Supplementary Information

Global processes of anthropogenesis characterise the early Anthropocene in the Japanese Islands

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As noted in the main text, the claims about Japanese environmental exceptionalism analysed here have been used in environmental policy in Japan. In this Supplementary Information we list some examples related to the four claims investigated. Our aim is to provide representative examples and the following material is certainly not exhaustive. As well as publications by the Japanese government, we use policy statements published by influential private organisations. One such organisation is the Tokyo Foundation for Policy Research, a think tank established in 1997. Another is the MUFG Bank, Japan's biggest bank currently ranked as the sixth largest in the world. We use the MUFG Bank's publication *Kikan Seisaku/Keiei Kenkyū* (*Quarterly Journal of Public Policy and Management*). According to its website, this magazine 'includes debates by research institution staff and professional consultants about a current topic, as well as contributions from industry experts and realistic and valuable policy statements' (https://www.murc.jp/english/report/quarterly_journal/). Yet a third organisation is AEON Environmental Foundation established by AEON Co., Ltd, a Japanese multinational said to be the 'largest retailer in Asia'(https://en.wikipedia.org/wiki/AEON_(company)).

In the early post war era, the historical sciences in Japan often critiqued nature as a way to deny autonomous political change (Maruyama, 1969; cf. Thomas, 2001; Hudson, 2021: 21). With growing concerns over environmental issues, however, the opposite trend has become common. That is, even if nature and the environment are seen as changing and 'under threat', writings about

Japanese nature are reduced to essentialist claims about Japanese society and culture. This means that environmental policy in Japan usually includes, perhaps to some extent unconsciously, assumptions about culture and society. The Japanese writers cited in the main text have included little in the way of direct policy recommendations in their own work; their intention has rather been to extoll various aspects of Japan's supposedly 'harmonious' relationship with nature. The appearance of their ideas in policy documents such as those introduced below reflects, on the one hand, common shared sources such as Tetsurō Watsuji's influential 1928 book *Fūdo* (revised in 1943 and translated into English as *Climate and Culture*) (Watsuji 1961) but, at the same time, shows that the influence of popular writers such as Takeshi Umehara extends beyond academia. A particularly instructive publication in this respect was produced for the COP-9 Congress in Bonn. Titled *Conserving Nature: A Japanese Perspective*, the book was released by the Biodiversity Network Japan, Countdown 2010 and the Nippon Keidanren Committee on Nature Conservation, reflecting a broad group of conservation and business interests (Biodiversity Network Japan, 2008). The Foreword to this publication admits that 'Unlike other publications on biodiversity, we didn't focus on conventional topics such as endangered species and protected area. Neither have we intended to show the best way to conserve biodiversity. Rather, as a first step to explore a new way of thinking, we tried to review our cultural and social background and [our] own historical experiences on how our ancestors tried to create ways to live harmoniously with nature. This traditional concept may be characterized by a sense of awe towards nature and [is] focused on respecting nature benefits rather than just protecting them' (Nishida, 2008). The explicit argument that environmental policy can or should begin with reviewing how modern Japan's 'ancestors tried to create ways to live harmoniously with nature' is found in many of the documents discussed below. To put this more bluntly, the underlying argument is that since the key factor is the 'Japanese spirit of worshipping nature', then environmental policy should follow 'naturally' from that (e.g., Iwatsuki, 2008).

Japanese government publications on food and food culture (including so-called *washoku*, nominated as UNESCO Intangible Cultural Heritage in 2013) also often reflect claims about environmental exceptionalism, not least in the nomination file submitted to UNESCO which can be downloaded at: https://ich.unesco.org/doc/src/19950-EN.doc. *Washoku* has been analysed in terms of Japan's 'soft power' whereby attempts to export more food and thus increase agricultural self-sufficiency are projected through certain ideas about Japanese cultural identity (Bestor, 2014; Kohsaka, 2017; Farina, 2018; Cwiertka and Yasuhara, 2020). Wengrow's (2008) discussion of commodity branding over history has also been employed by Cwiertka and Yasuhara (2020) to analyse political uses of food in contemporary Japan.

We were unable to locate any examples in Japanese policy documents of the specific claim that the late arrival of agriculture in Japan has made the country more sustainable. Such documents emphasise the traditional or 'timeless' nature of rice farming in the archipelago. However, the continuing role of pre-agricultural forest resources is frequently mentioned, for instance in the

National Biodiversity Strategy, which notes that, in addition to agriculture, 'Food gathered from the forests is also important. People used to live by utilizing abundant benefits from forests to the full such as mushrooms, edible wild plants and nuts. Today, with changing lifestyles, the food collected from forests is not as vital for our diet as it used to be. However, *forests are still a treasury of foodstuffs which characterize Japanese culture*, as they are cultivated by local climates' (Government of Japan, 2012: 10, emphasis added). Umehara's concept of Japan as a 'forest civilisation' positions the forest an essential element of Japanese culture and identity (Umehara, 1999 and numerous other works by the same author in Japanese). A 2009 policy paper published by the MUFG Bank argues that the 'loss of ethnic identity among the Japanese has already started' because 'discussions on the [forest-based hunter-gatherer] Jomon period, which is the source of Japanese identity, have been eliminated from history textbooks for young students—the leaders of tomorrow' (Yasuda, 2009: 50). In 2010, the Tokyo Foundation for Policy Research published a policy proposal titled *Regulatory Reform for Japan's Watershed Forests: Protecting a Public Good* (Hirano and Yoshihara, 2010). This document focuses on the legal framework of land ownership and the specific issue of forest land being bought up by foreign capital, a topic given coverage in the *New York Times* (Tabuchi, 2010). Although the original document contains no discussion of environmental exceptionalism as analysed here, a book published in the same year by one of the authors together with Yoshinori Yasuda develops explicit arguments contrasting the problem of land ownership by foreigners with the forest as an essential part of Japan's deep identity (Hirano and Yasuda, 2010).

The ideas that rice farming forms a key element of Japanese history and culture and that Japan's way of growing rice has been environmentally sustainable is widely found in a range of policy documents. *The National Biodiversity Strategy 2012-2020* claims that 'Since ancient times, Japan has been called "Toyoashihara-no-mizuho-no-kuni," a country abundant in vigorous rice plants with green reeds growing on watersides. In the country where all life grows richly, Japanese people have nurtured a culture in which humans live in accordance with the changing seasons' (Government of Japan, 2012: 13). The term 'Toyoashihara-no-mizuho-no-kuni' is taken from the *Nihon shoki*, an eighth century court history. The long history of the cultivation of cereals other than rice—barley, broomcorn and foxtail millet and wheat have been grown in Japan since the Bronze Age (Robbeets et al., 2021)—receives little or no attention. Various claims about rice found in Japanese government policy documents need to be seen against the background of the post war political system where rural votes have been solicited through the incentive of high important tariffs on rice—778% in 2014 according to Cwiertka and Yasuhara (2020: 13).

Publications which emphasise the importance of marine foods in Japanese history are common. Under the heading 'Basis for human life (provisioning services)', *The National Biodiversity Strategy 2012-2020* states that 'Since the Jomon Period (from 145 B.C. to 10 B.C. [sic]), seafood has been a precious foodstuff which supported the diet of the Japanese people. … Japanese people never miss a day without seafood' (Government of Japan, 2012: 10). (The dates given for the Jōmon period,

which are not included in the Japanese original, are missing two zeroes and should be 14,500 to 1000 BC). As noted in the main text, such claims ignore significant historical diversity in seafood use as well as the whole issue of the consumption of animal meat in premodern Japan. These important historiographic questions would seem to be too nuanced to find their way into policy publications.

Finally, claims about Japan's particular environmental ethics appear frequently in official documents, such as *Becoming a Leading Environmental Nation in the 21st Century: Japan's Strategy for a Sustainable Society*, all five versions of the *Basic Environmental Plan* (most recently from 2018), or the *National Strategy for Biodiversity Protection 2012-2020*, to name a few that explicitly argue that, because of its traditional wisdom of harmonious coexistence with nature, Japan is in an ideal position to create a working model of a sustainable society and to serve as a global paragon of sustainability (Ministry of the Environment, 2007, 2012, 2018). Under a section heading titled 'Creation of a Beautiful Nation in which Tradition [sic] Wisdom for Coexistence with Nature is Applied to Modern Society', an official (though 'tentative') translation of *Becoming a Leading Environmental Nation in the 21st Century* insists that 'Since ancient times, Japanese people have had a view of nature in which every living thing is respected as part of nature. Japanese people have traditionally embraced a sense of respect for nature and lived in harmony with nature' (Government of Japan, 2007: 7). This view of the environment is not just a historical framework but, the same document suggests, can be broadly applied to contemporary problems: Japan's 'traditional wisdom by which people take a humble attitude towards nature and work cooperatively for environmental conservation and management is an approach that holds great significance in the pursuit of a sustainable society, and is one that can be spread not only within Japan but also throughout Asia and beyond' (Government of Japan, 2007: 8). The catchphrase 'Japan as a beautiful nation' was used from at least the 1998 Fifth Comprehensive National Development Plan, titled *Grand Design for the 21st Century: Promotion of Regional Independence and Creation of Beautiful National Land* (for an English translation, see: Ministry of Land, Infrastructure and Transport, 1998). The concept has been extensively promoted by former prime minister Shinzō Abe and by Heita Kawakatsu, a former economic historian who worked at Umehara's International Research Center for Japanese Studies and who has promoted Umehara's ideas through his position as elected governor of Shizuoka prefecture since 2009 (Abe, 2006; Kawakatsu, 2006a, 2006b). The idea that Japanese society was sustainable until contact with the West in the nineteenth century is commonly found in Japanese claims of environmental exceptionalism and this assumption also makes its way into policy documents. For instance, an article in the online *Midori Press* published by the AEON Environmental Foundation argues that 'In the Japanese archipelago, the co-existence with nature was maintained for a long time, and Japanese people did not eradicate even one species of middle or large animal. However, after the Meiji Restoration, they adored western culture single-mindedly in order to catch and pass it in line with the policy of increasing wealth and military power' (Iwatsuki, 2012, 2008).

The concept of *satoyama* has become an increasingly influential area of policy which attempts to combine two environmental narratives: Japan as a rice-growing nation and Japan as a 'forest civilisation' (Lindström 2017, 2019). With the literal meaning of 'village mountain', *satoyama* refers to the ecotonal woodlands situated between alluvial paddy fields and surrounding mountains. The 'Satoyama Initiative' developed by the Ministry of the Environment, Japan with a secretariat based at the United Nations University in Tokyo has posited *satoyama* woodlands as the most representative and therefore 'authentic' traditional agricultural landscape of Japan. An International Partnership for the Satoyama Initiative was established in 2010 during the COP 10 Congress in Nagoya and by December 2021 had 283 members located across the world (https://satoyama-initiative.org/about/members/#members). The Satoyama Initiative and other *satoyama* related environmental policy has drawn heavily on the idea of Japan as a society 'in harmony with nature' (e.g., Takeuchi, 2015). The slogan chosen for COP 10 was 'Life in harmony, into the future' (Matsumoto, 2010).

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