

China's Food Pagodas: Looking Forward By Looking Back?



Headline Issues

- > China's national food policies have been driven by nutrition and health considerations, largely neglecting wider issues of climate resilience, ecological sustainability, and animal welfare.
- > China's official food guidelines, the Food Pagodas, offer a glimpse into China's official discourse about food.
- > As the planetary climate crisis intensifies, China's rich and diverse culinary heritage can help us live through the Anthropocene.

The Center for Environmental and Animal Protection (CEAP) aims to provide academic leadership for research policy-making and addressing critical social issues at the intersection of environmental and animal protection.

Summary

"Food is the absolute to the people," or *min yi shi wei tian* (民以食为天), goes the ancient Chinese adage. Despite the centrality of food in Chinese culture and the weight of the nation's food economy, it is glaringly absent when it comes to broader conversations about China's environmental protection and responses to climate change. China's national food policies have been mainly driven by nutritional and health considerations, to the neglect of the myriad connections of the food economy to wider issues of climate resilience, ecological sustainability, and animal welfare.

The recent release of the fifth edition of China's official food guidelines (pictured below), known as the Food Pagoda, offers a glimpse into China's official discourse about food and the gap between government proclamation and the realities on the ground. As the people of China become wealthier and the food system grows more globalized than ever, it is worth investigating the potential for greening the Chinese food economy. Could the food pagodas guide China into a carbon-neutral, ecologically sustainable future?

Could China's culinary heritage help guide us to an ecologically sustainable future?



The humble pagoda

There is a widely held assumption—sometimes even hope—that China's top-down political system can compel citizens and firms to adopt sweeping changes in the interest of the common good simply by ordering them to do so. This has not been the case with the food pagodas. The evolution of the food pagoda mimics the changing trajectory of food consumption in China. Steady consumption growth predicts a continuous increase in the recommendation, while U-shaped consumption corresponds to U-shaped recommendation changes. The image of the Chinese government as a proactive, draconian climate defender does not hold up, at least not now, in the case of the food pagoda.

Got milk?

The most glaring feature of the food pagodas is their unrealistically high recommendations for the consumption of dairy products. The only major change in the 2022 release of the food pagoda was that the recommended dairy consumption increased to 300-500 grams a day, up from 300 in 2016 and 100 in 1997. This increase occurs even though the actual average daily consumption stabilized in the range of 25 to 30 grams a day in the first two decades of this century.



中国居民平衡膳食宝塔 (2022)

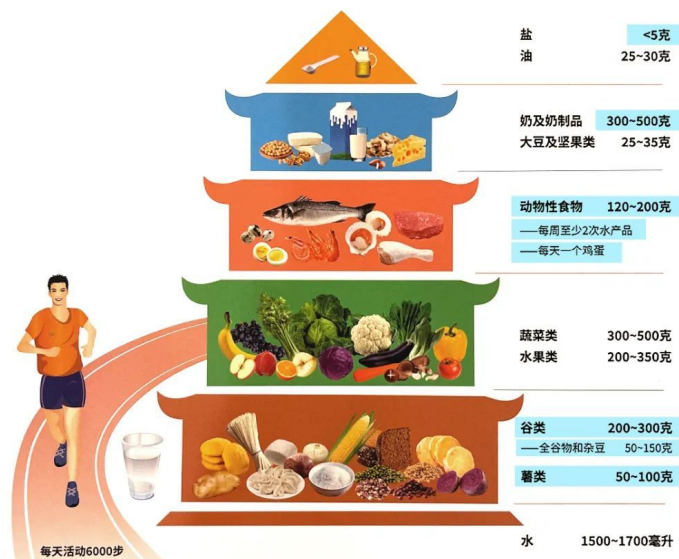


Figure 1. The Food Pagoda (2022)

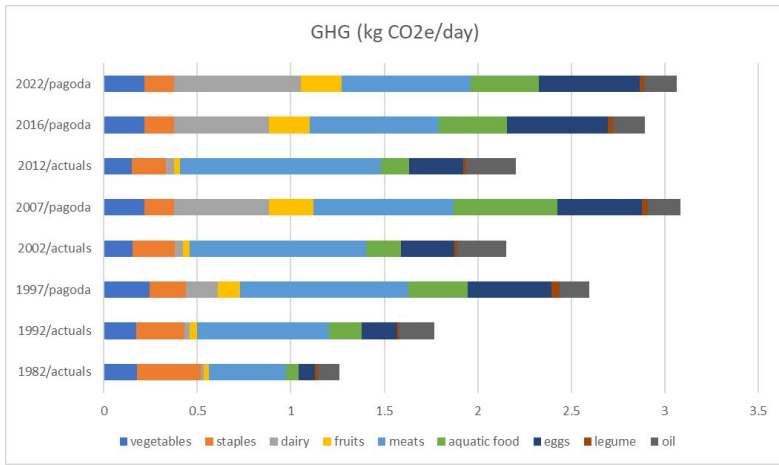


Figure 2. CO2 Emissions of China's Diet, Observed Trends (1982, 1992, 2002, 2012) and Pagoda Goals (1997, 2007, 2016, 2022) (kg CO2e/day)

The pagoda's emissions

When the pagoda's recommendations are taken as a whole, their impact on climate change is much less positive than might have been thought. The per capita emission reduction potential (0.386 kg CO2e/day) of China's proposed cut in meat consumption in 2016, for example, is more than wiped out by the additional emission (0.465 kg CO2e/day) of the proposed dairy increase alone. As pictured, the CO2 emissions of the food pagoda's recommended diet total 2.895 kg CO2e/day, reflecting a 31.3 percent increase from the observed emissions level of 2.204 kg CO2e/day in 2012. Taken together, the CO2 implication of the food pagoda is net-positive: it increases emissions from the current dietary baseline.

China's policymakers are yet to fully appreciate the real costs of abandoning plant-based food traditions in favor of animal-based culinary modernity.

Looking up to the urbanites

The food pagoda tends to liberally recommend foods that are favored by urbanites, while at the same time discouraging foods that rural residents disproportionately consume. As a result, what appear as quintessentially Chinese urban foods such as dairy, fruits, and aquatic foods are further valorized by the pagoda, whereas characteristically rural foods, e.g. rice, bread, noodles, corn, and sweet potatoes, are presented as less desirable in the pagoda. As such, the food pagoda nudges the people of rural China to look up to their urban counterparts for the ideal diet and encourages the people of urban China to continue in their current dietary trajectory.

The "assuredly superior" Chinese diet?

In the opening chapter of his three-volume treatise entitled *General Plan for Nation Building*, the founding president of the Republic of China, Sun Yat-Sun, proudly proclaimed in 1917 that

"All of China is culturally accustomed to vegetarianism. ... By contrast, Europeans and Americans are in the fashion of carnivorous and alcoholism, despite scientific advocacy on the one hand and regulatory prohibition on the other. . . . Chinese cultural customs of eating and drinking are assuredly superior to that of all other nations."

Sun's call for tofu nationalism may have been long forgotten. China's policymakers are yet to fully appreciate the real costs of abandoning plant-based food traditions in favor of animal-based culinary modernity. However, as the planetary climate crisis intensifies, China might just have to tap into its rich and diverse culinary heritage, out of no nationalist sentiments, but the need to live through the Anthropocene. The food pagoda still has an opportunity to lead that effort.

也。中國素食者必食豆腐。夫豆腐者，實植物中之肉料也。此物有肉料之功，而無肉料之毒。故中國全國皆食之。已習以為常。而不待學者之提倡。歐美之人所飲者，酒肉所食者，腥羶亦相習成風。故雖在衛生科學之提倡。在後有重法之厲禁。而一時亦不能轉廢之也。軍就飲食一道論之。中國之習尚。當超乎各國之上。此人生最重之。而中國人已無待於利誘勢迫。而能習之。成自然。實為一大幸事。吾人當保守之。而勿失。以為世界人類之師範也。古人有言。為一小天地。良有以也。然而以之為一小天地。無寧謂之為一小國家也。蓋體內各臟腑分司全體之功用。無異於國家各機關分理全國之政事。惟人身之各機關。其組織之完備。運用之靈巧。迥非身外國家之組織所能及。而人身之奧妙。向非人類今日知識所能窮也。據最近科學家所得者。則造成人類及動物者。乃生物之元子。生物之元子。學者多譯之為細胞。而作者今特創名之曰生元。蓋取生物元始之意也。生元者何物也。曰。其精微也。精微矣。神矣。神矣。不可思議者矣。按今日科學所能窺者。則生元之為物也。乃有知覺靈明者也。乃有意識計畫者也。人身結構之精神奇者。生元為之也。人性之聰明知覺者。生元發之也。動物植物狀態之奇者。生元所賦之也。生元之構造。人類及萬物亦猶乎人類之構造。屋宇舟車。城市橋梁等物。亦空中之

Figure 3. Excerpt from Sun Yat-Sun's *General Plan for Nation Building* (1917)

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