

China's Covid-19 Aid Diplomacy in 2020: Patterns and Motivations

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Summary

This article investigates the determinants underlying the Chinese Covid-19 global humanitarian aid campaign in 2020 by statistical analysis on a novel author-made dataset that tracks Chinese aid across the globe in 2020. The results show many existing Chinese humanitarian aid practices first followed a policy of near universalism of aid, but then resumed more traditional forms of Chinese humanitarian aid targeting the Global South on a bilateral basis in the latter half of the campaign. Aid was allocated based on mixed motives that included humanitarian calculations, but also a more short-term diplomatic calculus typical of disaster diplomacy and other nonhumanitarian factors. Chinese humanitarian aid needs to be considered as an important public diplomacy tool as it can be used to reward closer partnerships with China and penalise their absence.

1. Introduction¹

On 4 April 2020, the Chinese government news agency *Xinhua* published an indignant article criticising those who were ‘politicising’ China’s ‘sincere and substantial’ assistance to fight Covid-19 and claiming that China was engaging in a geopolitical campaign for influence through ‘mask diplomacy’. As the commentary claimed:

China has been offering emergency humanitarian aid to other countries, especially hard-hit or inadequately prepared nations to save more lives, to jointly control the global pandemic as early as possible. ... China has always done things fair and square, it is never on its agenda to make aid a ploy to pursue influence. ... The paranoid critics should stop politicising and distorting Chinese assistance.²

Indeed, after the Covid-19 pandemic broke out from China in December 2019, the People’s Republic of China’s (PRC) government launched a global humanitarian aid campaign donating, it seemed, huge amounts of personal protective equipment (PPE) to every country in need. This aid campaign (hereafter China’s Covid-19 aid, or CCA, campaign) was quickly dubbed with many names like ‘mask diplomacy’³, and ‘Coronavirus diplomacy’,⁴ and many comments were alarmist about China outdoing the West on the diplomatic front. However, the claims made in the *Xinhuanet* article beg for fact checking. Analysing the CCA campaign also allows us to inquire into the role of humanitarian aid and disaster diplomacy in Chinese public diplomacy in general.

This article asks how much various humanitarian and diplomatic motives guided China’s aid decisions during the 2020 Covid-19 aid campaign, how much they were affected by factors typical of ad hoc disaster diplomacy, and how much by China’s already existing humanitarian aid practices? The article argues that China’s Covid-19 humanitarian aid allocation was not ‘fair and square’. Instead, it was a mixed package characterized by short term *ad hoc* factors and diplomatic calculations but it also had some humanitarian aspects to it. The findings further indicate that while the early phase of the campaign broke with the earlier geographical patterns of Chinese overseas humanitarian aid and disaster relief (HADR) allocation, it resumed to its

¹ This article is part of Finnish Research Council Project 323795 Security in China (SIC). We would like to thank the nursing science doctoral researcher Reetta Mustonen and the Procurement and Logistics services of the Wellbeing Services County of Southwest Finland for their generous assistance with the work on Covid-19-related medical supplies.

² Xinhua 2020b.

³ Del Álamo et al. 2021

⁴ Kobierecka and Kobierecki 2021.

past tracks after May 2020. The role of non-public donors was also crucial in the CCA campaign. This included the way China was able to make good on its word to prioritize Africa with the help of Jack Ma Foundation donations.

This article addresses a significant gap in the research literature on China's Covid-19 aid campaign in 2020 by uniquely incorporating into the analysis HADR-specific factors, thereby diverging from previous studies that have predominantly examined China's Covid-19 donations within the broader context of China's foreign aid,⁵ thus helping us to better understand the role of increasingly active overseas disasters and humanitarian aid in China's public diplomacy.

In the following sections, the article first reviews existing research on China's HADR practices within the framework of public diplomacy. The article then introduces the authors' global dataset, tracking China's aid throughout 2020, along with the determinants used to analyse aid allocation. Finally, the article presents and discusses the results, whilst drawing connections to prior research.

1 Public Diplomacy and China's HADR

Historically, public diplomacy has been defined by the critical role of its non-coercive features,⁶ which often involve government efforts to communicate with foreign publics, aiming to influence and build support for strategic objectives through various means such as media engagement and human exchanges.⁷ While HADR is often seen as less susceptible to criticism and politicisation compared with other types of aid, it too can serve as an effective policy tool for donors to garner diplomatic favour from recipients, even when their foreign policy preferences diverge from those of the donors.⁸ This includes the donation of medical goods to countries in crisis, which nowadays has become a common gesture of goodwill in global public diplomacy.⁹

In case of China, HADR has increasingly come to be seen as a strategic tool for Chinese public diplomacy to shape global narratives and project a positive image abroad, which has also been noted in Chinese research since the early 2010s.¹⁰ Under Xi Jinping, China's public diplomacy

⁵ Fuchs et al. 2022.

⁶ Ayhan 2020.

⁷ Cull 2008.

⁸ Hwang and Hwang 2023; Kelman 2016.

⁹ Lee and Kim 2021.

¹⁰ He 2013; Zhang 2015; Li 2012

has shifted from only focusing on top-down external propaganda toward a more multifaceted engagement where foreign aid has a key role to play.¹¹ Accordingly, China has sought to upgrade its international development cooperation as a diplomatic tool,¹² notably through the establishment of the China International Development Cooperation Agency (CIDCA) in 2018.¹³ Nevertheless, research has shown that China's foreign aid is still often been delivered in a top-down manner with limited transparency,¹⁴ which was also the case with the CCA campaign.

Studies have further shown that this strategy has enabled Beijing to build stronger diplomatic ties, but its effectiveness varies.¹⁵ In China's neighbouring countries, for example, some studies suggest that China's HADR efforts, such as its response to the Nepal earthquake in 2015, have significantly improved local perceptions of China.¹⁶ China's participation in the anti-Ebola campaign in West Africa in the early 2010s also gained positive response from recipient countries and trained China for a large multi-recipient campaign in health diplomacy.¹⁷ However, other studies argue that these initiatives have often failed to overcome pre-existing scepticism about China's motives, particularly in regions such as Southeast Asia where geopolitical tensions and heightened security concerns amid territorial disputes in the South China Sea may dampen the diplomatic benefits of its aid.¹⁸

Existing research has also noted that China's public diplomacy approach often relies on top-down, state-centred image management rather than relational, context-dependent strategies that foster genuine connections and empathy with foreign publics.¹⁹ Comparative studies suggest that China's approach to HADR differs significantly from that of other major powers. Unlike OECD nations, which often frame humanitarian aid as an apolitical endeavour,²⁰ China tends to integrate HADR into its broader geopolitical strategy. This approach allows China to use

¹¹ Wu, Thomas, and Yu 2021.

¹² Rudyak 2021.

¹³ Wu and Zhang 2021.

¹⁴ Kitano and Miyabayashi 2023.

¹⁵ Custer et al. 2019.

¹⁶ Lin 2021.

¹⁷ Huang 2017.

¹⁸ Gong 2021.

¹⁹ Creemers 2015.

²⁰ de Mesquita and Smith 2009.

foreign aid selectively,²¹ rewarding countries that align with its foreign policy objectives while projecting an image of a benevolent global actor.

It is nevertheless important to differentiate more clearly the specific role of HADR within China's overall aid portfolio.²² As researchers have argued, conflating China's complex aid system with its HADR practices obscures the specific reasons for and effects of HADR allocation in China's broader public diplomacy, and so it should be studied on its own with a heightened awareness of its unique role in the international aid field by examining more closely the specificities of China's HADR diplomacy and its understudied effects.²³

Since the Covid-19 pandemic, a growing number of studies has sought to clarify the relations between China's humanitarian aid and public diplomacy from a variety of perspectives. Studies have noted how CCP's Covid-19 aid was motivated by a will to display its aid as reciprocation of the help it had received from other countries, and to present China as a responsible great power.²⁴ Another study points out how the CCP primarily used its Covid-19 aid to secure domestic stability and foreign expressions of gratitude.²⁵ Media studies suggest that China's aid campaign indeed had positive effects in the tone of media coverage of China at least during the first months of the pandemic in 2020.²⁶

A number of studies have been interested in the determinants behind China's Covid-19 aid decisions. According to Sun and Yu, China used COVID-19 aid to promote China's global influence and Chinese knowledge of health governance, but its fragmented implementation reflected a lack of strategic preparedness among the policy makers in charge.²⁷ Other studies have found that Chinese Covid-19 aid was significantly influenced by China's economic and political-diplomatic interests as well as by a recipient country's involvement in the Belt and Road Initiative (BRI).²⁸ One study has argued that China's medical and vaccine assistance in 2020 and 2021 was significantly related to recipient countries' support on China-related human rights issues, with supportive countries receiving considerably more aid.²⁹ To specify more

²¹ Woldemichael and Tesfaye 2022.

²² Ali, Banks, and Parsons 2015; Drury, Olson, and Van Belle 2005; Fink and Redaelli 2011; Kevlihan, DeRouen Jr, and Biglaiser 2014.

²³ Hirono 2018; Hirono 2020.

²⁴ Kobierecka and Kobierecki 2021.

²⁵ Kowalski 2021.

²⁶ Müller, Brazys, and Dukalskis 2021.

²⁷ Sun and Yu 2023.

²⁸ Wu 2024; Huang 2022..

²⁹ Tritto, Haini, and Wu 2024.

accurately the determinants of Chinese aid, we build partly upon the statistical analyses by Fuchs et al.³⁰ and Telias and Urdinez³¹ on the factors behind Chinese Covid-19 aid and compare their results with our findings in more detail below.

2 Description of the Dataset

Information about China's overseas aid allocation is scattered around the various news outlets and state agencies that report such activities, but no comprehensive official sources exist on the matter. This is also true for the CCA campaign. Therefore, this study relies on a global dataset that incorporates manually collected open-source data with one pre-existing dataset.

The data collection process started with the news archives of all the Chinese embassies and then expanded to other open sources where necessary. China practises diplomatic universalism and has an embassy in almost all countries that recognize the PRC. In 2020, these embassies reported actively on their aid activities including those of Chinese private and third sector actors.³² However, when important pieces of information were omitted from official sources, the social media posts of Chinese embassies, associations, and enterprises in the recipient country were included in the data collection.³³ This was augmented with information from the websites of the most relevant Chinese state agencies, companies, and state media. The latter included – but were not limited to – sources such as Xinhua, Xinhua Silk Road Information Service, CGTN, China Daily, CIDCA, COSCO Shipping, and the PRC State Council Information Office (SCIO).³⁴ Moreover, we collected information from the recipient countries' local news media and government agencies.³⁵ Together these various sources allowed us to piece together relevant information for the majority of the observations in about twenty languages.

The construction of the dataset also benefited from previous research: we incorporated a previously made similar dataset on CCA in Latin America and the Caribbean (LAC) during January through June 2020 developed by Diego Telias and Francisco Urdinez.³⁶ We augmented

³⁰ Fuchs et al. 2020; Fuchs et al. 2022.

³¹ Telias and Urdinez 2022.

³² See for example donations to Myanmar: Embassy of the People's Republic of China in Myanmar 2020a; 2020b.

³³ See for example Embassy of the People's Republic of China in the Republic of Namibia 2020b; Hytera Communications 2020; Association des chinois en Lorraine 2020.

³⁴ See for example Xinhua 2020a; Xinhua Silk Road 2020; CGTN 2020; China Daily 2020; China International Development Cooperation Agency 2020; COSCO Shipping 2020; State Council of the People's Republic of China 2020.

³⁵ See for example Antena M 2020; Department of Medical Research 2020.

³⁶ Telias and Urdinez 2022; dataset: Urdinez 2021.

this dataset by collecting further data on the region to cover the latter part of 2020. Bringing together the pre-existing and newly collected data resulted in a global dataset comprising 2,547 donations to 181 countries, non-sovereign territories, and multilateral organizations in 2020.

The dataset includes an estimate of the monetary value in USD of each donation for which there was sufficient information available. The estimates are based either on the source(s) directly (amount of cash, value of items), or our own calculations. The latter rely on the quantification of ten PPE items and medical equipment (regular face masks, N95 masks, protective clothing, goggles, gloves, shoe covers, thermometers, visors, tests, and ventilators), and a list of reference prices developed by Telias & and Urdinez.³⁷ Regarding the donated medical equipment we consulted the Hospital District [hidden for anonymization] and the websites of Chinese online retailers – namely Alibaba.com and Global Sources –to further validate the prices of specific items, such as PCR machines and infusion pumps. Eventually, we compiled and used a list of reference prices for 24 medical items to estimate the value of donations. With such a list we have been able to estimate the value of more donations than ready-made sources (e.g. customs databases) would have allowed.

In addition to the medical items, we tracked the deployment of Chinese medical teams that was undertaken in the name of pandemic prevention. China has deployed medical experts especially to the Global South for decades now.³⁸ This practice was ongoing when the pandemic erupted, and China harnessed the teams for health diplomacy. We quantified the value of the teams by first collecting information on the size of the teams and the duration of each deployment. With this information, we were then able to calculate the total person-months each team worked between 1 January 2020 and 31 December 2020. The value estimate is the product of the person-months the team worked and the average monthly salary of a Chinese physician.³⁹ These estimates are added to the public CCA, as the teams are organized either by national and provincial public agencies (e.g. health commissions, People’s Liberation Army) or by *de facto* extensions of the party-state (e.g. Red Cross Society of China).

³⁷ Telias and Urdinez 2022.

³⁸ Eadie and Grizzell 1979.

³⁹ The average annual salary of a physician working in tertiary hospitals was USD 13,764 in 2015, according to Zhang and Liu 2018.

The 2020 CCA campaign was not limited to medical aid – i.e. PPE and medical teams. CCA included various items ranging from laptops to food aid.⁴⁰ Apart from cash donations that were meant to fund purchasing PPE from China, the present article ignores the non-medical donations of the CCA campaign because the information about them was even more incomplete than the medical aid.

Another problem regarding quantification and value estimation was that at first about fifteen per cent of the observed donations disclosed no information about the value or number of items donated. To impute the missing values, we relied on a more experimental method: we used the ubiquitous photographs from the Chinese donation ceremonies displaying some of the donated items, often in stacks of boxes, to estimate the approximate number of donated items. In brief, we counted the number of boxes in the photographs, and then multiplied that number by the estimated number of items they contain. This number we then converted to monetary value with the above-described price list. To ensure a realistic understanding of the dimensions of the containers in which medical items are packaged and transported, we consulted the online sources mentioned above, as well as nursing science experts, and the Procurement and Logistics services of the Hospital District [hidden for anonymization]. Ultimately, we reduced the number of missing values to about six per cent.

These estimates obviously come with caveats. For example, the information provided by donors about the price, manufacturers and models was often vague or even absent. Thus, we had to generalize the reference prices over each item category, regardless of different pricing between manufacturers and models. Furthermore, our reference prices are fixed; they do not reflect currency or price fluctuation. Much like with the reference prices, we had to simplify the box size estimation process. We did so by classifying container boxes into three, fixed size categories (small, regular, large). This came at the expense of reality but allowed us to quantify the box contents in a systematic fashion. As a precaution, however, we pushed the value estimates of box contents toward the median value of the donations whose monetary value was indicated by the source. In so doing, we excluded the most valuable donations to not exaggerate the estimates. Thus, despite these limitations, we maintain that these evidence-based estimates allow us to better study China's Covid-19 aid than would otherwise have been possible.

⁴⁰ See e.g. Embassy of the People's Republic of China in El Salvador 2020; Embassy of the People's Republic of China in the Republic of Namibia 2020a.

Chinese Covid-19 aid has also been studied using other data sources. For example, Fuchs and others use China Customs Database to estimate the quantities of Covid-19 aid.⁴¹ The customs data is a good source for Chinese aid in general, but the data does not indicate if the donations listed in it were *per se* meant for combating Covid-19 epidemics or some other health hazards in recipient countries. Although in the early 2020 this assumption was probably correct, after the peak moments of aid other uses for it were also more likely. Further, the customs data does not necessarily indicate the final recipients of aid, only the first destination, as using different distribution hubs is typical in international logistics. Moreover, aid given to multinational bodies, such as the EU, and redistributed to their members cannot be traced from customs data. Our data is also more comprehensive in scope, as it includes cash donations and the values of Chinese medical equipment and teams sent to different countries, which played a visible part in China's Covid-19 aid. Through our data, we therefore offer a second opinion on China's aid and its use as a tool of public diplomacy.

3 Analytical Framework

By asking the question about the relevance of disaster diplomacy to Chinese Covid-19 aid, this article belongs to the research tradition in HADR literature that seeks to clarify which donors are most 'principled' by distinguishing the importance of humanitarian motives from political or economic motives in various natural disasters and health emergencies.⁴² To answer our research questions, we applied descriptive correlations and graphical statistical analysis on the global dataset to interrogate the possible determinants behind China's aid decisions in 2020. In existing studies, China's Covid-19 aid has been studied based on variables mostly derived from its previous ODA donor behaviour.⁴³ What the present article brings to the discussion, apart from a new set of data, are the specific disaster diplomacy factors related to giving life-saving *ad hoc* aid in a fast-moving truly global crisis situation in addition to using a set of common diplomatic and humanitarian aid-related variables.

Apart from the existing research, our selection of variables is informed by the official announcements and documents about the principles that guided China's aid decisions in 2020. Although public official documents that would shed light on the principles behind China's Covid-19 aid are scarce, there are nonetheless some documents available that provide

⁴¹ Fuchs et al. 2020; Fuchs et al. 2022; Telias and Urdinez 2022.

⁴² Gulrajani and Calleja 2019.

⁴³ Fuchs et al. 2020; Fuchs et al. 2022; Telias and Urdinez 2022.

information about China's humanitarian aid priorities in 2020. Starting from the most authoritative one, in his speech at the 73rd World Health Assembly on May 18, 2020,⁴⁴ President Xi Jinping proclaimed that international Covid-19 aid should be sent to the countries that 'needed it most'. He further specified developing countries and especially Africa as priority areas for help.

China's aid principles were laid out in more details in the June 7, 2020 China's State Council White Paper entitled 'Fighting Covid-19: China in Action'.⁴⁵ Here the principles mentioned included reciprocity for aid China had received earlier from other countries, as well as assisting countries and regions with weaker health care systems naming Asia and Latin America and emphasising Africa as the top priority destinations for global aid.

Less authoritative, but still indicative of the aid principles, CIDCA vice-director Deng Boqing laid out three points in his March 26, 2020 comments to the media about China's aid principles during a SCIO press conference.⁴⁶ As he noted, China was sending aid based on requests, the severity of the epidemic, and the strength of the recipient countries' health care systems, as well as China's ability to respond to those requests. CIDCA also published an article elaborating aid principles in the August 2020 issue of the CCP Central Committee flagship journal *Qiushi*.⁴⁷ This article reiterated that aid was allocated based on the severity of epidemic situation and strength of the health care systems of recipient countries, while the article also stressed reciprocity of Chinese aid.

Based on these official documents, one could expect that China's aid was guided by humanitarian motivations, rewarded those who had aided China earlier during the pandemic, and focused on Africa, but countries also had to request help from China first. To see if these principles were really followed, we have incorporated them into our analysis below.

For analysis, we grouped the independent variables into three clusters: Diplomatic motives, humanitarian aid specific motives, and background factors. The diplomatic motives group consisted of variables that can be described as typical of disaster diplomacy and whose motives are not purely humanitarian. These variables were derived from China's earlier reactions to overseas disasters and on research literature on factors affecting overseas disaster relief aid.

⁴⁴ Xinhua 2020c.

⁴⁵ Information Office of the State Council of the People's Republic of China 2020.

⁴⁶ China International Development Cooperation Agency 2020.

⁴⁷ CIDCA CCP Leading Group 2020.

These variables included: Call Xi Jinping, refusal, reciprocity, diplomatic closeness to China, diplomatic recognition of Taiwan, conflict with China, and BRI membership. Humanitarian aid specific motives included epidemic severity and health expenditure per capita in recipient countries.

In 2020, dozens of foreign leaders picked up the phone and called Beijing for help. The Call Xi Jinping variable tries to capture this factor that was about competition among nations for Chinese aid and supplies in a tense situation where the shortages of PPE became suddenly global and governments were forced to turn to China, which produced some 90 per cent of global PPE. For this variable, we identified from Chinese official media and Foreign Ministry web pages which heads of states had made phone calls to Xi Jinping from March to December 2020. For industrial countries and rich oil nations, we counted calls from March to May. For the rest of countries, we extended this period to December 2020, with an assumption that by June rich countries were able to acquire the needed PPE from their own sources or from global markets. Phone calls between the heads of state can be seen as a good proxy for direct *ad hoc* disaster diplomacy, but one needs to remember that some of the calls might also have been about the heads of state asking for being granted priority for PPE purchases from China, not aid. This is related to the refusal variable.

Refusal is another disaster diplomacy -specific variable and its significance is easy to understand. Countries can refuse humanitarian aid from governments they for some reason do not like, or if they see other sources of aid available.⁴⁸ Chinese official statements included requesting aid as a condition for it. In 2020, some countries chose to rely on purchasing PPE from China instead of relying on Chinese donations. Such behaviour should naturally also show in China's aid decisions. However, showing that some countries refused or did not ask for aid from China is challenging to ascertain. Normally, governments do not go on public record on such things. To the best of our knowledge, only a few countries publicly refused aid from foreign actors during 2020. The Finnish government, for example, stated that the Finnish state would not accept donations from foreign entities (but allowed donations at the subnational level). Instead, the Finnish foreign policy leadership sought to import Chinese PPE with the help of its business representatives.⁴⁹ Another country to have publicly refuse Covid-19 aid is

⁴⁸ Nelson 2010.

⁴⁹ See Parkkonen 2020; 'Presidentti Niinistö kertoi Kiinan presidentille suojarusteiden puutteesta' 2020.

Eritrea, which declined a PPE donation from the Chinese entrepreneur Jack Ma and preferred to purchase its PPE supplies instead.⁵⁰

Because of states rarely refusing help publicly, we had to resort to *post hoc* selection of countries for this variable. More specifically, we looked into the countries that had diplomatic relations with the People's Republic of China and did not receive any public aid from it, crosschecking our dataset with the China Customs data on PPE exports. These countries came in clear clusters. One was the Nordic countries including Estonia and the Netherlands. A high preparedness country, Switzerland, was also on the list. Another clear group were the wealthy Gulf Countries: Kuwait, Saudi-Arabia, Qatar, the United Arab Emirates (UAE), and Bahrain. According to media sources, these countries tried to gain priority in buying PPE from China instead of directly asking for aid.⁵¹ Further, the UAE launched its own Covid-19 aid campaign,⁵² however some of them did receive Chinese medical teams.

The third group were the two South Asian countries India and Bhutan. In 2020, India kept a 'no aid' policy stressing self-reliance and refusing foreign disaster aid. The policy only started to change in 2021.⁵³ Bhutan does not have diplomatic relations with the PRC, but neither does it recognize the ROC.⁵⁴ The last country on the zero-aid list was New Zealand that had a low to nil inflection rate throughout the spring of 2020, according to the Johns Hopkins data, and did therefore not need to ask for aid. One reason for refusal could have been a denialist government, a case which itself is difficult to establish objectively. Nevertheless, governments that are known to either have played down the danger of the pandemic or denied its existence in their country included North Korea (that officially had its first Covid-19 case in September 2022), Turkmenistan, and Eritrea.

Reciprocity was another disaster diplomacy -specific variable. Unlike ODA, also poor countries can offer disaster aid to richer countries. As noted above, Chinese official statements included reciprocity as a criterion for aid and also Kobierecka and Kobierecki note how Chinese diplomats presented reciprocity as the prime motive for Chinese aid.⁵⁵ For the reciprocity variable, we used data from the Chinese customs from January to March 2020 that

⁵⁰ Zere 2020.

⁵¹ On for example the Saudis, see Ministry of Foreign Affairs, the People's Republic of China 2020.

⁵² Federal Competitiveness and Statistics Authority of the United Arab Emirates n.d.

⁵³ Roy 2021.

⁵⁴ Ranjan 2021.

⁵⁵ Kobierecka and Kobierecki 2021.

allows the identification of international aid and supplemented it with known cash donations made to China during the period.⁵⁶ We then created a list of the countries which aided China in the early period of the pandemic and used the dollar value of this aid as the variable.

In existing research, ODA, health diplomacy, and humanitarian aid all have often been connected to upholding already good relations between countries,⁵⁷ or improving relations in seeking new strategic partners,⁵⁸ and the same motive has also been suspected about China's Covid-19 aid.⁵⁹ Using various way to measure it, Diplomatic closeness to China has been found to be a significant explanandum for Chinese aid also in 2020.⁶⁰ We measured this using China's diplomatic partnership level classification developed by Li and Ye.⁶¹ By 2020, the PRC had established an extensive partnership and cooperation treaty system with 78 countries with different levels of comprehensiveness of such partnership agreements. Li and Ye use a four-level categorization to classify these partnerships: 0 for no partnership agreement, 1 for regular partnerships, 2 for 'strategic partnerships', and 3 for 'comprehensive strategic partnerships', which we also employed. To verify the treaty status of each country, we compared them with the list of China's bilateral relations in 2020 that is available on the PRC Ministry of Foreign Affairs website.⁶²

Another possible diplomatic motive was the recipient countries' BRI membership. During the Covid-19 pandemic the PRC authorities emphasized the so-called Health Silk Road.⁶³ To see if this accounted for more aid to the BRI members, we created a dummy variable and classified countries according to whether they had signed a BRI agreement with the PRC by the end of 2020.⁶⁴

The opposite of diplomatic closeness is of course international conflict. As Kelman has shown, if political will exists before the event, disaster diplomacy can create openings that can be used to improve relations or even end conflicts between countries.⁶⁵ China has border conflict with several of its neighbours from Japan to Pakistan. The conflict variable was used to see Chinese

⁵⁶ See General Administration of Customs of the People's Republic of China n.d.

⁵⁷ Fidler 2013.

⁵⁸ McCormick 2008.

⁵⁹ Pfaff 2020.

⁶⁰ Fuchs et al. 2022; Telias and Urdinez 2022.

⁶¹ Li and Ye 2019; see also Strüver 2017; Telias and Urdinez 2022.

⁶² Ministry of Foreign Affairs of the People's Republic of China 2023.

⁶³ Huang 2022.

⁶⁴ For a list of countries that were part of the BRI during that time, see Brixsweden 2021.

⁶⁵ Kelman 2016.

aid was aimed at soothing sentiments with the countries it had a diplomatic conflict going on. The last diplomatic motive used in this study was the diplomatic recognition of Taiwan (ROC), which has been noted as an important explanandum in almost all research on China's foreign and disaster aid including the 2020 aid campaign.⁶⁶

Humanitarian aid specific motives are motives which can be said to be specific to disaster relief as an engagement to reduce human suffering.⁶⁷ These were gauged by measures of epidemic severity and health expenditure per capita in recipient countries. As noted, Chinese official statements referred to the severity of the epidemic situation and the strength of the health care systems of recipient countries as the main motives of Chinese aid. For us, the former referred to the seriousness of the domestic epidemic in recipient countries in December 2020 and was measured as the total number of Covid-19 cases per million inhabitants in each country.⁶⁸ For measuring vulnerability, we used the government health expenditure per capita in 2019 in aid recipient countries.

We also wanted to analyse how different country groups were treated by China. As noted, official statements stressed Africa, Asia, and developing countries in general as aid recipients. For this, we created dummy variables for Africa, LAC, Southeast Asia, Pacific Island Countries (PIC), and industrial countries (represented by OECD membership). Before the Covid-19, China's disaster aid targeted typically African countries, Southeast Asia, and China's neighbours,⁶⁹ but how much those patterns remained in the mask diplomacy campaign?

As background factors, we included the (natural logarithms of) Gross Domestic Product (GDP) per capita, population, and China's exports to recipient countries in 2019.⁷⁰ For example, Szondi has argued that one of the main goals of public diplomacy is promoting economic interests,⁷¹ while GDP per capita helps to assess if China really prioritised developing countries in its aid.

⁶⁶ Dreher and Fuchs 2015; Fuchs et al. 2022; Telias and Urdinez 2022.

⁶⁷ Barnett 2011; Slim 2015.

⁶⁸ See Our World in Data 2022.

⁶⁹ Paltemaa 2019.

⁷⁰ GDP and population estimates are from The World Bank 2022; trade figures from United Nations 2022.

⁷¹ Szondi 2008.

4 Analysis

This section describes the CCA campaign of 2020 based on the global dataset. A little over two months after the Covid-19 pandemic erupted in China in December 2019, the PRC embarked on its global humanitarian aid campaign. To our knowledge, the earliest donation of CCA campaign was made to Panama on 11 February.⁷² Afterwards, the aid campaign spread quickly to other countries and regions and the value of aid peaked in the Spring 2020: in March, Chinese donors donated USD 381 million worth of medical aid, cash, and medical assistance, and the next month the figure was some 89 million dollars higher, but started to decline sharply after May. Nevertheless, aid continued at the monthly rate of millions of dollars throughout the rest of the year. The temporal development of the campaign measured in monetary value is illustrated in Figure 1 below.

In our estimate, the total value of the 2020 CCA campaign stands almost at USD 1.2 billion (including aid to multilateral organisations, non-sovereign territories and the medical teams). Of this, USD 87 million was donated in cash and the rest in the form of medical supplies and deployment of medical teams. The value of donations ranged from USD 20 to 102 million, while on average, the donors donated almost 525 thousand dollars (median 40 thousand). The total sum donated to multilateral organizations amounted to USD 206.7 million, of which the World Health Organization (WHO) received the largest share by far (73.5 per cent).

(Fig. 1 here)

As noted above, China has deployed medical teams for decades in a number of countries now and this was the case when the pandemic erupted, too. To our knowledge, 59 teams were deployed to 42 countries (and Palestine) in 2020. Table 1 lays out the value of medical teams by region and subregion (see online appendix for full list detailing each team with destination, organizer, duration and cost). On average, the teams comprised of 11 experts and the number of personnel varied from 2 (Iran) to 42 (Sudan) experts.⁷³ Often the sources describe the teams as having experts specialised in infectious and respiratory diseases, although also experts in Traditional Chinese Medicine were mentioned, as were nurses. The exact composition of the teams was hardly ever indicated in the sources, and therefore the cost estimates do not consider the salary differences between team members.

⁷² Urdinez 2021.

⁷³ Iran: Xinhua 2020b; Sudan: Embassy of the People's Republic of China in the Republic of Sudan 2020.

(Table 1 here)

On average, the teams were deployed for 6 weeks (median is only 2 weeks), although the duration varied greatly: between 3 days and a full year. The great variance, and the online appendix, suggest that there were, roughly, two kinds of teams: *ad hoc* teams that were deployed once China acknowledged the pandemic and started to act upon it. From the beginning, these teams were mandated to assist containing the Covid-19 pandemic in the host country. The other type of teams was a part of the longer trajectory of China sending medical teams abroad as part of its health diplomacy. These teams may have been deployed even before the pandemic erupted and their mandates may have included various tasks which were later realigned for the purposes of pandemic prevention. The former type of teams did notably shorter stints ranging from 3 days to 3 weeks, while the latter's deployments varied between 2 to 18 months.

In total, the teams worked in our estimate of circa 145 person-months that adds up to almost 2.16 million US dollars.⁷⁴ The average cost was 36,000 dollars (median was only 6,400 USD) but again, the cost varies widely from approximately 1000 to 500,000 dollars. Figure 2 maps the countries that hosted Chinese medical teams during 2020 and illustrates the range of costs. We can see from Table 1 and Figure 2 that Africa received an overwhelming majority of this type of aid (82 per cent).

(Fig. 2 here)

Full analysis of the distribution of medical teams across the globe is beyond the remit of this article, and the sources never discuss the decision behind deployment. However, already early observers noted in 1979 that Chinese medical teams were 'ubiquitous throughout the Third World' and listed many of the host countries that we have found now – notably Algeria, both Congos, Gambia, and Equatorial Guinea to name only a few.⁷⁵ This suggests that a longer historical path dependency is at play behind the medical team concentration in Africa. As to the medical teams deployed beyond the Global South – especially those in Europe, namely Italy, Russia, and Serbia – they were all active only in the first half of 2020 when the overall

⁷⁴ This estimate includes only 2020; i.e. if a medical team was deployed in 2019 but it continued working until 2020, only days from 2020 are included in the estimate. Similarly, if the team continued activities beyond 2020 are not included in cost estimates. Establishing the exact dates when the medical teams' mandates were updated is impossible, thus this is assumed for every team in 2020.

⁷⁵ Eadie and Grizzell 1979, 228–229.

CCA campaign peaked. Teams deployed after June 2020 were sent exclusively to the Global South. Below, we will see how this pattern is visible also in medical aid allocation: the campaign was global in scope for the first half of 2020 but then narrowed down to the Global South. There seems to therefore have been only a momentary shift away from China's established aid practices.

In the main dataset, we categorized donors into seven different categories (party-state organs and agencies at the national, provincial, and municipal level, enterprises, foundations, universities, and other). In the present article, they are aggregated into public and non-public donors. The former includes the party-state organs at the state, provincial and municipal levels as well as state-owned enterprises and listed companies where party-state organs are the known majority owner, whereas the latter comprises donors from the private and third sectors, as well as private individuals. This separation was done because previous research indicates that private aid tends to 'follow the flag', that is, it follows the aid allocation patterns of official donors, which is also seen to be the case with China.⁷⁶ Furthermore, there is evidence that the Chinese government sees civil society as a useful partner in promoting 'people-to-people diplomacy' in the context of humanitarian aid.⁷⁷ Thus, it stands to reason to disaggregate public and non-public aid to tease out the differences and similarities between the two.

As the description above and Figure 3 and Table 2 further below show, CCA was based not just a state effort as actors from both the public, private and other sectors of society participated in it. Indeed, non-public donations (USD 604 million, 51 per cent) exceeded public donations (579 million). From the non-public sphere, the three biggest singular donors in order of aid value were Jack Ma / Alibaba Foundations (451 million), and the companies, Chery (12 million), and the then CEO of ByteDance, Zhang Yiming with a one-time donation of 10 million dollars to Gates Philanthropy Partners.⁷⁸ From the public sphere, the biggest donor was unsurprisingly the Central government with 415 million, followed by the Chinese embassies totalling almost 26 million, the PLA with over twelve million, and Ministry of Foreign Affairs as well as the state-owned enterprise Three Gorges both with ten million dollars.

Table 2 lists the top 10 recipient countries of CCA in 2020. The top recipients reveal the aid campaign's extensive geographical scope, covering almost all regions of the world, including

⁷⁶ Fuchs and Öhler 2021.

⁷⁷ Hirono 2018, 28.

⁷⁸ On Zhang's donation, see Au-Yeung 2020.

Asia, Europe, LAC, and Northern America. Notably, regions often seen as China's rivals, like Europe and Northern America, were top recipients. Only countries from Africa and Oceania were missing from the top, although they also received aid. At first glance, Chinese humanitarian aid allocation appears to have changed from past practices: during the Mao era, aid was limited to ideologically aligned partners. After Mao, it expanded to the broader Global South.⁷⁹ Once the Covid-19 pandemic erupted, the Global North is also among the recipients.

(Table 2 here)

At the annual level, one can say the geographic scope of the 2020 campaign was global: the Chinese donated aid to every continent. At the regional level, Figure 3 shows that most CCA flowed to the Asian and African continents with the former receiving 30.5 per cent and the latter 26.7 of the aid, respectively. These were followed by Europe's share of 15.9 per cent and LAC's 14.5 per cent. The aid campaign also reached North America, which received 10.3 per cent of CCA, while only 2.2 per cent went to Oceania. Thus, neither of the previous aid allocation patterns holds true for the 2020 CCA campaign, seeing as even wealthy regions in the Global North received substantial amounts of CCA.

There are more nuances, however, when temporal developments in CCA are considered. As noted above, the CCA campaign peaked in April and then declined rapidly. Upon examining pre- and post-May periods at the region-level separately, some changes can be seen in the Chinese aid allocation. The total amount of aid in the former period was 800 million and in the latter 172 million dollars. Asia and Africa were the biggest recipients in both periods, with their respective aid shrinking from 232 million (29 per cent) and 195 million dollars (24 per cent) to 64 million each after May. Nevertheless, their respective shares increased to 37.2 per cent, which indicates a narrower scope in aid allocation. At first, Europe and LAC received 17.4 and 15.7 per cent of CCA, respectively, but their shares shrunk to circa nine per cent each in the latter period. Oceania received more in the latter period (aid increased from USD 7.8 million to 13.5 million, and from 0.9 to 7.9 per cent), probably due to the delayed spread of the virus in the region. Northern America's share dropped from 12.5 to 0.05 per cent of CCA. In sum, at the regional level, the CCA campaign was at first global but after peaking, it focused on China's home region and Africa, marking a return to more typical patterns of Chinese aid allocation.

⁷⁹ Paltemaa 2019.

(Fig. 3 here)

To analyse China's aid motivations further, we used semi-partial correlations for assessing how the Chinese government's aid decisions correlated with our chosen variables (see table 3). Semi-partial correlations measure the unique contribution of an independent variable to the dependent variable. In other words, semi-partial correlations quantify how one specific independent variable affects the dependent variable while controlling for other variables. In our analysis, the dependent variables were the public, non-public, and total combined aid.

(Table 3 here)

The first group on the variable list were the diplomatic motives. The analysis shows how calling to Xi Jinping does not seem to have helped in acquiring more aid, but this analysis does not reveal if calls changed the timing of aid, which is possible. However, refusing Chinese aid offers had statistically significant correlation to aid in all categories. That the Chinese government respected other governments' refusals of aid is not surprising, but it underlines the importance of diplomatic calculations in a crisis and how government-to-government refusals also affected non-public aid. However, the data does not support the claim that one of China's proclaimed aid criteria, reciprocity, would have played much of a role in China's aid decisions favouring these donors quantitatively over others.

For the long-term diplomatic factors, only diplomatic recognition of the ROC (Taiwan) was a statistically significant factor in public and non-public aid decisions. The result is not surprising and is corroborated by earlier research using different data.⁸⁰ It further highlights the weight of diplomatic calculations on China's aid decisions. Interestingly, another long-term factor, diplomatic partnership level, became statistically significant in total aid allocation, while BRI membership was statistically nearly significant. In this, non-public aid seems to have complemented China's governmental aid decisions so that China's diplomatic partners received more Chinese aid in total. This highlights the importance of non-public actors in Chinese disaster diplomacy during the Covid-19 pandemic.

Nevertheless, the results are mixed if we take a normative stance that aid should have targeted the most vulnerable countries. Neither of the humanitarian variables were statistically significant in total aid. However, Chinese public aid seems to have responded to the severity

⁸⁰ Fuchs et al. 2022; Telias and Urdinez 2022.

of the local epidemics but not to local health care systems' ability to cope with the situation. The official principles of giving aid to the most vulnerable countries were therefore reflected in aid allocation but only in a partial manner. Earlier research on a different dataset and variables has not found correlation between Chinese aid and the severity of local epidemics.⁸¹

As to the possibility of Chinese government favouring some regions over others, unlike it proclaimed, China did not prioritize developing countries in its aid as such, but Africa stands out as a priority region for Chinese donations. As we have seen, Africa was the proclaimed priority for Chinese aid, but it was left for the Chinese non-public sector to fulfil this promise and here especially the Jack Ma Foundation played a key role. This finding also connects to the way China dispatched its medical teams to help fight local epidemics. Here only two variables were statistically significant: diplomatic closeness to China ($sr = .171^*$) and being an African country ($sr = .155^*$). The medical teams can therefore be seen as forming a special tool in Chinese disaster diplomacy supplementing other forms of aid to its priority partners.

5 Discussion

This article opened by citing *Xinhua* on how China offered its aid to the 'hard-hit or inadequately prepared nations'. However, our analysis points to the conclusion that *Xinhua*'s arguments need to be read as typical propaganda in that its claims were not entirely false, but neither did they tell the whole truth. This can be seen in the way the humanitarian reasons seem to have influenced public aid as to the severity of local epidemics, but at the same time many diplomatic motives left unmentioned in the article also had a strong influence on decisions. Our findings further point out that the interplay between public and non-public aid was an important factor in China's aid allocation, and that there existed a complementary relation between these aid types for Chinese diplomatic purposes. Through this, 'China' was for example able to make good on its verbal commitment to Africa. Non-public aid also helped the Chinese government to prioritise its own diplomatic partners. The Chinese government's ability to guide non-public actors' donations is therefore a potent diplomatic tool but requires further research.

Another strong diplomatic motive for the Chinese government was to ostracize those countries that had relations with the ROC. Though prioritising its diplomatic partners and penalising countries with wrong diplomatic allegiances, the 2020 CCA campaign showed the positive value of China's diplomatic partnerships in a time of crisis. At the same time, this was

⁸¹ Fuchs et al. 2022; Telias and Urdinez 2022.

underlined by the nature of the whole campaign: it was based on bilateral relations and aimed at strengthening existing ties rather than lessening conflicts or forging new relations. In this sense, it can be seen as a public diplomacy campaign rewarding China's diplomatic partnerships.

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Table 1. Table 1. Costs of Chinese medical teams active in 2020 by region and subregion.

Region	Subregion	Medical team cost (USD million)	% of total
Africa		1.786	82.8
	Northern Africa	0.674	31.24
	Western Africa	0.413	19.16
	Eastern Africa	0.391	18.14
	Middle Africa	0.304	14.09
	Southern Africa	0.004	0.17
Asia		0.209	9.69
	South-eastern Asia	0.131	6.06
	Southern Asia	0.04	1.87
	Western Asia	0.025	1.17
	Central Asia	0.013	0.59
Latin America and the Caribbean		0.122	5.66
	South America	0.122	5.66
Europe		0.04	1.85
	Southern Europe	0.037	1.73
	Eastern Europe	0.003	0.12
Total		2.157	100

Source: our own estimate.

Note: Regional and subregional categorization of states is based on the United Nations geoscheme.

Table 2. Top 10 Chinese Covid-19 aid recipients, 2020, US\$ million.

Country	Combined	% of total	Public	% of total	Non-public	% of total
United States	92.99	9.54	46.76	4.8	46.22	4.74
Venezuela	45.52	4.67	45.52	4.67	0	0
Philippines	42.58	4.37	25.6	2.63	16.99	1.74
Malaysia	32.53	3.34	27.9	2.86	4.64	0.48
Indonesia	27.16	2.79	12.31	1.26	14.85	1.52
Brazil	24.5	2.51	9.07	0.93	15.42	1.58
Italy	20.96	2.15	8.71	0.89	12.24	1.26
Uzbekistan	20.07	2.06	18.17	1.86	1.89	0.19
Pakistan	19.28	1.98	15.48	1.59	3.8	0.39
Portugal	19.14	1.96	10.11	1.04	9.03	0.93
Total	344.73	35.37	219.63	22.53	125.08	12.83

Source: our own estimate.

Note: per cent of total indicates the share of all CCA. Aid to multilateral organizations and non-sovereign territories is excluded.

Table 3. Semi-partial correlations of CCA in 2020.

IVs	DVs	Public aid (ln)		Non-public aid (ln)		Combined aid (ln)	
		<i>sr</i>	sig.	<i>sr</i>	sig.	<i>sr</i>	sig.
Diplomatic motives							
	<i>Calls to XJP</i>	.034	0.463 <0.001**	.043	0.481	-.025	0.650 <0.001**
	<i>Aid refusal</i>	-.450	*	-.146	0.018**	-.314	*
	<i>BRI membership</i>	.037	0.415 <0.001**	.058	0.348	.093	0.093* <0.001**
	<i>ROC recognition</i>	-.309	*	-.132	0.032**	-.237	*
	<i>Diplomatic partnership level</i>	.086	0.063*	.092	0.136	.142	0.010**
	<i>Conflict with PRC</i>	-.001	0.976	.043	0.478	.037	0.500
	<i>Covid Aid to PRC (USD)</i>	.061	0.183	.010	0.867	.027	0.622
	<i>Aid from Taiwan</i>	-.015	0.740	.024	0.696	.015	0.783
Humanitarian motives							
	<i>Epidemic severity in Dec. 2020</i>	.107	0.020**	.039	0.526	.052	0.348
	<i>Health expenditure per capita 2020</i>	-.013	0.779	.100	0.104	.090	0.101
Country group							
	<i>Africa</i>	.068	0.142	.234	<0.001** *	.158	0.005***
	<i>LAC</i>	.038	0.405	.043	0.482	.017	0.757
	<i>Southeast Asia</i>	.057	0.211	.066	0.280	.057	0.302
	<i>PIC</i>	-.033	0.467	-.038	0.536	-.034	0.532
	<i>Middle East</i>	-.057	0.216	-.120	0.051*	.063	0.254
	<i>OECD</i>	-.019	0.681	.033	0.591	-.022	0.687
Other factors							
	<i>Population (ln)</i>	.079	0.085*	.015	0.8071	.136	0.014**
	<i>GDP per capita (ln)</i>	.023	0.610	-.051	0.409	.040	0.468
	<i>Chinese exports 2019 (ln)</i>	-.062	0.178	.021	0.729	-.110	0.046**

Source: our own data.

Note: CCA to non-sovereign entities and multilateral organisations excluded from analysis.

Figure 1. Monthly value of CCA in 2020.

Source: our own estimate.

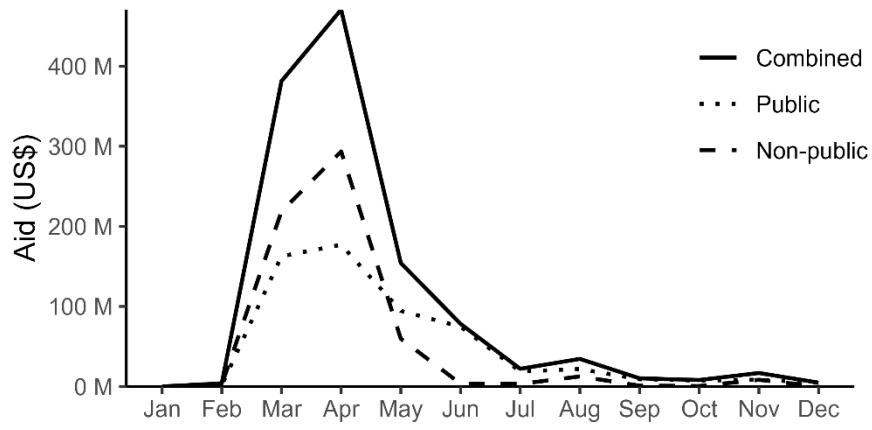


Figure 2. Chinese medical teams across the world in 2020 with cost estimates.

Source: own estimate.

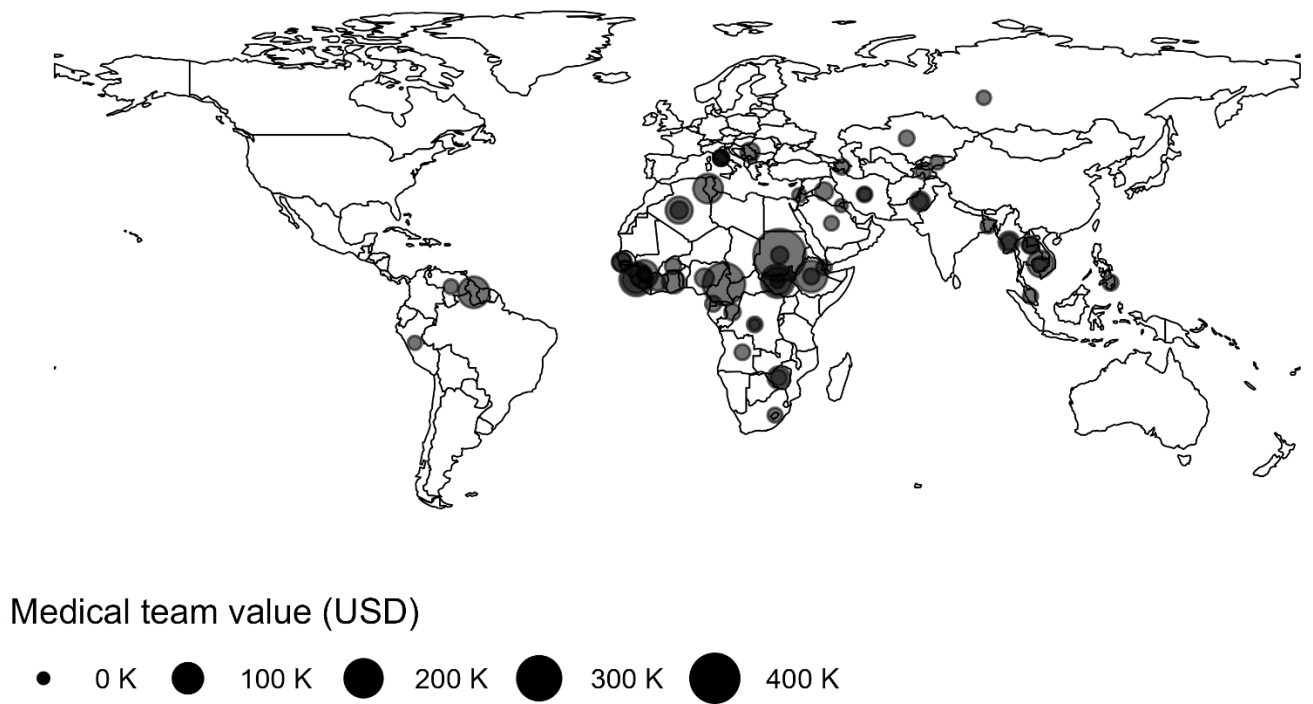


Figure 3. CCA by region in 2020.

Note: Aid includes only bilateral donations to UN member states. Regional categorization of states is based on the United Nations geoscheme.

Source: own estimate.

