COUNTERING DISINFORMATION IN FRAGILE STATES

Prepared for:
U.S. Department of State
Global Engagement Center

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Acknowledgements

I would like to thank my client, David Phillips, for his support on this project as he moved from the Bureau of Conflict & Stabilization Operations to the Global Engagement Center. Without his expertise and support, this project would not have reached completion. I would also like to thank Deputy Assistant Secretary Matthew Steinhelfer for inspiring this project and encouraging me to pursue this topic.

Thank you to my APP instructors and classmates for the guidance and advice throughout this process. Special thanks to Casey Gottlieb, Leigh Bierman, and Noah Strike for all the laughs in this final semester – here's to fixing what the world broke.

And to my parents, thank you for your unwavering support of me of throughout this trying academic experience. We made it. I promise, this is the last academic work product you will have to read.

Disclaimers

The author conducted this study as part of the program of professional education at the Frank Batten School of Leadership and Public Policy, University of Virginia. This paper is submitted in partial fulfilment of the course requirements for the Master of Public Policy degree. The judgements and conclusions are solely those of the author, and are not necessarily endorsed by the Batten School, by the University of Virginia, or by any other agency.

The views expressed in this study do not necessarily represent the views of the U.S. Department of State or the United States.

Honor Statement

On my honor as a student, I have neither given nor received aid on this assignment.

Glossary of Key Acronyms

CSO – Bureau of Conflict & Stabilization Operations

FSO – Foreign Service Officer

FSI – Foreign Service Institute

GEC – Global Engagement Center

GFA – Global Fragility Act

PD – Public Diplomacy

UN – United Nations

UNICEF – United Nations Children's Fund

Glossary of Key Technical Terms

Disinformation – False information that is deliberately shared with the knowledge that it is false information and intention of deceiving the recipient to believe the false information.

Malinformaiton – True information, particularly personal information, that is spread with malicious intent (e.g., doxing).

Misinformation – False information that is deliberately shared without the knowledge that the information is false and/or the intention of deceiving the recipient to believe the false information.

Public Diplomacy – Communications by a country directed at another to influence foreign audiences to advance its own interests.

State Fragility – Describes states whose governments fail to meet critical needs or metrics related to legitimacy.

Truth Discernment – Ability to discern truth from falsehood, particularly in relation to information.

Executive Summary

While disinformation and state fragility have been recognized independently as policy problems that need to be addressed, little has been done to address the effects of disinformation in fragile states. **Citizens in fragile states are too ill prepared to recognize and respond to disinformation. As disinformation is more frequently targeted to the population of fragile states, the risk of violence, ethnic conflict, and democratic backsliding increases.** This report examines how the Global Fragility Act (GFA) can be leveraged by the U.S. Department of State's Global Engagement Center (GEC) to counter and create resilience to disinformation in fragile states, which contributes to greater overall stability in GFA priority countries.

Disinformation can be countered in the short-term using methods like fact-checking or in the long term by creating resilience in populations to disinformation messages. Both can contribute to reducing instability in fragile states caused by disinformation, however creating resilience is more effective and has longer-term results than fact-checking. The best practices for countering and creating resilience to disinformation include fact-checking, public diplomacy, literacy programs, and regulations. Given the governance challenges in fragile states, not all of these practices are equally as effective in the context of fragile states.

This report evaluates four alternatives for countering and creating resilience to disinformation:

1. Allowing present trends to continue (status quo)
2. Investment in existing fact-checking organizations
3. Executing a disinformation-focused public diplomacy campaign
4. Creating UNICEF disinformation literacy programming

These alternatives are evaluated on the five criteria of cost, effectiveness, cost-effectiveness, administrative feasibility, and opportunities for waste and/or corruption.

After evaluating these alternatives, this report recommends the State Department invest in hiring personnel to execute disinformation-focused public diplomacy in each GFA priority country/region. This alternative provides U.S. Embassies with funding to create public diplomacy programming with the ability to both fact-check and promote long-term resilience to disinformation without increasing costs far beyond the status quo or increasing the administrative burden of existing Foreign Service Officers (FSOs). This alternative is estimated to cost $5,792,826.27 over the next ten years with high administrative feasibility and few opportunities for waste and/or corruption. Given its ability to enact programming targeted at both short-term corrections and long-term resilience, this alternative is more effective and preferred compared to other alternatives.

The FSOs hired under this alternative would undergo training at the Foreign Service Institute (FSI) to learn the skills necessary to execute public diplomacy programming, with a focus on countering disinformation and creating resilience through these programs. After these FSOs are trained, they will have the ability to create culturally responsive programming that increases resilience to disinformation at the embassy in each GFA priority country, which will help to stabilize the information environment in GFA priority countries and target the root causes of instability.

Introduction & Problem Statement

Citizens in fragile states are too ill prepared to recognize and respond to disinformation. As disinformation is more frequently targeted to the population of fragile states, the risk of violence, ethnic conflict, and democratic backsliding increases.

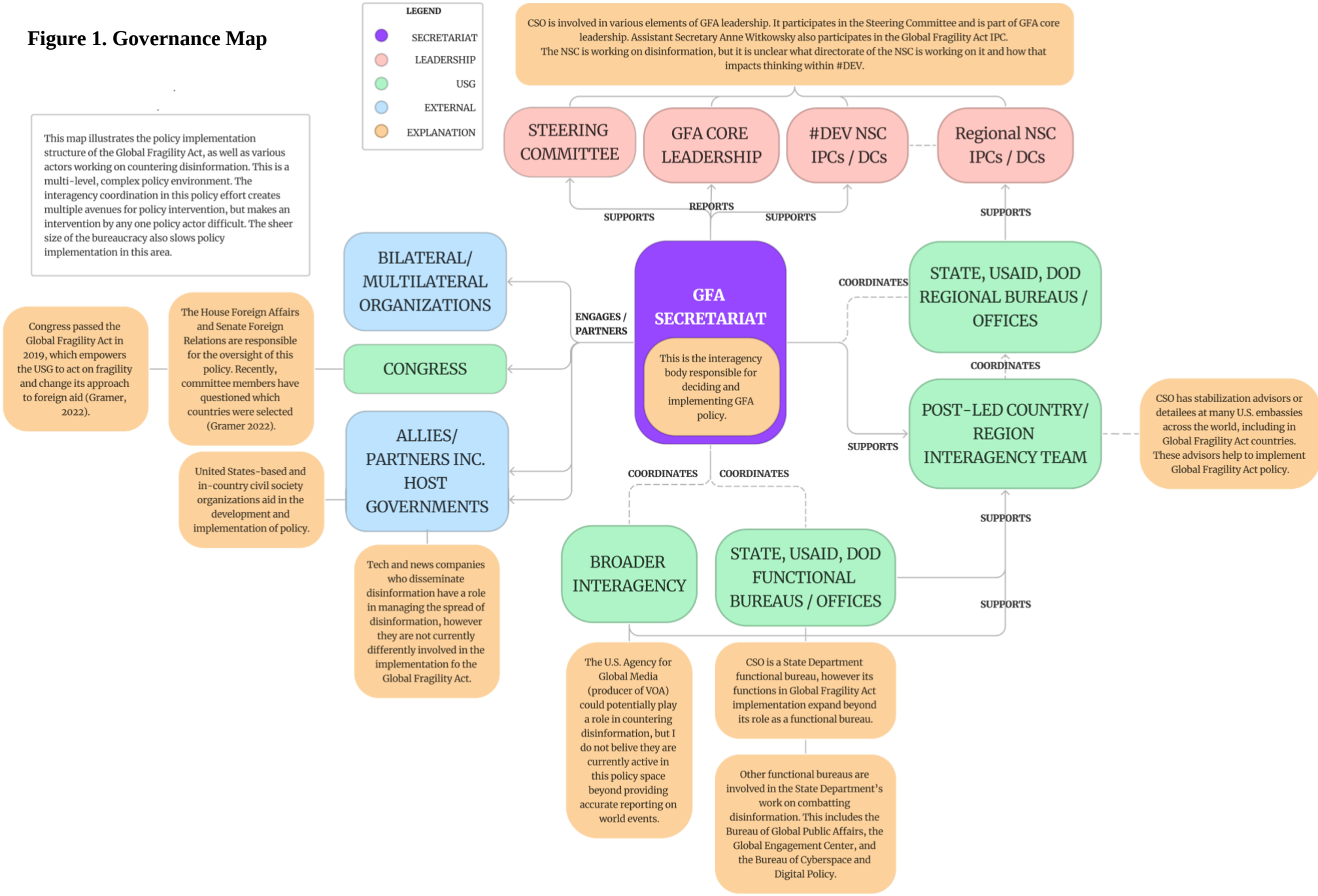
Disinformation has been recognized as a growing problem globally. In April 2022, the United Nations Human Rights Council adopted a resolution proclaiming the importance of countering disinformation, given its threats to human rights (United Nations, 2022). Disinformation has fueled genocide in Burma and was used by Russia during the invasion of Ukraine to demoralize Ukrainians and alienate Ukraine from its allies (OECD, 2022; Morrison & Cooper, 2021). However, as international attention on disinformation increases, limited attention is focused on disinformation in fragile states. Fragile states are potentially the most at-risk of the destabilizing and negative effects of disinformation due to their poor governance and limited ability to respond (Hook & Verdeja, 2022). This report begins to examine the problem of disinformation in fragile states through the lens of promoting resilience against disinformation in the Global Fragility Act (GFA) priority countries.

Client Overview

This report was prepared for the U.S. Department of State's Global Engagement Center (GEC). The GEC's primary responsibility is to understand and counter disinformation, particularly that used by Russia to destabilize the United States and its allies. The GEC has its origins in coordinating the U.S. counterterrorism messages across the U.S. government, which was an important part of U.S. public diplomacy efforts at the time (U.S. Department of State, n.d.). Public diplomacy is a key policy tool used by the United States to counter disinformation, and its effectiveness is discussed in further detail below. The GEC's work does not currently focus on the specific context of fragile states. However, the expertise and abilities in countering disinformation are the basis of this report.

This report is also inspired by the work of the U.S. Department of State's Bureau of Conflict and Stabilization Operations (CSO). CSO is responsible for addressing conflict and instability, per the Joint Strategic Plan for the State Department and USAID. The Joint Plan specifically cites GFA as a policy tool to prevent conflict and increase state stability (U.S. Department of State & U.S. Agency for International Development, 2022). As the State Department lead for GFA implementation, CSO has broad authority to act in this policy area. Through its relationships with other members of the GFA Secretariat, CSO can influence both GFA policymaking and its in-country implementation. While addressing disinformation is not explicitly part of GFA, there is growing interest within the bureau on the effects of disinformation in fragile states.

Figure 1. Governance Map



The policy environment in which the GEC and CSO operate are shown in Figure 1. This figure demonstrates the wide array of actors working on policy related to fragile states and disinformation, both inside and outside of the U.S. government. There is a vast array of policy actors interested in fragile states; however, very few of those are directly focused on disinformation. Of the actors able to work to combat disinformation, many exist outside of government and are not interested in fragile states. The GEC is one of the only policy-relevant actors able to work at the nexus of fragile states and disinformation. This report seeks to leverage the unique position of the GEC to recommend policies that can both counter and create resilience against disinformation.

Report Structure

This report begins by providing background of the problems of state fragility and disinformation, focusing on how disinformation in fragile states works to worsen fragility. The Global Fragility Act is then introduced as a potential policy mechanism for overcoming the past failure of foreign aid to stabilize fragile states.

Best practices for countering disinformation are then described in the literature review. Not all programs discussed are successful at both combatting and creating resilience to disinformation or are effective in the context of fragile states.

The criteria and alternatives are then described. Based on my research of the best practices and considerations made relative to the context of fragile states, this report evaluates four alternatives for countering and creating resilience to disinformation:

1. Allowing present trends to continue (status quo)
2. Investment in existing fact-checking organizations
3. Executing a disinformation-focused public diplomacy campaign
4. Creating UNICEF disinformation literacy programming

These alternatives are evaluated on the five criteria of cost, effectiveness, cost-effectiveness, administrative feasibility, and opportunities for waste and/or corruption.

After evaluating these alternatives, this report recommends the State Department invest in hiring personnel to execute disinformation-focused public diplomacy in each GFA priority country/region. This alternative provides U.S. Embassies with the ability to both fact-check and promote long-term resilience to disinformation without increasing costs far beyond the status quo or increasing the administrative burden of existing Foreign Service Officers (FSOs).

Finally, a two-step plan for implementing this selected alternative is outlined. First, FSOs would be trained at the Foreign Service Institute (FSI) on the best practices in public diplomacy, particularly those that are important for countering and creating resilience to disinformation. After training, FSOs would be sent to the embassies in GFA priority countries to execute a disinformation-focused public diplomacy program. These programs would create long-term resilience to disinformation in the populations of GFA priority countries, which would help to stabilize the information environment in the country and lessen fragility.

Background on the Problem

State Fragility

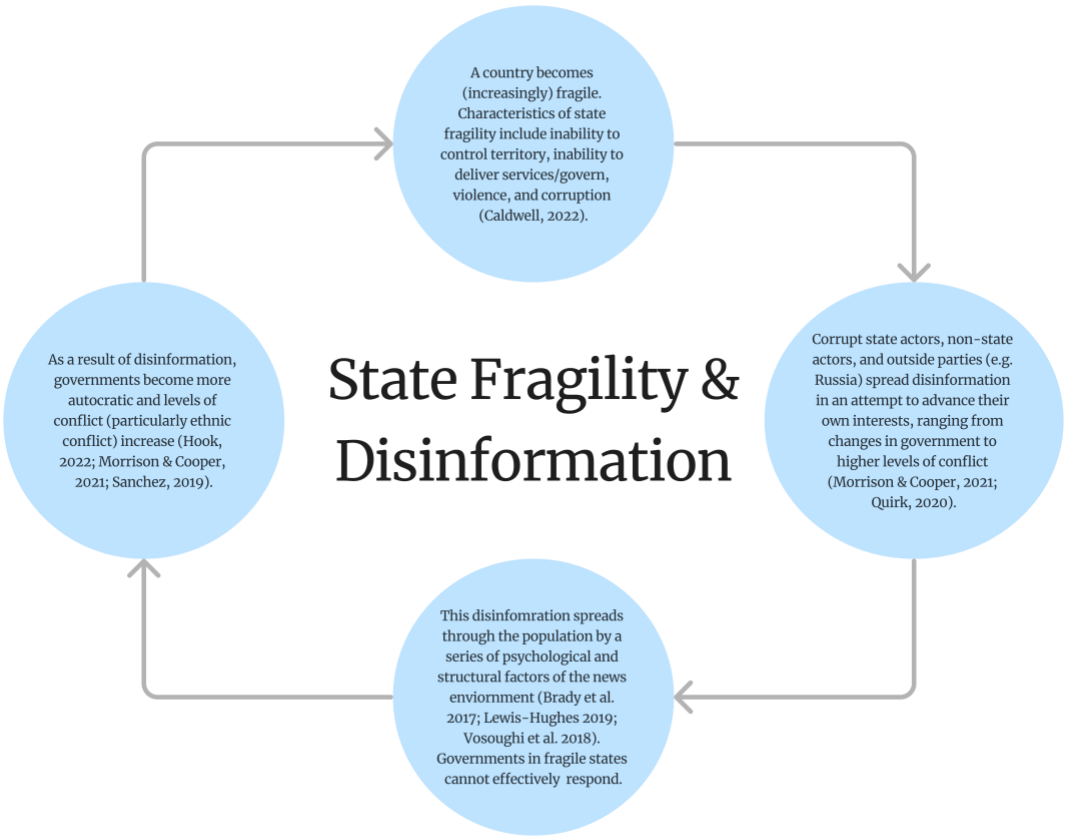
State fragility is a development concept that has been used to describe states whose governments are failing to meet critical needs or metrics related to legitimacy. The key characteristics of fragile states include an inability to control territory and govern, as well as deliver public services (Caldwell, 2022). They are typically marked by conflict or are in a post conflict state. Fragility is a continuum, with fragile states possessing the most characteristics that contribute to fragility. The Fragility Index ranks states based on 12 characteristics across 4 categories: cohesion, economic, political, and social. These characteristics allow states to be compared across one another in terms of fragility. However, comparisons within states across time are far more important analytically to determine changes in fragility across time (The Fund for Peace, n.d.a.).

The costs of state fragility can range depending on the level of fragility, with costs being extremely high in fragile states. The most obvious cost is associated with increased levels of conflict. Conflict not only has monetary costs for governments and the citizens in those states, but additional costs in human life and psychologically (Jain, 2022). Increases in state fragility could lead to the incitement of new conflict or the worsening of an existing conflict. Conflict pervades all aspects of governance and life in conflict zones, which thus worsens characteristics associated with state fragility (Caldwell, 2022). States in conflict struggle to meet basic needs of governance like delivery of public services, which again contributes to worsening fragility (The Fund for Peace, n.d.b.). Fragility also makes states more vulnerable to the negative effects of global crises, like the coronavirus pandemic. Failure to deliver public services was particularly costly during the coronavirus pandemic. Haiti wasted an estimated one million dollars of COVID-19 vaccines donated by COVAX (Griffiths et al. 2021; Holder 2022). Disinformation regarding the vaccine and the pandemic itself ran rampant in Haiti at this time (Hellerstein, 2021). The combination of a weak governance system and this disinformation led to vaccine wastage. Waste like this is common in fragile states, particularly related to corruption. With corruption and waste of public resources, the costs of fragility are high in the most fragile of states (Caldwell, 2022).

Disinformation

Disinformation is an increasingly discussed problem, but it is an often misunderstood one. Terms like disinformation and misinformation are often used interchangeably, however, they are distinct terms with different definitions. Disinformation is false information that is deliberately shared with the knowledge that it is false information; it is shared with the intention of deceiving the recipient to believe the false information. According to experts at the State Department, this differs from both misinformation and malinformation. Misinformation is false information that is shared without the negative intent of disinformation. Sharers may not know the information is false, or they may be acting on a fear response; disinformation involves the deliberate and knowing sharing of false information. Malinformation involves the spread of true information, particularly personal information, for malicious purposes like doxing or exposing people (David Phillips, personal communication, October 14, 2022).

Figure 2. Cycle of Disinformation in Fragile States



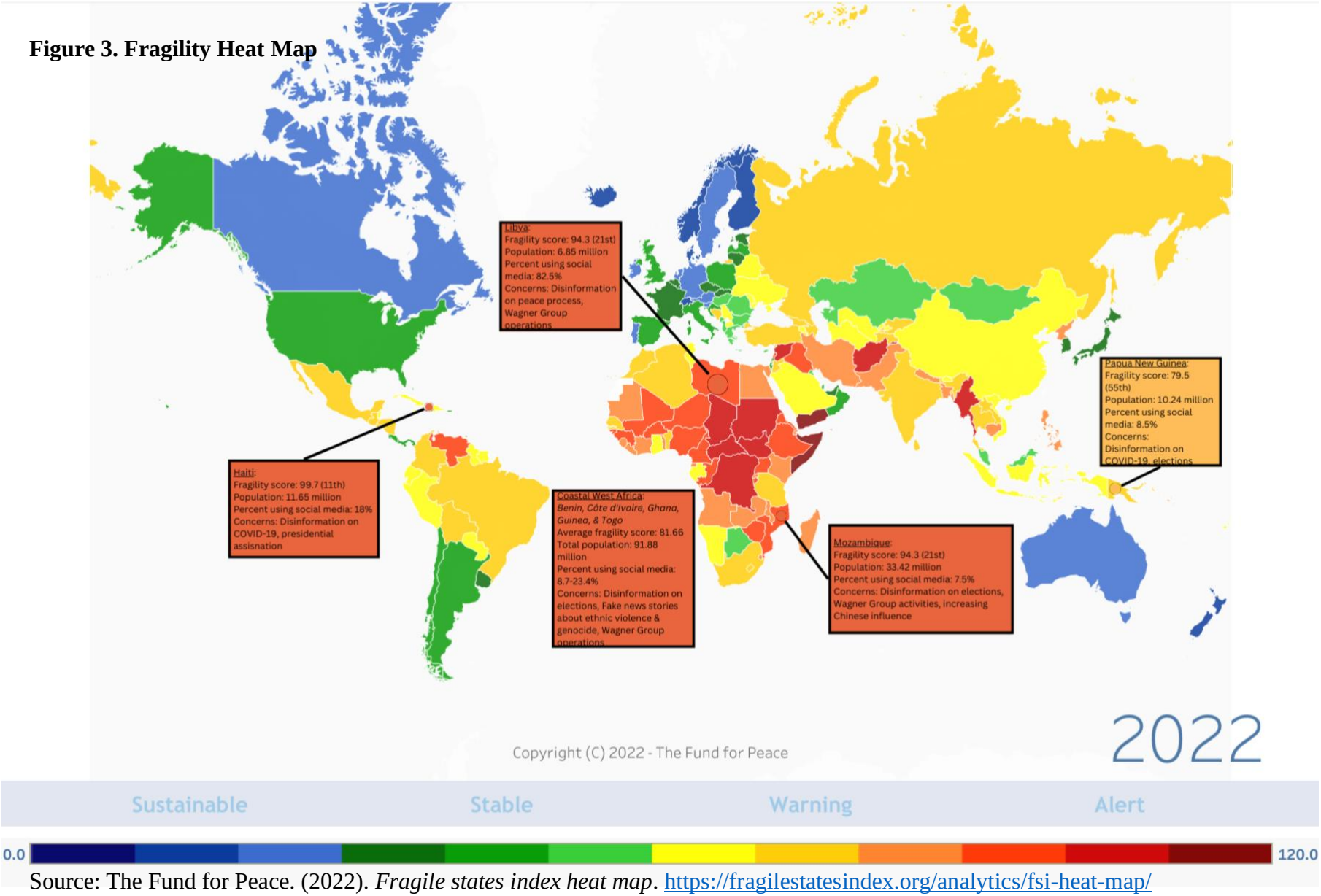
Disinformation in fragile states works in a way that worsens fragility. As Figure 2 above illustrates, actors in and outside of fragile states use disinformation to advance their own interests (Morrison & Cooper, 2021; Quirk, 2020). Given the structural factors of the news environment and the inability of fragile states to respond effectively to disinformation, disinformation spreads through the population (Brady et al., 2017; Lewis-Hughes, 2019; Vosoughi et al., 2018). As a result of this disinformation, fragile states become increasingly fragile in this difficult-to-break cycle. Disinformation in the context of fragile states is particularly costly. Disinformation is often used to increase tensions between groups, particularly ethnic groups. This can contribute to the perpetration of atrocities, as occurred in Burma (Hook & Verdeja, 2022). Disinformation is also used to influence elections in fragile states. Russia has used disinformation to meddle in elections around the world, though Russia is not the only state actor at play here (Africa Center for Strategic Studies, 2020a). State, non-state, and individual actors can contribute to the spread of disinformation that has negative effects. Research suggests that every election in Africa was influenced by disinformation in 2019. This is a particularly alarming statistic as disinformation is often used to help candidates who are autocratic, which worsens democratic backsliding in many of these countries (Lewis-Hughes, 2019). Disinformation can also be used to help corrupt actors maintain their power, which contributes to further corruption and fragility.

The Global Fragility Act

The Global Fragility Act (GFA) was passed in 2019 as a new approach to U.S. foreign assistance. Reflecting on experiences of the last 20 years of responding to violent conflict with military interventions, policymakers used GFA as an opportunity to prevent conflict. GFA seeks to target the root causes of fragility with a focus on long-term stabilization and prevention of violence (Yayboke et al., 2021). The law required five priority countries and/or regions be selected, followed by the development of ten-year plans detailing how the act would be implemented in each priority country (Mercy Corps, 2020). GFA emphasizes evidence-based policymaking, looking at programming and responses that have been proven effective, and local involvement in the planning and implementation processes of programming (Yayboke et al., 2021). In April 2022, the Biden Administration announced the selection of four priority countries and one priority region as part of GFA: Haiti, Libya, Mozambique, Papua New Guinea, and coastal West Africa (Benin, Côte d'Ivoire, Ghana, Guinea, and Togo). These priority countries are shown in the Fragility Heat Map in Figure 3. As indicated by a darker red color, most of these priority countries have high fragility scores indicating high levels of fragility. Papua New Guinea has a lower fragility score than the other priority countries, and it is being used as a test case to demonstrate the wide applicability of this Act and approach to development aid. In March 2023, President Biden submitted the ten-year plans for these priority countries and priority region to Congress (The White House, 2023). While disinformation is not clearly laid out as a priority of GFA, disinformation can contribute to increased fragility and work against stabilization efforts. This analysis examines what policy options exist to counter disinformation in the context of GFA to help further stabilization efforts and prevent de-stabilization due to disinformation.

GFA was passed with bi-partisan support, although there are concerns regarding country selection. Senators, across both parties, have raised concerns that Haiti and Libya are too fragile for GFA programming to be effective – programming would be responsive rather than preventative (Gramer, 2022). While the varying levels of fragility can be used to demonstrate the variety of circumstances under which GFA programming can be effective, Congressional support is important to the success of GFA implementation over its lifetime (Yayboke et al., 2021). Particularly as Congressional appropriations are required for successful implementation of this Act. This report considers Congressional support through the opportunities for waste and/or corruption criterion (discussed in further detail below).

Figure 3. Fragility Heat Map



Source: The Fund for Peace. (2022). *Fragile states index heat map*. https://fragilestatesindex.org/analytics/fsi-heat-map/

The Fragility Trap

The fragility trap refers to the tendency of fragile states to remain fragile despite significant investments, aid, and programming from foreign actors. Research considers this to be a case of economic and development stagnation in most cases, while backsliding may occur in some countries. The statistics regarding states remaining in fragility are alarming. Studies have shown that the average length of state fragility is 54 years (Carment & Samy, 2017). States that were fragile in 2001 had a 95% probability of being fragile in 2009, nearly a decade later (Andrimihaja et al., 2011). Despite investments by foreign actors, fragile states continue to struggle to improve on the metrics that would enhance their stability. GFA is designed to overcome the fragility trap by directly targeting aid and programs towards the factors that most contribute to fragility, however, these are the same factors that make aid and programs ineffective (Center for Strategic & International Studies, 2021). This puts GFA programs at the same risk for stagnation and ineffectiveness that previous ventures to reverse fragility have faced.

The research suggests no clear answer to getting states out of the fragility trap, as long fragile states remain fragile to this day. Afghanistan is a prime, recent example of a state failing to emerge from the fragility trap despite two decades of U.S. involvement (Zürcher, 2012). Policy analysts suggest that U.S. military involvement in Afghanistan hampered attempts to improve civilian capabilities and create the structures necessary for long-term stability (Center for Strategic & International Studies, 2021). Research suggests there are three key factors that must be considered to enact successful development programs in fragile states: authority, legitimacy, and economic capacity (Carment & Samy, 2017). Typically, aid programs provide funds to fragile states to improve their economic capacity and authority (Carment et al., 2008). However, this is not enough for aid programs to be effective in helping states escape the fragility trap. All three areas need to be targeted with aid programs to help states escape the fragility trap (Carment & Samy, 2017). Doing so will require change in the strategies pursued by donor states, who often don't have the bureaucratic structures prepared to handle such intense development programs in these fragile states, and greater involvement by local actors who are needed to make these programs successful (Barakat & Larson, 2014; Osaghae, 2010). These factors are the key factors that have been considered as the U.S. executes GFA as a new approach to U.S. foreign assistance.

The implications of the fragility trap are critical as the U.S. considers how to invest in fragile states to counter disinformation. Legitimacy and authority are two key factors to consider when examining policy options: Do these fragile states have the legitimacy to be acting to counter disinformation or are they actively contributing to the spread of disinformation? Do they have the power and authority to execute any interventions? What role can the U.S. play in directly countering disinformation given its historical interventions in fragile states (Kapetas, 2021)? Given that local involvement and investment in aid programs are critical to their success, these elements are essential to any of the policy alternatives discussed below to be effective (Gisselquist, 2015; Osaghae, 2010).

Literature Review

This literature review will examine the existing evidence on programs designed to combat and create resilience to disinformation. Not all programs discussed are successful at both combatting and creating resilience to disinformation or are effective in the context of fragile states. While the programs discussed are not an exhaustive discussion of all programs, it seeks to examine the best practices on the subject based on what is being done by the U.S. and other nations to counter disinformation.

Public Diplomacy and Public Affairs

According to the USC Center on Public Diplomacy (n.d.), a country is exercising public diplomacy when communicating with and attempting to influence foreign countries and audiences to advance its interests. A country communicating with and attempting to influence its own domestic audiences is practicing public affairs. Both are critical for states seeking to develop their own narrative about itself and create a national brand (Fjällhed, 2021). While these communications tools could be used by states seeking to spread a false narrative, they can also be used to counter disinformation by providing counter narratives and fact-checking (discussed in its own sub-section below). This review will focus on the side of countering disinformation. However, it is important to consider how these tools can be abused by governments and groups seeking to influence audiences by providing consistent but false narratives (Manor & Bjola, 2021).

Looking first at public affairs, the context of fragile states may make public affairs initiatives less successful. The research is divided on whether trust in an entity is required for it to be effective in fact-checking (Vraga & Bode, 2017; Humprecht, 2019). However, if state media accounts have used their platform to spread disinformation in the past, it may be difficult to convince populations that the state isn't doing so again. Therefore, the effectiveness of public affairs campaigns by GFA countries directly may be ineffective.

As a result of this, public diplomacy programs ran by the U.S. may be a more effective intervention to counter disinformation than public affairs programs. The traditional method of U.S. public diplomacy are exchange programs, including the International Visitor Leadership Program (IVLP) and the Fulbright Program. One benefit of exchange programs is that they target emerging leaders and help to develop opinion leaders (Scott-Smith, 2020). Opinion leaders have the power to shape public opinion on issues, therefore it is critically important to ensure they can identify disinformation and are aware of the veracity of the information they share. There is evidence that opinion leaders are more likely to fact-check than opinion seekers, which is critical to the sharing of accurate information online (Dubois et al., 2020). If exchange program participants are taught how to identify disinformation, they can then pass on that knowledge directly or serve as a conduit through which true information can be passed on. However, research suggests it is difficult to measure the long-term success of exchange programs since one cannot say that it is the exchange program that caused their desired outcome (increased fact-checking, in this case). Opinion leaders may fact-check more even without such an exchange program, which would make it a poor investment of resources. However, there are other benefits to exchange programs that should be considered. Exchange program participants tend to express

more support for U.S. values, which may help meet the goals of GFA by providing lessons and values which could help stabilize the priority countries (ORC Marco, 2006).

Literacy Programs

Literacy programs are programs designed to help individuals develop the knowledge and skills necessary to read and engage with written content. While literacy skills are important skills to have, literacy programs can also be used to develop the skills necessary to recognize disinformation. There are three main types of literacy programs to counter disinformation, all with varying degrees of effectiveness: media literacy, digital literacy, and information literacy. Media literacy focuses on the ability to access and understand all forms of media, while digital literacy focuses on the ability to access and understand forms of digital media (e.g., the Internet, social media). Information literacy refers to the capacity of individuals to process information and recognize what is most important (Koltay, 2011).

While all literacy programs are important, the research suggests they are not equally effective in fighting disinformation. Research suggests that information literacy programs are the most effective in helping participants learn to correctly identify disinformation (Jones-Jang et al., 2021). The basis for information literacy's success is the inoculation theory. In this context, inoculation theory holds that exposure to disinformation will help guard against future susceptibility to believing disinformation, like how receiving a vaccine helps to prevent future illness (Dumitru et al, 2022). The type of program which is most effective also varies based on the audience for the program, as literacy programs are most effective when they are tailored to the audience. Digital literacy programs are particularly important for young people who are often online. Schools have been suggested as potential places for students to learn digital literacy skills, however, schools lack the necessary infrastructure to enact digital literacy programs at the required level (Bandura & Leal, 2022). Elderly audiences are also particularly important to focus literacy programs on as elderly audiences are more susceptible to believe disinformation. Like young audience, elderly audiences need to undergo digital literacy to learn how to properly use the devices and platforms on which they use social media (Moore & Hancock, 2022). In summary, while information literacy programs are the most effective literacy programs for countering disinformation, digital literacy programs are also important for uninformed audience or groups who use the internet frequently.

Despite their benefits, there are limits to the effectiveness of literacy programs to counter disinformation. Literacy programs sometimes focus on promoting technical solutions to countering disinformation (including fact-checking apps) instead of learning strategies on how to identify disinformation (Dumitru, 2022). Focusing on technology-based solutions is limiting, particularly when targeted at older audiences who may not understand the technology they are using. Additionally, there are flaws within the research itself on literacy programs. Many of the studies are not able to draw causal claims about the effectiveness of its interventions or involve self-selection into the studies (Dumitru, 2022; Moore & Hancock, 2022). Both flaws in the research design make it such that the evidence for the effectiveness of literacy programs is weaker than it would be otherwise. Much of the evidence also focuses on short-term outcomes, which brings into question the effectiveness of literacy programs in the long run in promoting resilience against disinformation (Moore & Hancock, 2022).

Fact-Checking

Fact-checking is a common tool used for countering disinformation, particularly useful in the private sector. Media platforms, like Twitter and Facebook, use various types of fact-checking mechanisms on their platforms to stop the spread of disinformation on their platforms (Meta, 2022). There is also a role for government in fact-checking as government accounts can publicize accurate information and de-bunk disinformation, as a tool of public affairs and public diplomacy (Fjällhed, 2021; Manor & Bjola, 2021).

The effectiveness of fact-checking depends on the method. The literature distinguishes between different methods of fact-checking based on when information is identified as disinformation (before, while, or after seeing the information). De-bunked information, meaning information that is labeled as false after the audience views it, tends to have the longest term effect on remembering the veracity of the information (Brashier et al, 2021). While there is research for the inoculation theory against disinformation via literacy programs (discussed above), it is impossible to label disinformation as it comes out. Therefore, it is most useful to be fast in responding to disinformation. The literature is mixed on whether the credibility of the organization matters when providing corrective information, however research suggests that increased credibility of the organization is at least not harmful to disinformation records. If one fact-checking organization is strong enough, they alone may be able to serve as an authoritative source to counter disinformation (Vraga & Bode, 2017). Research also suggest that high journalistic professionalism is associated with the likelihood an organization would fact-check (Humprecht, 2019). However, generalizations from the research are inherently limited by the fact that this research was done in the U.S.; it is unclear how this research would generalize to international contexts.

Given research on public diplomacy and the fragility trap, it may be difficult for fragile states themselves to do this de-bunking because they do not possess the legitimacy or authority to command public attention. Any attempts to adjudicate what is disinformation and what isn't would likely be regarded as illegitimate. Therefore, there may be a role for the U.S. to support these efforts through GFA programming to enhance host government legitimacy and authority. However, these factors make it difficult to enact such programming to begin with. That is the key issue of the fragility trap. The U.S. also possesses the capacity to intervene on behalf of a GFA country by serving as a fact-checker, even if the U.S. may not be the most appropriate actor in some international contexts (Kapetas, 2021). For example, U.S. embassy accounts could be used to de-bunk disinformation posted from external (namely, Russian) or in-country sources). To make such a policy effective, resources would need to be allocated to improving the effectiveness of public diplomacy efforts by embassies.

Regulations

Regulation is an increasingly common tool used to counter disinformation, particularly in the European Union. Researchers have proposed co-regulation as a regulatory model to counter disinformation, whereas private companies provide regulations that must be approved by governments. Co-regulation has been found to be more effective than direct government regulation, although there isn't research directly on regulations to counter disinformation (Marsden et al., 2020). However, these regulations are relatively new, and research on their effectiveness is limited. Given issues with state authority and legitimacy in fragile states, it may be difficult for co-regulation to be practiced in fragile states. Enforcement of regulations would likely be weak, so their effectiveness would be limited. Therefore, this would not be the most feasible policy option in this policy environment.

Blackouts and internet shutdowns, which are a quasi-regulatory mechanism have also been used in fragile states to counter the spread of disinformation. While blackouts have been justified as means of protecting national security, they are often used to counter narratives that run contrary to powerful parties in states and preserve corrupt interests (Hassan & Hitchen, 2022). The economic costs of blackouts are high and conservatively estimated at $2.4 million since 2015 (West, 2016; Woodhams & Migliano 2022). However, social costs are higher due to the repression of information and free speech associate with such blackouts. Like regulations, blackouts and internet shutdowns are not considered a feasible policy option to counter disinformation in this context.

Criteria

The following criteria will be used to assess the alternatives this report presents to counter and create resilience against disinformation. These criteria include cost, effectiveness, cost-effectiveness, administrative feasibility, and opportunities for waste and/or corruption. Rubrics for rating each alternative on the qualitative criteria (effectiveness, administrative feasibility, and opportunities for waste and/or corruption) are included in Appendix 2.

Cost

The cost criterion will measure how much each alternative costs the implementers in USD over the course of the ten-year GFA country plans (adjusted using a discount rate of 9% since these programs would be run in developing countries). While $1.15 billion is dedicated to GFA programming through the Prevention and Stabilization Fund and the Complex Crisis Fund over the next five years, lower cost alternatives are preferred. Combating and creating resilience to disinformation is not the primary goal of GFA, therefore my client prefers to limit costs associated with such programming (Global Fragility Act, 2019). In most cases, the implementers will be the U.S. government, however, private sector and NGO implementers are also be considered when calculating cost in the status quo alternative. Only the costs of directly countering and creating resilience against disinformation will be considered as this is the primary goal of my client for this project. If programming is implemented within a broader government program, only disinformation-related programming will be considered in the cost calculation. Costs may include the cost of foreign aid/investments, hiring personnel to implement the program, and materials, among other costs. Cost data comes from government reports on existing program costs and the private sector reporting on the costs of fact-checking, among other sources that will be referenced in the specific alternative.

Effectiveness

The effectiveness criterion will measure the ability of the alternative to counter and create resilience against disinformation. Given my client's goal of promoting long-term resilience to disinformation rather than immediate fact-checking, this criterion will rank alternatives prioritizing long-term resilience to disinformation higher than those prioritizing immediate fact-checking. Resilience and the effectiveness of a program to create resilience are difficult to measure, given its qualitative nature. Therefore, this criterion will focus on my client's framing of effectiveness. A criterion rated *moderate* to *high* effectiveness will promote long-term resilience to disinformation, while a criterion rated *low* to *moderate* effectiveness will promote short-term strategies to counter disinformation. Given the range of types of programs falling into these two buckets, other important elements of effectiveness are also considered while evaluating this criterion. These include public perceptions of the unbiasedness of programs and the use of best practices from the research on countering disinformation, among other potential factors. To measure this criterion, the time frames over which these alternatives will be implemented are considered based on the results of previously implemented similar programs.

Cost-Effectiveness

The cost-effectiveness criterion will measure the effect size per $1 million spent on the given alternative. Since it is impossible to quantify how much resilience would be created or how much disinformation would be prevented, effectiveness is quantified according to effect sizes found in the literature, particularly the effect size in standard deviations of the increase in truth discernment caused by the alternative (Sirlin et al., 2021). The cost will be measured in the same way as above. The values for cost and effectiveness will then be used to calculate the cost-effectiveness ratio, scaled to per $1 million spent to account for small effect sizes.

Administrative Feasibility

The administrative feasibility criterion will measure the feasibility of implementing each alternative in a GFA priority country. Given the governance challenges in fragile states, it is important that alternatives have embedded flexibility that allows them to be implemented under a variety of difficult circumstances (Caldwell, 2022). Alternatives will be rated *low, moderate,* and *high* administrative feasibility, with high being the most favorable outcome. The more flexibility in program implementation, the greater the likelihood of successful implementation in fragile states and, therefore, the higher ranking the alternative will receive on this criterion. To measure this criterion, existing government and social media company reports on program implementation are examined to estimate how much leeway implementers get in implementation.

Opportunities for Waste and/or Corruption

This criterion will measure the opportunities for wasted resources and/or corruption in the implementation of the program. Given that high levels of corruption are characteristic of fragile states, it is important to limit the waste of resources (Caldwell, 2022). While not explicitly stated by my client, it would be unwise to recommend an alternative where resources could be wasted, or corruption could occur. Given current Congressional concerns around GFA, wasted resources would further reduce support for GFA-related programming (Gramer, 2022). Therefore, this criterion will be weighted the most when considering tradeoffs between alternatives. Alternatives will be rated with *few, moderate,* and *many* opportunities for waste or corruption, with few being the most favorable outcome. To rank this criterion, the number of local implementing partners involved in implementing the alternative and their direct access to U.S. financial resources is considered. The more implementers involved and the greater direct access they have to financial resources, the more opportunities for waste and corruption exist and, therefore, the lower ranking the alternative will receive on this criterion. To measure this criterion, government and social media company reports on program implementation are used to estimate how many partners are currently being used for implementation and what access they would have to financial resources under the proposed alternatives.

Description of Alternatives

Alternative 1: Status Quo

This alternative would allow current trends to continue. GFA ten-year country plans would not include any specific references to countering and creating resilience against disinformation, and no additional government funding would be allocated towards countering disinformation in GFA priority countries. The task of countering and creating resilience against disinformation would be left to the private sector, namely social media companies. Social media companies may choose to counter disinformation on their platforms by flagging false or misleading content so users can recognize it as disinformation. A key actor in the private sector would be Meta, who owns three of the top five most used social media platforms (Kemp, 2023c). Meta has spent an estimated $4 million on fact-checking in GFA priority countries since 2016, and I predict that the company will continue such fact-checking investments going forward (Africa Check, n.d.; Meta, 2022). This is an underestimate of the total amount spent on fact-checking by other media outlets and private organizations in these countries, however it serves as a basis upon which to estimate future costs of countering disinformation in these priority countries. Based on analysis of data from the Varieties of Democracy dataset, GFA priority country governments are unlikely to actively contribute to efforts to counter disinformation. In most of these priority countries, governments have actively been pushing false information to influence their citizens on political issues (V-Dem). As governments can contribute to the negative effects of disinformation in fragile states, countering disinformation is left to the private sector alone under this alternative.

Alternative 2: Investments in Existing Fact-Checking Organizations

This alternative seeks to utilize funds allocated to GFA implementation to bolster existing fact-checking organizations in GFA priority countries. This funding would not be used to establish new fact-checking organizations within these countries, but rather would be given as grants to existing fact checking organizations. The U.S. Embassy in each priority country/region would identify fact-checking organizations which would be eligible for grants and seek applications based on existing requirements for applying for and receiving grants (U.S. Department of State, n.d.). There are nine fact-checking organizations being funded by social media organizations in GFA priority countries, with at least additional seven fact-checking organizations existing outside of social media (Meta, n.d.; Keenan, 2022). This program would be run like how USAID and the U.S. Embassy fund fact-checking organizations in Georgia to create resilience against Russian disinformation in the country (U.S. Embassy Tbilisi, 2020). By providing direct funding to these fact-checking organizations, the United States would seek to bolster existing fact-checking channels to promote accurate information and ultimately create resilience in GFA countries where disinformation is being spread. However, one risk that comes with the implementation of this alternative is that U.S. involvement in fact-checking organizations may reduce perceived unbiasedness, which may hamper their effectiveness depending on the political context and in-country views on the United States (Vraga & Bode, 2017).

Alternative 3: Disinformation-Focused Public Diplomacy

This alternative seeks to utilize existing public diplomacy functions within the U.S. Embassy within GFA priority countries to provide accurate information to counter disinformation and provide resources to promote resilience against disinformation. Public diplomacy cone officers within the embassy in each priority country would be responsible for managing a series of social media-based programs aimed at de-bunking false information and creating resilience against disinformation. This would include publishing news articles and information to debunk false information being spread in-country. This would be a model like what has been done by the United States in Georgia, the Swedish Embassy in the United States, and the British Foreign Office (Manor & Bjola, 2021; U.S. Embassy Tbilisi, 2020). Specific interventions may include re-framing misleading stories, providing context for images, and de-sensationalizing headlines (Manor & Bjola, 2021). Additionally, these programs would aim to create long-term resilience against disinformation by sharing digital literacy resources including games developed by the GEC (e.g., Harmony Square) and other useful tools for how to identify disinformation online. These programs should focus on the platforms from which the greatest audience can be reached, whether that is the embassy website (through press releases), a social media account (e.g., Facebook, Twitter), or a combination of both. Public diplomacy officers would monitor which of its programs/interventions are most effective and have the most online engagement to best utilize resources. This alternative would provide the U.S. the opportunity to both counter disinformation in the short term and create resilience against disinformation in the long term depending on what content is engaged with.

Alternative 4: UNICEF Education Programming

This alternative seeks to leverage existing UNICEF education programs ongoing in GFA priority countries to increase information, digital, and media literacy instruction. This alternative would provide training on information, digital, and media literacy to teachers in GFA priority countries, as well as textbooks on the subject to students. Research suggest that information literacy is the most effective in helping create resilience to disinformation (Dumitru et al, 2022; Jones-Jang et al., 2021). Information literacy materials would invoke the tactics used in disinformation to help students recognize and ultimately not believe those tactics, like is currently being done in Finland (Gross, 2023). The success of programming like this is based on inoculation theory: exposure to disinformation will help guard against future susceptibility to believing disinformation, like how receiving a vaccine helps to prevent future illness (Dumitru et al, 2022). Digital and media literacy materials are also important to include in these education programs to create resilience to disinformation online (Moore & Hancock, 2022). These educational materials should not replace existing materials but should be used in conjunction with existing programs and materials. To improve effectiveness, it is important that these materials be culturally relevant to the context, using culturally relevant examples of disinformation (McIntyre, 2008). Across multiple class cohorts using these materials, the goal of this alternative would be to develop resilience to disinformation in youth, who in some ways are particularly vulnerable to disinformation, that would last into their adult lives (Howard et al., 2021).

Assessment of Alternatives

Alternative 1: Status Quo

Brief Description

This alternative allows present trends to continue; social media companies continue to respond to disinformation through their existing fact-checking programs.

Cost

The cost criterion for the status quo will measure the private sector cost to continue with present trends. Present trends include the monitoring and flagging of disinformation online by social media platforms and fact-checking by independent (funded outside of government) organizations. Often, social media companies fund internal efforts and outside fact-checking organizations, so this cost estimate will focus on the cost to social media companies. This cost criterion will not measure the cost to the U.S. government as there is no current mandate within GFA country plans to enact programs and/or invest funds to combat and create resilience to disinformation. Small amounts potentially spent by the U.S. government outside of GFA programming in GFA priority countries are therefore not considered.

To estimate the value of this criterion, I estimate the amount spent by the top social media platforms (over 1 billion users globally) on countering disinformation. These platforms include Facebook, YouTube, WhatsApp, Instagram, WeChat, and TikTok (Kemp, 2023c).

> Meta (Facebook, WhatsApp, Instagram): I estimate that Meta (Facebook, WhatsApp, Instagram) has spent $4 million on fact-checking in GFA priority countries since 2016 (Africa Check, n.d.; Meta, 2022). Therefore, I estimate in the next ten years, Meta would spend approximately $4.2 million combatting disinformation.
>
> YouTube: Based on reports of staffing reductions to one full-time employee working on global misinformation policy at YouTube, I estimate that YouTube will spend nearly $1 million over the next ten years to combat disinformation (Glassdoor, 2022; Myers & Grant, 2023)
>
> WeChat: Reports suggest the WeChat is not well regulated and has been used to spread disinformation (Conrad, 2022). Therefore, I estimate the cost of countering disinformation at WeChat to be small, and its estimate will not be included in the overall cost estimate.
>
> TikTok: TikTok claims to support more than a dozen fact-checking organizations, however only two appear to work in GFA priority countries (Keenan, 2022). Additionally, there may be spillover effects from outside interventions and TikTok's content moderation. Based on the funding levels of the relevant fact-checking organizations to which TikTok contributes, I estimate the cost of countering disinformation to be approximately $350,000 over the next 10 years (Africa Check, n.d.; International Fact-Checking Network, n.d.).

Based on these estimates, the total cost for this alternative is estimated to be **$5.55 million over the next ten years**.

Effectiveness

Under this alternative, social media companies may choose to counter disinformation on their platforms by flagging false or misleading content so users can recognize it as disinformation. This would be considered a short-term method of countering disinformation, so this alternative cannot receive a rating higher than moderately effective. The type of content flagging used by social media platforms is often de-bunking (flagging content as false after a user views it), which the research considers to be the most effective fact-checking method (Brashier et al, 2021). However, none of the social media companies discussed above are known for their journalistic professionalism, which is important factor in improving the likelihood that fact-checking is successful (Humprecht, 2019). Given how social media has led to democratic backsliding and conflict around the world, the ability of these organizations to successfully debunk has been ineffective in the past and will likely continue to be (Morrison & Cooper, 2021). Therefore, I rank this alternative low effectiveness due to historic failures of social media companies to successfully fact-check.

Cost-Effectiveness

Based on the literature reviewed, the average effect of fact-checking, including that done on social media, on truth discernment is a 0.29 standard deviation increase in truth discernment from baseline (Walter et al., 2019). Given the cost listed above, the cost-effectiveness of this alternative is a **0.05 standard deviation increase in truth discernment from baseline per $1 million spent**.

Administrative Feasibility

This program would be implemented exclusively by social media companies, who are not limited by the complicated bureaucratic processes of the federal government. While there is mixed research about the effectiveness of the private versus public sector, there would be greater flexibility in implementation and choosing where funding should be allocated in private social media companies than within the U.S. government (UNDP Global Centre for Public Service Excellence, 2015). Social media companies and fact-checking organizations can choose how to allocate funds to best counter disinformation. Funding within organizations could be re-allocated between countries as needed to best counter emerging disinformation narratives easier than could be done in a government program. Social media companies may also be better at reacting in real time to emerging disinformation than government programs. Based on the flexibility in implementation, I rank this alternative to have **high administrative feasibility**.

Opportunities for Waste and/or Corruption

Social media companies can operationalize this alternative either by internally flagging of content or funding external fact-checking organizations. With internal flagging, there are few opportunities for waste and/or corruption as the funds are being used directly by that social media company. Fact-checking by external organizations may create opportunities for waste and/or corruption as there are many different implementing organizations who could mismanage resources. Meta and TikTok partners with nine fact-checking organizations in GFA priority

countries (Keenan, 2022; Meta, n.d.). However, no government resources would be wasted under this alternative as funding comes from the social media organizations. Therefore, there would be no opportunities for waste that would upset Congressional supporters of GFA. Based on the funding source of this alternative, this alternative has **few opportunities for waste or corruption**.

Alternative 2: Investments in Existing Fact-Checking Organizations

Brief Description

This alternative utilizes funds allocated to GFA implementation to provide grants designed to bolster existing fact-checking organizations in GFA priority countries.

Cost

The cost criterion for this alternative will measure the cost to the U.S. government to invest in existing fact-checking organizations in GFA priority countries. Investments to these organizations from other entities will not be considered as part of this cost criterion (those costs are covered under the status quo alternative). This analysis focuses on the funds that would be required to provide grants to fact-checking organizations to sustain operations. Administrative costs of implementing these grants (e.g., reviewing applications, implementing grants) are not considered in this analysis, so this is an underestimate of the cost of implementing this alternative.

Based on the expenditures of fact-checking organizations in Europe, I estimate that the United States would need to provide $50,000 per year per organization to maintain full-level operations in these organizations (Graves & Cherubini, 2016). There are nine fact-checking organizations being funded by social media organizations in GFA priority countries, with at least additional seven fact-checking organizations not funded by social media organizations (Meta, n.d.; Keenan, 2022). To account for organizations I am unaware of, I will assume there are 20 fact-checking organizations across GFA priority countries. Using this as the estimated number of organizations, this alternative would cost nearly **$7 million over the next 10 years**.

Effectiveness

Under this alternative, the U.S. government would fund fact-checking organizations in GFA priority countries without directly interfering in or dictating how they are operated. Therefore, the effectiveness of this alternative would vary between organization. Some organizations may have high journalistic professionalism and utilize debunking, which are the best practices according to the literature on fact-checking (Brashier et al., 2021; Humprecht, 2019). However, others may not. The quality of the organizations I researched is variable, but the question remains as to whether that is related to a lack of funding or professional ethics. Additional funding alone may not solve the issues presented with fact-checking in fragile states, which potentially limits the effectiveness of this alternative. Based on these factors, I rank this alternative **low effectiveness**.

Cost-Effectiveness

Based on the literature reviewed, the average effect of fact-checking, including that done on social media, on truth discernment is a 0.29 standard deviation increase in truth discernment

from baseline (Walter et al., 2019). Given the cost listed above, the cost-effectiveness of this alternative is a **0.04 standard deviation increase in truth discernment from baseline per $1 million spent**.

Administrative Feasibility

A program is already being executed at the U.S. Embassy in Georgia, so there is precedent that such a program is feasible (U.S. Embassy Tbilisi, 2020). There would be some administrative burden put on U.S. Embassies to identify fact-checking organizations in their country and solicit/review applications for grants. While this alternative would not likely require additional staffing within the embassy, it would increase the workload of FSOs. Program evaluation after grants are issued would also increase the workload of existing foreign service officers. However, once grants are issued, the administration of this alternative would be feasible. Funds, which would come directly from those currently appropriated to GFA, would be directly utilized by fact-checking organizations to meet the needs they find most pressing, with the goal of making those organizations more effective at fact-checking. While grants may be easy for fact-checking organizations to utilize, I rank this alternative moderate administrative feasibility due to the burden put on U.S. Embassies.

Opportunities for Waste and/or Corruption

This alternative seeks to provide grants to fact-checking organizations across GFA priority countries, which means there are many implementing partners as a part of this policy option. A high number of implementing partners increases the risk of waste and/or corruption. While there would be a vetting and application process involved in the selection of grant recipients, the quality of some fact-checking organizations I researched makes me question whether funds would be properly utilized should they receive a grant. Therefore, I rank this alternative to have **moderate opportunities for waste and/or corruption**.

Alternative 3: Disinformation-Focused Public Diplomacy

Brief Description

This alternative expands public diplomacy functions in the U.S. embassies in GFA priority countries to include disinformation-specific programming.

Cost

The cost of this alternative will measure the cost to the U.S. government to execute a disinformation-focused public diplomacy campaign from within the U.S. Embassy in each GFA priority country. This cost estimate will include both the salaries of the personnel used to run the program and the additional funding necessary to support these public diplomacy efforts.

The largest administrative cost of running such a program is the cost of hiring a public diplomacy cone FSO to run the public diplomacy program in each GFA priority country/region (five total). Given the expansiveness of this alternative and growing concerns over disinformation in fragile states, the responsibilities of this campaign would need to be given exclusively to one FSO per priority country/region (rather than folded into the responsibilities of an existing foreign service officer). I estimate the cost of hiring these five FSOs to be approximately $4.35 million over ten years.

This campaign would be executed within existing public diplomacy functions of the embassy by utilizing existing resources (e.g., social media accounts, websites). However, additional funding may be necessary to execute this campaign, so I estimate additional funding based on the current U.S. public diplomacy budget. Using data on FY 2020 funding for public diplomacy in each GFA priority country, I estimate cost of running this program to be approximately $1.44 million over the next ten years (United States Advisory Commission on Public Diplomacy, 2021).

In total, the cost for this alternative is estimated to be approximately **$5.79 million over the next ten years**.

Effectiveness

Under this alternative, the U.S. Embassies in GFA priority countries/regions would run public diplomacy campaigns to counter disinformation and promote long-term resilience to disinformation. The ability to target both short- and long-term resilience to disinformation allows this alternative to utilize many of the best practices from disinformation research. Specific interventions may include re-framing misleading stories, providing context for images, and de-sensationalizing headlines as the research suggests is effective for interventions run by government entities like an embassy (Manor & Bjola, 2021). One limitation is that digital literacy resources may be harder to access for users. For example, playing Harmony Square to develop an understanding of disinformation and digital literacy requires more engagement from internet users than reading a fact-checking Tweet. While this alternative would utilize the best practices from research to be effective, I rank this alternative **moderate effectiveness** to account toward potential user biases towards short-term fact-checking versus long-term resilience resources.

Cost-Effectiveness

Based on the literature reviewed, the effect of long-term resilience interventions like Harmony Square on truth discernment is a 0.51 standard deviation increase in truth discernment from baseline, while the average effect of fact-checking is only a 0.29 standard deviation increase in truth discernment from baseline (Roozenbeek & van der Linden, 2020; Walter et al., 2019). Given the cost listed above, the cost-effectiveness of this alternative is a **0.05-0.09 standard deviation increase in truth discernment from baseline per $1 million spent** depending on whether short-term fact-checking or long-term resilience interventions are more engaged with by the target population.

Administrative Feasibility

Many programs like this across similar government entities, both internationally and at U.S. Embassies, so there is precedence for the feasibility of this alternative. This program would utilize existing public diplomacy resources with additional staffing, so I do not anticipate a significant administrative burden for this alternative. I do not anticipate the need to develop additional resources since online resources including Twitter, embassy websites, and Harmony Square already exist, but funding and staffing is provided as part of this alternative should that be necessary. Given that this alternative utilizes resources that already exist, I rank this alternative **high administrative feasibility**.

Opportunities for Waste and/or Corruption
This alternative operates exclusively within the U.S. Embassy. Foreign FSOs would be responsible for all resources dedicated to this program and executing the program itself. Given that all resources and programming remain internal to the U.S. government, I rank this alternative to have **few opportunities for waste and/or corruption**.

Alternative 4: UNICEF Education Programming

Brief Description
This alternative provides resources for information, digital, and media literacy to existing UNICEF education programs in GFA priority countries.

Cost
The cost of this alternative will measure the cost of the U.S. government to increase information, digital, and media literacy instruction in GFA priority countries by providing resources to bolster UNICEF education programs. This cost estimate will include the cost of developing and providing information, digital, and media literacy resources to both students and teachers in primary schools. For students, the cost will include the cost of providing readers/textbooks. For teachers, the cost will include the cost of training.

Based on data from the World Bank, I estimate there are over 21 million primary school aged children in GFA priority countries. While not all these students are in school, I use all school-aged children in the cost estimates, so this is likely an overestimation of the true cost. Using USAID cost estimates for the cost of student readers/textbooks, I estimate the cost of this alternative for students to be approximately $17.5 million (Rizzo & Venetis, 2021).

Based on data from the World Bank, I estimate there are almost 13 million primary school teachers in GFA priority countries. Using UNICEF training cost estimates, I estimate it would cost approximately $150 million to provide training on how to develop information, digital, and media literacy course materials (UNICEF Mozambique, n.d.).

In total, the cost for this alternative would be approximately **$168.25 million**.

Effectiveness
Under this alternative, the U.S. would provide UNICEF with media, digital, and information literacy resources to use in its education programs in GFA priority countries. The goal of these resources would be to instill long-term resilience to disinformation utilizing the best literacy program tactics from the literature. Research suggests that information literacy is the most effective in helping create resilience to disinformation (Dumitru et al., 2022). Information literacy materials would invoke the tactics used in disinformation to help students recognize and ultimately not believe those tactics, which is currently being done in Finland (Gross, 2023). The success of programming like this is based on inoculation theory: exposure to disinformation will help guard against future susceptibility to believing disinformation, like how receiving a vaccine helps to prevent future illness (Dumitru et al., 2022). Digital and media literacy materials are also important to include in these education programs to create resilience to disinformation online

(Moore & Hancock, 2022). Additionally, materials would be culturally relevant to the country-context to improve effectiveness (McIntyre, 2008). However, the effectiveness of this alternative is inherently limited by the challenges fragile states face in providing public services like education (Caldwell, 2022). World Bank data suggest GFA countries struggle with low attendance, under-qualified teachers, and gender inequality which would make this alternative less effective. Given the structural factors that would inhibit the effectiveness of this alternative, I rank this alternative to have **moderate effectiveness**.

Cost-Effectiveness

Based on the literature reviewed, the effect of media and information literacy on truth discernment is a 1.4 standard deviation increase in truth discernment from baseline (Al Zou'bi, 2022). Given the cost listed above, the cost-effectiveness of this alternative is a **0.00007 standard deviation in truth discernment from baseline per $1 million spent**.

Administrative Feasibility

This alternative would have the U.S. provide financial support and the physical education resources (e.g., textbooks) necessary to execute these literacy programs in GFA priority countries to UNICEF. The U.S. currently provides about 10% of UNICEF's funding, so it would be feasible for the U.S. to continue to provide resources to UNICEF to execute this alternative using funds already allocated to GFA programming (UNICEF, n.d.). However, the scale at which these resources would need to be provided lowers the feasibility of this alternative. Therefore, I rank this **moderate administrative feasibility**.

Opportunities for Waste and/or Corruption

This alternative provides resources directly to UNICEF who then provides resources to local implementing partners in GFA priority countries. While there are few opportunities for waste and/or corruption in providing resources to UNICEF, there are opportunities for resources to be wasted as they are provided to local implementing partners. Given low attendance rates and poor teacher training in GFA priority countries, the resources may not be utilized properly to achieve their desired ends. Additionally, mishandling of resources after they are distributed (e.g., destruction of textbooks) would also contribute to waste under this alternative. I rank this alternative to have **many opportunities for corruption and/or waste given** the possibility for the mismanagement of resources at multiple levels of implementation.

Recommendation

Based on the above analysis, this report recommends Alternative 3: Disinformation-focused public diplomacy. The outcomes matrix in Table 1 describes the tradeoffs made between alternatives to come to this recommendation. Though UNICEF education programming (Alternative 4) would likely be the most effective alternative in creating long-term resilience to disinformation, its high cost is prohibitive and removes that alternative from serious consideration. Even if scaled down to reflect current attendance rates in GFA priority countries, the cost would be too high to undertake. The status quo and disinformation-focused public diplomacy (Alternatives 1 & 3) rank the same for administration feasibility and opportunities for waste and/or corruption, however, disinformation-focused public diplomacy is the only remaining alternative that prioritizes long-term resilience to disinformation over fact-checking. The status quo and investments in fact-checking organizations (Alternatives 1 & 2) only utilize fact-checking, which is only a short-term solution for countering disinformation that does not target the root causes of disinformation as GFA programming should. Disinformation-focused public diplomacy (Alternative 3) outperforms both the status quo and investments in fact-checking organizations (Alternatives 1 & 2) because its programming can increase long-term resilience to disinformation in addition to short-term fact-checking. Creating long-term resilience to disinformation would help to stabilize the information environment across generations in GFA priority countries, which ultimately contributes to the goal of greater stability. Since disinformation-focused public diplomacy (Alternative 3) more directly addresses the goals of GFA and is at least as cost-effective as the status quo (Alternative 1), I recommend the State Department enact a disinformation public diplomacy.

Table 1. Outcomes Matrix

	Alternative 1: Status Quo	**Alternative 2: Investments in Fact Checking Organizations**	**Alternative 3: Disinformation-Focused Public Diplomacy**	**Alternative 4: UNICEF Education Programming**
Cost	$5,479,306.94	$6,995,246.89	$5,792,826.27	$168,245,936.41
Effectiveness	Low	Low	Moderate	Moderate
Cost-Effectiveness	0.05 per $1 million spent	0.04 per $1 million spent	0.05-0.09 per $1 million spent	0.0008 per $1 million spent
Administrative Feasibility	High	Moderate	High	Moderate
Opportunities for Waste and/or Corruption	Few	Moderate	Few	Many

Implementation

Step 1: Course Development at the Foreign Service Institute

The first step to implement the recommended alternative would be to develop more comprehensive disinformation-related training at the Foreign Service Institute (FSI). Currently, there is only one course that directly addresses disinformation and propaganda. This would not be sufficient training for a public diplomacy officer whose sole job would be countering and creating resilience against disinformation. This report recommends extending the current foundation public diplomacy courses, Foundations of Public Diplomacy and PD Officer Tradecraft, to include more training relative to disinformation. This report recommends extending this course by one week to incorporate the fundamentals of disinformation and how public diplomacy can be used to combat it. The curriculum could be adapted from the current course related to disinformation and propaganda but should also be expanded to include best practices on how public diplomacy is being used to counter disinformation by U.S. allies (Manor & Bjola, 2021). A focus-group of current public diplomacy officers should be consulted to determine what best practices from the field should be incorporated into the course. Additionally, disinformation-related programming should be incorporated into country-related training, so public diplomacy officers can be prepared to tailor their messaging towards the local populations they seek to create resilience in (McIntyre, 2008). Given the time it would take to expand these trainings and the long process of entering the Foreign Service, the funding dedicated to the first year of enacting public diplomacy programming should be dedicated to expanding the trainings at FSI.

Step 2: In-Country Implementation

Once the public diplomacy officers for each GFA priority country/region are trained, they would be sent to their respective embassies to begin executing their disinformation-focused public diplomacy campaigns. The exact implementation of these campaigns would look different in each country based on the dynamics of the local disinformation environment. While all could share tools like Harmony Square to create long-term resilience to disinformation on the embassy website, the exact fact-checking would look different in each country. Priority countries with more rampant disinformation may need to utilize more of their resources towards fact-checking as compared to developing longer-term resilience to disinformation. Tailoring messaging to the current news content will be important to ensure this alternative is effective (McIntyre, 2008).

It is critical to consider the perspective of the residents of GFA priority countries, as the effectiveness of this alternative depends on the receptiveness of host populations to the public diplomacy messages. It is likely that the messages will be met with at least some level of skepticism depending on the country. Historical interventions by the U.S. may make some populations doubtful of U.S. intentions in countering disinformation (Kapetas, 2021). Disinformation-related messaging without any further engagement with the population through other public diplomacy measures would likely be met with significant skepticism.

Therefore, it is critical the U.S. maintain engagement with target populations through traditional diplomatic channels, including other public diplomacy measures. Cultural exchanges that emphasize the importance of local culture should be encouraged to ensure local populations do not find U.S. disinformation-related interventions imperialistic. The maintenance of public

diplomacy is an important reason why the disinformation public diplomacy officer be a FSO in addition to the regularly employed public diplomacy officers. Efforts dedicated to new and traditional public diplomacy should not be diminished to implement this alternative or else this alternative will be less effective.

Potential Obstacles

One worst-case scenario for implementing this alternative would be that FSI is not able to add any disinformation-related training for incoming public diplomacy officers. Without additional training, public diplomacy officers would have limited experience when heading to their embassy. While countering disinformation is becoming an increasingly important foreign policy goal, it is not clear at this time that FSI would be willing to expend the resources necessary to develop their courses to meet this priority specifically for GFA priority countries. It is unlikely this new level of training could be implemented quickly, which would hinder the immediate effective implementation of this alternative. Dedicating one year of funding for this alternative to developing this training should help increase the likelihood of successful implementation.

While existing courses may be enough to provide basic information on countering disinformation to incoming public diplomacy officers, groups like the GEC should brief incoming public diplomacy officers on strategies for countering disinformation to supplement their training. This technique would have minimal marginal cost and likely be more feasible than developing a new curriculum. Additionally, public diplomacy officers should utilize the expertise of the locally employed staff. Locally employed staff would have a better understanding of the disinformation environment in each GFA priority country than what the public diplomacy officers could develop in training. Utilizing this expertise would allow public diplomacy officers to best target their time and resources towards the areas of most concern given the context.

Another worst-case scenario would be if the embassies are unable to employ new FSOs to handle the work of countering and creating resilience to disinformation, instead giving those responsibilities to an existing public diplomacy officer. This would significantly increase the administrative burden placed upon that public diplomacy officer, as their job responsibilities would essentially double. Given the importance of also continuing traditional public diplomacy measures to the effectiveness of disinformation-related programming and relations more broadly, the focus on disinformation programming would be decreased. Such a change would greatly limit the effectiveness of this program which is why funding for these public diplomacy officers was included in the cost estimate for this alternative. While it is expected a year of this funding will be used for training purposes at FSI, it is essential these FSOs be hired and sent to their embassy as soon as possible.

Conclusion

GFA represents a landmark shift in U.S. foreign policy to prevent conflict before it happens and promote stability. As disinformation becomes an increasingly used tool to drive instability, incite mass killings, and promote autocratic rule, the State Department must consider how to counter and create long-term resilience to disinformation in the implementation of GFA (Hook & Verdeja, 2022). After analyzing various policy alternatives based in the best practices from research, this report ultimately recommends the State Department hire public diplomacy officers to run disinformation-focused public diplomacy programs in GFA priority countries. This recommendation would require significant investment in personnel and training by the State Department, however it has the potential to increase resilience to disinformation in the countries most at-risk to its negative effects. Not only would disinformation-focused public diplomacy be able to provide critical fact-checking services in the short-term, but it would also be able to teach the literacy skills that can create long-term resilience to disinformation. While this resilience could take up to a generation to develop, it would ultimately help to stabilize the information environment in GFA priority countries, targeting a root cause of fragility as GFA intends (Gross, 2023). As GFA programming targets other root causes of fragility over its implementation period, the prevalence and role of disinformation in GFA priority countries may change. Therefore, continual monitoring of disinformation trends and evaluation of public diplomacy programming will be required to ensure the recommended alternative remains effective in counteract and creating resilience to disinformation.

References

Africa Center for Strategic Studies. (2020a, February 18). *Russian disinformation campaigns target Africa: An interview with Dr. Shelby Grossman*. https://africacenter.org/spotlight/russian-disinformation-campaigns-target-africa-interview-shelby-grossman/

Africa Center for Strategic Studies. (2020b, October 9). *A light in Libya's fog of disinformation*. https://africacenter.org/spotlight/light-libya-fog-disinformation/

Africa Check. (2021). *Fostering the practice of fact-checking in Africa: An evaluation of the Africa Facts network.* https://africacheck.org/sites/default/files/media/documents/2021-05/041521_Africa%20Facts%20network_case%20study_v9%20%281%29.pdf

Africa Check. (n.d.). *How we are funded.* https://africacheck.org/who-we-are/how-we-are-funded

Al Zou'bi, R. M. (2022). The impact of media and information literacy on students' acquisition of the skills needed to detect fake news. *Journal of Media Literacy Education, 14*(2), 58-71. https://doi.org/10.23860/JMLE-2022-14-2-5

Andrimihaja, N. A., Cinyabuguma, M. & Devarajan, S. (2011). *Avoiding the fragility trap in Africa* (Policy Research Working Paper, No. 5884). The World Bank Chief Economist's Office, Africa Region. https://ssrn.com/abstract=1961471

Bandura, R. & Leal, E.I.M. (2022). *The digital literacy imperative.* Center for Strategic & International Studies. https://www.csis.org/analysis/digital-literacy-imperative

Barakat, S. & Larson, A. (2014). Fragile states: A donor-serving concept? Issues with interpretations of fragile statehood in Afghanistan. *Journal of International and Statebuilding, 8*(1), 21-41. https://doi.org/10.1080/17502977.2013.770263

Brady, W. J., Wills, J. A., Jost, John T., Tucker, J. A., & Van Bavel, J. J. (2017). Emotion shapes the diffusion of moralized content in social networks. *Proceedings of the National Academy of Sciences, 114*(28), 7313-7318. https://doi.org/10.1073/pnas.1618923114

Brashier, N.M., Pennycook, G., Berinksky, A.J., & Rand, D.G. (2021). Timing matters when correcting fake news. *Proceedings of the National Academy of Sciences, 118*(5), 1-3. https://doi.org/10.1073/pnas.2020043118

Caldwell, Z. (2022, February 18). *Fragile States*. CQ Researcher. https://library-cqpress-com.proxy01.its.virginia.edu/cqresearcher/document.php?id=cqresrre2022021800&type=hitlist

Carment, D. & Samy, Y. (2017). *Exiting the fragility trap: Rethinking our approach to the world's most fragile states* (WIDER Working Paper, No. 2017/81). The United Nations University World Institute for Development Economics Research. https://doi.org/10.35188/UNU-WIDER/2017/407-0

Carment, D., Samy, Y., Prest, S. (2008). State fragility and implications for aid allocation: An empirical analysis. *Conflict Management and Peace Science*, *25*(4), 349-373. https://doi.org/10.1080/07388940802397509

Center for Strategic & International Studies. (2021). *A policymaker's guide to the Global Fragility Act.* https://www.csis.org/analysis/policymakers-guide-global-fragility-act

CFI Media Development. (n.d.). *Desinfox Africa*. https://cfi.fr/en/project/desinfox-africa

Conrad, J. (2022, October 18). China's WeChat is a hot new venue for US election misinformation. *Wired*. https://www.wired.com/story/chinese-american-misinformation-midterm-elections-wechat/

Coppedge, Michael, John Gerring, Carl Henrik Knutsen, Staffan I. Lindberg, Jan Teorell, Nazifa Alizada, David Altman, Michael Bernhard, Agnes Cornell, M. Steven Fish, Lisa Gastaldi, Haakon Gjerløw, Adam Glynn, Sandra Grahn, Allen Hicken, Garry Hindle, Nina Ilchenko, Katrin Kinzelbach, Joshua Krusell, Kyle L. Marquardt, Kelly McMann, Valeriya Mechkova, Juraj Medzihorsky, Pamela Paxton, Daniel Pemstein, Josefine Pernes, Oskar Rydén, Johannes von Römer, Brigitte Seim, Rachel Sigman, Svend-Erik Skaaning, Jeffrey Staton, Aksel Sundström, Eitan Tzelgov, Yi-ting Wang, Tore Wig, Steven Wilson and Daniel Ziblatt. 2022. *V-Dem Country-Year Dataset*, V12. Distributed by the Varieties of Democracy (V-Dem) Project. https://doi.org/10.23696/vdemds22.

Dubois, E., Minaeian, S., Paquet-Labelle, A., & Beaudry, S. (2020). Who to trust on social media: How opinion leaders and seekers avoid disinformation and echo chambers. *Social Media + Society*, *6*(2). https://doi.org/10.1177/2056305120913993

Dumitru, EA., Ivan, L., & Loos, E. (2022). A generational approach to fight fake news: In search of effective media literacy training and interventions. In Gao, Q. & Zhou, J. (Eds.), *Human aspects of IT for the aged population*. Design, Interaction and Technology Acceptance. HCII 2022. Lecture Notes in Computer Science, vol 13330. Springer, Cham. https://doi.org/10.1007/978-3-031-05581-2_22

FactCheckGhana. (n.d.). *Who we are*. https://www.fact-checkghana.com/about/

Fjällhed, A. (2021). Managing disinformation through public diplomacy. In Surowiec, P. & Manor, I. (Eds.), *Public Diplomacy and the Politics of Certainty* (p. 227-253). Palgrave Macmillan Series in Global Public Diplomacy. Palgrave Macmillan, Cham. https://doi.org/10.1007/978-3-030-54552-9_9

FSO Career. (2023, January 6). Foreign service officer salary: A comprehensive guide (2023 update). *Path to Foreign Service*. https://pathtoforeignservice.com/foreign-service-officer-salary-a-comprehensive-guide/

The Fund for Peace. (2022). *Fragile states index heat map*. https://fragilestatesindex.org/analytics/fsi-heat-map/

The Fund for Peace. (n.d.a.). *Indicators*. Fragile States Index. https://fragilestatesindex.org/indicators/

The Fund for Peace. (n.d.b.). *What does state fragility mean?* Fragile States Index. https://fragilestatesindex.org/frequently-asked-questions/what-does-state-fragility-mean/

GhanaFact. (2022). *About us.* https://ghanafact.com/about/

Gisselquist, R. M. (2015). Varieties of fragility: implications for aid. *Third World Quarterly, 36*(7), 1269-1280. https://doi.org/10.1080/01436597.2015.1041104

Glassdoor. (2022, August 8). *Salary details for a content moderation specialist at YouTube*. https://www.glassdoor.com/Salary/YouTube-Content-Moderation-Specialist-Salaries-E40803_D_KO8,37.htm

Global Fragility Act, 22 U.S.C. § 9801 *et seq.* (2019).

Gramer, R. (2022, August 19). U.S. foreign aid pilot program sparks fight with Congress. *Foreign Policy*. https://foreignpolicy.com/2022/08/19/us-foreign-aid-global-fragility-act-congress-usaid-haiti-libya/

Graves, L. & Cherubini, F. (2016). *The rise of fact-checking sites in Europe*. Reuters Institute for the Study of Journalism. https://reutersinstitute.politics.ox.ac.uk/sites/default/files/research/files/The%2520Rise%2520of%2520Fact-Checking%2520Sites%2520in%2520Europe.pdf

Griffiths, U., Brenzel, L., Resch, S., Portnoy, A., Adjagba, A., Attaran, M., Yeung, K., Hutubessy, R., Van de Maele, N., Aun, W., Cronin, A., Allen, S., Boonstoppel, L., Banks, C., & Alkenbrack, S. (2021). *Costs of delivering COVID-19 vaccines in 92 COVAX advance market commitment economies*. COVID-19 Vaccine Delivery Costing Working Group (World Health Organization, Gavi, United Nations Children's Fund). https://aa9276f9-f487-45a2-a3e7-8f4a61a0745d.usrfiles.com/ugd/aa9276_97e3b3d5f8f3458aa17d565060f0ab61.pdf

Gross, J. (2023, January 10). How Finland is teaching a generation to spot misinformation. *The New York Times.* https://www.nytimes.com/2023/01/10/world/europe/finland-misinformation-classes.html?campaign_id=9&emc=edit_nn_20230112&instance_id=82499&nl=the-

morning&regi_id=138061373&segment_id=122290&te=1&user_id=ad850d93c821e47a7f6623ff8b900d37

Grossman, M. & Ries, M. (2022). *Blueprints for a more modern U.S. diplomatic service*. ASU Leadership, Diplomacy and National Security Lab. https://ldns.asu.edu/sites/default/files/events/2022-09/American%20Diplomacy%20Project%20-%20Final%20Report_0.pdf

Hassan, I. & Hitchen, J. (2022, July 19). *If blackouts don't work, what might? Tackling fake news in West Africa*. African Arguments. https://africanarguments.org/2022/07/if-blackouts-dont-work-what-might-tackling-fake-news-in-west-africa/

Hellerstein, E. (2021, August 13). *The origins of Haiti's vaccine hesitancy*. Coda Story. https://www.codastory.com/newsletters/infodemic-august-13/

Hook, K. & Verdeja, E. (2022, July 7). *Social media misinformation and the prevention of political instability and mass atrocities.* Stimson. https://www.stimson.org/2022/social-media-misinformation-and-the-prevention-of-political-instability-and-mass-atrocities/

Holder, J. (2022, October 10). Tracking coronavirus vaccinations around the world. *The New York Times*. https://www.nytimes.com/interactive/2021/world/covid-vaccinations-tracker.html

Humprecht, E. (2019). How do they debunk "fake news"? *Digital Journalism, 8*(3), 310-327. https://doi.org/10.1080/21670811.2019.1691031

International Fact-Checking Network. (n.d.). *Signatories*. IFCN Code of Principles. https://ifcncodeofprinciples.poynter.org/signatories

Jain, S. (2022, September 30). *Fragility, conflict, & violence*. The World Bank. https://www.worldbank.org/en/topic/fragilityconflictviolence/overview#1

Jones-Jang, S. M., Mortensen, T., & Liu, J. (2021). Does media literacy help identification of fake news? Information literacy helps, but other literacies don't. *American Behavioral Scientist, 65*(2), 371-388. https://doi.org/10.1177/0002764219869406

Kapetas, A. (2021, October 18*). How should the US confront state fragility and democratic decline?* Australian Strategic Policy Institute. https://www.aspistrategist.org.au/how-should-the-us-confront-state-fragility-and-democratic-decline/

Keenan, C. (2022, September 28). *An update on our work to counter misinformation*. TikTok. https://newsroom.tiktok.com/en-us/an-update-on-our-work-to-counter-misinformation

Kemp, S. (2022). *Digital 2022: Côte D'Ivoire*. Data Reportal. https://datareportal.com/reports/digital-2022-cote-divoire

Kemp, S. (2023a). *Digital 2023: Benin*. Data Reportal. https://datareportal.com/reports/digital-2023-benin

Kemp, S. (2023b). *Digital 2023: Ghana*. Data Reportal. https://datareportal.com/reports/digital-2023-ghana

Kemp, S. (2023c). *Digital 2023: Global overview report.* Data Reportal. https://datareportal.com/reports/digital-2023-global-overview-report

Kemp, S. (2023d). *Digital 2023: Guinea*. Data Reportal. https://datareportal.com/reports/digital-2023-guinea

Kemp, S. (2023e). *Digital 2023: Haiti*. Data Reportal. https://datareportal.com/reports/digital-2023-haiti

Kemp, S. (2023f). *Digital 2023: Libya*. Data Reportal. https://datareportal.com/reports/digital-2023-libya

Kemp, S. (2023g). *Digital 2023: Mozambique*. Data Reportal. https://datareportal.com/reports/digital-2023-mozambique

Kemp, S. (2023h). *Digital 2023: Papua New Guinea*. Data Reportal. https://datareportal.com/reports/digital-2023-papua-new-guinea

Kemp, S. (2023i). *Digital 2023: Togo*. Data Reportal. https://datareportal.com/reports/digital-2023-togo

Koltay, T. (2011). The media and the literacies: media literacy, information literacy, digital literacy. *Media, Culture & Society, 33*(2), 211-221. https://doi.org/10.1177/0163443710393382

Lewis-Hughes, J. (2019, July 7). *Disinformation and social media: A threat to security and peace*. The Organization for World Peace. https://theowp.org/reports/disinformation-and-social-media-a-threat-to-security-and-peace/

Manor, I. & Bjola, C. (2021). Public diplomacy in the age of 'post-reality'. In Surowiec, P. & Manor, I. (Eds.), *Public diplomacy and the politics of certainty* (p. 111-143). Palgrave Macmillan Series in Global Public Diplomacy. Palgrave Macmillan, Cham. https://doi.org/10.1007/978-3-030-54552-9_5

Mardsen, C., Meyer, T., & Brown, I. (2020). Platform values and democratic elections: How can the law regulate digital disinformation. *Computer Law & Security Review, 36*(105373). https://doi.org/10.1016/j.clsr.2019.105373

McIntyre, L.R. (2008). A cross-cultural collaborative: creating textbooks and learning materials and a sustainable partnership for African children. *Africa Education Review*, *5*(2), 199-219. https://doi.org/10.1080/18146620802449449

Mercy Corps. (2020). *The Global Fragility Act*. https://www.mercycorps.org/sites/default/files/2020-06/GFA_Summary_and_Timeline_Mercy_Corps.pdf

Meta. (2022, April 1). Meta's investments in fact-checking. *Program Impact*. https://www.facebook.com/formedia/blog/third-party-fact-checking-industry-investments

Meta. (n.d.). *Where we have fact checking*. https://www.facebook.com/formedia/mjp/programs/third-party-fact-checking/partner-map

Moore, R.C. & Hancock, J.T. (2022). A digital media literacy intervention for older adults improves resilience to fake news. *Sci Rep*, *12*(6008). https://doi.org/10.1038/s41598-022-08437-0

Morrison, M. & Cooper, A. (2021, April 20). In war zones, social media disinformation is costing lives. *Wired*. https://www.wired.co.uk/article/disinformation-war-zones

Myers, S. L. & Grant, N. (2023, February 14). Combatting disinformation wanes at social media giants. *The New York Times*. https://www.nytimes.com/2023/02/14/technology/disinformation-moderation-social-media.html

OECD. (2022). *Disinformation and Russia's war of aggression against Ukraine: Threats and governance responses*. https://www.oecd-ilibrary.org/docserver/37186bde-en.pdf?expires=1669394702&id=id&accname=guest&checksum=23E1E5E43072A16124B0B85EC7FF9874

ORC Marco. (2006). *International visitor leadership program outcome assessment*. https://eca.state.gov/files/bureau/ivlp-eurasia-study-executive-summary_january-2006.pdf

Osaghae, E. E. (2010). Fragile states. *Development in Practice*, *17*(4-5), 691-99. https://doi.org/10.1080/09614520701470060

Quirk, P. W. (2020, May 15). The global fragility strategy: Posturing the United States for a reshaping world order. *Brookings*. https://www.brookings.edu/blog/order-from-chaos/2020/05/15/the-global-fragility-strategy-posturing-the-united-states-for-a-reshaping-world-order/

Rizzo, T. & Venetis, E. (2021). *Cost of teaching and learning materials: Data and evidence for education programs*. EnCompass LLC for the Data and Evidence for Education Program. https://www.edu-links.org/sites/default/files/media/file/DEEP-Cost-of-Teaching-and-Learning-Materials-report-Final-508.pdf

Roozenbeek, J. & van der Linden, S. (2020). Breaking *Harmony Square*: A game that "inoculates" against political misinformation. *Harvard Kennedy School Misinformation Review, 1*(8). https://doi.org/10.37016/mr-2020-47

Sanchez, C. (2019, January 29). Misinformation is a threat to democracy in the developing world. *Council on Foreign Relations*. https://www.cfr.org/blog/misinformation-threat-democracy-developing-world

Scholz, J. P. (2021, February 18). Using fact-checking to combat Libya's social media war. *DW Akademie.* https://akademie.dw.com/en/using-fact-checking-to-combat-libyas-social-media-war/a-56578045

Scott-Smith, G. (2020). Exchange programs and public diplomacy. In Snow, N. & Cull, N. J. (Eds.), *Routledge handbook for public diplomacy* (pp. 38-49). Taylor & Francis Group. https://doi.org/10.4324/9780429465543

Sirlin, N., Epstein, Z., Arechar, A. A., & Rand, D. G. (2021). Digital literacy is associated with more discerning accuracy judgements but not sharing intentions. *Harvard Kennedy School Misinformation Review, 2*(6). https://doi.org/10.37016/mr-2020-83

UNDP Global Centre for Public Service Excellence. (2015). *Is the private sector more efficient? A cautionary tale.* https://www.undp.org/sites/g/files/zskgke326/files/publications/GCPSE_Efficiency.pdf

UNICEF. (2023). *Humanitarian situation report no. 4: Libya*. https://www.unicef.org/media/133851/file/Libya-End-of-Year-Humanitarian-SitRep-31-December-2022.pdf

UNICEF. (2021). *Togo COVID-19 situation report – #12*. https://www.unicef.org/media/101996/file/Togo-COVID19-SitRep-April-2021.pdf

UNICEF. (n.d.). *Funding to UNICEF*. https://www.unicef.org/partnerships/funding

UNICEF Ivory Coast. (n.d.). *Education*. https://www.unicef.org/cotedivoire/éducation

UNICEF Ghana. (n.d.). *Education*. https://www.unicef.org/ghana/education

UNICEF Guinea. (n.d.). *Education*. https://www.unicef.org/guinea/education

UNICEF in Benin. (n.d.). *Education*. https://www.unicef.org/benin/education

UNICEF in Haiti. (n.d.). *Education*. https://www.unicef.org/haiti/education

UNICEF Mozambique. (n.d.). *Education*. https://www.unicef.org/mozambique/educação

UNICEF Papua New Guinea. (n.d.). *Education*. https://www.unicef.org/png/what-we-do/education

United Nations. (2022, April 1). *UN's rights council adopts 'fake news' resolution, States urged to tackle hate speech* [Press release]. https://news.un.org/en/story/2022/04/1115412

United States Advisory Commission on Public Diplomacy. (2021). *Comprehensive annual report on public diplomacy & international broadcasting*. https://www.state.gov/wp-content/uploads/2022/02/2021_ACPD_Annual_Report.pdf

U.S. Department of State. (n.d.). *Global Engagement Center*. https://2009-2017.state.gov/r/gec/index.htm

U.S. Department of State & U.S. Agency for International Development. (2022). *Joint Strategic Plan FY 2022-2026.*

U.S. Embassy Tbilisi. (2020, February 3). *Thematic inquiry working group report on disinformation and propaganda* [Press release]. https://ge.usembassy.gov/thematic-inquiry-working-group-report-on-disinformation-and-propaganda-february-3/

USC Center on Public Diplomacy. (n.d.). *What's PD?* University of Southern California Annenberg. https://uscpublicdiplomacy.org/page/what-is-pd

Vraga, E. K. & Bode, L. (2017). Using expert sources to correct health misinformation in social media. *Science Communication, 39*(5), 621-645. https://doi.org/10.1177/1075547017731776

Vosoughi, S., Roy, D., & Aral, S. (2018). The spread of true and false news online. *Science, 359*(6380), 1146-1151. https://doi.org/10.1126/science.aap9559

Walter, N., Cohen, J., Holbert, R. L., & Morag, Y. (2019). Fact-checking: A meta-analysis of what works and for whom. *Political Communication, 37*(3), 350-375. https://doi.org/10.1080/10584609.2019.1668894

West, D. M. (2016). *Internet shutdowns cost countries $2.4 billion last year*. Center for Technology Innovation at Brookings. https://www.brookings.edu/wp-content/uploads/2016/10/intenet-shutdowns-v-3.pdf

The White House. (2023, March 24). *Fact sheet: President Biden submits to Congress 10-year plans to implement the U.S. Strategy to Prevent Conflict and Promote Stability* [Press

release]. https://www.whitehouse.gov/briefing-room/statements-releases/2023/03/24/fact-sheet-president-biden-submits-to-congress-10-year-plans-to-implement-the-u-s-strategy-to-prevent-conflict-and-promote-stability/

Woodhams, S. & Migliano, S. (October 11, 2022). *Government internet shutdowns have cost $35.5 billion since 2019.* Top10VPN. https://www.top10vpn.com/research/cost-of-internet-shutdowns/

Yayboke, E., Nzuki, C., & Strouboulis, A. (2022). *The Global Fragility Strategy gets a refresh*. Center for Strategic & International Studies. https://www.csis.org/analysis/global-fragility-strategy-gets-refresh

Yayboke, E., Pforzheimer, A., Staguhn, J., & McCurdy, D. (2021). *A policymaker's guide to the Global Fragility Act*. Center for Strategic & International Studies. https://www.csis.org/analysis/policymakers-guide-global-fragility-act

Zürcher, C. (2012). Conflict, state fragility and aid effectiveness: insights from Afghanistan. *Conflict, Security & Development, 12*(5), 461-480. https://doi.org/10.1080/14678802.2012.744180

Appendix 1: Assumptions for Analysis

While assessing each alternative, I make the following assumptions as part of my analysis.

Global Assumptions

1. This report focuses on disinformation that is spread on social media. Disinformation that is spread by other methods is not considered in this analysis. As a result, this report likely underestimates the effects and costs of disinformation in GFA priority countries.
2. Current U.S. government efforts to combat disinformation tend to focus on major actors like China and Russia. If these priorities have led to funding being spent in GFA priority countries, these amounts are not considered in the evaluation of the cost criterion. Further, I assume that the U.S. government is not spending money on combatting disinformation in GFA priority countries currently, which likely makes these cost estimates an underestimate.
3. For each population estimate (social media users or internet users), I use numbers from the Digital 2023 reports for each GFA priority country (2022 is used for Cote d'Ivoire as that is the most recent report available). Each report is cited independently in the references list.
4. A discount rate of 9% is used for all costs as 9% was the APP-recommended discount rate used for programs executed in developing countries.

Alternative 1: Status Quo

1. I assume there is at least one fact-checking organization in each GFA priority country/region. From my research, the only GFA priority countries in which I cannot find a fact-checking organization are Papua New Guinea and Haiti. However, for the purposes of this report, I work under the assumption that there is at least one fact-checking organization operating in each GFA priority country.
2. Fact-checking organizations (or the site from which they are sourced) are all independently cited in the references list.
3. Cost relies on the assumption that the social media platforms used the most globally are also those used the most in GFA priority countries.
4. I assume spending by fact-checking organizations is constant across years. Considering investments in fact-checking will likely increase over time, this cost estimate is likely an underestimate.

Alternative 2: Investments in Existing Fact-Checking Organizations

1. I assume there is at least one fact-checking organization in each GFA priority country/region. From my research, the only GFA priority countries in which I cannot find a fact-checking organization are Papua New Guinea and Haiti. However, for the purposes of this report, I work under the assumption that there is at least one fact-checking organization operating in each GFA priority country.
2. Fact-checking organizations (or the site from which they are sourced) are all independently cited in the references list.
3. I only consider private fact-checking organizations operating in the country, not international organizations.

4. If an organization operates in multiple countries, it is only counted once for funding purposes.
5. Instead of providing enough resources to bring each organization to have a budget of $50,000 per year, I estimate costs if $50,000 per year is provided to the organizations.

Alternative 3: Disinformation-Focused Public Diplomacy

1. For the purposes of estimating a salary, I assume each foreign service officer is a FS-04, step 5 with a family of 4. Foreign service salary information was calculated using the Foreign Service Officer Salary: A Comprehensive Guide blog and linked content from that blog (FSO Career, 2023).
2. I assume the only disinformation focused public diplomacy courses are those available on the Foreign Service Institute's public facing website. The courses discussed are all independently cited in the references list.
3. I estimate the cost using a budget increase of 2.6% of the FY2020 public diplomacy budget. Embassy-led public diplomacy programs under DP .7 funds account for 20.8% of the public diplomacy budget. Under DP .7 funding, only 12% of funding is dedicated to programs run by the GEC, which would be those targeted at countering disinformation. Therefore, only about 2.6% of public diplomacy funds are used for embassy programs countering disinformation. I use this 2.6% of funding as an estimate of how much funding would need to increase to execute the proposed disinformation-focused public diplomacy program.

Alternative 4: UNICEF Education Programming

1. I assume there are active UNICEF education programs in each GFA priority country/region.
2. I use one-time/upfront costs and assume the books and training will last for the ten-year implementation period. Given this assumption, the cost estimate is an underestimate.

Appendix 2: Rubrics for Evaluating Qualitative Criteria

Rubric for Evaluating Effectiveness

Alternatives are evaluated for effectiveness based on the factors listed in each category. A wholistic approach is used to evaluation such that an alternative may not meet every factor listed in a category.

High Effectiveness	*Moderate Effectiveness*	*Low Effectiveness*
• Prioritizes long-term resilience to disinformation over fact-checking • Only fact-checks as necessary • Utilizes best practices from research • Implemented by a trusted, unbiased source	• Contains elements of both creating resilience and fact-checking • Interventions partly based in best-practices from research • Some level of concerns relative to unbiasedness, but the implementing organization is largely accepted by society	• Only provides fact-checking and other short-term aimed programming • Little opportunity to create long-term resilience to disinformation • Executed by an organizational with low institutional trust and/or professionalism • Low public perceptions of unbiasedness and effectiveness

Rubric for Evaluating Administrative Feasibility

Alternatives are evaluated for administrative feasibility based on the factors listed in each category. A wholistic approach is used to evaluation such that an alternative may not meet every factor listed in a category.

High Administrative Feasibility	*Moderate Administrative Feasibility*	*Low Administrative Feasibility*
• Operates within existing programming • Flexibility in how funds can be used • High responsiveness to changes in media environment • Creates little to no administrative burden	• Some but limited amounts of flexibility • Moderate responsiveness to changes in media environment • Creates moderate administrative burden	• Requires the creation of new programs • Funds must be used in a specific manner • Low responsiveness to changes in media environment • Creates significant administrative burden

Rubric for Evaluating Opportunities for Waste and/or Corruption

Alternatives are evaluated for opportunities for waste and/or corruption based on the factors listed in each category. A wholistic approach is used to evaluation such that an alternative may not meet every factor listed in a category.

Few Opportunities for Waste and/or Corruption	*Moderate Opportunities for Waste and/or Corruption*	*Many Opportunities for Waste and/or Corruption*
• U.S. government or private control • U.S. control of funds • Few steps for implementation	• Localized control with few implementing partners • Mediated access to U.S. funding • Moderate number of steps for implementation	• Highly localized control with many implementing partners • Direct access to U.S. funding • Many steps for implementation

Appendix 3: Cost Calculations

All costs are reported in the present value, discounted at a 9% discount rate. A 9% discount rate was chosen

Alternative 1: Status Quo

Meta Spending									
How much has Meta spent per year since 2016?									
Estimated $4million since 2016									
Estimated per year	$571,428.57								
*** I round up to an estimate $600,000 per year**									
Total for 10 years (assuming steady spending)									
2023	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**
$600,000.00	$550,458.72	$505,008.00	$463,310.09	$425,055.13	$389,958.83	$357,760.40	$328,220.55	$301,119.77	$276,256.67
Total	$4,197,148.14								

IFCN Funding									
2% of Africa Check funding	759852.72	* In South African Rands							
Cost for 1 year (after conversion)	$41,376.17	* In USD							
*** I round up to an estimate of 50000 per year**									
Total for 10 years (assuming steady spending)									
2023	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**
$50,000.00	$45,871.56	$42,084.00	$38,609.17	$35,421.26	$32,496.57	$29,813.37	$27,351.71	$25,093.31	$23,021.39
Total	$349,762.34								

YouTube Costs		
Fringe rate estimate	$133,290.00	* Fringe rate estimated by 2x average salary estimate

Total for 10 years (assuming steady spending)									
2023	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**
$133,290.00	$122,284.40	$112,187.53	$102,924.34	$94,426.00	$86,629.35	$79,476.47	$72,914.19	$66,893.76	$61,370.42

Total	$932,396.46

Total Cost	**$5,479,306.94**

Reach									
Country	**Haiti**	**Libya**	**Mozambique**	**PNG**	**Benin**	**Côte d'Ivorie**	**Ghana**	**Guinea**	**Togo**
Population	2100000	5650000	2500000	872000	1300000	6400000	6600000	1950000	775600

Total Population	28147600
Cost per 100,000	$19,466.34

Cost-Effectiveness	
Effect size	0.29
Effect per $1million spent	0.052926402

Alternative 2: Investments in Fact-Checking Organizations

Population									
Country	**Haiti**	**Libya**	**Mozambique**	**PNG**	**Benin**	**Côte d'Ivorie**	**Ghana**	**Guinea**	**Togo**
Population	2100000	5650000	2500000	872000	1300000	6400000	6600000	1950000	775600

Costs	
Cost per Year	$1,000,000.00
Total for 10 years	

2023	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**
$1,000,000.00	$917,431.19	$841,679.99	$772,183.48	$708,425.21	$649,931.39	$596,267.33	$547,034.24	$501,866.28	$460,427.78

Total Cost	$6,995,246.89
Total Population	28147600
Cost per 100,000	$24,852.02
Cost-Effectiveness	
Effect size	0.29
Effect per $1million spent	0.041456721

Alternative 3: Disinformation-Focused Public Diplomacy

Foreign Service Officer Salary									
Entry level FSO with a master's degree, 8 years of experience, and family of 4									
FP4/Step5	$85,612.14								
Spendable income	$44,100.00								
	Haiti	**Tunis**	**Mozambique**	**PNG**	**Benin**	**Cote d'ivorie**	**Ghana**	**Guinea**	**Togo**
Danger pay %	25%								
	$21,403.04								
Hardship %	25%	15%	25%	35%	30%	25%	20%	30%	30%
	$ 21,403.04	$ 12,841.82	$ 21,403.04	$ 29,964.25	$ 25,683.64	$ 21,403.04	$ 17,122.43	$ 25,683.64	$ 25,683.64
COLA %		15.00%	5.00%	50.00%	15.00%	42.00%		70.00%	20.00%
	$ -	$ 6,615.00	$ 2,205.00	$ 22,050.00	$ 6,615.00	$ 18,522.00	$ -	$ 30,870.00	$ 8,820.00
Total	$128,418.21	$105,068.96	$109,220.18	$137,626.39	$117,910.78	$125,537.18	$102,734.57	$142,165.78	$120,115.78
Total across countries (1 year)	$622,499.53								
*Note: The Libyan embassy is currently in Tunis									
Total for 10 years									
*Assumes no promotions									
2023	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**
$622,499.53	$571,100.49	$523,945.40	$480,683.85	$440,994.36	$404,581.98	$371,176.13	$340,528.56	$312,411.52	$286,616.08
Total	$4,354,537.90								

PD Spending									
	Haiti	**Libya**	**Mozambique**	**PNG**	**Benin**	**Cote d'ivorie**	**Ghana**	**Guinea**	**Togo**
Current PD Budget	$862,500.00	$599,739.00	$907,697.00	$379,408.00	$567,417.00	$1,454,257.00	$1,860,178.00	$630,122.00	$646,735.00
2.6% of PD Spending	$22,425.00	$15,593.21	$23,600.12	$9,864.61	$14,752.84	$37,810.68	$48,364.63	$16,383.17	$16,815.11

Total PD spending for 1 year	$205,609.38

Total for 10 years									
2023	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**
$205,609.38	$188,632.46	$173,057.30	$158,768.17	$145,658.87	$133,631.99	$122,598.15	$112,475.37	$103,188.41	$94,668.27

Total	$1,438,288.36

Overall Cost	$5,792,826.27

	Haiti	**Libya**	**Mozambique**	**PNG**	**Benin**	**Cote d'ivorie**	**Ghana**	**Guinea**	**Togo**
Population	4530000	3140000	6920000	3290000	4600000	9940000	23050000	4870000	3130000
Total Population	63470000								

Cost per 100,000	$9,126.87

Cost-Effectiveness			
Maximum effect size	0.51	**Minimum effect size**	0.29
Maximum effect per $1million spent	0.0880399267	**Minimum effect per $1million spent**	0.05006191911

Alternative 4: UNICEF Education Programming

Cost for Students									
Country	**Haiti**	**Mozambique**	**Libya**	**PNG**	**Benin**	**Cote d'ivorie**	**Ghana**	**Guinea**	**Togo**
Primary School School-Aged Population	1628148	3758706	694505	1135827	1866128	4154730	4491935	2117284	1289420
Unit Price	$1.01	$0.85	$0.85	$0.08	$0.86	$0.86	$0.86	$0.86	$0.86
Primary School Book Cost	$1,644,429.48	$3,194,900.10	$590,329.25	$90,866.16	$1,604,870.08	$3,573,067.80	$3,863,064.10	$1,820,864.24	$1,108,901.20

N Students	21136683
Total Cost for Students	$17,491,292.41

Cost for Teachers									
Training cost	$116								
Country	**Haiti**	**Mozambique**	**Libya**	**PNG**	**Benin**	**Cote d'ivorie**	**Ghana**	**Guinea**	**Togo**
N Primary Teacher	44472	121488	42696	694505	53341	96255	168546	37680	40626
Unit Price	$2.43	$1.23	$1.23	$0.24	$3.35	$3.35	$3.35	$3.35	$3.35
Primary Teacher Training Cost	$5,158,752	$14,092,608	$4,952,736	$80,562,580	$6,187,556	$11,165,580	$19,551,336	$4,370,880	$4,712,616

N Teachers	1299609
Total Cost for Teachers	$150,754,644.00

Overall Cost	
Total Cost	$168,245,936.41
Cost per 100,000	$795,990.25
Cost-Effectiveness	
Effect size	1.4
Effect per $1million spent	0.0008321151939

FRANK BATTEN SCHOOL
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