	0.08	0.15	0.14	0.13	0.12	0.15	0.05	0.10
24	Denmark	DNK	0.03	0.02	0.03	0.02	0.05	0.06	0.07	0.07	0.07	0.02	0.04
25	Dominican Republic	DOM	0.00	0.00	0.65	2.15	2.15	0.40	1.40	1.76	2.15	0.00	1.06
26	East Timor	TLS	33.09	23.15	62.03	78.78	84.38	48.37	75.20	79.39	84.38	23.15	60.55
27	Ecuador	ECU	8.50	7.69	7.20	11.28	8.40	8.02	7.19	8.60	11.28	7.19	8.36
28	Estonia	EST	46.08	41.22	57.13	50.17	60.09	56.46	58.41	59.57	60.09	41.22	53.64
29	Fiji	FJI	0.16	0.00	0.46	2.82	7.75	0.49	2.46	4.39	7.75	0.00	2.32
30	Finland	FIN	0.07	0.00	0.15	0.00	0.15	0.11	0.15	0.11	0.15	0.00	0.09
31	France	FRA	1.29	0.94	1.79	0.81	2.07	1.53	1.47	1.50	2.07	0.81	1.42
32	Georgia	GEO	10.74	10.04	10.78	9.60	11.48	11.71	10.90	11.50	11.71	9.60	10.84
33	Germany	DEU	0.09	0.05	0.11	0.07	0.08	0.06	0.08	0.09	0.11	0.05	0.08
34	Greece	GRC	0.02	0.02	0.04	0.02	0.07	0.02	0.05	0.05	0.07	0.02	0.04
35	Honduras	HND	0.48	0.29	1.00	1.83	2.34	0.67	0.75	1.27	2.34	0.29	1.08
36	Hungary	HUN	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08
37	India	IND	0.18	0.08	0.42	0.74	1.07	0.27	0.65	0.79	1.07	0.08	0.53

38	Indonesia	IDN	0.26	0.18	0.33	0.54	0.55	0.41	0.66	0.73	0.73	0.18	0.46
39	Iran	IRN	18.16	15.38	18.44	15.13	18.20	19.05	18.77	18.29	19.05	15.13	17.68
40	Iraq	IRQ	15.35	15.13	13.94	14.81	12.96	14.42	20.42	23.72	23.72	12.96	16.34
41	Ireland	IRL	1.32	0.44	2.81	0.27	10.33	1.49	2.74	1.26	10.33	0.27	2.58
42	Italy	ITA	0.11	0.08	0.22	0.10	0.26	0.14	0.17	0.16	0.26	0.08	0.16
43	Japan	JPN	2.31	2.02	2.41	1.51	3.72	2.85	2.86	3.15	3.72	1.51	2.60
44	Kosovo	KOS	0.39	0.49	0.36	0.41	0.21	0.42	0.52	0.50	0.52	0.21	0.41
45	Laos	LAO	14.47	13.17	18.96	21.52	24.03	16.46	20.32	21.79	24.03	13.17	18.84
46	Latvia	LVA	44.80	39.62	52.50	24.17	54.88	46.98	56.51	57.58	57.58	24.17	47.13
47	Lithuania	LTU	12.61	9.82	14.89	6.23	16.00	14.44	16.35	16.51	16.51	6.23	13.36
48	Luxembourg	LUX	6.58	6.88	16.18	4.76	10.35	12.22	14.09	14.68	16.18	4.76	10.72
49	Macedonia	MKD	8.49	5.55	7.65	4.44	6.58	7.21	7.27	7.28	8.49	4.44	6.81
50	Madagascar	MDG	12.23	12.99	21.21	23.97	23.36	20.57	19.38	18.35	23.97	12.23	19.01
51	Mexico	MEX	1.38	1.09	2.04	2.76	4.02	2.12	2.32	2.30	4.02	1.09	2.25
52	Montenegro	MNE	2.33	3.06	2.45	2.93	2.11	2.77	3.61	3.63	3.63	2.11	2.86
53	Myanmar	MMR	0.63	0.59	0.79	0.90	1.10	0.73	0.84	0.98	1.10	0.59	0.82
54	Nepal	NPL	1.45	1.78	1.43	1.20	1.66	0.88	1.91	2.01	2.01	0.88	1.54
55	Netherlands	NLD	0.10	0.10	0.12	0.05	0.13	0.12	0.10	0.11	0.13	0.05	0.10
56	New Caledonia	NCL	68.12	67.26	70.18	69.53	67.89	69.42	67.87	69.15	70.18	67.26	68.68
57	New Zealand	NZL	0.49	0.00	2.12	2.16	1.03	0.24	1.02	4.12	4.12	0.00	1.40
58	Nicaragua	NIC	8.45	4.24	23.13	40.86	45.00	14.98	36.11	40.78	45.00	4.24	26.69
59	North Korea	PRK	8.80	7.88	8.80	8.24	17.31	10.15	13.94	15.11	17.31	7.88	11.28
60	Norway	NOR	0.70	0.42	0.31	0.36	1.41	1.15	1.01	1.04	1.41	0.31	0.80
61	Pakistan	PAK	0.00	0.00	0.03	0.00	0.02	0.01	0.01	0.03	0.03	0.00	0.01
62	Panama	PAN	1.05	1.00	0.91	1.14	1.10	0.86	0.99	1.05	1.14	0.86	1.01
63	Peru	PER	35.21	16.19	13.08	23.24	22.01	12.55	15.57	13.11	35.21	12.55	18.87

64	Poland	POL	5.31	4.40	5.19	4.51	5.43	5.50	5.54	5.56	5.56	4.40	5.18
65	Portugal	PRT	1.70	1.76	1.71	1.68	1.78	1.63	1.64	1.61	1.78	1.61	1.69
66	Republic of Serbia	SRB	0.54	0.29	0.56	0.22	0.39	0.59	0.70	0.73	0.73	0.22	0.50
67	Romania	ROU	0.26	0.12	0.29	0.10	0.33	0.26	0.32	0.32	0.33	0.10	0.25
68	Russia	RUS	9.84	8.09	10.02	6.83	5.27	9.32	10.46	10.68	10.68	5.27	8.81
69	Slovakia	SVK	0.19	0.18	0.26	0.23	0.27	0.22	0.25	0.41	0.41	0.18	0.25
70	Slovenia	SVN	4.92	4.97	5.14	4.92	5.43	5.10	5.22	5.53	5.53	4.92	5.15
71	South Korea	KOR	3.95	3.15	5.16	3.99	5.02	4.68	5.47	5.21	5.47	3.15	4.58
72	Spain	ESP	0.26	0.18	0.69	0.25	0.83	0.44	0.44	0.42	0.83	0.18	0.44
73	Sri Lanka	LKA	0.31	0.10	2.99	6.56	8.91	1.33	5.28	6.18	8.91	0.10	3.96
74	Sweden	SWE	10.65	8.45	15.84	9.77	17.43	13.98	14.16	14.48	17.43	8.45	13.09
75	Switzerland	CHE	0.01	0.00	0.01	0.01	0.01	0.00	0.00	0.01	0.01	0.00	0.01
76	Thailand	THA	0.07	0.04	0.10	0.28	0.53	0.08	0.21	0.25	0.53	0.04	0.20
77	Turkey	TUR	8.33	7.47	9.15	8.20	8.50	8.91	8.54	8.66	9.15	7.47	8.47
78	Ukraine	UKR	0.43	0.27	0.47	0.29	0.42	0.51	0.53	0.56	0.56	0.27	0.43
79	United Kingdom	GBR	0.20	0.12	0.19	0.09	0.24	0.21	0.19	0.18	0.24	0.09	0.18
80	United States of America	USA	0.19	0.14	0.25	0.33	0.53	0.47	0.31	0.31	0.53	0.14	0.31
81	Venezuela	VEN	24.69	24.01	24.99	22.35	28.34	24.21	27.34	27.09	28.34	22.35	25.38
82	Vietnam	VNM	3.88	3.24	4.74	5.24	7.31	3.74	5.00	5.48	7.31	3.24	4.83
83	Zambia	ZMB	4.38	4.40	4.46	3.61	3.12	3.54	4.53	4.39	4.53	3.12	4.05

Supplementary Table 5

Percentage of cropland losses for countries under nature-only approach in 2030 at country scale(%)

	country	ISO3	SSP1_RCP19	SSP1_RCP26	SSP2_RCP45	SSP3_RCP70	SSP4_RCP34	SSP4_RCP60	SSP5_RCP34	SSP5_RCP85	max	min	mean
1	Aland	ALA	3.09	2.86	11.27	2.60	3.54	4.05	8.21	3.09	11.27	2.60	4.84
2	Albania	ALB	2.85	2.89	2.21	2.79	1.68	1.98	2.54	2.44	2.89	1.68	2.42
3	Antigua and Barbuda	ATG	1.71	1.60	48.29	8.81	11.28	33.99	48.29	39.90	48.29	1.60	24.23
4	Azerbaijan	AZE	4.54	4.23	3.96	3.52	4.07	3.85	3.95	4.19	4.54	3.52	4.04
5	Bangladesh	BGD	16.10	15.65	15.82	16.37	16.70	15.87	17.11	17.54	17.54	15.65	16.40
6	Belarus	BLR	9.06	8.83	9.85	10.66	9.61	9.96	10.99	10.94	10.99	8.83	9.99
7	Belgium	BEL	1.88	2.66	3.70	4.07	3.44	4.03	4.05	3.22	4.07	1.88	3.38
8	Benin	BEN	4.64	5.97	5.41	3.20	4.19	4.46	6.74	5.40	6.74	3.20	5.00
9	Bosnia and Herzegovina	BIH	8.87	8.12	4.44	8.62	2.83	5.53	5.87	5.39	8.87	2.83	6.21
10	Bulgaria	BGR	1.25	1.25	1.80	1.07	2.36	1.22	1.92	2.12	2.36	1.07	1.62
11	Burkina Faso	BFA	19.74	19.74	20.32	20.42	22.44	21.97	20.16	19.63	22.44	19.63	20.55
12	Burundi	BDI	17.03	16.41	19.50	21.61	22.83	22.64	17.63	17.91	22.83	16.41	19.45
13	Croatia	HRV	0.57	0.57	0.13	0.35	0.00	0.06	0.33	0.30	0.57	0.00	0.29
14	Cuba	CUB	4.21	4.15	3.73	4.25	4.05	4.16	3.78	3.93	4.25	3.73	4.03
15	Czech Republic	CZE	12.97	12.85	15.22	14.87	15.09	14.74	14.52	14.45	15.22	12.85	14.34
16	Denmark	DNK	24.37	24.31	24.19	24.11	24.06	24.32	24.17	24.14	24.37	24.06	24.21
17	Dominican Republic	DOM	8.75	9.26	9.76	10.02	9.21	10.26	9.92	9.32	10.26	8.75	9.56
18	East Timor	TLS	8.05	8.13	8.03	8.07	7.87	7.85	8.07	8.37	8.37	7.85	8.06
19	El Salvador	SLV	16.14	16.35	16.17	17.16	15.52	15.09	13.97	14.72	17.16	13.97	15.64
20	Estonia	EST	4.74	4.22	6.75	6.39	6.31	5.67	6.43	6.45	6.75	4.22	5.87
21	France	FRA	6.70	6.70	8.86	9.14	9.39	8.42	8.84	8.84	9.39	6.70	8.36
22	Gambia	GMB	27.46	27.54	27.53	27.77	28.38	27.69	27.60	27.82	28.38	27.46	27.72
23	Gaza	Gaza	19.74	19.79	18.92	19.68	19.65	20.22	19.49	19.61	20.22	18.92	19.64
24	Germany	DEU	7.98	7.94	9.03	9.11	8.76	8.93	8.92	8.77	9.11	7.94	8.68
25	Ghana	GHA	4.17	4.29	4.11	3.61	3.58	3.53	4.74	4.52	4.74	3.53	4.07

26	Greece	GRC	0.22	0.00	2.47	3.07	3.07	2.01	2.75	2.84	3.07	0.00	2.05
27	Guam	GUM	85.04	91.27	91.69	84.68	91.58	91.02	34.34	36.36	91.69	34.34	75.75
28	Hungary	HUN	14.32	14.46	14.34	14.53	14.63	14.49	14.37	14.49	14.63	14.32	14.45
29	India	IND	9.86	9.72	9.98	10.49	10.35	9.83	11.76	11.71	11.76	9.72	10.46
30	Italy	ITA	6.96	6.92	8.30	8.51	8.60	8.12	8.27	8.38	8.60	6.92	8.01
31	Japan	JPN	0.00	0.00	0.00	0.00	4.27	0.00	0.43	4.20	4.27	0.00	1.11
32	Kosovo	KOS	1.02	1.01	0.43	0.94	0.15	0.47	0.59	0.65	1.02	0.15	0.66
33	Kyrgyzstan	KGZ	0.00	0.00	3.51	0.00	0.00	2.30	7.29	7.57	7.57	0.00	2.58
34	Latvia	LVA	6.90	6.65	9.47	5.37	10.20	5.56	9.71	9.90	10.20	5.37	7.97
35	Lesotho	LSO	3.95	4.53	6.82	4.01	8.04	8.27	5.48	3.28	8.27	3.28	5.55
36	Liberia	LBR	0.34	0.29	0.34	0.28	0.34	0.05	0.53	0.06	0.53	0.05	0.28
37	Lithuania	LTU	15.59	15.60	16.94	14.69	17.35	15.50	17.06	17.17	17.35	14.69	16.24
38	Malawi	MWI	14.79	14.78	14.94	14.36	14.59	14.75	14.95	14.70	14.95	14.36	14.73
39	Moldova	MDA	27.44	27.54	27.60	27.45	27.53	27.53	27.47	27.47	27.60	27.44	27.50
40	Montenegro	MNE	9.50	9.99	0.00	10.03	0.00	0.24	4.81	4.47	10.03	0.00	4.88
41	Netherlands	NLD	2.02	2.28	3.90	4.31	4.34	3.36	4.05	4.02	4.34	2.02	3.54
42	Nigeria	NGA	24.00	24.44	23.64	22.09	22.29	22.62	24.24	23.54	24.44	22.09	23.36
43	North Korea	PRK	4.96	5.01	4.60	4.72	4.67	4.66	4.93	5.13	5.13	4.60	4.83
44	Northern Cyprus	CYN	17.54	16.92	21.24	48.29	53.75	49.01	61.85	59.00	61.85	16.92	40.95
45	Paraguay	PRY	0.00	0.00	0.74	0.00	0.00	0.00	0.21	0.33	0.74	0.00	0.16
46	Philippines	PHL	2.61	2.80	2.66	2.83	2.76	2.50	2.88	3.18	3.18	2.50	2.78
47	Poland	POL	11.33	11.35	11.99	11.82	11.99	11.83	11.84	11.86	11.99	11.33	11.75
48	Portugal	PRT	5.70	5.70	8.87	9.42	9.41	8.69	9.01	9.22	9.42	5.70	8.25
49	Puerto Rico	PRI	0.75	0.00	1.45	0.00	0.00	0.00	1.37	0.00	1.45	0.00	0.45
50	Republic of Serbia	SRB	4.81	4.71	4.17	4.78	3.58	3.94	4.23	4.42	4.81	3.58	4.33
51	Romania	ROU	3.51	3.44	4.00	3.27	4.29	3.46	4.14	4.27	4.29	3.27	3.80

52	Rwanda	RWA	5.30	5.17	5.35	5.69	5.86	5.95	5.42	5.55	5.95	5.17	5.54
53	Sao Tome and Principe	STP	26.00	29.90	26.10	28.81	31.97	22.93	25.84	25.58	31.97	22.93	27.14
54	Sierra Leone	SLE	12.93	13.12	13.27	12.59	12.67	12.68	13.04	13.30	13.30	12.59	12.95
55	Slovakia	SVK	0.00	0.00	0.21	0.21	0.21	0.15	0.18	0.16	0.21	0.00	0.14
56	Slovenia	SVN	1.49	1.44	2.62	1.84	2.18	1.37	1.97	1.81	2.62	1.37	1.84
57	South Korea	KOR	14.06	14.12	14.48	14.77	14.38	14.35	15.19	15.60	15.60	14.06	14.62
58	Sri Lanka	LKA	12.68	12.39	10.01	10.41	9.90	12.20	11.77	10.16	12.68	9.90	11.19
59	Swaziland	SWZ	13.81	12.56	12.66	10.94	10.84	11.25	12.75	13.47	13.81	10.84	12.28
60	Thailand	THA	3.45	3.35	3.24	3.71	3.40	3.37	3.45	3.42	3.71	3.24	3.42
61	Togo	TGO	10.40	11.05	10.83	8.27	8.15	10.57	11.26	10.95	11.26	8.15	10.18
62	Tonga	TON	5.43	3.35	4.01	5.94	9.24	6.91	11.70	10.33	11.70	3.35	7.11
63	Turkey	TUR	7.75	7.88	6.20	5.97	6.09	6.58	7.22	7.24	7.88	5.97	6.87
64	Uganda	UGA	13.70	14.39	13.86	12.56	12.70	12.99	13.89	13.61	14.39	12.56	13.46
65	Ukraine	UKR	21.70	21.70	21.84	22.06	21.86	21.92	22.08	22.06	22.08	21.70	21.90
66	Uruguay	URY	0.00	0.00	0.60	0.00	0.56	0.00	2.01	0.28	2.01	0.00	0.43
67	Vietnam	VNM	10.71	10.06	9.05	9.46	9.44	10.09	9.11	9.93	10.71	9.05	9.73
68	Zimbabwe	ZWE	16.51	17.19	15.75	14.48	14.29	15.15	16.58	15.72	17.19	14.29	15.71

Supplementary Table 6

Percentage of cropland losses for countries under shared approach in 2030 at country scale(%)

	country	ISO3	SSP1_RCP19	SSP1_RCP26	SSP2_RCP45	SSP3_RCP70	SSP4_RCP34	SSP4_RCP60	SSP5_RCP34	SSP5_RCP85	max	min	mean
1	Bangladesh	BGD	12.12	11.25	11.62	12.43	12.96	11.64	13.54	13.99	13.99	11.25	12.44
2	Belgium	BEL	1.83	2.66	2.75	2.73	0.87	2.72	2.73	1.31	2.75	0.87	2.20

3	Burkina Faso	BFA	0.40	0.00	4.50	8.25	13.86	13.02	1.36	2.48	13.86	0.00	5.48
4	Burundi	BDI	1.56	0.00	7.22	13.18	15.97	15.81	3.09	5.78	15.97	0.00	7.83
5	Czech Republic	CZE	10.82	11.03	12.56	12.32	12.43	12.21	11.88	11.75	12.56	10.82	11.88
6	Denmark	DNK	23.43	22.96	23.06	22.73	21.33	22.95	22.81	23.19	23.43	21.33	22.81
7	France	FRA	0.18	0.19	2.32	1.32	1.92	1.61	1.49	1.34	2.32	0.18	1.30
8	Gambia	GMB	2.67	0.96	2.67	6.53	9.01	7.08	2.64	9.61	9.61	0.96	5.15
9	Germany	DEU	6.97	7.02	7.31	7.27	6.56	7.33	7.12	6.92	7.33	6.56	7.06
10	Hungary	HUN	11.99	12.18	12.12	12.40	12.38	12.14	11.98	12.25	12.40	11.98	12.18
11	India	IND	0.00	0.00	0.00	0.00	0.00	0.00	0.59	0.54	0.59	0.00	0.14
12	Lithuania	LTU	0.00	0.00	0.00	0.00	0.00	1.67	0.00	0.00	1.67	0.00	0.21
13	Moldova	MDA	25.90	26.21	27.16	25.19	26.20	26.43	25.69	25.92	27.16	25.19	26.09
14	Netherlands	NLD	2.02	2.14	2.43	2.43	2.51	2.43	2.49	2.45	2.51	2.02	2.36
15	Nigeria	NGA	0.00	0.00	0.00	0.35	2.58	1.97	0.00	0.41	2.58	0.00	0.66
16	Poland	POL	0.00	0.00	0.00	0.00	1.45	0.81	0.12	0.15	1.45	0.00	0.32
17	Puerto Rico	PRI	0.75	0.00	0.13	0.00	0.00	0.00	0.06	0.00	0.75	0.00	0.12
18	Romania	ROU	1.72	1.54	2.17	1.33	2.25	1.92	2.13	2.27	2.27	1.33	1.92
19	Ukraine	UKR	19.07	19.04	19.10	19.33	19.17	19.17	19.29	19.33	19.33	19.04	19.19

Supplementary Table 7

Percentage of cropland losses for countries under nature-only approach in 2050 at country scale(%)

	country	ISO3	SSP1_RCP19	SSP1_RCP26	SSP2_RCP45	SSP3_RCP70	SSP4_RCP34	SSP4_RCP60	SSP5_RCP34	SSP5_RCP85	max	min	mean
1	Aland	ALA	0.79	0.00	20.49	1.11	27.37	10.48	11.15	14.88	27.37	0.00	10.79
2	Albania	ALB	12.21	15.74	12.91	13.01	6.82	12.76	14.79	13.69	15.74	6.82	12.74

3	Antigua and Barbuda	ATG	2.16	2.07	17.64	2.15	5.02	6.68	100.00	24.31	100.00	2.07	20.00
4	Armenia	ARM	8.16	8.87	10.45	9.29	8.39	10.63	13.23	16.01	16.01	8.16	10.63
5	Austria	AUT	10.74	10.93	12.53	10.39	11.77	11.37	10.71	10.51	12.53	10.39	11.12
6	Azerbaijan	AZE	21.34	22.90	21.84	21.54	22.64	21.30	21.84	22.17	22.90	21.30	21.95
7	Bangladesh	BGD	41.25	40.97	40.72	41.17	42.67	40.99	42.11	42.41	42.67	40.72	41.54
8	Barbados	BRB	16.88	13.85	15.37	18.51	18.05	15.45	13.64	15.93	18.51	13.64	15.96
9	Belarus	BLR	26.08	26.37	28.26	27.75	25.57	28.39	29.68	29.76	29.76	25.57	27.73
10	Belgium	BEL	20.96	20.36	21.04	21.88	19.57	21.30	19.74	19.67	21.88	19.57	20.57
11	Benin	BEN	24.97	27.16	26.48	25.38	23.38	25.51	29.78	29.79	29.79	23.38	26.55
12	Bosnia and Herzegovina	BIH	17.09	19.28	17.78	18.97	11.00	17.09	17.92	17.88	19.28	11.00	17.13
13	Brazil	BRA	0.00	0.02	0.90	0.00	0.00	0.00	0.00	0.00	0.90	0.00	0.12
14	Bulgaria	BGR	24.59	24.28	25.27	22.78	25.70	24.90	25.23	25.42	25.70	22.78	24.77
15	Burkina Faso	BFA	40.84	41.14	42.68	45.75	45.59	45.59	42.57	42.24	45.75	40.84	43.30
16	Burundi	BDI	42.17	41.16	44.60	45.95	46.05	45.86	45.21	45.54	46.05	41.16	44.57
17	Cambodia	KHM	9.34	7.95	8.33	6.90	10.22	7.58	7.09	7.36	10.22	6.90	8.10
18	Cape Verde	CPV	0.21	0.00	17.95	1.52	1.73	0.87	0.00	0.00	17.95	0.00	2.78
19	China	CHN	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01	0.00	0.00
20	Comoros	COM	0.00	8.14	0.00	8.84	13.07	0.00	13.36	25.11	25.11	0.00	8.56
21	Croatia	HRV	14.29	15.88	14.98	14.36	9.95	14.48	15.46	15.24	15.88	9.95	14.33
22	Cuba	CUB	26.86	26.12	28.14	29.08	26.77	26.74	25.50	26.48	29.08	25.50	26.96
23	Cyprus	CYP	0.00	0.00	18.50	0.01	1.71	17.96	19.61	19.37	19.61	0.00	9.65
24	Czech Republic	CZE	29.89	28.30	30.28	29.58	30.90	30.14	29.77	29.54	30.90	28.30	29.80
25	Denmark	DNK	42.40	42.28	42.33	42.35	42.10	42.49	42.34	42.28	42.49	42.10	42.32
26	Dominican Republic	DOM	27.73	27.21	29.55	30.26	27.35	28.11	26.51	27.80	30.26	26.51	28.07
27	East Timor	TLS	33.78	34.01	33.55	34.11	35.70	34.07	35.18	35.35	35.70	33.55	34.47
28	El Salvador	SLV	44.60	43.30	45.08	46.53	42.10	43.87	40.06	43.05	46.53	40.06	43.58

29	Equatorial Guinea	GNQ	0.00	0.00	0.00	0.06	0.01	0.00	0.00	0.00	0.06	0.00	0.01
30	Estonia	EST	12.77	12.48	18.30	15.87	19.06	16.53	18.14	18.01	19.06	12.48	16.40
31	Fiji	FJI	3.28	5.10	3.73	4.88	9.24	3.18	6.59	7.06	9.24	3.18	5.38
32	France	FRA	33.20	32.94	34.96	32.75	35.16	33.96	34.21	34.14	35.16	32.75	33.91
33	Gambia	GMB	47.05	47.18	47.23	47.77	47.51	47.77	47.69	48.06	48.06	47.05	47.53
34	Gaza	Gaza	46.20	46.70	45.29	46.38	46.68	47.64	45.95	48.20	48.20	45.29	46.63
35	Georgia	GEO	2.63	3.88	2.82	2.61	3.46	3.08	2.77	3.26	3.88	2.61	3.07
36	Germany	DEU	19.55	18.81	21.03	19.62	20.56	20.42	19.66	19.57	21.03	18.81	19.90
37	Ghana	GHA	23.02	23.69	23.34	25.15	25.03	25.72	28.17	30.06	30.06	23.02	25.52
38	Greece	GRC	9.46	9.00	14.18	10.14	15.47	12.04	12.45	12.52	15.47	9.00	11.91
39	Guam	GUM	94.65	94.89	97.70	91.38	96.68	97.83	49.70	49.24	97.83	49.24	84.01
40	Guinea Bissau	GNB	2.25	6.61	4.62	0.86	1.48	4.33	7.12	7.81	7.81	0.86	4.39
41	Haiti	HTI	0.00	0.00	7.58	9.33	7.74	9.43	0.00	6.49	9.43	0.00	5.07
42	Hungary	HUN	36.82	36.60	35.69	36.13	36.48	36.01	36.39	36.29	36.82	35.69	36.30
43	India	IND	32.36	32.43	32.97	34.34	34.62	32.32	34.81	35.20	35.20	32.32	33.63
44	Indonesia	IDN	0.00	0.00	0.00	0.70	0.71	1.35	0.52	0.48	1.35	0.00	0.47
45	Iran	IRN	0.00	0.00	5.71	0.00	0.00	0.00	0.00	0.00	5.71	0.00	0.71
46	Ireland	IRL	0.00	0.00	0.00	0.00	7.34	0.00	0.00	0.00	7.34	0.00	0.92
47	Italy	ITA	29.03	28.74	31.23	28.74	32.21	30.37	30.60	30.61	32.21	28.74	30.19
48	Ivory Coast	CIV	22.91	25.53	23.32	22.09	21.50	22.79	24.84	24.33	25.53	21.50	23.41
49	Jamaica	JAM	14.09	15.16	20.77	19.19	12.68	16.06	16.96	16.28	20.77	12.68	16.40
50	Japan	JPN	12.67	12.42	12.97	10.45	18.10	14.35	14.60	15.82	18.10	10.45	13.92
51	Kosovo	KOS	10.17	11.58	10.57	9.59	7.86	9.88	10.72	10.40	11.58	7.86	10.10
52	Kyrgyzstan	KGZ	0.00	0.00	3.67	0.00	0.00	4.69	17.65	18.34	18.34	0.00	5.54
53	Latvia	LVA	17.96	17.63	23.76	7.28	25.01	17.95	24.36	24.41	25.01	7.28	19.79
54	Lebanon	LBN	27.89	27.51	27.39	27.98	29.53	28.64	29.41	33.35	33.35	27.39	28.96

55	Lesotho	LSO	8.25	19.33	28.02	39.18	38.97	37.43	29.64	24.47	39.18	8.25	28.16
56	Liberia	LBR	23.57	23.45	24.08	24.56	24.18	25.02	26.30	26.92	26.92	23.45	24.76
57	Lithuania	LTU	38.35	37.82	39.84	32.72	40.14	38.87	40.00	40.05	40.14	32.72	38.47
58	Luxembourg	LUX	6.99	7.38	19.02	5.85	20.02	14.39	16.83	16.99	20.02	5.85	13.43
59	Macedonia	MKD	7.02	6.58	6.88	5.88	5.13	6.18	6.95	6.60	7.02	5.13	6.40
60	Malawi	MWI	40.78	40.85	40.66	40.30	40.80	41.39	41.48	40.80	41.48	40.30	40.88
61	Malaysia	MYS	0.05	1.88	0.00	0.00	0.00	0.00	0.00	0.00	1.88	0.00	0.24
62	Mauritius	MUS	2.85	2.62	3.08	2.83	2.91	3.40	3.60	2.90	3.60	2.62	3.02
63	Moldova	MDA	48.53	48.50	48.64	48.52	48.54	48.60	48.52	48.61	48.64	48.50	48.56
64	Montenegro	MNE	1.07	25.38	2.45	19.00	0.00	3.97	17.44	8.54	25.38	0.00	9.73
65	Myanmar	MMR	2.38	4.18	2.89	3.63	7.44	2.46	5.56	6.02	7.44	2.38	4.32
66	Nepal	NPL	1.64	5.49	3.44	3.44	4.63	1.14	10.16	8.00	10.16	1.14	4.74
67	Netherlands	NLD	11.75	9.50	13.43	9.77	14.31	12.94	9.90	11.30	14.31	9.50	11.61
68	New Caledonia	NCL	0.00	1.13	0.00	0.00	0.00	0.00	0.00	0.00	1.13	0.00	0.14
69	Nigeria	NGA	48.03	48.75	47.21	46.77	47.24	47.77	47.49	47.39	48.75	46.77	47.58
70	North Korea	PRK	14.73	15.74	15.22	15.88	26.38	15.35	20.33	21.67	26.38	14.73	18.16
71	Northern Cyprus	CYN	0.00	100.00	94.27	98.88	99.39	96.36	92.64	95.63	100.00	0.00	84.65
72	Northern Mariana Islands	MNP	43.38	37.76	43.14	42.86	42.86	42.86	35.98	35.98	43.38	35.98	40.61
73	Pakistan	PAK	0.00	0.00	0.34	0.00	0.00	0.00	0.00	0.00	0.34	0.00	0.04
74	Paraguay	PRY	0.00	0.00	5.75	0.88	0.22	3.51	6.25	5.43	6.25	0.00	2.76
75	Philippines	PHL	20.31	20.23	19.75	21.28	27.38	21.13	25.09	25.84	27.38	19.75	22.63
76	Poland	POL	37.40	37.09	37.83	37.15	38.05	37.77	38.07	38.11	38.11	37.09	37.68
77	Portugal	PRT	29.28	27.98	31.91	29.18	32.63	30.15	30.95	31.38	32.63	27.98	30.43
78	Puerto Rico	PRI	6.50	4.93	3.82	12.50	10.18	12.29	0.00	0.92	12.50	0.00	6.39
79	Qatar	QAT	14.16	11.72	9.75	18.78	36.42	9.97	10.21	48.09	48.09	9.75	19.89
80	Republic of Serbia	SRB	30.51	30.41	30.64	29.11	28.92	29.87	31.55	30.28	31.55	28.92	30.16

81	Romania	ROU	20.17	19.87	21.58	18.55	22.11	20.37	21.92	22.02	22.11	18.55	20.82
82	Rwanda	RWA	30.84	30.87	31.51	32.35	32.53	32.53	32.61	32.90	32.90	30.84	32.02
83	Saint Kitts and Nevis	KNA	22.67	19.91	19.96	20.27	21.32	19.35	17.59	21.78	22.67	17.59	20.36
84	Samoa	WSM	2.65	3.84	4.63	2.97	8.99	3.73	5.46	2.03	8.99	2.03	4.29
85	Sao Tome and Principe	STP	45.85	50.77	48.15	31.21	36.30	39.09	30.87	28.48	50.77	28.48	38.84
86	Senegal	SEN	5.92	7.00	7.47	8.69	10.74	9.59	9.66	9.86	10.74	5.92	8.62
87	Sierra Leone	SLE	37.15	37.97	37.39	37.64	37.56	38.08	39.47	39.75	39.75	37.15	38.13
88	Singapore	SGP	0.00	0.00	0.00	51.04	0.00	0.00	0.00	0.00	51.04	0.00	6.38
89	Slovakia	SVK	13.48	12.37	13.52	13.28	14.03	13.60	13.10	13.35	14.03	12.37	13.34
90	Slovenia	SVN	19.75	19.47	21.94	20.23	21.33	21.01	21.30	22.12	22.12	19.47	20.89
91	South Korea	KOR	35.36	35.41	37.23	37.28	37.80	36.29	37.35	36.91	37.80	35.36	36.70
92	Spain	ESP	4.65	4.84	5.92	4.49	6.16	5.20	5.21	5.19	6.16	4.49	5.21
93	Sri Lanka	LKA	30.15	30.27	30.21	32.21	35.51	30.38	31.46	31.08	35.51	30.15	31.41
94	Swaziland	SWZ	38.45	39.33	35.00	34.16	34.33	33.88	37.56	38.45	39.33	33.88	36.39
95	Switzerland	CHE	2.01	2.10	2.25	2.03	2.12	2.12	2.00	1.96	2.25	1.96	2.08
96	Syria	SYR	0.00	0.00	3.89	0.00	0.11	0.00	0.00	0.00	3.89	0.00	0.50
97	Thailand	THA	21.69	21.51	21.94	24.19	25.82	22.00	22.89	22.87	25.82	21.51	22.86
98	Togo	TGO	31.16	30.98	31.29	31.85	32.18	32.83	34.09	34.43	34.43	30.98	32.35
99	Tonga	TON	34.41	33.12	32.62	39.59	45.18	40.73	45.18	45.18	45.18	32.62	39.50
100	Trinidad and Tobago	TTO	5.43	5.09	5.55	5.76	5.47	1.23	4.75	1.23	5.76	1.23	4.31
101	Tunisia	TUN	2.11	1.67	0.32	0.30	0.00	0.00	0.00	0.00	2.11	0.00	0.55
102	Turkey	TUR	22.62	22.74	24.24	23.43	21.72	23.45	22.90	23.48	24.24	21.72	23.07
103	Uganda	UGA	35.96	36.52	35.79	36.21	35.99	36.14	37.57	37.52	37.57	35.79	36.46
104	Ukraine	UKR	42.42	42.32	42.48	42.35	42.14	42.38	42.44	42.51	42.51	42.14	42.38
105	United Kingdom	GBR	13.19	13.38	14.58	12.85	13.85	13.79	13.99	13.67	14.58	12.85	13.66
106	United Republic of Tanzania	TZA	11.97	14.53	13.12	12.07	11.22	13.53	14.19	14.09	14.53	11.22	13.09

107	United States Virgin Islands	VIR	46.04	69.32	74.63	34.04	53.66	73.34	84.03	86.23	86.23	34.04	65.16
108	Uruguay	URY	0.00	0.00	0.00	0.00	0.00	0.00	1.82	0.00	1.82	0.00	0.23
109	Vietnam	VNM	26.21	23.65	24.46	20.77	27.78	22.12	21.12	21.90	27.78	20.77	23.50
110	West Bank	PSE	20.01	21.38	21.03	21.13	25.88	22.10	17.61	24.19	25.88	17.61	21.67
111	Zimbabwe	ZWE	37.19	38.02	36.91	37.13	36.79	37.55	38.35	38.42	38.42	36.79	37.54

Supplementary Table 8

Percentage of cropland losses for countries under shared approach in 2050 at country scale(%)

	country	ISO3	SSP1_RCP19	SSP1_RCP26	SSP2_RCP45	SSP3_RCP70	SSP4_RCP34	SSP4_RCP60	SSP5_RCP34	SSP5_RCP85	max	min	mean
1	Antigua and Barbuda	ATG	2.16	2.07	17.64	2.15	5.02	6.68	100.00	24.31	100.00	2.07	20.00
2	Austria	AUT	10.74	10.93	12.53	10.39	11.77	11.37	10.71	10.51	12.53	10.39	11.12
3	Azerbaijan	AZE	5.66	9.20	6.74	6.03	13.92	6.09	5.77	5.59	13.92	5.59	7.38
4	Bangladesh	BGD	40.13	39.74	39.43	39.79	41.51	39.76	40.92	41.30	41.51	39.43	40.32
5	Barbados	BRB	16.88	13.85	15.37	18.51	18.05	15.45	13.64	15.93	18.51	13.64	15.96
6	Belarus	BLR	7.56	5.93	14.17	8.64	3.57	11.79	14.30	14.29	14.30	3.57	10.03
7	Belgium	BEL	25.13	22.78	20.40	18.05	18.97	20.83	22.81	22.69	25.13	18.05	21.46
8	Bulgaria	BGR	23.96	23.65	24.45	22.50	24.82	24.23	24.35	24.53	24.82	22.50	24.06
9	Burkina Faso	BFA	33.03	32.02	38.82	43.69	43.68	43.55	38.85	38.13	43.69	32.02	38.97
10	Burundi	BDI	38.82	37.24	42.29	44.65	44.42	44.57	43.57	44.23	44.65	37.24	42.47
11	Cuba	CUB	20.97	18.60	24.31	26.28	19.26	19.08	14.99	19.47	26.28	14.99	20.37
12	Czech Republic	CZE	10.79	10.63	11.82	11.48	12.20	11.88	11.31	10.98	12.20	10.63	11.39
13	Denmark	DNK	38.19	37.14	36.59	36.14	34.27	37.32	36.72	37.10	38.19	34.27	36.68
14	Dominican Republic	DOM	12.12	11.24	16.39	19.53	12.69	14.62	7.46	11.87	19.53	7.46	13.24

15	East Timor	TLS	14.79	6.94	9.18	19.92	30.99	16.63	28.03	28.70	30.99	6.94	19.40
16	El Salvador	SLV	36.09	34.10	36.64	38.81	32.95	34.80	26.09	20.71	38.81	20.71	32.52
17	France	FRA	33.10	32.90	34.02	32.75	33.42	33.46	33.51	33.43	34.02	32.75	33.32
18	Gambia	GMB	37.70	37.06	38.78	42.52	41.50	41.99	43.93	45.75	45.75	37.06	41.15
19	Gaza	Gaza	18.96	19.19	18.68	19.68	19.61	19.66	18.87	20.31	20.31	18.68	19.37
20	Germany	DEU	6.64	6.89	7.18	7.26	6.30	7.00	6.66	6.67	7.26	6.30	6.83
21	Ghana	GHA	4.16	3.90	5.80	11.00	10.95	11.38	17.19	20.09	20.09	3.90	10.56
22	Hungary	HUN	31.12	27.12	26.28	26.33	29.00	27.29	26.85	26.99	31.12	26.28	27.62
23	India	IND	27.09	27.26	28.22	30.56	30.94	27.20	31.36	31.94	31.94	27.09	29.32
24	Italy	ITA	20.59	20.45	22.04	20.76	21.58	21.28	21.20	21.18	22.04	20.45	21.13
25	Ivory Coast	CIV	3.85	3.77	4.60	6.34	6.64	7.10	10.04	11.13	11.13	3.77	6.68
26	Japan	JPN	0.00	0.00	0.00	0.00	5.68	0.00	0.00	0.00	5.68	0.00	0.71
27	Kosovo	KOS	4.85	4.50	4.99	1.22	0.00	3.08	4.16	3.83	4.99	0.00	3.33
28	Lebanon	LBN	20.89	22.08	18.74	22.96	24.01	23.68	19.69	13.39	24.01	13.39	20.68
29	Lesotho	LSO	0.00	0.00	0.00	14.97	23.05	11.66	0.00	0.00	23.05	0.00	6.21
30	Liberia	LBR	5.15	5.19	7.96	13.17	12.55	13.11	17.67	20.29	20.29	5.15	11.89
31	Lithuania	LTU	36.16	33.54	35.34	25.80	35.45	36.19	35.10	35.18	36.19	25.80	34.09
32	Luxembourg	LUX	6.58	6.88	16.18	4.76	10.35	12.22	14.09	14.68	16.18	4.76	10.72
33	Malawi	MWI	17.90	16.15	19.88	21.42	22.50	22.55	23.60	24.20	24.20	16.15	21.03
34	Moldova	MDA	49.84	49.41	50.18	48.75	49.00	49.29	48.97	49.06	50.18	48.75	49.31
35	Netherlands	NLD	1.87	1.97	2.48	1.62	2.44	2.30	1.40	2.42	2.48	1.40	2.06
36	Nigeria	NGA	34.61	33.70	36.32	38.16	39.25	39.51	39.29	39.85	39.85	33.70	37.59
37	North Korea	PRK	0.00	0.00	0.00	0.00	20.05	0.00	9.14	11.26	20.05	0.00	5.06
38	Northern Cyprus	CYN	0.00	100.00	94.27	98.88	99.39	96.36	92.64	95.63	100.00	0.00	84.65
39	Philippines	PHL	0.14	0.00	0.00	3.18	20.12	2.51	14.67	16.33	20.12	0.00	7.12
40	Poland	POL	36.82	36.34	37.10	36.18	37.46	37.07	37.56	37.62	37.62	36.18	37.02

41	Portugal	PRT	6.90	4.41	14.79	7.74	16.58	11.07	11.61	11.94	16.58	4.41	10.63
42	Republic of Serbia	SRB	30.37	30.06	30.46	28.57	28.79	29.55	31.55	29.94	31.55	28.57	29.91
43	Romania	ROU	14.41	14.38	14.95	13.97	14.98	14.39	15.14	15.18	15.18	13.97	14.68
44	Rwanda	RWA	29.29	29.25	30.32	31.56	31.74	31.73	31.82	32.14	32.14	29.25	30.98
45	Saint Kitts and Nevis	KNA	0.00	19.91	0.00	20.27	0.00	0.00	0.00	0.00	20.27	0.00	5.02
46	Sierra Leone	SLE	23.15	23.88	25.55	29.59	29.56	29.21	32.60	34.01	34.01	23.15	28.45
47	Singapore	SGP	0.00	0.00	0.00	51.04	0.00	0.00	0.00	0.00	51.04	0.00	6.38
48	Slovakia	SVK	7.18	6.61	7.43	7.56	7.69	7.68	7.47	7.71	7.71	6.61	7.42
49	Slovenia	SVN	19.46	18.33	20.82	19.98	20.64	20.33	20.61	20.75	20.82	18.33	20.12
50	South Korea	KOR	34.05	33.90	36.10	36.25	37.07	35.13	35.90	35.91	37.07	33.90	35.54
51	Sri Lanka	LKA	11.28	9.90	10.63	20.88	26.09	13.27	17.39	17.20	26.09	9.90	15.83
52	Swaziland	SWZ	0.00	0.00	0.00	21.44	19.30	17.68	17.13	20.86	21.44	0.00	12.05
53	Switzerland	CHE	2.01	2.10	2.25	2.03	2.10	2.12	2.00	1.96	2.25	1.96	2.07
54	Thailand	THA	16.38	15.96	16.38	20.67	23.03	16.94	18.60	18.66	23.03	15.96	18.33
55	Togo	TGO	0.00	0.00	0.00	4.94	4.34	5.84	12.23	14.18	14.18	0.00	5.19
56	Trinidad and Tobago	TTO	5.43	5.09	5.55	5.76	5.47	1.23	4.75	1.13	5.76	1.13	4.30
57	Turkey	TUR	0.00	0.00	1.91	0.68	0.00	0.00	0.00	0.00	1.91	0.00	0.32
58	Uganda	UGA	6.32	5.01	9.98	13.43	13.69	13.62	15.53	16.90	16.90	5.01	11.81
59	Ukraine	UKR	39.70	38.77	40.02	37.72	38.00	38.54	38.58	38.48	40.02	37.72	38.73
60	United Kingdom	GBR	13.19	13.38	14.58	12.85	13.85	13.79	13.99	13.67	14.58	12.85	13.66
61	Vietnam	VNM	7.58	0.00	5.07	0.00	12.03	0.00	0.00	0.00	12.03	0.00	3.09
62	West Bank	PSE	11.97	11.82	12.06	12.50	14.86	12.65	12.23	17.97	17.97	11.82	13.26
63	Zimbabwe	ZWE	0.00	0.00	0.00	0.90	0.01	1.15	9.38	13.17	13.17	0.00	3.08