

## Supplementary Materials

**Table S1: Data used in compiling Figure 1.**

Chemical fertilizer input in China (10 <sup>4</sup> t)					
Year	Nitrogen fertilizer	Phosphorus fertilizer	Potassium fertilizer	Compound fertilizer	Total
1980	934	273	35	27	1269
1981	942	296	41	57	1336
1982	1043	345	57	69	1514
1983	1164	351	58	86	1659
1984	1215	329	69	127	1740
1985	1205	311	80	180	1776
1986	1313	360	77	181	1931
1987	1327	372	92	209	2000
1988	1417	382	101	241	2141
1989	1537	419	121	281	2358
1990	1638	462	148	342	2590
1991	1726	500	174	406	2806
1992	1756	516	196	462	2930
1993	1835	575	212	529	3151
1994	1882	601	235	601	3319
1995	2022	632	269	671	3594
1996	2145	658	290	735	3828
1997	2172	689	322	798	3981
1998	2234	683	346	822	4085
1999	2181	698	366	880	4125
2000	2162	690	376	918	4146
2001	2164	706	400	984	4254
2002	2157	712	422	1040	4331
2003	2150	714	438	1110	4412
2004	2222	736	467	1204	4629
2005	2229	744	489	1303	4765
2006	2262	770	510	1386	4928
2007	2297	773	534	1503	5107
2008	2303	780	545	1609	5237
2009	2330	798	564	1699	5391
2010	2354	806	586	1799	5545
2011	2381	819	605	1895	5700
2012	2400	829	618	1990	5837
2013	2394	831	627	2057	5909
2014	2393	845	642	2116	5996

2015	2362	843	642	2176	6023
2016	2310	830	637	2207	5984
2017	2222	798	620	2220	5860
2018	2065	729	590	2269	5653
2019	1930	682	561	2231	5404
2020	1834	654	542	2221	5251
2021	1745	627	525	2294	5191
2022	1654	563	493	2369	5079

**Table S2: Names and classification of Constituent Units of China's ten pilot national parks (Table 1).**

No.	Pilot National Park	Constituent Units
1	Sanjiangyuan National Park	<ul style="list-style-type: none"> <li>• 3 National Nature Reserves (Sanjiangyuan NNR, Hoh Xil NNR, Qangtang NNR)</li> <li>• 2 Wetlands of International Importance (Elinghu wetland, Zalinghu wetland)</li> <li>• 7 Wetlands of National Importance (Elinghu wetland, Zalinghu wetland, Gangnagmacuo wetland, Zhuonaihu Wetland, Longbaotan wetland, etc.)</li> <li>• 2 National Aquatic Germplasm Resources Conservation Areas (Gyaring Hu Ngoring Hu <i>Gymnocypris eckloni et Platypharodon extremus</i> NAGRCA, Qumar He Endemic Fishes NAGRCA)</li> <li>• 1 World Natural Heritage Site (Qinghai Hoh Xil)</li> <li>• 1 Water Conservancy Scenic Spot (Huangheyuan water conservancy scenic spots)</li> </ul>
2	Giant Panda National Park	<ul style="list-style-type: none"> <li>• 21 National Nature Reserves (Wolong NNR, Fengtongzhai NNR, Tangjiahe NNR, Longxi - Hongkou NNR, Wanglang NNR, Baishuihe NNR, Xuebaoding NNR, Xiaozhaizigou NNR, Liziping NNR, Qianfoshan NNR, Foping NNR, Taibaishan NNR, Zhouzhi NNR, Changqing NNR, Tianhuashan NNR, Sangyuan NNR, Taibai Xushuihe Valuable and Rare Aquatic Organisms NNR, Huangbaiyuan NNR, Laoxiancheng NNR, Guanyinshan NNR, Baishuijiang NNR)</li> <li>• 5 National Scenic and Historic Areas (Huanglongsi SHA of Huanglongsi - Jiuzhaigou NSHA, Qingcheng Houshan Scenery Area of Qingchengshan - Dujiangyan NSHA, Xiling Xueshan NSHA, Sichuan Bailonghu NSHA, Longmenshan NSHA)</li> <li>• 3 National Geoparks (Longmenshan NGP, Anxian Bioherm NGP, Huanglong NGP)</li> <li>• 11 National Forest Parks (Dujiangyan NFP, Wawushan NFP, Xiling NFP, Longcanggou NFP, Longmenshan NFP, Qianfoshan NFP, Erlangshan NFP, Beichuan NFP, Jiguanshan NFP, Tianhuashan NFP, Qingfengxia NFP)</li> </ul>
3	Northeast China Tiger and Leopard National Park	<ul style="list-style-type: none"> <li>• 7 National Nature Reserves (Hunchun Northeast China Tiger NNR, Wangqing NNR, Laoyeling Northeast China Tiger NNR, Muling Japanese Yew NNR, Huangni River NNR, Yanming Lake NNR, Tianqiaoling NNR)</li> <li>• 3 National Forest Parks (Lanjia Daxiagu NFP, Liufengshan NFP, etc.)</li> <li>• 1 National Wetland Park (Wangqing Gayahe NWP)</li> </ul>

		<ul style="list-style-type: none"> <li>• 1 National Aquatic Germplasm Resources Conservation Area (Mijianghe Chum Salmon NAGRCA)</li> </ul>
4	Hainan Tropical Rainforest National Park	<ul style="list-style-type: none"> <li>• 5 National Nature Reserves (WuZhi Shan NNR, YingGe Ling NNR, JianFeng Ling NNR, BaWang Ling, NNR and Diaoluo Shan NNR)</li> <li>• 4 National Forest Parks (JianFeng Ling NFP, BaWang Ling NFP, Diaoluo shan NFP, and Limu mountain NFP)</li> </ul>
5	Wuyishan National Park	<ul style="list-style-type: none"> <li>• 2 National Nature Reserves (Wuyishan NNR, Jiangxi Wuyishan NNR)</li> <li>• 3 National Forest Parks (Wuyishan NFP, Wuyi Tianchi NFP, Ehushan NFP)</li> <li>• 1 National Scenic and Historic Area (Wuyishan NSHA)</li> <li>• 1 National Aquatic Germplasm Resources Conservation Area (Jiuquxi Spinibarbus caldwelli NAGRCA)</li> </ul>
6	Qilianshan National Park System Pilot Site	<ul style="list-style-type: none"> <li>• 2 National Nature Reserves (Qilianshan NNR, Yanchiwan NNR)</li> <li>• 2 National Forest Parks (Tianzhu Sanxia NFP, Xianmi NFP)</li> <li>• 1 National Wetland Park (Qilian Heiheyuan NWP)</li> </ul>
7	Hubei Shennongjia National Park System Pilot Site	<ul style="list-style-type: none"> <li>• 1 National Nature Reserve (Shennongjia NNR)</li> <li>• 1 National Geopark (Shennongjia NGP)</li> <li>• 1 National Forest Park (Shennongjia NFP)</li> <li>• 1 National Wetland Park (Shennongjia Dajiuhu NWP)</li> </ul>
8	Hunan Nanshan National Park System Pilot Site	<ul style="list-style-type: none"> <li>• 1 National Nature Reserve (Jintongshan NNR)</li> <li>• 1 National Scenic and Historic Area (Nanshan NSHA)</li> <li>• 1 National Forest Park (Liangjiang Xiagu NFP)</li> <li>• 1 National Wetland Park (Chengbu Baiyunhu NWP)</li> </ul>
9	Yunnan Bodaco National Park System Pilot Site	<ul style="list-style-type: none"> <li>• Hongshan Scenery Area (part, incl. lakes of Bitahai &amp; Xodo) of Sanjiangbingliu NSHA</li> </ul>
10	Zhejiang Qianjiangyuan National Park System Pilot Site	<ul style="list-style-type: none"> <li>• 1 National Nature Reserve (Gutianshan NNR)</li> <li>• 1 National Forest Park (Qianjiangyuan NFP)</li> </ul>