

Why do INGOs fail in the Global South? How heterogeneous interests condition the effects of conservation advocacy campaigns

Abstract

Many international nongovernmental organizations (INGOs) run advocacy campaigns in the Global South to reduce the demand for threatened species. However, existing research documents that INGOs often fail to achieve conservation objectives in local areas. This paper uses an experimental analysis of pangolin (scaly anteater) conservation advocacy in Vietnam to highlight the disadvantages of INGOs in engaging with the local public. The results show that individual interests—in relation to nature and traditional medicine—condition the effects of conservation advocacy, highlighting the importance of appealing to the heterogeneous interests of the local public. The findings suggest that ineffective INGO campaigns may have resulted from the North-South divide among INGOs as well as normative issues that critical scholars had raised regarding global conservation advocacy.

Keywords: International NGOs, environment, conservation, survey experiment

Civil society advocacy plays an important role in wildlife conservation. There are numerous wildlife conservation laws at domestic and international levels, but the effectiveness of such rules is often challenged by the lack of awareness among consumers of protected species. International nongovernmental organizations (INGOs) working on wildlife conservation frequently run campaigns to raise awareness of threatened species in the Global South. In 2016, for example, The Nature Conservancy and WildAid launched a campaign in China to reduce the consumption of pangolins (scaly anteaters), featuring celebrities such as Jackie Chan in their campaign ads. However, existing research suggests that wildlife conservation advocacy campaigns in the Global South often end up as failure (Balboa, 2018; Fuentes-George, 2016).

Existing research has explained INGO failure by highlighting the disconnect between INGOs and the local public (Balboa, 2018; Cooley and Ron, 2002; Fuentes-George, 2016; Murdie, 2014;

Rodríguez et al., 2007). For example, principal-agent analyses of INGOs suggest that the myopic behaviors of INGOs may result from acting on the interests of Northern donors instead of the local public (Cooley and Ron, 2002; Gent et al., 2015; Murdie, 2014). Critical scholars of environmental conservation also point out that conservation advocacy often treats local populations as “others” who consume threatened “exotic” species (Margulies, Wong and Duffy, 2019; Neumann, 2004). But, less attention has been paid to understand the interests of the local public themselves. I argue that the interests of the local public are highly heterogeneous. *Preservationists* believe that nature and wildlife should be kept away from human consumption as much as possible (Nadelmann, 1990). *Appropriators* are a part of the community that harvests, processes, or consumes wildlife as natural resources (Ostrom, 1990). And many others, or *the mass public*, may not be interested in conservation at all when wildlife consumption has little personal relevance.

If the success of conservation depends on reducing the demand for threatened species, we cannot treat the local public as a monolithic group, but instead we need to analyze how the heterogeneity of interests interacts with conservation advocacy. To account for heterogeneous effects of conservation advocacy, I conducted a survey experiment on INGO advocacy for pangolin conservation in Vietnam. The pangolin is a dog-sized mammal, traded in Asia and Africa as an ingredient of traditional medicine and wildlife meat. The case of pangolin conservation illuminates the importance of consumer awareness in wildlife conservation. Despite the toughest ban on pangolin trade under the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) in 2016, an increasing amount of illegally trafficked pangolins has been discovered in recent years (Harrington, D’Cruze and Macdonald, 2018; Wildlife Justice Commission, 2020). Vietnam is one of the major trade hubs for wildlife products, including pangolins (Heinrich et al., 2017), but the lack of awareness about the plight of pangolins has been pervasive among local consumers.

I experimentally manipulated an advocacy message for pangolin conservation to measure its heterogeneous effects on the different subsets of the local public. There are two key components to the advocacy message. First, the perception of INGOs as a foreign organization might affect

how their message is understood among members of the local public. For example, anti-whaling campaigns by foreign INGOs in Japan fueled domestic backlash (Blok, 2008). This experiment estimates the effect of information sources by comparing a well-known conservation INGO (World Wildlife Fund) and a domestic organization (Education for Nature - Vietnam).

Second, the framing of advocacy messages may affect the effectiveness of a campaign (Allan and Hadden, 2017; Price, 2003). To date, the vast majority of conservation INGOs have framed the issue of pangolin trafficking as a threat to the well-being of pangolins, emphasizing the brutal nature of poaching, and more broadly, threats to biodiversity (*harm-and-threats* frame). However, consumers of traditional medicine, especially those who consume animal-based products, may be less interested in the preservation of pangolins *per se* but the sustainable use of animal resources in traditional medicine (*sustainability* frame). Finally, the COVID-19 pandemic raised awareness of disease transmission from wildlife to humans. Although the importance of wildlife conservation may be low for members of the mass public, an emphasis on the pandemic may increase the issue's personal relevance to them (*pandemic* frame).

My analysis found that INGO advocacy had heterogeneous effects on different subsets of the local public. Among preservationists, advocacy messages from World Wildlife Fund (WWF) were more effective than Education for Nature - Vietnam (ENV). By contrast, appropriators and the mass public preferred ENV to WWF. Surprisingly, the sustainability frame was more effective than the conventional, harm-and-threats frame among both preservationists and appropriators. Moreover, no evidence indicates that the pandemic frame worked better than the harm-and-threats frame among the mass public.

The results offer important implications for how INGOs might run effective advocacy campaigns in the Global South. INGOs typically adopt frames and agendas controlled by their Northern headquarters (Balboa, 2018; Wong, 2012). However, the findings here suggest that INGOs need to engage with the subset of the public that is consequential to establishing conservation norms, and doing so may require different kinds of frames that might not have been possible among Northern audiences. Moreover, while the reputation of INGOs could assist their ability

to succeed in Northern advocacy campaigns (Bob, 2005; Carpenter, 2014), it may become a hindrance in local areas, as INGOs can be seen as foreign threats to local, traditional practices.

The remainder of this article is structured as follows. First, I review the literature on INGOs and environmental conservation to justify my focus on the interest heterogeneity of the local public. Second, I introduce several hypotheses regarding the effects of INGO advocacy on different subsets of the local public. Third, I explain the experimental design that allows me to examine my argument. The forth section reports the results of analysis in relation to the hypotheses and discusses the interpretations of the findings. Finally, I discuss broader implications of the findings for the study of INGO advocacy and global environmental governance.

1 Civil society advocacy for wildlife conservation

Scholars generally agree that INGOs play an important role in global conservation governance, but INGOs are quite diverse actors themselves (Bloodgood, 2011; Stroup and Wong, 2016). Some INGOs focus on the provision of skills and knowledge for local populations, while others run advocacy campaigns to raise awareness of issues (Wapner, 1995). My research here focuses on the advocacy work of INGOs—civil society efforts to raise awareness of “urgent” issues. Recent research on international wildlife conservation suggests that demand reduction campaigns for wildlife products in local areas tend to be more cost-effective than increasing anti-poaching enforcement efforts (Holden et al., 2019). However, the effectiveness of such local campaigns is still widely contested (Balboa, 2018; Thomas-Walters et al., 2020). Thus, understanding the conditions under which civil society advocacy becomes effective can make a valuable contribution to both academics and practitioners working in the area of global wildlife conservation.

While INGOs have been relatively successful in influencing the agendas of global conservation governance (Betsill and Corell, 2008; Shibaike, 2021), existing research is generally skeptical of their effectiveness in local conservation projects. Balboa (2018) argues that INGOs often fail in local conservation projects by prioritizing global administrative capacity instead of local

contextual knowledge. Similarly, Fuentes-George (2016) argues that conservation INGOs can invite backlash from developing countries because their exclusive reliance on conservation science marginalizes the knowledge of local populations. Critical scholars also point out the tendency of global conservation projects to embody neo-colonial forms of development (Epstein, 2006; Neumann, 2004).

All of those studies point to a major problem pervasive among INGOs: the disconnect between INGOs and local populations. Most conservation INGOs are supported and evaluated primarily by environmentalists in the Global North, who may hold fundamentally different ideas about wildlife and nature from target populations in the Global South. However, we know little about how local populations differ from one another in terms of their interests in wildlife and nature, and more importantly, how such differences might affect the effectiveness of conservation advocacy. While critical scholars have warned that conservation advocacy campaigns often implicitly adopt the blaming and othering of cultural practices in the Global South (Margulies, Wong and Duffy, 2019; Neumann, 2004), we lack a nuanced understanding of how members of the local public react to such campaigns beyond intense backlash.

If successful advocacy must appeal to individual interests, it is important for us to empirically evaluate how different individuals may hold different ideas about nature and wildlife. As public opinion research consistently indicates, the vast majority of the public do not hold strong opinions about issues of low personal relevance (Converse, 1964; Zaller, 1992). Among the people who are affected by conservation rules and projects, their interests vary depending on their relationship to nature (Agrawal, 2007). The literature on wildlife conservation has documented demographic covariates of people who tend to hold pro-conservation attitudes (George et al., 2016; Gillingham and Lee, 1999; Kideghesho, Røskift and Kaltenborn, 2007). Across developing and developed countries, support for wildlife conservation increases with the characteristics associated with Inglehart's (1997) modernization thesis, such as urbanization, education, and income. Gender is also a consistent predictor of pro-conservation attitudes with women being more likely to support conservation than men (Czech, Devers and Krausman, 2001). Personal experience, such

as familiarity with protected species, increases pro-conservation attitudes (Subroy, Rogers and Kragt, 2018). Overall, the degree to which a species is endangered does not affect conservation attitudes (Colléony et al., 2017), but cues as simple as species names might affect the level of support for species conservation (Karaffa, Draheim and Parsons, 2012).

Existing research has shown how heterogeneous interests of the public affects attitudes towards environmental protection. Partisanship, in particular, has been found to be a strong predictor affecting one's position on environmental policy (Benegal and Scruggs, 2018; Bolen, Ferraro and Miranda, 2014; Coffey and Joseph, 2013). For example, Guisinger and Saunders (2017) show that partisanship affects how individuals process information across different international issues, such as cap and trade for carbon emissions. However, such interest heterogeneity has rarely been considered beyond partisanship in democratic contexts. Since party competition may not be a crucial factor for how people think about conservation in Southern countries, including Vietnam, we need to empirically examine how the interests of people vary in relation to wildlife and nature.

2 Theory and hypotheses

To explore the heterogeneous effects of conservation advocacy, I empirically observe the variation in interests among members of the local public. The meaning of “conservation” varies between individuals, which is defined by the relationships they have to nature and wildlife. I introduce three categories that highlight important subsets of the local public in wildlife conservation: *preservationists, appropriators and the mass public*.

Preservationists refer to the people who are interested in the protection of species and nature. They believe that certain species should not be consumed at all for moral reasons. For example, whale conservation is supported by a large number of preservationists who see whales as “unique and unusually intelligent forms of animal life that should not be killed at all” rather than a mere natural resource (Nadelmann, 1990: 517). Existing research indicates that people who treat humans and animals more or less equally tend to hold post-materialist values (Inglehart, 1997;

Manfredo, Teel and Henry, 2009). *Appropriators* refer to the people who harvest, process, or consume wildlife from the environment for a variety of human activities, such as traditional medicine and sport hunting (Ostrom, 1990). They may not be aware of the risk of resource exhaustion, but once informed, they should prefer the sustainable use of certain species to the total prohibition of their use in order to continue their economic and cultural practices. Finally, members of *the mass public* exhibit so-called “non-attitudes” towards conservation (Converse, 1964), as long as wildlife conservation does not affect their daily lives. Public opinion research suggests that members of the mass public rely on information shortcuts and minimize cognitive engagement when exposed to new information (Downs, 1957; Zaller, 1992). As with preservationists and appropriators, the mass public is defined in terms of individual interest, not in terms of population size, although the group typically comprises the largest segment of the public.

I use these subgroups to generate hypotheses around the key elements of conservation advocacy. The following theoretical expectations are laid out in my pre-analysis plan (PAP), which was registered with OSF before the experiment was fielded.¹ First, the source of advocacy information may affect how respondents process incoming information. In social psychology, source credibility is a major predictor of the likelihood of persuasion (Petty and Cacioppo, 1986). Well-known INGOs like WWF should be more effective than domestic organizations among the mass public because of the tendency of the mass public to rely on cognitive shortcuts such as organizational reputation. Similarly, preservationists, who want to keep wildlife intact, may also be familiar with the work of WWF and thus prefer to support their message. By contrast, those who value traditional practices, such as appropriators, may be skeptical of a foreign organization. For example, foreign organizations advocating for domestically unpopular causes could fuel backlash from domestic groups (Blok, 2008; Fuentes-George, 2016).

Second, framing should affect how members of the local public respond to conservation advocacy (Allan and Hadden, 2017; Keck and Sikkink, 1998). Framing is an effort to highlight certain aspects of an issue such that the issue becomes relatable to target audiences (Goffman,

¹PAP registration information will be provided here but is hidden now for anonymous review.

1974; Snow et al., 1986). The goal of pangolin conservation advocacy is to reduce the demand for pangolin products, but different frames exist to explain why one should not consume pangolins. An emphasis on the *harm and threats* to the pangolin should be effective among preservationists, who value the well-being of nature and wildlife similarly to that of humans. However, the same framing may harden the attitudes of appropriators, who regard pangolins as a part of natural resources that may be used as an important part of traditional cultural practices. Instead, an appeal to the *sustainable use* of pangolin products in the future should be effective among appropriators, as it offers an acceptable middle ground between unrestricted consumption and total prohibition. Finally, an appeal to the *pandemic* should affect all subgroups, but the largest effect is expected among members of the mass public, who would otherwise be uninterested in conservation. I summarize these expectations by subgroups below:

H1 (preservationists): Well-known INGOs are more persuasive than local organizations among preservationists.

H2 (preservationists): The effect of the harm-and-threats frame is the largest among preservationists.

H3 (appropriators): Local organizations are more persuasive than well-known INGOs among appropriators.

H4 (appropriators): The effect of the sustainability frame is the largest among appropriators.

H5 (mass public): Well-known INGOs are more persuasive than local organizations among the mass public.

H6 (mass public): The effect of the pandemic frame is the largest among the mass public.

3 Research design

To examine the above hypotheses, I conducted a survey experiment in Vietnam between April 26 and May 1, 2021 with 1,517 adult-only respondents.² Vietnam exhibits a wide range of interests

²The sample size is based on the power analysis conducted prior to fielding the survey. See Appendix A.

in wildlife conservation among the local public. On the one hand, the Vietnamese wildlife market is one of the major sources of demand for pangolins along with other wildlife products. In Vietnam, the national health insurance covered pangolin-related traditional medicine until 2014. According to the recent survey conducted by WWF in Vietnam (n=996), 48% of the respondents have consumed wildlife products before (World Wildlife Fund, 2020). On the other hand, Vietnam is a rapidly urbanizing country, shifting away from traditional dietary habits (Khue, 2015). Thus, Vietnam offers a wide variation of individual interests in traditional medicine, the use of wildlife, and nature preservation.

The sample was drawn from Dynata's member-based panel in Vietnam.³ The survey was structured in three stages.⁴ First, the respondents answered demographic questions such as age, gender, urban or rural living, and educational attainment. Given the persistent socio-economic divide between Northern and Southern Vietnam, the survey also asked respondents' attachment to North and/or South Vietnam (Arrighi, Silver and Brewer, 2003).

Second, the respondents were randomly assigned to treatment conditions that varied in terms of information sources and advocacy framing. The following message was delivered to respondents in Vietnamese. Randomized elements are denoted by source and frame (see randomization design in Appendix E).

“The pangolin is an animal that is used in traditional medicine. In traditional medicine, pangolin scales are believed to cure a variety of illnesses, such as arthritis, amenorrhea, and tumors. However, source argues that people in Vietnam should not buy pangolin-related products in order to frame.”

source

- World Wildlife Fund (the world's leading conservation group)

³The survey begins with the explicit consent of each respondent, following the protocol approved by the European University Institute's Ethics Committee (December 18, 2020). Respondents were free to withdraw from the survey without mentioning any reason. Dynata provides incentives for participants to complete the survey, which can be converted to gift cards, points programs, charitable contributions and its partner programs and services.

⁴The survey instruments are registered with OSF along with the PAP.

- Education for Nature - Vietnam (Vietnam's conservation group)

frame

- *Harm-and-threats frame*: “save pangolins from hunting and extinction”
- *Sustainability frame*: “maintain enough pangolin populations to be used in traditional medicine for years to come”
- *Pandemic frame*: “prevent the spread of novel infectious diseases that pangolins may carry”

In order to experimentally manipulate information sources, I used two conservation organizations relatively well-known in the Vietnamese context: WWF and Education for Nature - Vietnam (ENV). WWF is a well-known INGO that has the largest budget and membership among environmental INGOs (Bossio, 2005). It has a national office in Hanoi, conducting both research and advocacy for a wide variety of domestic and foreign species. ENV is a Hanoi-based national non-governmental organization that specializes in the conservation of Vietnamese wildlife. Although ENV is a relatively well-known among domestic conservation groups, WWF has greater public recognition in the Vietnamese society. Figure 1 shows weekly Google Trends between June 5, 2016 and May 30, 2021. This trend captures the volume of queries originating in Vietnam for each organization, standardized between 0 and 100 (where the highest volume is set to be 100). While there are a few weeks in which ENV surpassed WWF, the trend suggests that WWF is consistently more visible and thus recognized among the Vietnamese public. This difference in recognition allows me to test the premium attached to information sources (H1, 3, 5). The survey included a brief description of each organization in brackets to ensure that respondents know whether it is a global or domestic organization.

I used three types of framing appealing to the interests of the different subsets of the Vietnamese public. First, the *harm-and-threats frame* highlights the brutal nature of over-consumption of pangolin products. Conservation INGOs predominantly use this frame in their advocacy campaigns (Shibaike, 2021). For example, WWF uses a Disney-like animation to create

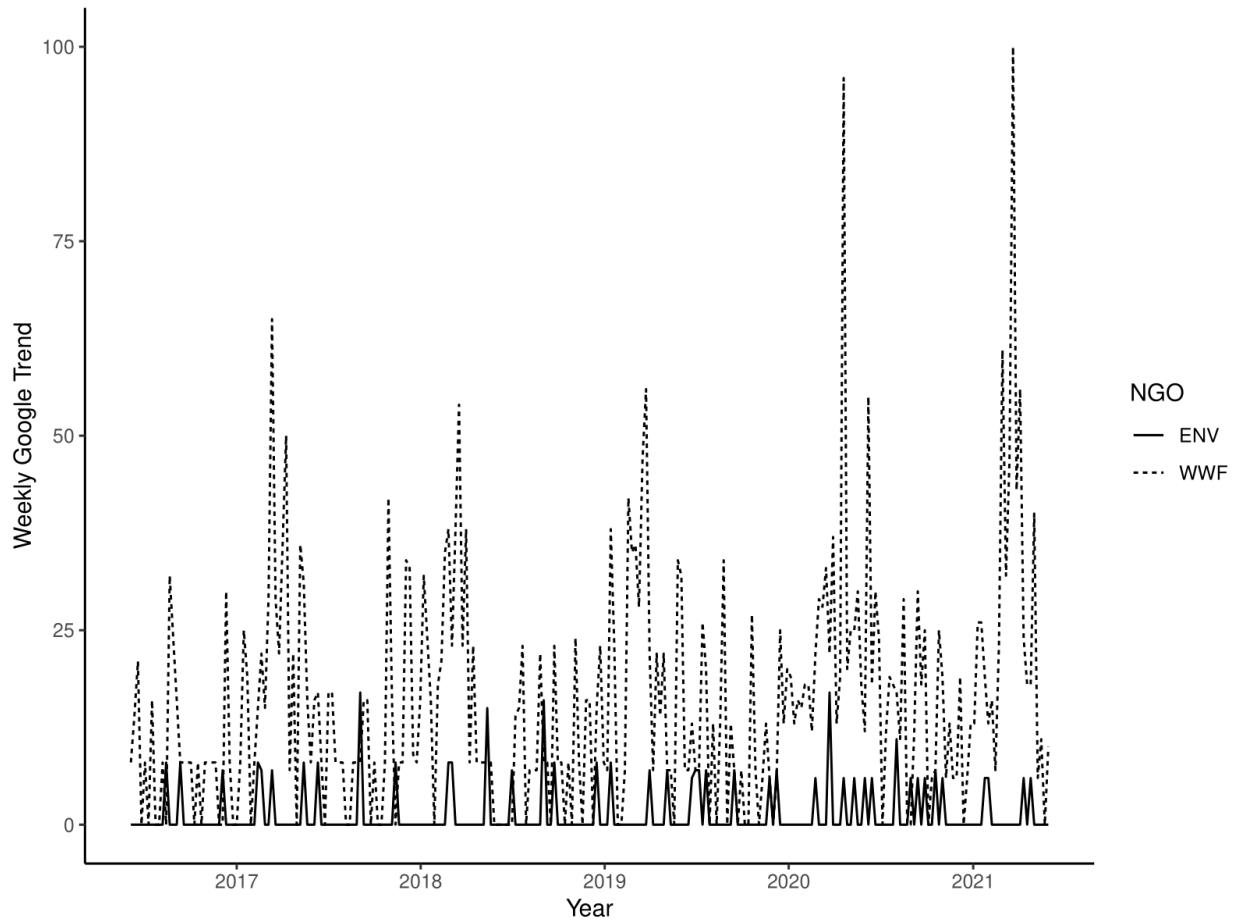


Figure 1: Google Trend of WWF and ENV between June 2016 and May 2021. Obtained from <https://trends.google.com/trends/>.

a humanized image of the pangolin to evoke our sympathy. In its campaign ad, “Lin” the pangolin tells us, “The situation is critical, averaging about a hundred thousand goodbyes a year,” emphasizing the magnitude of threats facing pangolin populations (see Appendix B). Second, the *sustainability frame* emphasizes the risk of resource exhaustion. Given the lack of scientific evidence on the medical effects of pangolin products, to the best of my knowledge, no conservation organization has used this type of framing so far. However, doctors and patients in Vietnam have generated persistent demand for pangolin-based traditional medicine with the belief that pangolins can be used to cure a variety of diseases, including cancer (Sexton, Nguyen and Roberts, 2021). Regardless of the actual effect, halting the consumption of pangolins now for future use may be a middle ground that appropriators can accept rather than treating pangolins as something that should not be killed at all on a moral basis. Finally, the *pandemic frame* highlights the risk of dangerous disease transmission from wildlife. At the onset of the COVID-19 pandemic, pangolins were suspected as the intermediary species that carried the pathogen to humans. Although the origin of the disease is still investigated, some conservation INGOs were quick to adopt the pangolin as a symbol of zoonotic diseases. For example, Wildlife Conservation Society (a New York-based conservation INGO) circulated the infographic shown in Appendix D on social media on March 10, 2020 to call for a universal ban on wildlife trade.

The survey then asked the level of agreement with the statement, “*Vietnamese people should not buy pangolin-related products.*” The statement is about the behavior of others, not of respondents, because pangolin derivatives are generally expensive and may not be available to the respondents. Moreover, reducing demand for pangolins require establishing norms against pangolin purchases, which are about the inter-subjective understanding of how others *should* behave. The respondents were given a 1-7 scale choice ranging from “strongly disagree” to “strongly agree.”

Finally, to identify whether each respondent was a preservationist, an appropriator, or a member of the mass public, the survey asked the importance of nature and the frequency of traditional medicine use. Given that the results may be affected heavily by the characteristics of subgroups

(Banerjee et al., 2020), the method of subgroup identification is also registered with the PAP *prior to* the experiment was conducted. The questions to identify subgroups were asked after the experiment in order to avoid priming that may occur from questions about nature and traditional medicine. Each category had two questions. For the importance of nature, the survey asked, “To you, how important is it to keep nature and wildlife intact?” and “It might not be possible to achieve both nature conservation and economic growth. To you, how important is it to protect nature and wildlife at the expense of economic growth?” Together, these questions capture post-materialist values associated with preservationist attitudes (George et al., 2016; Manfredo, Teel and Henry, 2009). The respondents who answered, “very important” to both questions are grouped as preservationists (n=651).

For the use of traditional medicine, the survey asked “Have you used traditional medicine before?” and “How often do you use traditional Chinese medicine?” Those who responded “yes” and “everyday” or “a few times a week” were grouped as appropriators (n=267).⁵ Even though the group is referred to as appropriators, they may not be actual consumers of pangolins themselves. However, they are members of the traditional medicine community, which is often the main target of conservation advocacy (Shibaike, 2021). The respondents who did not meet any of the conditions above were grouped as the mass public (n=599).

4 Results and discussions

Table 1 reports the characteristics of the respondents in each subgroup and the sample as a whole. The number of preservationists are greater than initially expected. This may be because they were primed for pro-environmental attitudes in the experiment immediately before the questions about the importance of nature. Moreover, public opinion research suggests that urban and educated individuals tend to hold pro-environmental attitudes (George et al., 2016; Gillingham and Lee, 1999; Kideghesho, Røskaft and Kaltenborn, 2007), and the sample is indeed skewed towards educated and urban respondents despite our sampling effort. To correct the sampling bias, the subsequent

⁵The respondents who have the overlapping membership in both are counted as appropriators.

analyses applied raking weights based on the World Bank’s 2020 demographic data on gender, educational attainment, age, and urban population in Vietnam (See Appendix C for details).

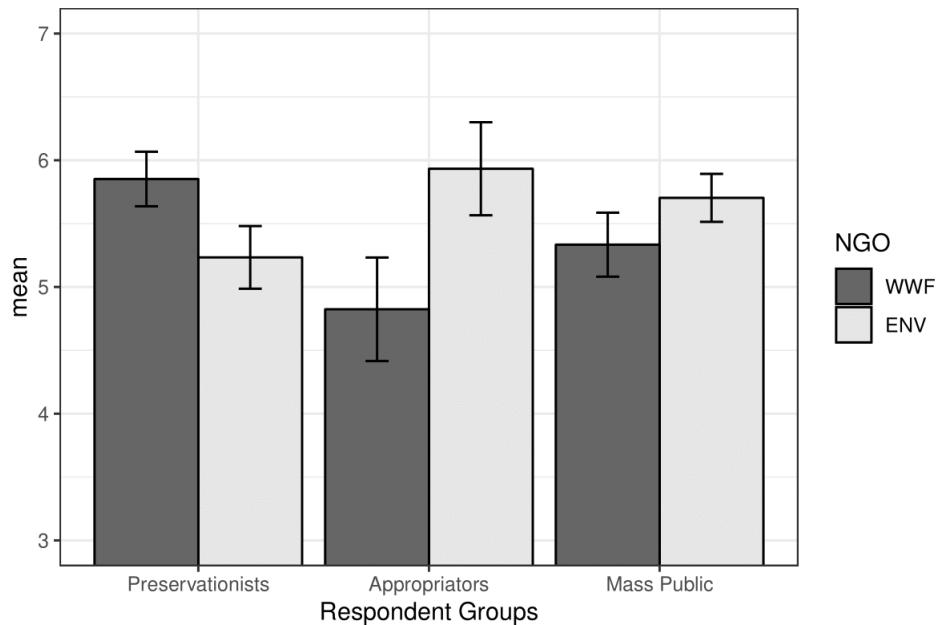
	All	Preservationists	Appropriators	Mass Public
N	1,517	651	267	599
% Female	41.3	42.9	44.6	38.2
Average age	34.4	34.2	38.2	32.8
% University degree	83.5	86.8	79.4	81.8
% Very proud to be Vietnamese	98.2	98.6	100	97.0
% Urban (current)	87.5	88.0	92.8	84.5
% Urban (past)	60.5	63.6	71.5	52.3
% Attachment to Northern Vietnam	38.8	39.2	27.7	43.2

Table 1: Characteristics of the respondents by subgroup.

Figure 2 shows the average responses to the Likert-scale question by subgroup. All groups were generally supportive of norms against pangolin consumption, averaging 5.47 on a 7-point scale. However, appropriators were most sensitive to the treatments, both information sources and advocacy framing. Appropriators discounted the advocacy message from WWF more than any other subgroup, and their response to the harm-and-threats frame indicated the lowest level of support for norms against pangolin consumption, averaging 4.17. By contrast, they indicated the highest level of support under the sustainability frame, averaging 6.77. The exact cause of the sensitivity among appropriators cannot be identified from the experiment, but I suspect that the psychological characteristics that drew them to traditional medicine in the first place might share some of the underlying characteristics that made them prone to persuasion. For example, Gyasi et al. (2016) discuss that consumers of traditional medicine in Ghana often justify their uptake with cultural and spiritual beliefs instead of modern science.

To estimate the effects of interventions more precisely, I used an OLS method to regress the responses on the experimental variables (source and frame). Importantly, the effects of interventions are estimated relative to the standard treatments (WWF and the “harm-and-threats” frame). While experimental research often uses a placebo (non-treatment) group as a baseline, a placebo group in the context of pangolin conservation is highly unrealistic. Unlike political

(a)



(b)

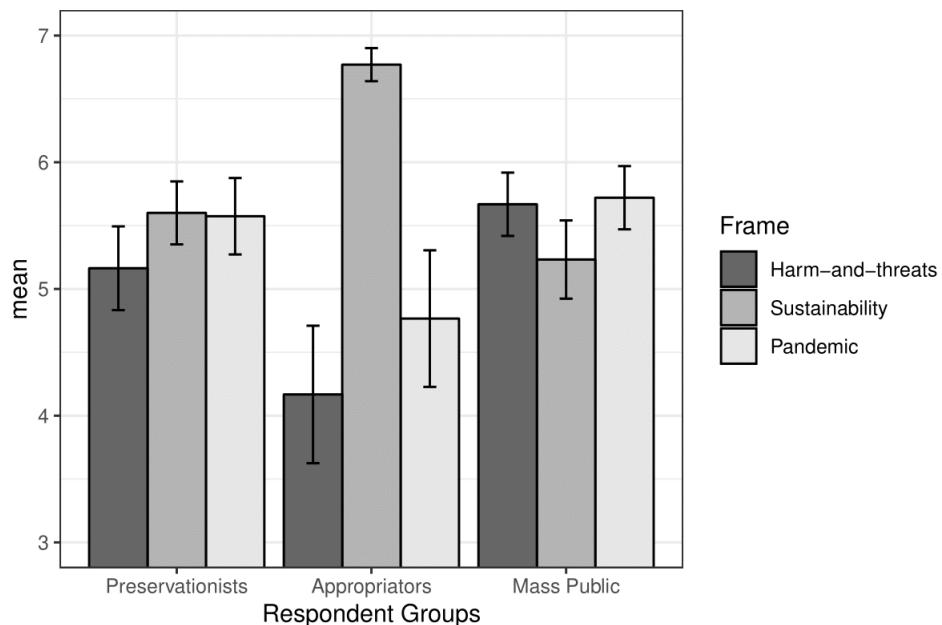


Figure 2: Average response to the Likert-scale question on pangolin consumption “Vietnamese people should not buy pangolin-related products” by respondent group for (a) source and (b) frame treatments, where 1 = “Strongly disagree” and 7 = “Strongly agree.” The bars represent 95% confidence intervals.

campaigns, in which many people choose to vote regardless of the presence of an intervention, most people do not actively think about pangolins *unless* they encounter conservation-related information. Given the high visibility of WWF (Figure 1) and its dominant use of the “harm-and-threats” frame, I used them as reference categories and compared them against the other treatments.

Figure 3 plots the average treatment effects (ATEs) of experimental variables by respondent groups (See Appendix F for regression table). The ATEs are estimated with demographic covariates to reduce noise in the process of estimation (Mutz, 2011). The results show that only preservationists favor the message of WWF more than ENV, the domestic conservation group. By contrast, both appropriators and the mass public put a premium on the message of ENV relative to WWF. These results support H1 (a larger source effect of well-known INGOs among preservationists) and H3 (a larger source effect of local organizations among appropriators) but reject H5 (a larger source effect of well-known INGOs among the mass public).

The finding suggests that the perceptions of information sources by different subsets of the local public may have important consequences for the effectiveness of conservation advocacy. While it is true that WWF is better-known among the Vietnamese public, this visibility of WWF may not help its local advocacy campaigns but potentially exacerbate its negative image as a foreign organization that poses threats to local traditional practices. The disadvantage of WWF is especially large among appropriators, suggesting the linkage between personal values to embrace traditional practices and distrust towards foreign organizations. By contrast, preservationists, whose ideas about “conservation” are generally aligned with Northern environmentalists, seem to view WWF favorably and thus give a premium to its advocacy message irrespective of the frames used.

Regarding the effect of framing, I did not find support for H2 that the harm-and-threats frame is most effective among preservationists. Instead, the effect of the sustainability frame was larger than the harm-and-threats frame even among preservationists. This is surprising because preservationists seem to hold Inglehart’s (1997) post-materialist values, such as prioritizing nature

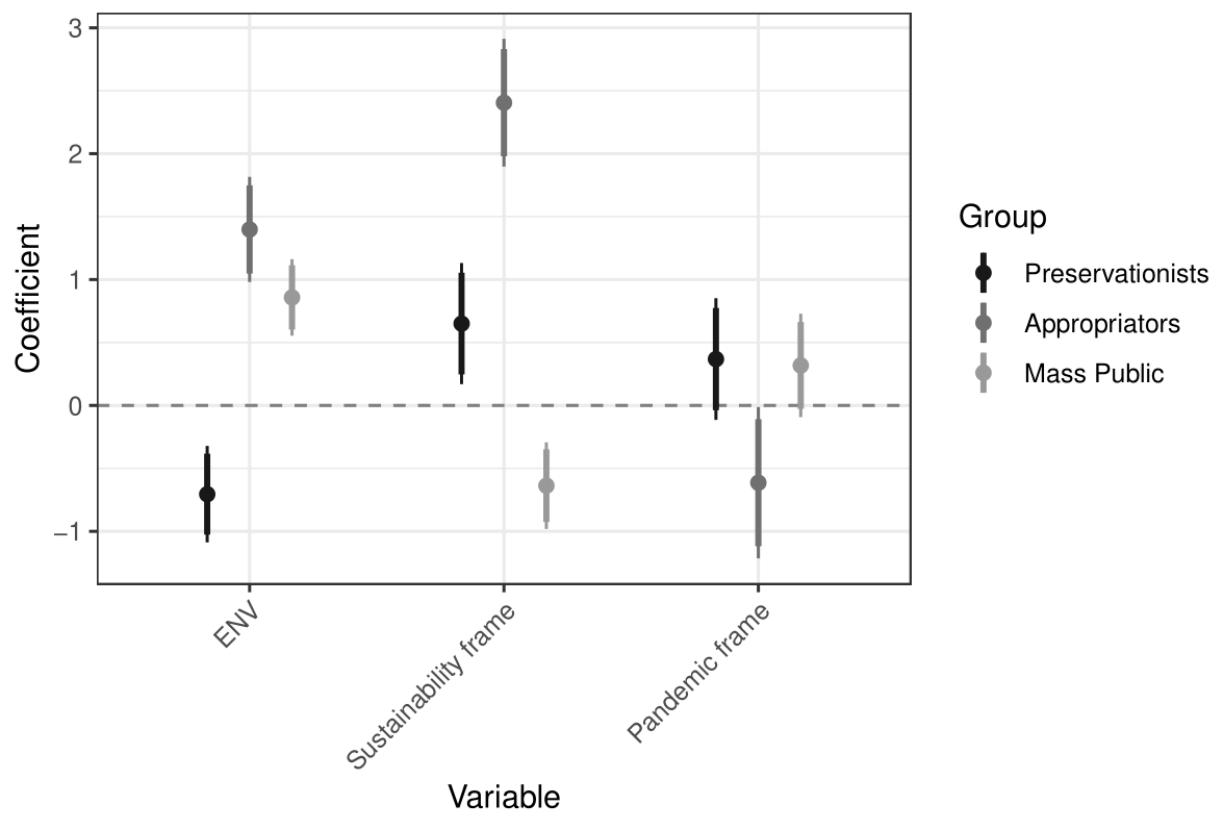


Figure 3: Coefficient plot by subgroup with 90% (thick) and 95% (thin) confidence intervals.

preservation over economic growth, just like Northern environmentalists (George et al., 2016; Manfredo, Teel and Henry, 2009). Compared to Northern environmentalists, preservationists in Vietnam may be more sympathetic to the use of traditional medicine given the social proximity to people who consume traditional medicine in general (but not necessarily pangolin-based products). This finding highlights the danger of adopting the harm-and-threats frame in local conservation advocacy campaigns since it offers no advantage relative to other frames among the subset of the public that is most likely an “easy” target.

Among appropriators, the analysis indicates that the sustainability frame was much more effective than the conventional, harm-and-threats frame, thus providing strong support for H4. Indeed, the effect size is so large that appropriators may have reacted not only positively to the sustainability frame but also negatively to the harm-and-threats frame (which was used as the baseline). This finding highlights a fundamental, potentially irreconcilable, difference regarding the meaning of “conservation” between traditional medicine consumers and Northern environmentalists. While appropriators see pangolins as a part of natural resources for human use, Northern environmentalists treat them as a part of nature that should be left alone from any sort of human activities, as evident in WWF’s pangolin conservation advocacy.

The negative effect of the pandemic frame among appropriators also indicate possible reactionary attitudes against simplistic frames that overemphasize the danger of local practices. Critical scholars have already pointed out the tendency of Northern conservation advocacy to adopt stereotypes of Asian consumers (Margulies, Wong and Duffy, 2019). At the onset of the COVID-19 pandemic, Northern media and INGOs exacerbated the othering of local practices by portraying “exotic” images of wet markets, where most people in fact purchase regular fresh groceries instead of wildlife.⁶ From whaling in Japan to mining in Jamaica, advocacy based on irreconcilable ideas about nature and wildlife by foreign organizations invited intense backlash by domestic groups (Blok, 2008; Fuentes-George, 2016). Pangolin conservation advocacy has not faced such severe backlash yet, but the finding suggests that a simplistic frame may aggravate

⁶<https://www.weforum.org/agenda/2020/04/china-wet-markets-covid19-coronavirus-explained/> (Accessed: Nov 30, 2021)

the North-South divide in the future of pangolin conservation governance.

Among the mass public, no evidence suggests that the pandemic frame outperformed the harm-and-threats frame. This is also unexpected because members of the mass public typically do not pay attention to conservation issues, but they do when their personal relevance to the issue increases, such as the issue's linkage to the COVID-19 pandemic. Even among those individuals who are relatively disengaged from conservation, the harm-and-threats frame seem to be as effective as the pandemic frame, which fails to support H6 that the effect of the pandemic frame is the largest among the mass public. In fact, there is no evidence to believe that the pandemic frame works better than the conventional, harm-and-threats frame in any subgroup. Interestingly, the sustainability frame was also less effective than the harm-and-threats frame among the mass public. Perhaps this is because members of the mass public are selected on the basis of non-use of traditional medicine, which in turn meant that they would dislike the idea of conservation in order to support traditional medicine practices.

Regarding the demographic covariates (see Appendix F), the directions of the effects were generally in line with expectations, while statistical significance was not always present. For example, the results suggest that female and university graduates tend to give more support for reducing pangolin consumption, but these turned out to be statistically insignificant. Experiences of living in rural areas, both current and past, had a negative effect on conservation attitudes. This is consistent with evidence from the United States, where urban residents tend to view animals as human-like existence that deserve "caring and compassion" (Manfredo, Teel and Henry, 2009: 412). More surprisingly, the effect of age was positive and statistically significant across all subgroups. Although pro-conservation attitude is typically associated with Inglehart's modernization (George et al., 2016), older generations in Vietnam tend to give greater support for norms against pangolin consumption than younger generations perhaps because they are more likely to be or know consumers of traditional medicine.

5 Implications for INGO advocacy and future research

Civil society advocacy plays an important role in wildlife conservation, as local populations may not be aware of the threats posed to the species they consumed for generations. In light of mounting evidence that INGOs fail to deliver their conservation objectives in the Global South, I investigated how the heterogeneous interests of the local public might condition the effects of conservation advocacy. The results of the survey experiment in Vietnam documented quite different reactions between preservationists, appropriators, and the mass public. One important limitation of this experiment is that we cannot observe actual change in the behaviors of respondents. Future research should consider how heterogeneous interests may lead to the likelihood of behavioral changes.

The key takeaway from my analysis is that conservation advocacy has heterogeneous effects on different subsets of the local public. This offers important implications for INGO advocacy in the Global South. First, the reputation of well-known INGOs, such as WWF, may not help them succeed in local conservation projects. In fact, given the negative effect of WWF as an information source among appropriators and the mass public, we can suspect that a large subset of the local public, at least in Vietnam, might not hold favorable views towards foreign organizations. This argument is consistent with the existing research documenting foreign organizations fueling counter-mobilization among local groups (Blok, 2008).

This problem can be further exacerbated by the tendency of Northern INGOs to collaborate among themselves (Barnett and Walker, 2015; Hughes et al., 2018; Stroup and Wong, 2017). For example, an interviewee from WildAid discussed the routinized nature of collaboration with The Nature Conservancy for their pangolin conservation campaign:

We have been working for many years with The Nature Conservancy in China. We had some previous collaboration and even some previous discussion about collaboration that didn't actually result in a collaboration. Our offices were quite near each

other so we often met their staff for coffee.⁷

The problem of routinized collaboration among Northern INGOs has already been discussed in the literature in terms of marginalization of Southern groups (Barnett and Walker, 2015). The findings suggest that such collaboration may be not only morally problematic but also less effective than North-South collaboration. In fact, research shows that some of the most powerful networks of INGOs have strong North-South networks (Keck and Sikkink, 1998), which seems true regardless of their ideological positions. For example, Bob (2011) shows that right-wing groups and churches in the United States have successfully collaborated with local groups in countries like Uganda, Belize and Malawi for their anti-LGBTQ campaigns. More practically, Northern INGOs may benefit from collaborating with local organizations to alleviate the local concern that they might pose a threat to local culture and traditional practices. Moreover, collaboration with local organizations should generate positive outcomes beyond the source effect examined in this paper; it should equip INGOs with context-specific capacities that are deemed necessary to the success of local conservation projects (Balboa, 2018).

Second, pangolin conservation advocacy highlighted crucial differences in cultural practices between Vietnam and the Global North. Currently, INGOs adopting the harm-and-threats frame dominate the discourse of pangolin conservation advocacy at both global and local levels. However, the results suggest that consumers of traditional medicine, whose support is essential to establishing norms against pangolin consumption, are more susceptible to the sustainability frame. Even preservationists, who share similar values with Northern environmentalists regarding nature and wildlife, are slightly more susceptible to the sustainability frame than the conventional, harm-and-threats frame. These findings challenge the mode of INGO governance typically considered as effective, in which Northern headquarters of INGOs control advocacy agendas at their national offices with limited efforts to adapt them into local contexts (Balboa, 2018; Luxon and Wong, 2017; Wong, 2012). The public perception of certain species can differ between the Global North and the Global South, and to overcome such a difference, INGOs may be required to sub-

⁷Interview conducted on April 26, 2019. The interview protocol was approved by the University of Toronto's Research Ethics Board on July 20, 2017 (ID: 34702).

stantially shift the framing of an issue in local areas.

Third, the ineffectiveness of the pandemic frame across all subgroups may be a negative consequence of the normative problem that critical scholars have long noted in Northern conservation advocacy. They argue that conservation advocacy is often embedded in neo-colonialist ideas, which produce and reproduce the othering and blaming of non-white populations (Epstein, 2006; Margulies, Wong and Duffy, 2019; Neumann, 2004). The pandemic frame had an element of othering of local practices, most notably the nature of “wet markets.” Northern media and INGOs circulated the pictures of “exotic” animals in Asian wet markets as the origin of the COVID-19 pandemic despite the fact that wild animals were not the only products traded in wet markets. Most consumers use wet market to purchase fresh produce, such as vegetables and fish, but some markets also trade wildlife products.⁸ Although conservation scientists have warned against calls for a universal ban on wildlife trade, which would disproportionately damage the economies of rural communities,⁹ Northern conservation INGOs have already adopted the pandemic frame to emphasize the risk of zoonotic diseases (Appendix D). Such an oversimplification of wildlife trade could potentially further aggravate the negative image of foreign organizations as a threat to local culture and traditional practices.

Finally, the findings speak to the broader areas of global environmental governance, in which the interests of preservationists and appropriators are difficult to reconcile. Scholars of environmental politics found strong evidence that partisanship affects how individuals react to advocacy interventions (Benegal and Scruggs, 2018; Bosen, Ferraro and Miranda, 2014; Coffey and Joseph, 2013; Guisinger and Saunders, 2017). However, existing research focuses overwhelmingly on the attitudes of Northern publics despite the fact that many environmental issues, including climate change and species extinction, require public support, or at least public awareness, in the Global South. We cannot simply use partisanship as a salient political cleavage in the Global South, where partisan competition may not be a dominant factor for individuals to

⁸<https://www.cnn.com/2020/04/14/asia/china-wet-market-coronavirus-intl-hnk/index.html> (Accessed: June 1, 2021).

⁹<https://theconversation.com/coronavirus-why-a-blanket-ban-on-wildlife-trade-would-not-be-the-right-response-135746> (Accessed: Nov 28, 2021).

form environmental opinions. Future research may consider individual interests in nature and resources as useful subsetting strategies to widen the scope of analysis in environmental politics and attitude formation.

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A Power analysis

There was no existing data I could leverage for the power analysis of this survey; instead, this power analysis was based on assumptions. Assuming that the standard variation of the dependent variable would be 1 ($\sigma=1$) and the effect size would be 0.4 ($\beta=0.4$), roughly 200 individuals as the total number of observations ($N=200$) would allow me detect the effect with 95% confidence (Figure A).¹⁰ In other words, if there are 200 individuals for each of the preservationist and appropriator groups, the effect would be detected with significance. The mass public, which I expected to be 1000+ individuals, would easily pass the statistical test if the effect is indeed present. Future research would be able to use my study to conduct power analysis and reliably estimate an appropriate sample size to block subgroups (preservationists and appropriators) in experimental designs.

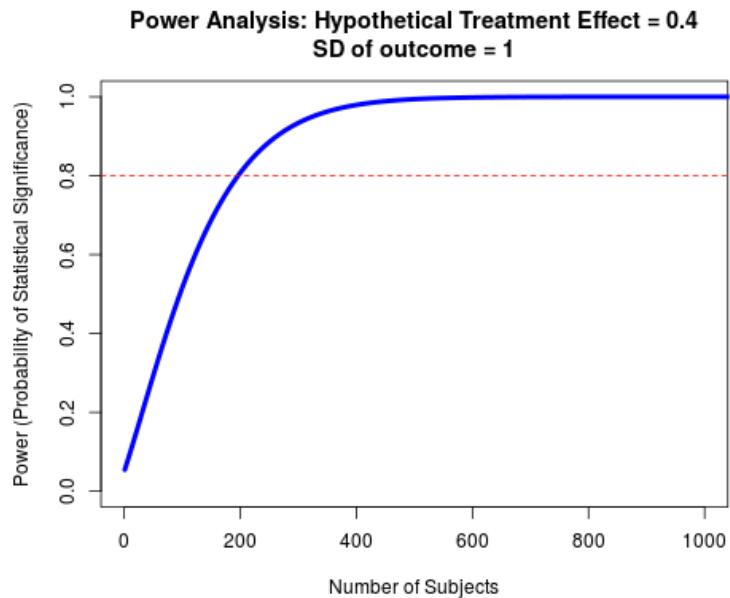


Figure 4: Power analysis

¹⁰When the subgroup is divided into two groups, i.e. treatment and control groups.

B WWF's save the pangolins campaign



Figure 5: Screenshots of WWF's campaign ad

C Raking weights

Due to the nature of an online panel, the demographic characteristics of the respondent pool were biased towards urban, young and well-educated populations. To correct the biases, I used raking (not ranking) weights, in which each respondent was assigned a weight based on the marginal distributions of key demographic parameters in the census data. In short, individuals who were over-represented in the survey relative to the population distribution received greater weights than those who were under-represented. Raking is a commonly used approach to correct sampling bias across different disciplines, such as medical and public opinion research (e.g. Barchuk et al., 2021; Pasek et al., 2009). Data on the Vietnamese population (2020) were obtained from the World Bank.¹¹ I used the marginal distributions of the following demographic parameters to compute raking weights: female population, current residence in an urban environment, post-secondary educational attainment, and age 65+. The R package, *anestrake*, was used for this computation. Table 2 reports the distributions of the demographic parameters used for calculating raking weights as well as the distributions after the weights were applied.

	Survey	World Bank	Post-adjustment
N	1,517		1,517
% Female	41.3	49.9	48.7
% Population above age 65	0.5	7.8	5.3
% University degree	83.5	15.8	16.0
% Urban (current)	87.5	37.3	37.1

Table 2: Marginal distributions of the demographic parameters used for raking. in my survey data, the World Bank data (2020) , and the post-adjustment data. Post-secondary educational attainment is based on the predicted data from 1979, 1989, 2009, as recent data are not available.

¹¹<https://data.worldbank.org/indicator/>, Accessed: November 30, 2021

D Wildlife Conservation Society's anti-wildlife trade campaign

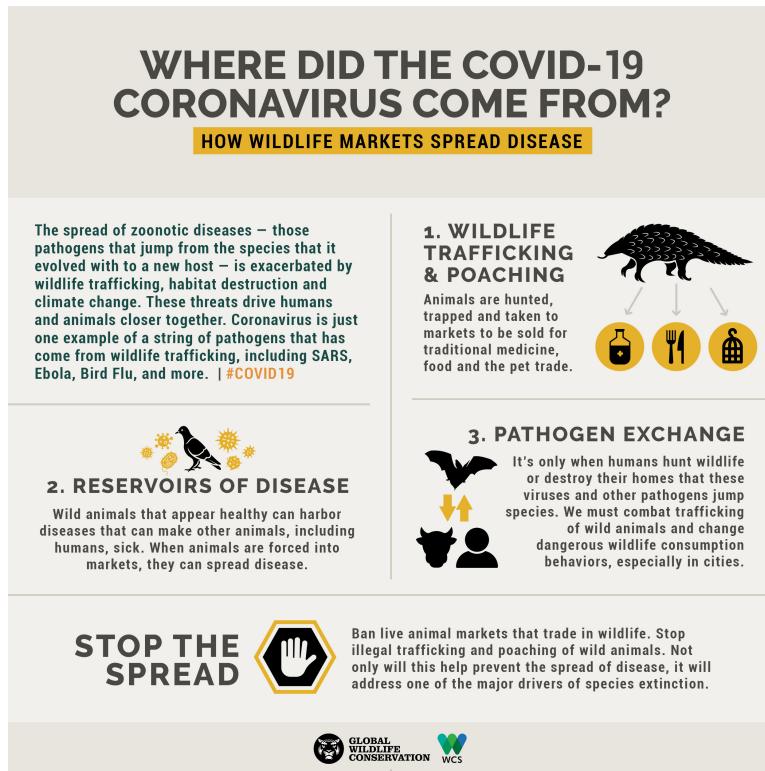
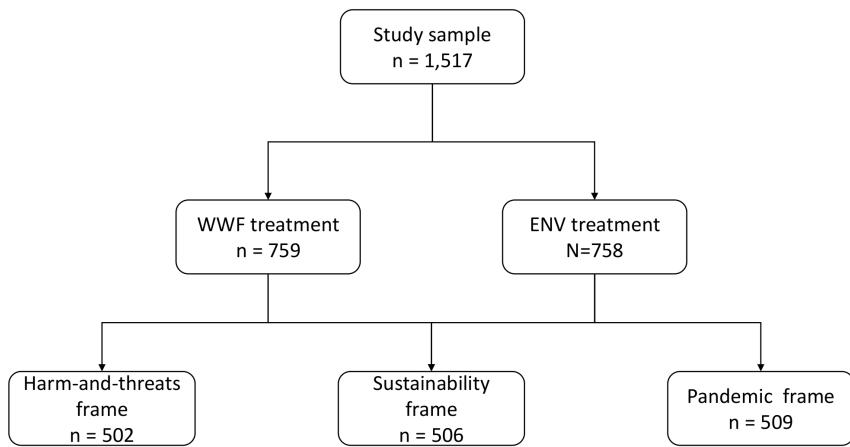


Figure 6: Wildlife Conservation Society's campaign ad on March 10, 2020

E Randomization design



F Regression table

Table 3 reports the results of regression by subgroup. For treatment variables, WWF and “harm-and-threats” are used as the reference categories. For demographic covariates—gender, education, pride as Vietnamese, past and current residence, and attachment to Northern or Southern Vietnam—I used the following as reference categories, respectively: female, less than high school degree, not proud at all, urban, attached to neither.

Dependent variable: Support for norms against pangolin consumption						
	Mass Public		Preservationists		Appropriators	
ENV	0.858*** (0.155)	0.418* (0.163)	-0.705*** (0.196)	-0.572** (0.187)	1.398*** (0.213)	1.109*** (0.258)
Sustainability frame	-0.637*** (0.175)	-0.461* (0.183)	0.650** (0.246)	0.332 (0.217)	2.405*** (0.259)	2.484*** (0.274)
Pademic frame	0.318 (0.210)	0.092 (0.219)	0.368 (0.247)	0.200 (0.226)	-0.614* (0.307)	0.169 (0.354)
Age	0.055*** (0.007)		0.025* (0.011)		0.049*** (0.013)	
Male	-0.217 (0.176)		0.034 (0.252)		-0.414 (0.518)	
Other	-1.762* (0.721)		1.367 (1.270)			
High school degree	1.612*** (0.239)		-0.529 (0.342)		-1.035** (0.333)	
Post-graduate degree	0.998* (0.470)		-0.842 (0.777)		-1.495 (0.798)	
University degree	0.599 (0.317)		-0.240 (0.468)		-0.281 (0.608)	
Not very proud	-3.594 (3.282)		4.068 (4.206)			
Somewhat proud	-1.232 (3.251)		2.809*** (0.827)			
Very proud	-0.326 (3.246)		2.400** (0.820)		-2.114*** (0.402)	
Past residence (Rural)	0.061 (0.268)		-0.982** (0.312)		-0.789 (0.421)	
Past residence (Both)	0.167 (0.245)		0.569 (0.400)		-2.409*** (0.547)	
Current residence (Rural)	-0.657* (0.284)		1.570*** (0.309)		-1.108* (0.446)	
Attachment (Both equally)	-2.309*** (0.557)		2.067*** (0.547)			
Attachment (Northern Vietnam)	-2.348*** (0.515)		1.457** (0.473)		0.418 (0.600)	
Attachment (Southern Vietnam)	-2.618*** (0.527)		1.917*** (0.483)		-0.205 (0.600)	
Constant	5.454 (3.273)	5.473*** (0.150)	0.711 (1.237)	5.635*** (0.221)	6.630*** (0.799)	3.817*** (0.207)
Observations	599	599	651	651	267	267
R ²	0.289	0.023	0.119	0.022	0.639	0.302
Adjusted R ²	0.267	0.018	0.094	0.017	0.619	0.294
Residual Std. Error	1.929 (df = 580)	2.233 (df = 595)	2.000 (df = 632)	2.084 (df = 647)	1.177 (df = 252)	1.602 (df = 263)
F Statistic	13.106*** (df = 18; 580)	4.708** (df = 3; 595)	4.758*** (df = 18; 632)	4.803** (df = 3; 647)	31.840*** (df = 14; 252)	37.954*** (df = 3; 263)

Note:

*p<0.05; **p<0.01; ***p<0.001

Table 3: Results of regression analysis