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Letter from the Editors

The societies of the world have always been integrated. The international system is consistently adapting to new economic, political, and cultural forms of interconnectivity and with this comes both peace and conflict. As such, it is imperative to research and understand the world on an international level, a fact that led to the establishment of the Martin Institute.

The Martin Institute was founded in 1979 by Boyd and Grace Martin with the purpose of researching the causes of war and the conditions for peace. Today, in partnership with the Program in International Studies, the Martin Institute continues to foster the discussion, exploration, and education of the international system.

The Martin Institute provides an array of different educational opportunities for students. Such opportunities include the Borah Symposium, which brings distinguished speakers to campus to discuss potential solutions to international conflict, and include the annual trip to New York for the National Model United Nations Conference, which allows students to experience first-hand how the United Nations functions. With these kinds of opportunities, the Martin Institute provides an exceptional educational experience.

Within the Program in International Studies, students have the opportunity to earn an interdisciplinary degree that focuses on the regional and issue emphases that most interest them. Students have the freedom to examine conflict, peace, and the international system from varying perspectives, such as business in Asia, development in the Americas, economics in Africa, or politics in Europe.

The program concludes with a senior capstone class in which students choose a specific international issue to explore. Their research culminates in a white paper outlining the issue and its various possible solutions. It involves creativity, critical thinking, research, and writing, and reflects the passion each student has for understanding the international system and overcoming the obstacles we face on the international level.

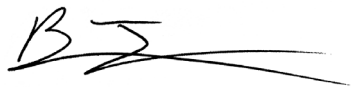
In reading the white papers from the 2015 graduating class, we learned much about a diverse number of problems from around the world. In this, the 7th edition of the Journal of the Martin Institute | International Studies, we have chosen the papers that we found the most thought-provoking and illuminating. They provide an excellent representation of what the Martin Institute stands for.

We would like to thank the students for their long hours spent researching and writing this year's contribution to the Martin Journal. Not only will this benefit our readers but it will also provide a shining example of the high expectations set for Martin graduates.

Thank You,



Caitlin Jacobshagen



Brett Travis

It now becomes necessary for us to put our major global problems into a socially relevant global framework. Our world has become too complex, too interdependent, to answer these questions by simplistic answers.

These problems call for creative thinking...

– Boyd A. Martin, founder of the Martin Institute and namesake of the Martin School, at the Institute's inauguration, 1980



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Four Decades Divided: Resolving the Ethno-Nationalist Dispute in Cyprus

– Jessie Dexter

ABSTRACT

Turkish and Greek Cypriots have been in an ethno-nationalist dispute for 41 years, with occurrences of ethnic unrest spanning back even further. Today the island is partitioned, divided between the Republic of Cyprus and the Turkish Republic of Northern Cyprus (TRNC). Although the island is not currently engaged in militarized conflict, both ethnic groups are growing weary of the dispute. Potential solutions for the Cyprus conflict include granting the TRNC international recognition and creating two sovereign states, unifying the island under a consociational democracy, creating a federal government, or implementing a seven year integration an education plan. The lack of cultural exchange and communication between the two ethnic groups for the last four decades has made a potential agreement between the Greek Cypriots and the Turkish Cypriots highly unlikely. This is why a seven year education and integration plan is the most promising potential solution at this time.

Overview and Background

The island of Cyprus has been the battle grounds of ethno-nationalist disputes for decades. Initially settled by Greeks, the island proceeded to be ruled by several empires; including the Ottoman Empire from 1571 through 1878, followed by the British Empire from 1878 through 1960.¹ While under British rule a strong sense of Greek and Turkish nationalism grew, the Greek Cypriots wanted a union with Greece and the Turkish Cypriots wanted a partition of the island. These opposing views grew stronger when British rule withdrew from the country and handed it over to the Cypriots as an independent, unified state in 1960. By 1963 fighting broke out amongst the two ethnic groups and the United Nations (UN) intervened and set up a UN Peacekeeping force, known as UNFICYP, which has been stationed on the island ever since.²

The island remained relatively calm until the summer of 1974 when a military coup that was backed by the Athens government overthrew

- 1 “Cyprus in the Period 1571-1959.” *Republic of Turkey Ministry of Foreign Affairs*. Republic of Turkey Ministry of Foreign Affairs, 2011. Web. 7 May 2015.
- 2 “About UNFICYP.” *United Nations Peacekeeping Force in Cyprus*. United Nations, 1 Jan. 2015. Web. 18 Mar. 2015.

the elected president of Cyprus and indicated a potential union with Greece.³ The suggested union caused Turkey to invade the island on the grounds that they needed to protect the Turkish Cypriot minority, which accounted for about 18 percent of the total population.⁴ A month later Turkey launched a second full scale invasion which made it clear that they had not previously invaded the nation to protect the Turkish Cypriots. Turkey wanted to prevent the country from uniting with Greece and wanted to exclude Greece from the eastern Mediterranean Basin.⁵ The takeover resulted in the occupation of 37 percent of the island territory, as well as numerous human rights violations. Over 200,000 Greek Cypriots were forcibly expelled from the occupied northern part of the island, and over 1,200 civilians and soldiers went missing and their whereabouts never confirmed.⁶ Later in 1974 an agreement was reached to end the violence and partition the island, with the northern third of the country being inhabited by Turkish Cypriots and the southern two thirds inhabited by Greek Cypriots.⁷

After the invasion the responsibilities of the UNFICYP expanded, and UN troops have continued to supervise the ceasefire lines and maintain a buffer zone, also known as the Green Line⁸, between the two ethnic groups.⁹ There have not been any militarized disputes between the Greeks and the Turks since the creation of the Green Line in 1974. Numerous attempts to resolve the Cyprus conflict and reunify the island over the last four decades have been unsuccessful, most recently being the Annan

plan that was drafted by the UN but failed to pass in 2004. Regardless, relations between the north and south have improved over the years, and several crossing points have opened across the Green Line in 2003 and 2008.

2015 marked the conflicts 41st year, and negotiations are currently at a standstill. There have been numerous attempts to deal with the situation, ranging from a power-sharing constitution in 1960, the partition of the island in 1974, to the Annan Plan in 2004, but none have succeeded. As the TRNC continues to suffer from isolation due to the lack of international recognition, and the expelled Greek Cypriots in the south are still restricted from returning to their homes, both sides have grown weary. However, there is still promise for successful negotiations and compromise. The most feasible solutions are as follows:

POSSIBLE SOLUTIONS

Approach 1: Creation of Two Sovereign States

The lack of violence between the two ethnic groups since 1974 has been noteworthy, however, tensions still remain after the decades of ethno-nationalist aggression. Is it realistic to expect two groups who have been fighting with each other for over 50 years to be able to come together to form a unified government or society? According to some theorists, restoring civil politics in multi-ethnic states that have experienced extreme violence and war is impossible because the war itself destroyed the possibilities for ethnic cooperation.¹⁰ The partition of the island in 1974 succeeded in ending the violence, however, it is argued that the partition may have strengthened the sense of separate identities in the years since as it severed connections and networks between the two groups. Building a sense of community is a vital step when moving toward unity, yet crossing points at the border did not even open up until 2003. In a Foreign Affairs article in 1997 Radha Kumar pointed out that “ethnic partitions have never been reversed; their implementation

3 “Cyprus Profile - Overview.” *BBC News*. BBC News Services, 26 Mar. 2015. Web. 28 Mar. 2015.

4 Papadakis, Yiannis, Nicos Peristianis, and Gisela Welz, eds. *Divided Cyprus: Modernity, History, and an Island in Conflict*. Indiana: Indiana University Press, 2006. Pg. 2.

5 Hoffmeister. Nijhoff Law Specials *Legal Aspects of the Cyprus Problem: Annan Plan and EU Accession*. Leiden, NLD: Martinus Nijhoff, 2006. Pg. 37. ProQuest ebrary. Web. 31 March 2015.

6 “Cyprus, July 1974 - July 2013: Still Occupied, Still Divided.” *Ministry of Interior, Republic of Cyprus*. Press and Information Office, Republic of Cyprus, 1 July 2013. Web. 28 Mar. 2015. (MOI, 2013)

7 See Appendix A

8 Ibid

9 About UNFICYP, 2015

10 Kaufmann, Chaim. “Possible and Impossible Solutions to Ethnic Civil Wars.” *International Security* 20, no. 4 (Spring 1996): pg. 136.

has inexorably driven communities further apart.”¹¹ Instead of working towards creating a unified Cyprus perhaps it is time that the UN, the Republic of Cyprus, and the TRNC work towards officially forming two separate sovereign nations. Some argue this will signal that the Turkish invasion was acceptable, but the UN and the international community have expressed strong disapproval of the invasion and occupation, and the UN has previously released multiple resolutions condemning Turkey’s actions.¹² By creating two separate sovereign states with the assistance of the international community, the ethnic communities could move on from debating between a permanent partition and a unified state, and instead begin focusing on improving bi-communal and international relations.

Approach 2: Creation of a Unified Cyprus

When attempting to manage and settle ethnic conflicts power-sharing arrangements often seem appropriate, and when Cyprus became an independent state in 1960 a constitution was formed that attempted to give equal power to both the Greek and the Turkish Cypriots. Under the new democratic government there was to be a Greek Cypriot president and a Turkish Cypriot vice-president, who would be elected by their respective communities and would share executive power. There would also be a 50 member House of Representatives that was composed of 35 Greek and 15 Turkish Cypriots who would be elected by their respective communities.¹³ It was an attempt to get the opposing ethnic groups to work together and make decisions by consensus, and to ultimately turn the adversaries into partners. This concept of conflict resolution is called ‘consociationalism’, it is a form of government involving guaranteed group representation, and is often used for managing conflict in deeply

divided societies. There are four conditions for a successful consociational democracy: 1) Government by grand coalition; 2) Proportional representation; 3) Mutual veto; 4) Segmental autonomy.¹⁴

In 1960 “the infant Cypriot state’s experiment in consociational government was doomed to break down because...it lacked any provision for close, neutral, international supervision and mediation during its implementation.”¹⁵ Improved relations between the two ethnic groups, as well as assistance from the international community, have created an environment where a unified Cyprus governed under a consociational democracy will have much higher odds of success.

Approach 3: A Federal Solution

The idea of federalism is promising because it offers unity for common purposes as well as separation for ethnic or other local reasons. Arguments in favor of a federalist government claim that some form of federalism or decentralized government power “enhances national unity and consensus, promotes security, protects citizens against encroachment by the state, limits ethnic conflict, and safeguards individual and communal liberty.”¹⁶ Considering the prolonged separation between the ethnic communities within Cyprus any settlement will have to assume a territorial aspect, and a federation is often promoted as the best way to manage the strong nationalistic feelings of both the Greek and Turkish Cypriots. However, the Greek Cypriot community is more in favor of a federal government than the Turkish Cypriot community.¹⁷ Minorities, such as the Turkish Cypriot population, tend to prefer confederations¹⁸ and have concerns that under

11 Kumar, Radha. “The Troubled History of Partition”. *Foreign Affairs* (January/February 1997): pg. 33.

12 Bogdani, Mirela. *Library of European Studies: Turkey and the Dilemma of EU Accession: When Religion Meets Politics*. London, GBR: I.B. Tauris, 2010. ProQuest ebrary. Web. 31 March 2015.

13 Bose, Sumantra. *Contested Lands: Israel-Palestine, Kashmir, Bosnia, Cyprus and Sri Lanka*. London: Harvard University Press, 2007, pg. 75.

14 Lijphart, Arend. *Democracy in Plural Societies: A Comparative Exploration*. New Haven: Yale University Press, 1977.

15 Bose, 2007, pg. 79-80

16 Wibbels, Erik. “Madison in Baghdad? Decentralization and Federalism in Comparative Politics.” *Annual Review of Political Science* 9 (2006): pg. 167.

17 UNFICYP. “The UN in Cyprus: An Inter-Communal Survey of Public Opinion”, 2007.

18 Watts, Ronald. *Federalism, “Federal Political Systems, and Federations.” Annual Review of Political Science* 1 (1998) pg. 121.

a federal government they may become an impoverished minority.

A federal government system may be a successful option because it is ultimately the second best solution for both the Greek and Turkish Cypriot communities. A majority of Greek Cypriots prefer a unified Cyprus, but would settle for a federation due to the strong central government that federalism would provide.¹⁹ While a majority of the Turkish Cypriot community would prefer a permanently partitioned Cyprus, but would settle for federalism because it would create two sovereign yet connected states.²⁰

Approach 4: Maintain Status Quo

Neither the Greek nor the Turkish Cypriots are entirely content with the current situation of the island partitioned at the Green Line, patrolled by UN Peacekeeping troops, and with border crossing checkpoints. The Greek Cypriots have still not accepted the partition of the island as the final result, and are still waiting for unification. While the Turkish Cypriots are more in favor of a division of the island, for them the current situation is not satisfactory because the TRNC is not recognized by the international community, leaving them isolated. Yet despite the lack of reconciliation, the situation has remained relatively calm for the last 41 years. Since the opening of the checkpoints in 2003 members of both communities have crossed over in substantial numbers: about 40% of Greek Cypriots say they have never crossed, about 50% say they have crossed once or a few times in the past but no longer, and about 10% still cross over. By comparison, about 30% of Turkish Cypriots have never crossed, about 25% have crossed once or a few times in the past but no longer, and about 45% still cross over.²¹

Considering the amount of increased interaction between the two ethnic communities, the absence of violence has been remarkable and a very positive sign for the future. This presents an alternative solution of taking modest steps toward some degree of shared decision making

and communication between the two ethnic communities, while maintaining the Green Line and the UN Patrol. This could, in time, help foster relationships and networks between the two groups and create a climate of reconciliation that they could build upon in the future.

Approach 5: Seven Year Education and Integration Plan

The number of citizen's crossing over the border and the absence of resulting violence are very positive signs. Large majorities in both communities believe that day-to-day bi-communal contact is essential to pave the way for a united Cyprus, and there is approval for those who reach out to the other community through such contacts. However, only a small percentage of Greek and Turkish Cypriots interact with one another in a bi-communal context despite evidence that it increases levels of trust towards members of the other community. Both groups generally accept and acknowledge the merits and benefits of inter-communal contact, however, there is sensitivity over the extent to which non-Cypriot intermediaries should get involved in facilitating such activities. The most acceptable type of inter-communal contact to both communities is cooperation by Greek and Turkish Cypriot non-governmental organizations (NGOs), as well as joint research projects and collaboration between Greek and Turkish Cypriot academics and universities.²² This approach proposes community outreach programs and trainings conducted by local NGOs, as well as increased cooperation of Universities²³ on either side of the Green Line. The UN and EU will provide grants to local NGOs and Universities who do community outreach trainings and educational information sessions, as well as to Universities that co-partner on projects with students attending schools in the other region of Cyprus. Ideally this will speed up the rate of interaction and integration between the communities, and after seven years an island wide survey will be conducted by UCFICYP which will determine the impact and progress of the approach.

19 UNFICYP. "The UN in Cyprus: An Inter-Communal Survey of Public Opinion", 2007.

20 Ibid

21 UNFICYP. "The UN in Cyprus: An Inter-Communal Survey of Public Opinion", 2007.

22 Ibid

23 See Appendix B


RECOMMENDED COURSE OF ACTION

A 2007 poll²⁴ indicated that large majorities in both ethnic communities were skeptical about the possibility of a comprehensive settlement in the foreseeable future. However, only small minorities within each of the two ethnic communities believed that “the current status quo is the solution”. While a strong majority of Greek Cypriots believe a united Cyprus to be the most satisfactory solution, it is clear that a unitary state is an unacceptable outcome to a majority of Turkish Cypriots. Most Turkish Cypriots would ideally prefer a two state arrangement, which a majority of Greek Cypriots stated they will not agree to under any circumstances. The survey also showed that a large majority in both ethnic communities believed a federal settlement to be the second best option, and would be prepared to accept such a constitutional framework as a compromise solution.²⁵ However, in 2002 the first version²⁶ of the ‘Annan Plan’ was circulated throughout Cyprus which proposed a loose federal union.²⁷ When the Plan was voted on in 2004 64.9% of Greek Cypriots said Yes, while 75.8% of Turkish Cypriots said No²⁸. Although a majority of Turkish Cypriots previously said that they would be prepared to accept a federal settlement as a compromise solution, the voting results imply that they still feel a federal union would cause them to lose too much sovereignty.

Practically every conceivable solution has been attempted to resolve the Cyprus dispute: the united island and power-sharing agreement in 1960 failed and resulted in outbreaks of severe violence; the partition of the island in 1974 has been the most “successful” attempt, but a majority of Cypriots do not believe that it is a long term solution; and the Annan Plan in 2004, an attempt to establish a federal solution for the island, was largely rejected. However, despite the failure of the Annan Plan both sides remain

committed to the principle of federalism.²⁹ Yet without the presence of a shared identity and trust between the two ethnic communities there is no reason to expect that a federation would be any more successful than the creation of the unitary state in 1960.

This is why Approach 6: Seven Year Education and Integration Plan is the best possible solution at this time. It provides a much needed shift in focus: from finding a solution to the conflict, to resolving the root of the problem. The root of the Cyprus dispute is in fact a lack of understanding, communication, and integration between the two ethnic communities, which has caused tension prior to the Turkish invasion in 1974. Until the communities can find a common sense of identity as Cypriots, rather than Greeks or Turks, no attempted solution will be successful.

Using funds from the European Regional Development Fund³⁰ the EU can use the Cohesion Policy³¹ and European Territorial Cooperation programs³² to stimulate NGO cooperation and cross-border university collaboration to generate more cultural exchange and integration between the two ethnic communities. After seven years an island wide survey will be conducted to gain an understanding of what a majority of Cypriots wish to do next; whether it be a continuation of the education and integration plan, unification of the island, a partition, or implementation of a federal government. The initial step is connecting the communities, then allowing them to develop a sense of identity and form a decision on how to move forward. 

24 See Appendix C

25 UNFICYP. “The UN in Cyprus: An Inter-Communal Survey of Public Opinion”, 2007.

26 There were to be four following versions of the plan that incorporated minor modifications on various issues, but the fundamentals remained the same.

27 See Appendix D

28 Bose, 2007, pg. 100

29 Papadakis, 2006, pg. 24

30 “European Regional Development Fund.” Europa. European Commission, 15 Oct. 2014. Web. 7 May 2015.

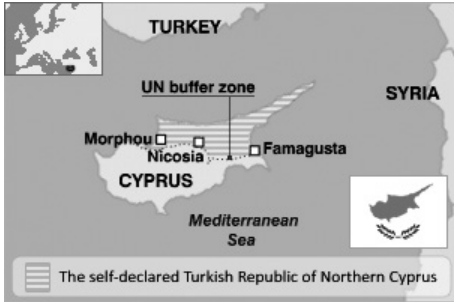
31 “Cohesion Policy Frequently Asked Questions.” Europa. European Commission, 15 Aug. 2014. Web. 7 May 2015.

32 “Interreg: European Territorial Co-Operation.” Europa. European Commission, 12 May 2015. Web. 13 May 2015.

APPENDICES

APPENDIX A

Map showing the location of the Turkish Republic of Northern Cyprus, the Republic of Cyprus, and the Green Line. This map also shows the geographic locations of Greece, Turkey, and Cyprus.



<http://www.bbc.com/news/world-europe-17217956>)

APPENDIX B

This map shows the locations of the different universities located on the island. Four universities are located in the TRNC, and six are located in the Republic of Cyprus. Four of the universities are located along the Green Line, but are still considered to be located in the Republic of Cyprus. (The Green Line is identified by the dashed line on the map)



APPENDIX C

In February 2007, an island-wide poll, commissioned by UNFICYP, was conducted with a sample of 1,000 Turkish Cypriots and 1,000 Greek Cypriots, who were interviewed in their respective languages, face-to-face. In addition, a special sample of 100 Turkish Cypriots and 250 Greek Cypriots, all resident within the UN Buffer Zone, was selected for comparison with the general population.

For purposes of this project, UNFICYP retained the services of a Greek Cypriot and a Turkish Cypriot expert consultant, whose task it was to assist with preparation of the questionnaire and interpretation of the results. In addition, two well-established polling companies, CYMAR Market Research and Prologue Consulting, were selected through a tendering process to carry out the fieldwork.

APPENDIX D

Additional information about the Annan Plan: The constituent territorial units would have maximal autonomy, and the limited joint institutions at the federal level would operate on the basis of consociational norms. The United Cyprus Republic would consist of a Greek Cypriot constituent state over 72% of the island's territory, and a Turkish Cypriot constituent state over the other 28%. The constituent states would have jurisdiction over all matters except foreign policy, EU affairs, and central bank functions, which would be the province of the federal government.



Reopening the Armenia-Turkey Border

– Ruben Tsarukyan

ABSTRACT

The Republic of Armenia and Republic of Turkey have shared a border since the dissolution of the Soviet Union in 1991. In 1993, Turkey closed its border with Armenia due to Armenia's occupation of Azerbaijani lands and its continued refusal to withdraw forces from these territories. Turkey and Armenia have worked tirelessly towards finding various solutions for reopening their shared border but have fallen short of any real progress. The solutions recommended include: Armenia accepting the blueprint set forth by the Organization for Security and Cooperation in Europe, Turkey requiring the Armenian Genocide¹ be dismissed/rejected as a precondition to normalize relations, and building bridges through non-governmental organizations. Balancing the use of non-governmental organizations and track two diplomacy, civilians of both states can influence government officials to find a political solution and reopen the border.

REOPENING THE ARMENIA- TURKEY BORDER

In a time when most Europeans can travel freely to neighboring countries and expand their horizons, Turkish and Armenian citizens struggle to travel freely across their shared border (see Appendix 1) due to disagreements about historical issues, territorial disputes, and opposing claims of Armenian occupation of Azerbaijani land. Open borders can serve as prodigious incentives for neighboring countries, promising increase in human capital, cross-cultural interaction, mutual gain and an end to hostilities.

The atrocities committed against the Armenian people of the Ottoman Empire during World War One are termed the “Armenian Genocide” by the Armenian government and a few other states. These massacres were perpetrated throughout different regions of the Ottoman Empire by the Young Turks Government, which was in power at the time.

Turkey was one of the first nations to officially recognize the independence of The Republic of Armenia following the collapse of the Soviet

Union. In December 1991, Turkey's President, Suleyman Demirel, offered cooperation with Armenia to his counterpart, Levon Ter-Petrosyan, who was the first president of Armenia. In a spectacular political move, Demirel not only proposed to give Armenia access to the port of Trebizond on the Black Sea, but also promised to initiate Armenia's membership in the Black Sea Economic Cooperation (BSEC), a regional organization that was created in 1992.¹ However, in April, 1993, during the Nagorno-Karabakh war, Armenian forces extended their military campaign outside Karabakh itself, capturing the Azerbaijani province of Kelbajar (see Appendix 2), which led to Turkey closing its border with Armenia in protest; 21 years later, the border remains closed.² In 2008, after 15 years of no diplomatic interaction, there seemed to be a breakthrough in Armenia-Turkey relations with what was called "Football Diplomacy." Armenian President Serzh Sargsyan invited President Abdullah Gul of Turkey to watch a soccer match between Armenia and Turkey and this was seen as an "earthquake" in Armenia-Turkey relations in a positive way.³ This invitation was not taken lightly by the Turkish government, but it occurred after the Georgian-Russian war in 2008, which changed the dynamics in the region.⁴ Football diplomacy laid out the groundwork for the 2009 protocols between Turkey and Armenia. Unfortunately, the "Protocol on Establishment of Diplomatic Relations" signed by the foreign ministers of Armenia and Turkey in Switzerland on October 10, 2009, lasted no longer than one week. Turkey stepped back from the protocols and closed the opportunity for a breakthrough because there was no specific mention of Karabakh.⁵

Turkey requires three preconditions in order to reopen the Armenia-Turkey border: halt aggression and withdraw from all occupied Azerbaijani territories of Karabakh and other

regions, discontinue the international campaign for recognition of the Armenian Genocide, and remove any hints of territorial claims to Eastern Turkey from official Armenian documents. Closed borders affect both Armenia and Turkey because this creates instability in the Caucasus and halts economic prosperity in the region.

POSSIBLE SOLUTIONS:

Accept solutions set forth by Organization for Security and Cooperation in Europe (OSCE)

The first possible solution is two-fold: Armenia should agree with the solutions set forth by the Organization for Security and Co-operation in Europe (OSCE) and start withdrawals from Armenian-occupied territories in Azerbaijan.⁶ These seven occupied territories comprise Kelbajar, Lachin, Kubatly, Aghdam, Fizuli, Jebrail, and Zangelan. There can be no settlement without respect for Azerbaijan's sovereignty and recognition that its sovereignty over these territories must be restored.⁷ Second, a settlement must include international security guarantees including a peacekeeping operation.⁸ There is no scenario in which peace can be assured without a well-designed peacekeeping operation that enjoys the confidence of all sides.⁹ Karabakh would retain its own defensive capability, which would guarantee its security irrespective of Azerbaijan's current or future intentions and Armenia would have the right to intervene if Karabakh was threatened militarily.¹⁰ Karabakh could retain its own defensive capability by drafting its own citizens to serve in the military and not asking the Armenian military to contribute soldiers to help protect its borders.

1 Geukjian Ohannes. *Ethnicity, Nationalism and Conflict in the South Caucasus*. (Burlington. Ashgate Ltd, 2011), 185.

2 De Waal Thomas. *Armenia and Turkey: Bridging the Gap*. (Massachusetts. Carnegie Endowment, 2010), 2.

3 Shakaryan, Artak. Interview. (Yerevan, Armenia, 2015).

4 Shakaryan, Artak.

5 Shakaryan, Artak.

6 Crisis Group. *Turkey and Armenia: Opening Minds, Opening Borders*. (Istanbul. Crisis Group, 2009) 2. http://www.crisisgroup.org/~media/Files/europe/199_turkey_and_armenia_opening_minds_opening_borders_2.pdf

7 Warlick, James. *The Keys to a Settlement*. (Carnegie. US Embassy, 2014) <http://armenia.usembassy.gov/news050714.htm>

8 Warlick, James.

9 Warlick, James.

10 Warlick, James.

Dismiss setting up genocide issue as precondition:

Discontinuing the international campaign of the recognition of the Armenian Genocide is a precondition set up by the Turkish government; however, the government of Armenia has continually stated that although recognition of the Armenian Genocide is a part of their foreign policy, it is not required as a precondition to normalize relations with Turkey. The foreign policy of Armenia is made in Armenia, and former Minister of Foreign Affairs Vartan Oskanian stated that Armenia would like to sit down and talk about the genocide issue at a government level once diplomatic relations are in motion. The Armenian diaspora in the United States has every right to ask their congressmen to pass bills condemning the Armenian Genocide but this does not mean it is part of the official stance of Armenia's foreign policy towards Turkey.¹¹ Turkey has long been conducting a policy of denial of the Armenian genocide. It is Turkey's prerogative to have a policy denying the Armenian Genocide within its borders, but exporting that denial to other countries and coercing other countries not to discuss this issue should not be acceptable.¹²

Discharge claims about Armenia challenging current borders:

With respect to Armenia's current borders created in the 1921 Treaty of Kars, Armenia has not made any territorial claims or challenged the status quo. The Treaty of Kars left many Armenian towns under Turkish rule, including Kars, Van, and Mount Ararat. Armenia does not print maps depicting borders that include the towns of Kars, Van and Mount Ararat within Armenian territory.¹³ Furthermore, there have been important voices in Armenia stating that Armenia is not setting up preconditions for Turkey to cede what might be considered ancestral lands of Armenia. During a speech at the European Parliament's Foreign Affairs Committee on October 9, 2007, Armenian Foreign Minister Vartan Oskanian denied any

territorial claims of Armenia.¹⁴ Armenia's first President, Levon Ter-Petrosyan, told the Turkish Ambassador in Moscow in 1991 that "Armenia has no territorial claims towards Turkey," and current President Serzh Sargsyan has stated that "never has a representative of Armenia made territorial demands."¹⁵ There is only one political party in Armenia which presses for the return of territories of Armenia from Turkey, and that is the Armenian Revolutionary Federation (ARF). Their ultimate goal is the establishment of a free, independent and united Armenia.¹⁶ However, the ARF is no longer part of Armenia's coalition government and therefore they do not have much influence on President Sargsyan's foreign policy issues.

Exclude Nagorno Karabakh issue as precondition:

The Nagorno Karabakh Republic issue should not be used as a political tool for the Turkish government to set up preconditions in its normalization of relations with Armenia. Turkish officials are underestimating how fundamental the Karabakh question is to Armenians.¹⁷ If Turkish officials keep pressuring Armenia to make compromises regarding the "occupied" Azerbaijani territory, they will continue to stall a peace plan. The fact of the matter is that Armenia has had closed borders for the past 23 years and the Republic of Armenia is unlikely to suddenly return the territory gained in the 1992 conflict to Azerbaijan. Turkey should respect the peace process undertaken by mediators such as Russia, France and the United States in the OSCE in hopes of finding a solution to the Nagorno Karabakh issue. The political situation in the occupied area of Cyprus, which is not under the effective control of the Government of the Republic of Cyprus, is dominated by the presence of the Turkish occupation forces, the Turkish mainland settlers and the overwhelming

14 Schrodtt, Nikolaus. *Modern Turkey and the Armenian Genocide: An Argument About the Meaning of the Past.* (New York. Springer International,2014) 89.

15 Schrodtt, Nikolaus. 89

16 Armenian Revolutionary Federation Archives (2005) <http://web.archive.org/web/20070202125337/http://www.arfshant.org/index.aspx?PAGEACTION=Home>

17 De Waal, Thomas *Bridging the Gap* (2010).

11 Oskanian, Vartan *CNN Turk* (2008).

12 Oskanian, Vartan (2008).

13 Shakaryan, Artak (2015).

influence of Ankara.¹⁸ Armenia does not attempt to force Turkey to withdraw from Northern Cyprus in order to engage in diplomatic talks, nor should Turkey place such a requirement on Armenia regarding Azerbaijan. Even without the Karabakh war, Armenian and Azerbaijan leaders have cooperated very little over the past hundred years. Before the collapse of the Soviet Union, they would conduct most of their business in and through Moscow. Since then, the south Caucasus has been a tangle of front lines, closed borders, dead-ends, and isolated enclaves. In any real political or economic sense, it is not a proper region at all.¹⁹ This concludes that this region has always been in a political entanglement and setting up preconditions to solve disputes will not be helpful.

Building bridges through NGOs

With political efforts to bring about reconciliation between Turkey and Armenia seemingly stymied, nongovernmental organizations (NGOs) are working on diplomatic moves of their own, planning a network to help Turkish and Armenian groups develop joint projects.²⁰ Groups like the Armenian-Turkish Youth Orchestra and Beyond Borders Foundation are doing their part in bringing harmony to divided cultures. The Armenian-Turkish Youth Orchestra is made up of young musicians from Turkey and Armenia who meet ten days beforehand to rehearse, with intense rehearsals twice a day. This is a music project that started in 2010, which aims to “help the relations between the two countries” and bring together Armenian and Turkish youth.²¹ Presenting concerts brings together the audience and the musicians from the politically opposed regions, encouraging

them to focus on the common heritage and culture of Turkey and Armenia through music in a tangible way.²² The conductor of the Armenian-Turkish Youth Orchestra stated that “music creates a beautiful mechanism which brilliantly controls peace. It puts away hatred and extremist mentality, but brings together sympathy and peace, which have always been worked towards.”²³ Much like the youth orchestra, the purpose of the Beyond Borders Foundation is to increase direct contacts and to promote cooperation between the peoples of the two neighboring countries.²⁴ Beyond Borders provides grants to students, youth, professors, teachers, journalists, researchers and many others for the opportunity to travel to the neighboring country.²⁵ Through the travel grants, the Foundation aims to contribute to joint initiatives between the two countries in various thematic fields such as volunteering, culture and arts, sports and much more.

Recommended Course of Action:

Turkey and Armenia must increase their engagement through the use of NGOs and Track Two diplomacy. Track Two diplomacy is defined as unofficial dialogue and problem-solving activities aimed at building relationships and encouraging new thinking that can inform the official process.²⁶ Track Two activities typically involve influential academic, religious, and NGO leaders and other civil society actors who can interact more freely than high-ranking officials.²⁷ From 2010-2012, Eurasia Partnership Foundation (EPF), together with the Union of Manufacturers and Businessmen of Armenia (UMBA), International Center for Human Development (ICHHD), and Yerevan Press Club (YPC), known as the Fourth Wave Consortium, implemented the project “Support to Armenia-Turkey Rapprochement: The Fourth Wave”

18 Ministry of Foreign Affairs of the Republic of Cyprus http://www.mfa.gov.cy/mfa/mfa2006.nsf/cyprus08_en/cyprus08_en?OpenDocument

19 Waal De Thomas *Black Garden* (New York University Press – 2003) 282.

20 Hurriyet Daily News *Turkish, Armenian NGOs push peace process through ‘TANGO diplomacy’ (2010)* <http://www.hurriyetaidailynews.com/default.aspx?pageid=438&n=turkish-armenian-ngos-launch-8216tango-diplomacy8217-to-push-peace-process-2010-08-11>

21 Today’s Zaman *Armenian-Turkish Youth Orchestra Brings Harmony to Divided Cultures* (2012). http://www.todayzaman.com/national_armenian-turkish-youth-orchestra-brings-harmony-to-divided-cultures_288410.html

22 Armenian-Turkish Youth Orchestra (2012).

23 Armenian-Turkish Youth Orchestra (2012).


Beyond Borders NGO (2014). <http://www.armtr-beyondborders.org/en/travel-grant/>

25 Beyond Borders NGO (2014).

26 United States Institute of Peace (2011). <http://glossary.usip.org/resource/tracks-diplomacy>

27 United States Institute of Peace (2011).

with the support of USAID.²⁸ The four partner organizations played a major role in engaging civil society organizations, businesses, media, and youth in cross-border cultural dialogue. The Fourth Wave Consortium's goal was achieved through a series of discussion events, exchange visits and capacity building activities to build trust between state actors and demonstrate that a return to frozen relations is in the interest of neither country.²⁹ Adjacent with Track Two diplomacy is TANGO diplomacy, which stands for Turkey Armenia Non-Governmental Organization. TANGO diplomacy is the teamwork of the Corporate Social Responsibility Association of Turkey and the Armenian Marketing Association who work together to gather civil society organizations from Turkey and Armenia and help them brainstorm ideas together.³⁰ The President of Corporate Social Responsibility Association of Turkey, Serdar Dinler stated, "It's not always easy for governments to develop relations. However, short-term results can be achieved with the cooperation of NGOs, which can contribute to the efforts of the governments." Aram Navasardayan, Chairman of the Armenian Marketing Association stated that the TANGO network's activities, which will include creating a website to foster cross-border communication between NGOs and highlight best practices from current and past projects in both countries, will help enable the Turkish and Armenian governments to better understand the situation of the two societies.³¹

dialogue is possible and desired between the peoples of Armenia and Turkey, the obstacle is political differences toward finding a common ground to resolve the main point of contention, disputed territories. Through Track Two diplomacy, engagement will begin which could spark a new era of harmonious political interaction between the two nations. 

It is obvious that diplomatic relations between Armenia and Turkey have been bitterly contested but this does not mean civil society or non-governmental organizations cannot help. The International Center for Human Development, Armenian-Turkish Youth Orchestra, TANGO diplomacy and Beyond Borders prove that

28 International Center for Human Development *Support to Armenia-Turkey Rapprochement: The Fourth Wave* (2010) <http://ichd.org/?laid=1&com=module&module=menu&id=30>

29 International Center for Human Development

30 Armenian Marketing Association Turkish, Armenian NGOs push peace process through 'TANGO diplomacy' (2011). <http://www.armenianmarketing.com/en/news/media-about-us/366-turkish-armenian-ngos-push-peace-process-through-tango-diplomacy>

31 Armenian Marketing Association

APPENDICES

APPENDIX 1



http://si.wsj.net/public/resources/images/NA-BA161_TURKEY_NS_20090901185747.gif

APPENDIX 2



<http://www.sras.org/img/dc910e22eb8b12365779c442a2c66d56.jpg>

This map depicts Armenia, Nagorno Karabakh, and the area outside of Nagorno Karabakh which the OSCE claims Armenia should withdraw its forces from.

ADDITIONAL WORKS CITED

“Foreign Policy.” Republic of Azerbaijan Ministry of Foreign Affairs. Republic of Azerbaijan, 2013. Web. <<http://www.mfa.gov.az/?options=content&id=37>>.

“Foreign Policy.” Republic of Turkey Ministry of Foreign Affairs. Republic of Turkey, n.d. Web. <<http://www.mfa.gov.tr/synopsis-of-the-turkish-foreign-policy.en.mfa>>.

Toumani, Meline. *There Was and There Was Not: A Journey through Hate and Possibility in Turkey, Armenia, and beyond*. First ed. N.p.: Metropolitan, 2014. Print.



Reducing the Prevalence of Human Trafficking in Europe: An International Business and Economic Approach

– Alysha Van Zante

ABSTRACT

Europe maintains the highest rates of per capita sexually related trafficking in the world. Current approaches fail to address human trafficking in the most direct and strategic way. Despite the nature of the human trafficking industry as a profit-seeking endeavor, strategic economic centered efforts to curb supply of human trafficking victims have not yet been pursued. Human trafficking persists in Europe and around the world because efforts have failed to approach the issue in terms of a preventative reduction in supply of vulnerable populations combined with policies to increase costs to traffickers while reducing the profitability of the industry. Five possible approaches are proposed in this paper. However, financial institution oversight is the recommended course of action because of the potential to decrease financial incentives for traffickers, the ease of implementation through established frameworks, and the proven success of the approach.

OVERVIEW, HISTORY AND DEFINITION OF THE ISSUE

Within the last century, the movement to end human trafficking has gained momentum as policymakers have come to recognize the complexity and magnitude of these crimes.¹ One recent effort, the Palermo Protocol, presents an internationally used definition of human trafficking.² Despite majority international

- 1 Carolina Johansson Wennerholm. "Crossing borders and building bridges: the Baltic Region Networking Project." *Gender, Trafficking and Slavery*. (United Kingdom. Oxfam, 2002), 10.
- 2 Also known as the United Nations Protocol to Prevent, Suppress and Punish Trafficking in Persons, which defines "trafficking in persons" as the recruitment, transportation, transfer, harbouring or receipt of persons, by means of the threat or use of force or other forms of coercion, of abduction, of fraud, of deception, of the abuse of power or of a position of vulnerability or of the giving or receiving of payments or benefits to achieve the consent of a person having control over another person, for the purpose of exploitation. Exploitation includes, at a minimum, the exploitation of the prostitution of others or other forms of sexual exploitation, forced labour or services, slavery or practices similar to slavery, servitude or the removal of organs. United Nations Office on Drugs and Crime. *United Nations Convention Against Transnational Organized Crime and the Protocols Thereto*. (pg. 42)

agreement on the issue at hand, international approaches continuously fail to address human trafficking in the most direct and strategic way.³ Europe maintains the highest rates of per capita sexually related trafficking in the world.⁴ Between 2008 and 2010, approximately 23,600 victims of human trafficking were identified in Europe alone.⁵ During that same time period, reports indicated that human trafficking in Europe increased by 18% while convictions fell by 13%.⁶

In Europe, females are the most common victims, while sexual exploitation is the most widespread purpose for human trafficking.⁷ Approximately 45% of victims are between 18 and 24 years old, although children between 12 and 18 still represent almost a fifth of human trafficking victims.⁸ Those trafficked from European nations tend to be members of vulnerable communities such as refugees, the LGBT or the Romani communities.⁹ The top five countries of victim held citizenship are Bulgaria, Romania, the Netherlands, Hungary and Poland.¹⁰ Victims of human trafficking typically come from backgrounds of economic or social disenfranchisement.¹¹

Human traffickers often bear the same profile because they are of the same ethnic, cultural or national background as their victims, in order to more fully exploit their vulnerabilities.¹² Traffickers are usually involved in a variation of business and can act as business owners and managers,

especially of brothels or fake massage parlors, labor brokers, farmers, pimps, family members, intimate partners and members of gangs or organized criminal networks.¹³ Of the suspects in Europe, traffickers tend to hold citizenship in the following top countries; 21% Bulgaria, 20% Romania, 18% Belgium, 11% Germany and 7% Spain.¹⁴ The majority of European traffickers are male, while females still represent more than a quarter.¹⁵

Beyond the moral reprehensibility of the practice, human trafficking should be addressed because it is illegal, diverts public and private resources, violates the rule of law and creates life-long victims.¹⁶ Past approaches to combat human trafficking have been victim or human rights focused, emphasizing awareness and care to victims.¹⁷ These efforts have been ineffective in curbing human trafficking rates, as they are often underfunded, inadequate, misdirected and uncoordinated internationally.¹⁸ The lucrative nature of the human trafficking industry provides exploiters over \$150 billion in profits each year.¹⁹ Despite the nature of the human trafficking industry as a profit-seeking endeavor, strategic economic centered efforts to curb supply of human trafficking victims have not yet been pursued.²⁰ Human trafficking persists in Europe and around the world because efforts have failed to approach the issue in terms of a preventative reduction in supply of vulnerable populations combined with policies to increase costs to traffickers while reducing the profitability of the industry.²¹

3 Siddharth Kara. *Sex Trafficking: Inside the Business of Modern Slavery*. (New York: Columbia University Press, 2009), 3., United Nations Office on Drugs and Crime. (pg. 41)

4 Kara, 16.

5 "European Union Report Details Growth of Human Trafficking." *NPR*. (2013).

6 Ibid.

7 Eurostat. *Trafficking in Human Beings*. (pg. 30) For more information, please see *Appendix A*.

8 Ibid, 26. For more information, please see *Appendix B*.

9 U.S. Department of State. *Trafficking in Persons Report 2014*.

10 Eurostat. (pg. 34)

11 United Nations Office on Drugs and Crime. *An Introduction to Human Trafficking: Vulnerability, Impact and Action*. (pg. 3)

12 "The Traffickers." National Human Trafficking Resource Center.

13 Ibid.

14 Eurostat, (pg. 47). For more information please see *Appendix C*.

15 Eurostat, (pg. 53). For more information, please see *Appendix D*.

16 United Nations Office on Drugs and Crime, 10.

17 For additional reading regarding these types of programs, please see *Appendix E*.

18 Kara, 3.

19 "The Traffickers." The No Project., "Who Are Human Traffickers?" Human Rights First.

20 Kara, 3.

21 Susan W. Tiefenbrun. "Sex Sells but Drugs Don't Talk: Trafficking of Women Sex Workers and an Economic Solution" *Thomas Jefferson Law Review* 24 (2001-2002), 163.

POSSIBLE SOLUTIONS

Approach #1: Economic development through increased access to technical and vocational training for vulnerable groups

Vulnerability to human trafficking, as identified by UN.GIFT, is driven in part by unemployment and lack of opportunity.²² These factors create economic desperation, pushing individuals and families to seek escape from “disadvantageous economic situations” by accepting falsified job offers and seeking employment or loans from persons who practice human trafficking.²³ Without alternative sources of income, these methods can lead to trafficking outcomes as traffickers use deceit to exploit the economic vulnerability of the victim.²⁴ Programs like the Microsoft Unlimited Potential Program, which provides basic computer literacy, IT training and assistance in increasing local employment opportunities to victims and vulnerable communities in India and the Philippines, can offer income alternatives.²⁵ A program with similar goals, run by Gap Inc., operates in the Mewat region of Northern India by educating women in hand embroidery skills to gain employment in the export market.²⁶ Implementing these types of programs in Europe could ensure access to technical or labor market skills for vulnerable communities and groups historically denied access, and thus increase the possibility of

employment.²⁷ Employment reduces inequality among social groups, and thereby decreases economic desperation and vulnerability to human trafficking.²⁸

Approach #2: Financial institution oversight

While trafficking earns traffickers over \$150 billion in profits each year, \$18 billion of those dollars originate in Central and South Eastern Europe.²⁹ Financial institutions can provide oversight to monitor transactions that signal human trafficking such as low-dollar, high volume transfers for the purpose of Internet classified advertisement agencies that specialize in adult services, and after closing hours high value credit card transactions at nail salons.³⁰ Monitoring transactions allows financial institutions to legally protect the institution, while offering law enforcement officials “actionable intelligence.”³¹ Money laundering can support certain businesses engaging in trafficking, act as contributions to political parties or election campaigns and bribes to government officials or law enforcement, which are all efforts that assist in carrying out the trafficking process.³² In-person interactions with customers during transactions may also provide signals of human trafficking, of which financial institution staff should be trained to recognize and report.³³ Early efforts in the United States have led to nearly 100 arrests and the seizure of approximately \$14 million dollars.³⁴ Partnership between private financial institutions, government and law enforcement

22 UN.GIFT is the United Nations Global Initiative to Fight Human Trafficking, which has identified the following as causes of vulnerability to human trafficking: Growing inequality between and within States, lack of information for potential migrants about safe migration opportunities and the dangers of trafficking, unemployment and lack of opportunity, lowering barriers to the movement of persons and goods, improved and cheaper means of transportation across borders, raising of barriers to legal immigration to industrialized countries, profitability of labor and sexual exploitation attracting the interest of organized crime, demand for sexual services or inexpensive labor, vulnerabilities linked to discrimination and irregular status of migrant workers, vulnerabilities linked to ethnic, social and gender discrimination and political or humanitarian crises. UN.GIFT. *Human Trafficking and Business: Good Practices to Prevent and Combat Human Trafficking*. (pg. 20)

23 Kara, 7.

24 Ibid.

25 UN.GIFT, 10.

26 UN.GIFT, 15-16.

27 International Centre for Migration Policy Development. *Guidelines for the Development and Implementation of a Comprehensive National Anti-Trafficking Response*. (pg. 41-42)

28 Ibid, 71.

29 “Financial Institutions and U.S. Officials Join Forces in Detecting Human Traffickers.” Acams.

30 “Eradicating human slavery: the impact on financial services of fulfilling growing regulatory expectations.” Lewis Baach (pg. 8)

31 Ibid.

32 United Nations Office on Drugs and Crime, (pg. 96-98)

33 “Guidance on Recognizing Activity that May be Associated with Human Smuggling and Human Trafficking-Financial Red Flags.” *U.S. Department of the Treasury Financial Crimes Enforcement Network*. (pg. 4).

34 Acams.

to continuously monitor the flow of money can increase the risk of apprehension and reduce profitability for traffickers, thus reducing the scope of practiced human trafficking and supply of victims.

Approach #3: Increase government and private sector regulation of high-risk sectors

Identified high-risk sectors are areas of business that are more likely to employ victims of human trafficking.³⁵ Higher regulation of these sectors can prevent the supply of victims by increasing the risk of identification and punishment to employers, and tilt a benefit/cost analysis of the practice towards higher costs.³⁶ Governments can increase investigations and screen vulnerable populations, targeting these high-risk sectors in order to increase effectiveness of victim identification and prevention efforts.³⁷ Governments in the United Kingdom of Great Britain and Northern Ireland responded to labor trafficking incidents by passing the Gangmasters (Licensing) Act in 2004, which requires a licensing system for all employment agencies providing employees for agricultural activities, overseen by a special licensing authority.³⁸ Private sector risk assessment can tailor action to the specific vulnerabilities of the firm, to improve development of policies to specific company operations and supply chains.³⁹ Developing a company code of conduct applied to business partners, agreements and contracts is one possible method of self-regulation.⁴⁰ In order to prevent labor trafficking, Ciett, the international confederation of private employment agencies, developed a code of conduct for the industry that all members must

comply with.⁴¹ Businesses can also become a signatory of the Athens Ethical Principles, which promotes zero tolerance of human trafficking in the business community.⁴² Additionally, private sector or joint training programs to identify signs of trafficking, as well as third party testing and review, can curb the supply of victims to these sectors.⁴³

Approach #4: Public and private partnerships in sharing and collecting data

The nature of Human Trafficking as an illegal and underground practice makes the collection of accurate data problematic.⁴⁴ However, improved collection of data can better define the issue and thus possible approaches to solve it, establish a baseline for later assessment, and can help identify current actors fighting human trafficking, as well as future stakeholders.⁴⁵ Current prevalence estimations, data reporting and data collecting methodologies differ largely from each other.⁴⁶ To mitigate this shortcoming, small scale, long term, action-oriented studies, with clearly presented methodologies, should be pursued.⁴⁷ These studies should focus on evaluating the impact of individual programs and methods of intervention, in order to identify best practices and countries with successful efforts to curb prevalence.⁴⁸ Sharing of data between states should be encouraged, to allow for comparative

35 Identified high-risk sectors: construction, agriculture, horticulture, sweatshops, tourist agencies, garment manufacturing, hospitality and catering, domestic service, commercial sex, food processing and packaging, mining, logging, forestry and transportation. International Centre for Migration Policy Development, 73., UN.GIFT, 17-18.

36 Tiefenbrun, 163. UN.GIFT, 21.

37 U.S. Department of State.

38 United Nations Office on Drugs and Crime, 117.

39 UN.GIFT, 21.

40 UN.GIFT, 18.

41 The code of conduct requires that companies refrain from charging fees to job seekers, encourages respect for laws, supports the principle of transparency, establishes a commitment to safety at work and a respect for diversity. UN.GIFT, 18.

42 United Nations Office on Drugs and Crime. *Athens Ethical Principles.*, UN.GIFT, 40.

43 Lewis Baach, (pg. 9)

44 Frank Laczko. "Data and Research on Human Trafficking." *International Migration* 43: ½ (2005), 1. Toman Omar Mahmoud, Christoph Trebesch. "The economics of human trafficking and labour migration: Micro-evidence from Eastern Europe." *Journal of Comparative Economics* 38:2 (2010).

45 International Centre for Migration Policy Development, 29.

46 Lisa Fedina. "Use and Misuse of Research in Books on Sex Trafficking." *University of Maryland* (2014)., Diego Hernandez, Alexandra Rudolph. "Modern day slavery: What drives human trafficking in Europe?" *European Journal of Political Economy* 38 (2015).

47 Laczko, 8.

48 Ibid, 9.

studies, and prevention efforts.⁴⁹ Partnerships between the public and private sectors should be sought out to achieve these goals. Microsoft Digital Crimes Unit and Microsoft Research have funded research to study the online behavior of child sex trafficking consumers.⁵⁰ Palantir Technologies has worked with NCMEC to perform geospatial analysis, simultaneously search multiple databases and share data with law enforcement.⁵¹ Additional data can also inform companies of how human trafficking impacts their business, and how to use current programs to combat the problem.⁵² These partnerships have the potential to develop methods to better utilize current data that can then be contributed to the UNODC Human Trafficking Case Law Database and used to direct policy.⁵³

Approach #5: Continue development of microfinancing services for vulnerable populations

Current efforts to address human trafficking focus on treatment of the “symptoms,” rather than the root causes of the issue like poverty, “which undermines the impact of the entire prevention arsenal.”⁵⁴ Microfinance has been praised as a tool for eradicating poverty and creating economic opportunity.⁵⁵ Microfinance can reduce vulnerabilities to human trafficking

through income generation and job creation, providing opportunities for education and vocational skills training, and by increasing family wellbeing.⁵⁶ In 2010 the European Commission launched the Europe 2020 strategy for smart, sustainable and inclusive growth, which aims to reduce by 20 million, the number of people in or at risk of poverty and social exclusion.⁵⁷ As a tool for economic growth and social cohesion, microfinancing can provide financial services to those typically denied access, and who are subsequently more vulnerable to trafficking, such as women and migrants.⁵⁸ However, increased development of these services is required to maintain access for these demographic groups.⁵⁹ Although microfinancing has experienced relative success, some argue that microfinancing fails to reach the poorest populations because providing these services is not as profitable.⁶⁰ High interest rates and short-term loan repayment schedules can actually increase debt in vulnerable populations and heighten vulnerability to trafficking.⁶¹ Instead programs should operate with the goal of maximizing social returns, provide reasonable interest rates and terms of repayment, while targeting the most vulnerable social groups in order to reduce poverty and human trafficking rates.⁶²

49 Prevention efforts could include the sharing of labor data, especially of fraudulent businesses or business owners and similar efforts. Oxfam. *Gender, Trafficking and Slavery*. (pg. 15). Lackzko, 11.

50 “Private Sector Initiatives.” *University of Southern California*.

51 NCMEC stands for the National Center for Missing and Exploited Children. *Ibid*.

52 *Ibid*.

53 UNODC stands for the United Nations Office on Drugs and Crime, and the Human Trafficking Case Law Database is a database of reported human trafficking cases from around the world that also features statistics by country regarding victims, perpetrators, trafficking routes, verdicts and other case related information. “UNODC expands key legal database to help improve human trafficking convictions.” United Nations Office on Drugs and Crime.

54 Makonen Getu. “Human Trafficking and Development: The Role of Microfinance.” *Transformation* 23:3 (2006), 152.

55 Katherine Driscoll. “Microcredit: Not Yet a Panacea to End Trafficking in Women.” *University of Pennsylvania Journal of Business Law* 13:1 (2011), 285.

RECOMMENDED SOLUTION

All the solutions presented have the potential to curb the prevalence of human trafficking in Europe, however financial institution oversight is the approach that has the greatest potential to expand on current efforts in the most direct and strategic way. Implementation in the United

56 Getu, 152.

57 “Europe 2020 Targets.” The European Commission.

58 “A tool for economic growth and social cohesion.” European Microfinance Network., International Center for Migration Policy Development, 71.

59 “A tool for economic growth and social cohesion.” European Microfinance Network.


60 Driscoll, 288.

61 Driscoll, 289-290. Anis Chowdhury. “Microfinance as a Poverty Reduction Tool-A Critical Assessment.” *United Nations Department of Economic and Social Affairs* (2009), 5-6.

62 Driscoll, 293. Getu, 155.

States has already proven effective in identifying human traffickers, and these methods could be expanded in Europe.⁶³ A working group with representatives from American Express, Bank of America, Barclays, Citigroup, JPMorgan Chase & Co., TD Bank, Wells Fargo and Western Union recently published a white paper sharing best practices for identifying human trafficking through financial activity.⁶⁴ Following these best practices and U.S. leadership, the European Union (EU) could continue development of the established framework to combat money laundering and terrorist financing in order to identify human traffickers. Analysis can be targeted to the identified high-risk sectors enumerated previously. The EU has already recognized the need to adapt these tools as stated in the 2011 Directive on prevention and combating human trafficking.⁶⁵ With training and policies already in place to combat these financially driven crimes, implementing additional analysis would be a simple extension of current efforts rather than the cumbersome pursuit of entirely new programs that other approaches call for.

Additionally, public and private partnerships in curbing the prevalence of human trafficking around the world have already proven vital, but financial institutions have a particular incentive to work closely with the public sector in this way. Corporations are under increasing pressure to combat human trafficking in their supply chain and third party contracting can legally protect their institution through financial institutional oversight as a part of due diligence. In the case of financial institutions themselves, further incentives apply to prevent the illegal use of their services or face legal consequences from the countries in which they operate.⁶⁶

Finally, financial institution oversight provides law enforcement with “actionable data” and “financial forensics are amongst the strongest in our arsenal” when prosecuting human traffickers.⁶⁷ Prosecutors can rely on unequivocal data rather than solely on the testimony of victims who may be unwilling or incapable of testifying.⁶⁸ While corrupt local officials and law enforcement may be persuaded not to pursue investigations, concrete financial indicators can signal suspicious activity to third party organizations and the institutions themselves.⁶⁹ Third party consulting firms, like UK based Finance Against Trafficking, can provide unbiased financial analysis and policy recommendations to corporations desiring to prevent trafficking in their business operations.⁷⁰ Analyzing financial data eases identification of traffickers, and thus, their victims. The risk of prosecution and legal consequence acts as a cost to the business operation of human trafficking, and can decrease the financial incentive to participate.⁷¹ Considering that this method is proven and easily implementable through established framework, the potential to decrease financial incentives for traffickers through financial institution oversight is the recommended course of action. 

63 “Financial Institutions Personnell: On the Front Line in the Fight Against Human Trafficking.” *ACAMS Today* (2014).

64 “Manhattan DA Cyrus Vance, Jr., Thomson Reuters Foundation CEO Monique Villa, Top U.S. Financial Institutions Issue White Paper to Combat Human Trafficking using Financial Data.” *Thomas Reuters Foundation* (2014).

65 Official Journal of the European Union. *Directive 2011/36/EU of the European Parliament and of the Council on preventing and combating trafficking in human beings and protecting its victims, and replacing Council Framework Decision 2002/629/JHA.* (pg. 3)

66 Lewis Baach, 8-9.

67 Lewis Baach, (pg. 8), *Thomas Reuters Foundation.*

68 *Thomas Reuters Foundation.*

69 *ACAMS Today.*, U.S. Immigration and Customs Enforcement. “Project STAMP: Smugglers’ Assets, Monies and Proceeds.” *The Cornerstone Report* 10:1 (2013), 2.

70 “Finance Against Trafficking: About.” *Stop the Traffik.*

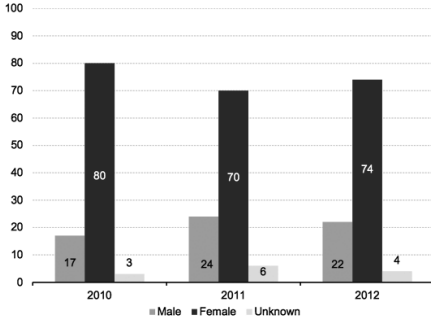
71 Tiefenbrun, 163.

APPENDICES

APPENDIX A:

Human Trafficking Victims By Gender

Figure 4: Registered victims by gender
(% of total number of registered victims)

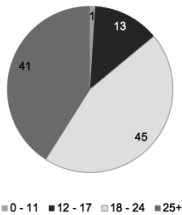


Source: Eurostat (Based on data from 24 Member States which provided data for all three years. See Table A2 in Annex)

APPENDIX B:

Sexually Exploited Human Trafficking Victims by Age

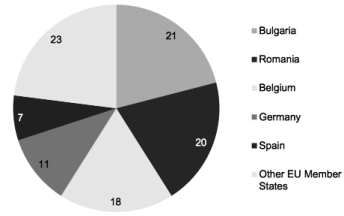
Figure 9: Registered victims by age and sexual exploitation (2010-2012)
(% of total number of registered victims)



Source: Eurostat (Based on data from 16 Member States which provided data for all three years. See Table A3 in Annex)

APPENDIX C:

Top Citizenship Held by Human Trafficking Suspects

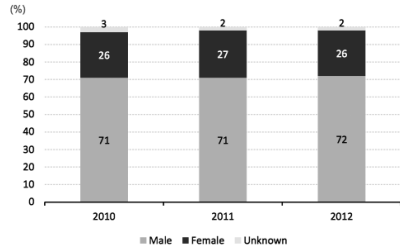


Note: Of the EU citizenships included under 'Other EU Member States', none contributes more than 4% to the total.

APPENDIX D:

Individuals Prosecuted for Trafficking, By Gender

Figure 15: Individuals prosecuted for trafficking, by gender



Source: Eurostat (Based on data from 11 Member States which provided data for all the three years. See Table A18 in Annex)

APPENDIX E:

Additional Reading Regarding Other Human Trafficking Approaches

For more information regarding worldwide anti-trafficking programs unrelated to the economic and business scope of this paper, the following resources are available for research:

“International, Regional, and Sub-Regional Organizations Combating Trafficking in Persons.” United States Department of State.

“What is Human Trafficking?” United Nations Office on Drugs and Crime.

“What We Do.” The Polaris Project.

“What is the Blue Heart Campaign?” United Nations Office on Drugs and Crime.

“Approaches to Combat Trafficking.” Humantrafficking.org.

ADDITIONAL WORKS CONSULTED

“Financial Crisis and Human Trafficking.” United States Department of State.

“Human Trafficking Background Information.” United Nations Inter-Agency Project on Human Trafficking.

“International, Regional, and Sub-Regional Organizations Combating Trafficking in Persons.” United States Department of State.

“Prevention.” Humantrafficking.org.

“Terrorist Finance Tracking Programme.” European Commission.

“Trafficking harms 30,000 in EU-most in sex trade.” BBC News. (2014).

“What is Human Trafficking?” United Nations Office on Drugs and Crime.

“What We Do.” The Polaris Project.

“100 Best Practices in Combating Trafficking in Persons: The Role of Civil Society.” The Protection Project. The Johns Hopkins University Vol. 1 (2012).



Puerto Rico's Uncommon Wealth: Building a Resilient Economy in a Neocolonial Era

– Mariela Vazquez

ABSTRACT

This work lays out the historical and political context of Puerto Rico's neocolonial relationship with the United States and how it has disenfranchised the island's ability to independently restore economic growth. Through a plethora of economy-shaping events, Puerto Rico has accrued \$72.6 billion in bond debt and possesses little means, neither political and social, to address its economic state. By exploring different solutions, such as reforming the current tax system, creating incentives for work by decreasing dependency on federal transfers, improving the skills of the work force through professional training mechanisms, promoting a more dynamic private sector, and investing greater resources in infrastructure, I arrive at a recommend course of action; to create a more secure economy, a tax reform must be adopted. Through its revenue, targeted expenditures must be allocated towards internal infrastructure, professional training scholarships, as well as working to alleviate the bond debt.

PART I: OVERVIEW, HISTORY, AND DEFINITION OF THE ISSUE

Puerto Rico (PR) exists as an unincorporated territory of the United States, self-governing in its internal affairs and administration while remaining subject to U.S. federal law and Congressional authorization in what can be described as a neocolonial relationship. The complex economic situation the island now faces unfolded through a series of events following WWII.

The postwar era was characterized by rapid economic growth, stimulated by large investments in defense. It also gave way to the modernization of society by giving women a place in the workforce.¹ This time of development showed significant demand for

1 Collado-Schwarz, A. (2012). A Brief History of Puerto Rico. In *Decolonization Models for America's Last Colony: Puerto Rico* (p. 11). Syracuse, New York: Syracuse University Press.

various infrastructure projects that would require the use of public funds to fulfill.^{2 3}

Come 1945, short- term measures to transform the island into an idealistic showcase of the U.S. capital-intensive model for development resulted in the evolution of PR as a “modern colony”, with access to metropolitan rights and federal transfers.⁴ The financial autonomy granted to Puerto Rico enables a triple-tax-exemption on all investments.^{5 6} This has proven to inspire confidence in foreign investors to respond to the government’s efforts for promoting new industries by yielding considerable returns.⁷ After the 1973 international oil crisis the island experienced a major economic restructuring.⁸ This situation caused a strong inflationary pressure on the economy, leading to the collapse of some of Puerto Rico’s most prominent industries. To complicate things further, implementation of the federal minimum wage took place in the late 1970s,⁹ causing the decentralization of operations to peripheral and semi-peripheral areas in search of cheaper labor and lower costs of production.¹⁰

Despite not fully recovering from economic shock, Puerto Rico managed to reindustrialize in the manufacturing sectors of electronics, pharmaceuticals, and scientific instruments.

With funding backed by federal grants and bond sales on Wall Street,¹¹ a \$72.6 billion debt accrued over time.^{12 13} The economic situation in PR has been exacerbated by a plethora of historical economy-shaping events and past relations. Among these, the 2006 budget crisis in which the local government ran out of money to fund public pensions.¹⁴ Other factors include: a significant percentage of the population living under the poverty line, high levels of unemployment and increasing dependency on federal transfers thereof, high emigration rates among professionals, an under-skilled populace, as well as weak social and economic infrastructure. It is clear that Puerto Rico has little means for responding to substantial changes in the global economy, for formulating new and long- term development strategies, or for addressing the outstanding debt.¹⁵ All of these factors contribute in furthering the island’s inability to independently restore economic growth.¹⁶

PART II: POSSIBLE SOLUTIONS

Implement a More Effective Tax System

As it stands, Puerto Rico has an extraordinarily complex tax system, the practice of which has developed a severe tax evasion problem; lack of government transparency has facilitated the establishment of an underground economy

2 Collado-Schwarz, 11.

3 Aponte, J. (1981). *The Lash of Inflation on a Developing Economy: Puerto Rico, A Case Study*. In *Annals of the American Academy of Political Science and Social Science* (Vol. 456, p. 132-153). Sage Productions.

4 Grosfoguel, R. (2003). *The Political Economy of Puerto Rico*. In *Colonial subjects Puerto Ricans in a Global Perspective* (p. 58-95). Berkeley: University of California Press.

5 NOTE: An investment (usually a municipal bond) featuring interest payments that are exempt from taxes at the municipal, state and federal levels. Also known as “triple tax-exempt”. Reference Appendix A for more information on the Triple Tax Exemption Code and its functionality within the Puerto Rican system.

6 Ashley, D. (2014, April 3). *Puerto Rico and Beyond: An Analysis of the Municipal Debt of U.S. Territories*. Retrieved April 1, 2015, from <http://www.fa-mag.com/news/puerto-rico-and-beyond--an-analysis-of-the-municipal-debt-of-u-s-territories-17473.html>

7 Aponte, 132-153.

8 Grosfoguel, 58-95

9 Aponte, 132-153.

10 Grosfoguel, 58-95.

11 Ibid, 58-95.

12 Board, E. (Ed.). (2015). *Congress can help ease Puerto Rico’s debt crisis*. Retrieved April 1, 2015, from http://www.washingtonpost.com/opinions/congress-can-ease-puerto-ricos-debt-crisis/2015/02/26/535f2aee-b877-11e4-a200-c008a01a6692_story.html

13 Appendix B breaks down Puerto Rico’s current debt crisis.

14 News, CBC. “Puerto Rico Government Shuts Down over Budget Crisis.” CBCnews. CBC/Radio Canada, 1 May 2006. Web. 14 May 2015. <<http://www.cbc.ca/news/world/puerto-rico-government-shuts-down-over-budget-crisis-1.593797>>.

15 Collado-Schwarz, 13.

16 Puerto Rican Separatism and United States Federalism. (2001). In C. Burnett & B. Marshall (Eds.), *Foreign in a*

and encouraged a disincentive towards work.¹⁷ Puerto Rican Governor Alejandro Padilla and his administration have recently proposed the implementation of the Value Added Tax (VAT). Padilla's administration has tailored the VAT system to suit Puerto Rico's tax reform needs in hopes of generating greater revenue. Their proposal presents a considerable practical advantage as a broad-based consumption tax by addressing all levels of industrial and personal expenditures.¹⁸ The proposition aims to reach an efficient and fair execution through a uniform rate of 16%.¹⁹ Ideally this would yield a 100% C- efficiency ratio.^{20 21} In addition, the system creates work incentives by providing tax credits as a supplement to employee paychecks, maintains a balanced middle class by offering exemptions,²² and reduces levels of evasion by extending contributive responsibilities to all citizens. These characteristics make the effects of the VAT more transparent, while generally working to increase revenue efficiency.²³ If functioning as intended and with the practice of good administration, this system has the potential to create a more secure economy for the island.

Create Incentives for Work

During its attempt to hold Puerto Rico as a model for capitalist development, the United States could not afford social unrest, thus expanded its food stamps program to the island.²⁴ After the oil crisis of 1973, Puerto Rico experienced a staggering increase in dependency on federal

appropriations.^{25 26} With the current rate of 11.6% unemployment coupled with a 43% dependency rate,²⁷ reform must be made at both the federal and commonwealth levels with the objective of maximizing incentives to encourage and maintain employment. Puerto Rico's low employment rate reflects enduring supply and demand problems: a narrow reserve of incentives to seek employment as well as limited job opportunities corresponding to the skill sets of the potential labor force.²⁸ One incentive could transpire from the restructuring of transfer programs by allowing dependents credit while they work to evade the system.²⁹ Another incentive could be achieved by eliminating the federal minimum wage so that an increased commonwealth wage can be instituted.^{30 31} Cost of living on the island is higher than that of the mainland due to its reliance on imports. If a higher commonwealth wage was implemented, while holding federal appropriations constant at \$7.25, there is a higher likelihood for people to seek employment. However, this approach would require collaboration between the commonwealth government and Congress to reform the transfer system at the federal level. Nevertheless, the creation of incentives to inspire work and immediate reform of federal and public transfer systems are critical if Puerto Rico seeks to fulfill its development objectives.

Improve Skills of the Work Force through Technical Training

The absence of travel restrictions has allowed many young professionals to accept recruitment opportunities on the U.S. mainland and countless others to emigrate for purposes of work and

17 Restoring Growth: The Policy Options. (2006). In S. Collins, B. Bosworth, & M. Soto-Class (Eds.), *Restoring Growth in Puerto Rico: Overview and Policy Options* (p. 120-123). Washington, D.C.: Brookings Institution Press. University Press

18 Appendix C shows the VAT distribution process as would be modified to suit PR.

19 ¿Qué es el IVA? Transformación Puerto Rico. (2015). Retrieved April 1, 2015, from <http://www.transformacionpr.com/conoce-mas/que-es-el-iva/>

20 Ebrill, L., Keen, M., Bodin, J., & Summers, V. (2002). The Allure of the Value-Added Tax. *Finance and Development*.

21 Appendix D confirms the efficiency of the VAT at a uniform rate.

22 Appendix E is a list of all products and institutions that are exempt from the Puerto Rican VAT system.

23 Ebrill, L., Keen, M., Bodin, J., & Summers, V. (2002).

24 Grosfoguel, 58-95.

25 Appendix F reflects the steady increase in dependency from 1954-2004.

26 Appendix G exemplifies the island's contemporary dependence on federal transfers.

27 Mejeur, J. (2015). State Unemployment Rates: February 2015. Retrieved April 2, 2015, from <http://www.ncsl.org/research/labor-and-employment/state-unemployment-update.aspx>

28 Restoring Growth: The Policy Options, 111-123.

29 NOTE: Means-tested benefits are provided to people whose income falls under a certain level. Typically, families receive little additional net income if an additional adult member obtains a job, further contributing to the creation of disincentives for work.

30 Grosfoguel, 58-95.

31 Restoring Growth: The Policy Options, 111-123.

study. While this positively affects the amount of remittances endowed to the island, it also leaves the state burden to an unskilled populace. Professional development of the work force is essential in order to maintain healthy economic growth. The biggest factor of unemployment in PR is not lack of jobs, but rather that the available jobs require technical training.³² An integrated approach to this obstacle includes development of a public network dedicated to professional and technical training; this addresses the needs of the potential labor force in order to meet the occupational requirements to compete within the local economy.³³ This solution ensures greater incorporation into the labor market and renders increased economic productivity.³⁴ A potential problem, however, manifests in providing a more efficient system in the allocation of public funds to grant financial assistance to individuals pursuing technical training. As the current contributive system stands, Puerto Ricans pay a high portion of their taxes to subsidize the university system with no evidence of comparable returns.³⁵ If a portion these funds could be reallocated into the technical training network, the island can expect a much more promising recovery of its labor market.

Promote a More Dynamic Private Sector

Since its acquisition in 1898, the U.S. has trained Puerto Rico to actively pursue investments, both foreign and domestic; this has consequently stifled the development of local business economies, resulting in a very small private business sector for a territory that holds a relatively strategic position between the U.S., Latin America, and Europe. The first step to establishing an effective private sector beings with policy reforms at the commonwealth level. Unnecessary regulations and licensing requirements that prevent new

business formation should be eliminated.³⁶ Reform must also take place at the federal level by exempting movement restrictions that limit Puerto Rico's ability to act as a transportation hub.³⁷ These same restrictions make the island impotent against the North American Free Trade Agreement as well as the Central American Free Trade Agreement.³⁸ Through these modifications, Puerto Rico would be better able to create and sustain a comprehensive program promoting the development of island-based businesses. The island should focus on a development strategy centered on the expansion of existing industries; Puerto Rico would most likely be endorsed as a regional center for finance and business services, due again to its location. Nevertheless, without cooperation from Congress in alleviating these strict policy restrictions, there is little prospect that this solution reach its full potential.

Invest Greater Resources in Economic Infrastructure

Though a significant amount of Puerto Rico's current debt has accrued from the use of public funds to supply infrastructure projects, it remains critical that internal investments be encouraged through the proper incentives to promote an entrepreneurial balance. The growing population requires expanded infrastructure of hospitals, schools, communications, and housing facilities. Inevitably, these propositions call for large financial resources at a time when they are not available.³⁹ Regardless, the quality of Puerto Rico's physical infrastructure must see substantial improvement if it is to adequately compete with higher income countries.⁴⁰ Despite being a U.S. territory, Puerto Rico is more representative of Latin America with regards to available resources, adequate infrastructure, and environmentally conscious utilities. The island suffers from overcrowded highway structures that have taken a toll on public transportation as well as the water and

32 «Más De 700 Plazas De Trabajo Disponibles.» *El Nuevo Día*. 3 Nov. 2014. Web. 14 May 2015. <http://www.elnuevodia.com/noticias/locales/nota/masde700plazasdetrabajodisponibles-1885165>

33 Restoring Growth: The Policy Options, 43-55, 118.

34 Ibid, 43-55.

35 Ibid, 118.

36 Ibid, 116.

37 NOTE: In terms of maritime, the Jones Act of 1917 requires that all Puerto Rican goods move in U.S. built, U.S. owned and U.S. manned ships.

38 Restoring Growth: The Policy Options, 117.

39 Aponte, 132-153.

40 Restoring Growth: The Policy Options, 119.

sewer systems that run beneath it.⁴¹ The high cost of energy is another significant barrier to the expansion of the island's industrial base. The government should take immediate action to restructure this public enterprise and increase general availability. Lastly, if Puerto Rico hopes to become an important regional center for business services, it will need to establish a superior communication system.⁴² Addressing Puerto Rico's infrastructural regression is imperative to expanding the island's economy and improving the overall quality of life.


PART III: RECOMMENDED SOLUTION

As of 2015, Puerto Rico remains one of the last colonies in the world. With a long history of imperialistic rule, its options for economic development or political reform aren't many. Despite its internal autonomy, the United States Congress reserves the power to veto any law passed by the Puerto Rican legislature and stop any action taken by the local administration. Granted this uncertainty, in any attempt towards progress, an appropriate response to Puerto Rico's impasse calls for an updated long-term development strategy. A strategy geared toward present and prospective conditions that should strive to be as transparent as politically possible.

Political transparency is the greatest factor in Puerto Rico's ability to create work incentives by decreasing dependency on federal transfers or promoting a more dynamic private sector. Although these solutions have the potential to adequately address the broader issue, they also have prerequisites and involve heavy collaboration with the federal government and Congressional approval throughout every step; previous relations have proved that is type of approach is beyond Puerto Rico's control.

Despite having been widely rejected by the general public in the last few months of its discourse, replacing the existing sales and usage tax system with the Value Added Tax (VAT) seems like a much more viable solution for the island. Not only has Governor Padilla's

administration tailored the system to suit Puerto Rico's unique import, export, and consumption expenditures, but the effects of the VAT also encompass other solutions provided in this work. By opting to reform the tax system the island, that has long enjoyed revenues from tourism, can expect a more stable and permanent collection through the uniform tax rate; this inflow will be maintained on the island as tourists will not be eligible for the tax credit. This credit is reimbursed directly to employee paychecks, which in turn creates incentives for work by acting as the only gateway to obtain those returns. Increased work incentives yield a more proactive middle class who in turn fuel the functionality of an economy. Finally, personal expenditures amongst Puerto Ricans were measured against their personal income; it was discovered that spending behavior amongst islanders far exceeds that of their earnings.⁴³ The VAT will mostly affect leisure consumption which will create a finer awareness to personal expenditures and encourage healthier spending habits as a whole.

Through increased tax revenue from the VAT, the government inherits the ability to reallocate economic resources into the public sector. Investing in internal infrastructure with money generated from within the island can result in one of two ways: by restraining further dependency on bond funds or by assisting in debt repayment. The government also holds the ability to distribute a portion of the tax revenue as scholarships or grants to subsidize technical training to further address unemployment. The implementation of this system coupled with good administration will undoubtedly help restore economic growth and improve the standard of living for all Puerto Ricans residing on the island. 

41 Ibid, 119.

42 Ibid, 119.

43 Appendix H shows the disparity of personal expenditure to personal income.

APPENDICES

APPENDIX A:

Triple Tax Exemption Code and Section 936 of the U.S. Tax Code

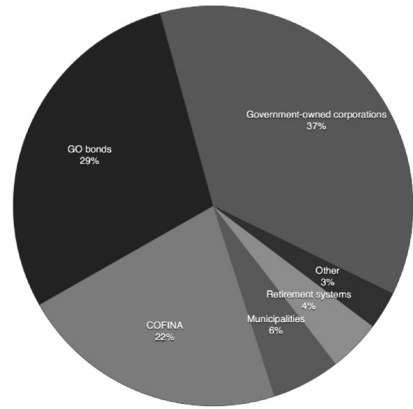
TRIPLE TAX EXEMPTION

“Under current acts of the U.S. Congress, the interest on most bonds issued by the Commonwealth of Puerto Rico, its political subdivisions and public corporations, is not includable in gross income for federal income tax purposes or subject to income tax by state and local municipalities. Few other U.S. municipal bonds enjoy the benefits of triple tax exemption in all states. Under the Internal Revenue Code of 1986, as amended, the interest paid on bonds issued by or on behalf of the Commonwealth could result in a federal tax to corporations, depending upon the tax position of the corporate investor.”⁴⁴

44 Introduction. (n.d.). Retrieved April 3, 2015, from http://www.gdbpur.com/investors_resources/introduction.html

APPENDIX B:

Distribution of Puerto Rico's Outstanding Debt as of Oct. 18, 2013



Source: "Commonwealth of Puerto Rico Financial Information and Operating Data Report," Puerto Rico Government Development Bank, October 18, 2013. <http://www.gdbpur.com/pur/compra/documentos/comwealthreport.pdf>

General-Obligation (GO) Bonds: Primarily used to finance capital improvement projects; GO Bonds make up a large part of municipal bonds.⁴⁵

Government-owned Corporations: Entities used on behalf of a government to partake in commercial activities.⁴⁶

Puerto Rico Sales Tax Financing Corporation (COFINA): issued bonds to provide funds for the island to repay certain debt obligations to the Government Development Bank and the Public Finance Corporation.⁴⁷

Municipal Bonds: issued to fund day by day obligations as well as to finance capital projects such as schools, highways, or sewer systems.⁴⁸

45 Ashley, 2014

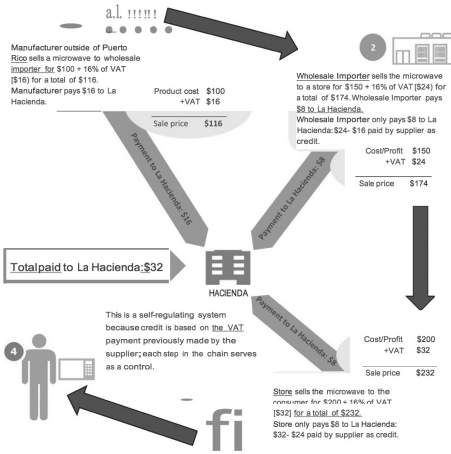
46 State-Owned Enterprise (SOE) Definition | Investopedia. (2009, August 23). Retrieved April 7, 2015, from <http://www.investopedia.com/terms/s/soe.asp>

47 Puerto Rico Sales Tax Financing Corporation (COFINA). (n.d.). Retrieved April 3, 2015, from <http://www.gdb->

48 Municipal Bonds. (n.d.). Retrieved April 3, 2015, from <http://www.sec.gov/answers/bondmun.htm>

APPENDIX C:

Proposed VAT Distribution Process



*La Hacienda is the Puerto Rican Department of the Treasury.⁴⁹

APPENDIX D:

Efficiency of Taxation at a Uniform Rate

Table 2
How effective?
Countries rated most effective in raising revenue from VAT tend to have relatively open economies, high literacy rates, and an 'older' VAT. (percent)

	Sub-Saharan Africa	Asia and Pacific	EU (plus Norway and Switzerland)	Central Europe and BR0 ¹	North Africa and Middle East	Small islands
Efficiency ratio ²	27	35	37	38	36	37
C-efficiency ratio ²	38	58	57	64	62	57

Source: IMF staff calculations.
¹ Baltic states, Russia, and other countries of the former Soviet Union.
² The efficiency ratio is the ratio of VAT revenue to GDP, divided by the standard VAT rate. The C-efficiency ratio is the ratio of VAT revenue to consumption, divided by the standard VAT rate. The C-efficiency ratio is a better measure of VAT effectiveness.

APPENDIX E:

List of Eligible Value Added Tax Exemptions in Puerto Rico

- Education (Tuition & Fees)
- Home/Rent
- Water
- Electric
- Car
- Gasoline
- Non-Processed Foods
- Prescription Medications
- Financial Services
- Hotel Stays
- Realty
- Health Care
- PAN & WIC Products
- Services & Reimbursement for Medicare, Medicaid, and P.R. Issued Government Health Care
- Rent of Primary Residence (Includes Student Housing)

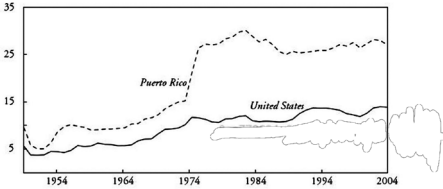
⁴⁹ ¿Cómo funciona el IVA? | Transformación Puerto Rico. (2015). Retrieved April 3, 2015, from <http://www.transformacionpr.com/conoce-mas/como-funciona/>

APPENDIX F:

Government Transfer Payments as a Share of Personal Income

Figure 3-2. Sources of Personal Income, Puerto Rico and the United States, 1959-2004^a

Percent (government transfer payments as share of personal income)

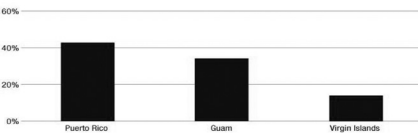


Source: Authors' tabulations of U.S. and Puerto Rican national income and product accounts data.
a. U.S. data are for calendar years; Puerto Rican data are for fiscal years, which begin six months earlier than the corresponding calendar year.

The sharp incline evidenced in the graph above, reflects major expansions in government transfers to Puerto Rico after the oil crisis of 1973; it is also linked to the slow rate at which the island's economy adjusted to competing under the federal minimum wage.⁵⁰

APPENDIX G:

Modern Federal Appropriations to the Island



As of 2013, direct federal transfers account for 43% of Puerto Rico's government revenues.⁵¹

50 Restoring Growth: The Policy Options, 2006, p. 21.

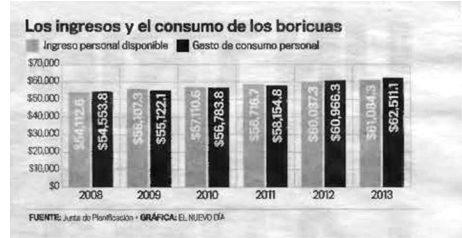
51 Ashley, 2014.

APPENDIX H:

Income and Personal Expenditure Disparity

The graph above exemplifies spending behaviors that may be cause to believe that a Value

Added Tax system is amongst the best solutions for Puerto Rico in this time.⁵²



ADDITIONAL WORKS CONSULTED

"How to Fix Puerto Rico's Broken Economy." *Caribbean Business*. 30 Oct. 2014. Web. 14 May 2015. http://www.caribbeanbusiness.pr/prnt_ed/how-to-fix-puerto-ricos-broken-economy-10563.html.

"Puerto Rico | Economic Indicators." *Puerto Rico | Economic Indicators*. 14 May 2015. Web. 14

May 2015. <http://www.tradingeconomics.com/puerto-rico/indicators>.

Williams Walsh, M. "Worsening Debt Crisis Threatens Puerto Rico." *DealBook Worsening*

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May 2015. <http://dealbook.nytimes.com/2013/10/07/worsening-debt-crisis-threatens-puerto-rico>.

52 Diaz, M. (2015, February 24). El impacto en los negocios. *El Nuevo Dia*, p. 5.



Mitigating the Foreign Fighter Threat: Limiting the Flow of Jihadists from Europe

– Emily Greene

ABSTRACT

The Syrian Conflict has caused a surge in Foreign Terrorist Fighters (FTFs) traveling from Europe to Syria and Iraq to join the cause, leaving European policymakers scrambling to address the threat of terrorism when they return home. The ease of recruitment and radicalization of these individuals through social media and the Internet, as well as the proximity of the conflict to Europe, have been significant in increasing the number of young FTFs joining the conflict in record numbers. European policymakers must find ways to address the recruitment and travel of recruits in order to prevent the further radicalization and training of FTFs once they arrive, and stop the future threat of terrorism in Europe once the FTFs return home. This can be achieved through a preventative approach to radicalization and limiting the number of individuals travelling to conflict areas in Syria and Iraq.

OVERVIEW AND HISTORY

Since the beginning of the Syrian conflict in 2011, there has been a surge in European foreign fighters travelling to join the conflict. The Syrian conflict is a civil war that broke out after the Syrian government, led by Bashar al-Assad, attempted to violently suppress pro-democratic protestors (See Appendix A). Foreign fighters are not a new problem in international conflicts, but the changing dynamics in the current wave have led to a new group of foreign fighters, known as foreign terrorist fighters (FTFs). The UN Security Council defines FTFs as individuals who travel to a state other than their own for the purpose of involvement with a terrorist organization and terrorist acts in connection with an armed conflict.¹ Many of these FTFs are European citizens, who hold European passports, increasing the threat of violence and terrorism in Europe when they return home. Security services fear that individuals will join the conflicts as idealists, but return home as

1 United Nations. Security Council. *Threats to International Peace and Security Caused by Terrorist Acts*, S/RES/2178 (24 September 2014).

anti-Western terrorists.² The recent attacks at the Jewish Museum in Brussels in May 2014 and at the office of Charlie Hebdo in Paris in January 2015 are connected to FTFs who returned to Europe from Syria and are examples of this new threat.

Many FTFs never return home, but those who do return are more likely to have radicalized beliefs, training, and resources to continue the violence at home in Europe. As of January 2015, there are approximately 20,000 total foreign fighters, with 11,000 of them from the Middle East.³ Analysts estimate that 4,000 Europeans are currently fighting in Syria and Iraq.⁴ In previous conflicts, the number of total foreign fighters did not exceed a few thousand, except for Afghanistan, which received 5,000 to 20,000 foreign fighters from 1978 to 1992.⁵ The numbers traveling to Syria are extremely high for such a short period of time. The majority of FTFs are joining the Islamic State (ISIS), but Jabhat al-Nusra, al-Qaeda and other organizations are popular.⁶ The majority of these Europeans are coming from the United Kingdom, France and Germany, but recruitment is not limited to these states (See Appendix B). It is estimated that 1 in 15 to 20 FTFs who return have the potential to commit terrorist acts. Thomas Hegghammer found that terrorism plots involving veteran FTFs are 1.5 times more likely to transpire and the participation of a veteran FTF in a plot also doubles the likelihood that the attack will be lethal.⁷

The current conflicts are attracting an extremely diverse range of individuals but FTFs are typically young aspiring jihadists with no previous battlefield experience.⁸ They are often second or third generation immigrants, male, and Muslim.⁹ However, there are many females and recent converts to Islam. The current FTFs are much younger than in previous conflicts. They are between the ages of 15 to 29, whereas the age range in previous conflicts was 25 to 35.¹⁰ The proximity of the conflict to Europe and ease of travel through the European Union to Turkey and then into Syria makes traveling to join the conflict relatively easy. After arrival, FTFs use social media to tell their stories, urge others to join them and provide travel information as part of the recruitment effort.¹¹ Limiting the flow of recruits is the first step in preventing potential acts of terrorism from those who will eventually return home.¹²

OPTION 1:

Removal of Social Media Posts and Internet Content

The removal of social media accounts and content is one method of halting Internet recruitment. Social media and the Internet have become vital tools in the recruitment of FTFs and the dissemination of information. Many of the European FTFs in Syria are actively using social media to reach followers at home. ISIS in particular has an extremely strong online presence, as they invest in high production values and they understand how to use the power of information on the Internet.¹³ European states, social media companies and search engines can increase cooperation to address the problem and increase efforts to remove criminal content, such as videos depicting the

2 Byman, Daniel and Jeremy Shapiro. "Be Afraid. Be a Little Afraid: The Threat of Terrorism from Western Foreign Fighters in Syria and Iraq". Brookings Institute: November 2014, pg. 2.

3 International Center for the Study of Radicalization (ICSR), <http://icsr.info/2015/01/foreign-fighter-total-syria-iraq-now-exceeds-20000-surpasses-afghanistan-conflict-1980s/>

4 Vidino, Lorenzo. "European Foreign Fighters in Syria: Dynamics and Responses". Centre for European Studies: December 2014, pg. 218

5 Hegghammer, Thomas. "The Rise of Muslim Foreign Fighters: Islam and the Globalization of Jihad." *International Security* 35.3 (2010): pg. 60.

6 Jenkins, Brian M. *When Jihadis Come Marching Home*. Rand Corporation: 2014, pg.18.

7 Hegghammer, Thomas. "Should I Stay or Should I Go? Explaining Variation in Western Jihadists' Choice between Domestic and Foreign Fighting". *The American Political Science Review* 107.1 (2013): pg. 14.

8 Vidino, Lorenzo. "European Foreign Fighters in Syria", pg. 220.

9 Barrett, Richard. "Foreign Fighters in Syria". Soufan Group: June 2014, pg. 16.

10 Briggs-Obe, Rachel and Tanya Silverman. "Western Foreign Fighters: Innovations in Responding to the Threat". Institute for Strategic Dialogue: 2014, pg. 12.

11 Barrett, 18.

12 Jenkins, 5.

13 Briggs-Obe, 21.

murder of hostages and other acts of terrorism.¹⁴ States can use the European Union as a platform to produce common guidelines for social media companies regarding the dissemination of inflammatory material related to violent extremism.¹⁵ States must find a balance when doing this, because the line between freedom of expression and the incitement to violence is not always clear.¹⁶ Social media companies do not face the same restrictions as states and have more control over the content on their products, so they should be encouraged to monitor it more carefully. This strategy is particularly effective when done quickly and aggressively, as it disrupts the message that groups are trying to send, especially when sustained over a period of time.¹⁷ The Internet and social media pose a lot of difficulties, particularly with the amount of data that would need to be monitored, but it is possible to lessen the role that social media and the Internet plays in the dissemination of information.

OPTION 2:

Produce a Counter-Narrative

States can work to alter the message that is seen by young people through the use of counter-narratives. The goal of a counter-narrative is to move potential FTFs towards non-violence.¹⁸ These must directly answer the radicalizing and recruitment narratives of extremist groups, especially as ISIS and similar groups are currently dominating the story of the conflict on social media. States can stress the brutality of the conflict, raise awareness of on-the-ground realities, and get rid of the image of “jihadi cool” that is portrayed on social media.¹⁹ The risks of travel and criminal consequences of doing so must also be communicated to

potential FTFs.²⁰ One realistic consequence is a high probability of severe injury or death, as European Intelligence estimate that approximately 20% of European FTFs have already died in Syria.²¹ These messages can be produced through public information campaigns and the use of social media to undermine Jihadist messages and organizations. The U.S. State Department, for example, has a Twitter account that posts in Arabic and is designed to expose the misrepresentations of Islam that ISIS produces.²² There are difficulties in states producing counter-narratives, as governments lack credibility in these topics, so it is important to elevate the voices of community and religious leaders who already embrace these ideas.²³ There is also the potential to use returning fighters themselves as part of this, as the stories of de-radicalized FTFs would be particularly effective and lend credibility.²⁴ States can improve the effectiveness of a counter-narrative by increasing their current efforts and creating a streamlined approach.

OPTION 3:

Increase Community-Level Support and Programs

States can reinforce efforts to prevent radicalization at a local level through the use of community support and programs. Communities are vital in the long-term process of preventing radicalization and these efforts can also be aimed at de-radicalization by helping returnees reintegrate after coming home. Community-based strategies can take many forms, including counseling programs, hotlines for reporting, reintegration programs, and capacity building, all at national or community level.²⁵ States should also attempt to include families in these efforts, especially because of the young age of many recruits. States can fund support programs that will help families gain the skills

14 Ibid, 22.

15 Sinkkonen, Teemu. “War on Two Fronts: EU Perspective on the Foreign Terrorist Fighters of ISIL”. Finnish Institute of International Affairs: January 2015, pg. 5.

16 Barrett, 30.

17 Briggs-Obe, 22.

18 Byman, “Be Afraid”, 26.

19 Barrett, 29.

20 Briggs-Obe, 23.

21 Byman, “Be Afraid”, 20.

22 This Twitter account can be seen at <https://twitter.com/dsdotar>

23 Byman, “Be Afraid”, 24.

24 Ibid.

25 Barrett, 28.

to play a preventative role and understand the radicalization process.²⁶ European states should also work to address growing Islamophobia and attempt to promote cooperation between different racial and religious communities to prevent marginalization, as many FTFs are second or third generation immigrants. The marginalization of these groups in society is problematic and states need to ensure that communities understand that Islam itself is not bad, but that radicalization and extremists are the problem. It is important for individuals to have a place in society, and building community ties decreases the risk of radicalization. States can also provide training for frontline workers, such as social workers, teachers, healthcare professionals, law enforcement and prison staff to better recognize signs of radicalization and how to respond.²⁷ Community support and cooperation is vital in the long-term prevention and identification of radicalization.

OPTION 4:

Provide Alternatives Options

There are many individuals that travel to Syria and Iraq out of a genuine desire to help people and get caught up in the FTF movement after they arrive. States can assist their citizens by providing other humanitarian efforts to help Syrians and find ways to provide support without the necessity for travel to the region. At the European Union, leaders are planning a web-portal that informs people of the humanitarian organizations that are involved in providing relief to Syria.²⁸ States can encourage charitable activities and provide opportunities for their citizens to contribute to humanitarian aid efforts. States should also publicize what they are doing in terms of aid and assistance, in an effort to highlight the positive actions of states and contribute to the positive alternatives to violence.²⁹ States can inform people that Syrians would prefer aid and relief efforts,

rather than individuals traveling to the region.³⁰ Foreigners often contribute to the chaos instead of reducing it. There are also movements pushing for the creation of a registration system for NGOs and aid workers to distinguish them from FTFs.³¹ This would assist states in keeping track of individuals and focus monitoring efforts on FTFs. There is also the potential for European states and the European Union to partner with local Syrian NGOs or other NGOs already working on the ground in Syria to provide options for those who wish to help. Coordination with these NGOs would provide programs and opportunities for Europeans to support Syrians in more direct ways.

OPTION 5:

Disrupt Transit Through Turkey

Turkey shares a 560-mile border with Syria, and throughout the conflict, the border has been a “two-way jihadist highway”, allowing the transit of many FTFs and recruiters for terrorist organizations.³² It is the longest border for both Syria and Turkey, making it difficult to control. Turkey has improved its efforts in recent weeks following international pressure by ending the open door policy it has maintained throughout the conflict.³³ A closed border is problematic because it prevents refugees from crossing into Turkey to escape the violence, but it is necessary from a security standpoint.³⁴ Turkey is attempting to prevent transit of jihadists by closing down the remaining border gates so that no one can legally cross, but there are still many smuggling routes in use.³⁵ The border remains fairly porous and efforts to prevent illegal transit across the border can be enhanced. This will require better cooperation between European governments and Turkish authorities, including

26 Briggs-Obe, 42.

27 Ibid.

28 Barrett, 30.

29 Briggs-Obe, 23.

30 Briggs-Obe, 23.

31 Barrett, 30.

32 Rand, Dafna and Anthony Vassalo. “Bringing the Fight Back Home: Western Foreign Fighters in Iraq and Syria”. Center for a New American Security: August 2014, pg. 5.

33 Yeginsu, Ceylan and Karam Shoumali. “Turkey Moves to Close all Gates at Border with Syria”. New York Times, 29 March 2015.

34 Ibid.

35 Ibid.

the establishment of more intelligence channels and improvement of existing channels. Turkish officials must address the smuggling routes by controlling key crossing points and targeting the Syrian smugglers who take recruits over the border.³⁶ It is essential for Turkey and European states to work together to track suspects and increase border security. Turkey and the EU do not always have the best relationship, but cooperation is necessary to address FTFs and the threat of extremist groups. Turkey can also broaden the focus of its counterterrorism laws, which are primarily focused on domestic groups such as the Kurdistan Worker's Party and do not address foreign extremist groups.³⁷

OPTION 6:

Improve Utilization of Existing Organizations and Methods

Counter-terrorism agencies and police networks are already well established throughout Europe, but these organizations can be better utilized by states. European states need to expand cooperation and intelligence sharing, both domestically with law enforcement agencies and with other European states. The monitoring of suspected FTFs and the capacity for dealing with the threat of terrorism is already extensive, but the flow of information must improve for the various law enforcement agencies to better address threats, as the FTF problem is not limited to one state.³⁸ States can share intelligence from the communications of FTFs as well as increase shared-open source monitoring.³⁹ For example, EUROPOL, the EU law enforcement agency, has the potential to be better utilized. EUROPOL provides a common platform for states to address counter-terrorism efforts, a hub for intelligence exchange, and

cooperation in specific operations.⁴⁰ States can also contribute to the Radicalization Awareness Network (RAN), another EU strategy to promote and share best practices of states aimed at countering radicalization in relation to FTFs.⁴¹ The RAN allows local communities across Europe to connect, share information and learn how to better address radicalization. In order to improve the use of existing organizations, European states must continue cooperation and intelligence-sharing with the United States, particularly through programs and agreements such as the EU-US Passenger Names Records Agreement and the Terrorist Finance Tracking Program.

OPTION 7:

Adopt a European Union Passenger Name Records database

The Passenger Name Records (PNR) is a proposed draft law in the European Union that will assist in making travel within the EU more difficult for suspected FTFs. A PNR system would strengthen border security and help states better monitor the movement of suspected FTFs within the EU, as the Schengen Agreement makes the region largely borderless in terms of travel.⁴² The PNR system would require air carriers operating flights between a EU member state and another state to send passenger data to the authorities of the member state.⁴³ The data collected by PNR includes travel dates, travel itinerary, contact details, baggage information and ticket information. PNR would focus on gathering information on movement within Europe and it would allow increased monitoring of who is entering and leaving the conflict zone. The EU currently has PNR agreements with the United States, Canada and Australia and many EU states already have PNR-type systems domestically. A purely European PNR would help synchronize the existing systems and allow EU

36 Malet, David. "Why Foreign Fighters? Historical Perspectives and Solutions". Foreign Policy Research Institute: 2009, pg. 111.

37 Argano, Tim and Eric Schmitt. "A Path to ISIS, Through a Porous Turkish Border". The New York Times, March 9, 2015.

38 United Kingdom. Parliament Home Affairs Committee. *Oral Evidence on Counter-terrorism in Europe*, 13 January 2015.

39 Jenkins, 26.

40 United Kingdom.

41 Vidino, Lorenzo, et al. "Foreign Fighters: An Overview of Responses in Eleven Countries". Center for Security Studies: March 2014, pg. 6.

42 Sinkkonen, 6.

43 Information Office of the United Kingdom. "EU Passenger Name Record Proposal: What's at Stake". European Parliament: 26 January 2015.

states to more easily request PNR data from one another in regards to specific investigations.⁴⁴ A PNR system would help decrease profiling and allow authorities to develop patterns of data over time. There are currently holes in the network of data PNR provides because of states without a PNR system, but the EU PNR database would fill these gaps and allow European states to better work together. Europeans are concerned about privacy violations and data protection, but support for PNR has grown significantly among EU states since the Paris attacks and the proposal has been amended to address these concerns.

OPTION 8:

Pass Legislation that Criminalizes Jihadist Activities

Most European states have existing legislation that criminalizes membership in groups such as ISIS, Jabhat al Nusra, and al Qaeda, but many are considering expanding legislation in regards to FTFs.⁴⁵ Several European states already have, and many are considering, the criminalization of unauthorized participation in a foreign war. The goal of such legislation is to stigmatize participation in FTF activities and provide a consequence for the decision to travel to Syria and Iraq. European states would have another law enforcement tool to prosecute individuals who have become or are planning to become FTFs if they criminalized unauthorized participation in a foreign war. There are calls for the criminalization of any radical activity, such as recruitment, training and the dissemination of radical material, with separate laws for the criminalization of travel to conflict areas.⁴⁶ States can also adopt policies that authorize the confiscation of travel documents of those suspected of jihadist activity. Several states have already adopted these measures. Some states have even gone as far as revoking the citizenship of dual-nationals who have become FTFs.⁴⁷ There are varying levels

of strictness throughout Europe when it comes to criminalization, so it is unlikely that criminalization can or even should happen at a European Union level. There are many options for states to criminalize activities related to FTFs that would allow states to prosecute individuals for participation and prevent them from future participation. The impact of criminalization is difficult to predict, which makes it problematic to determine how successful criminalization will be in different European states.

RECOMMENDED SOLUTION

Many of the counter-terrorism systems of European states are already equipped to handle the issue of FTFs, but many of the suggested solutions can build on these systems to create more long-term prevention of radicalization on the ground. It is important to have a well-rounded approach to the FTF problem, with efforts focused on the prevention of radicalization and travel to stop the flow of FTFs to Syria and Iraq. Many of the proposed options will overlap to allow European states to effectively address recruitment and travel. States should work to limit the role that social media plays in recruitment, remove criminal content, and produce a counter-narrative that properly responds to the needs of recruits. The freedom of expression and the incitement of violence must be balanced when filtering content, but focusing on the removal of clearly illegal content is a good starting point. States must also work to prevent radicalization through community-based efforts, as communities play a central role in dissuading people away from joining the conflict. States must provide resources and funding to aid communities. States will also benefit from integrating immigrant communities and reducing the effects of Islamophobia, as feelings of marginalization often play a strong role in radicalization. It is important to emphasize that it is a small number of radicals that become extremist terrorists and states and the media should not frame all Muslims as terrorists. European states can also make travelling to Syria and Iraq much more difficult by encouraging Turkey's efforts to stop recruits crossing the border and can aid Turkey


44 Information Office of the United Kingdom.

45 Barrett, 27.

46 Sinkkonen, 6.

47 However, revoking citizenship cannot render a person stateless under international law.

in doing so by providing support and information on suspected FTFs. Adopting a European Union PNR is also an important method of increasing the flow of information and allowing states to better monitor the activities of FTFs. It is important to ensure that the EU PNR database complies with data protection and authorities ensure the protection the rights and privacy of European citizens when adopting the PNR proposal.

States should be cautious when it comes to criminalization. It is often easier to criminalize FTF related activities, rather than focusing on the prevention of radicalization and reintegration of FTFs in to society. However, criminalization can easily backfire as it is typically a harsh measure.⁴⁸ The extent of criminalization must be determined state by state, due to the variations of opinions among European states on what should be criminalized. A level of criminalization will be useful for law enforcement, but not so much that families and communities are unwilling to approach authorities for help out of fear of criminal repercussions for loved ones. Prosecution should be used as a last-resort method for those who pose a legitimate risk. Confiscating travel documents instead is likely more effective. States should work to prevent radicalization as much as possible, as prison time only increases the chances for individuals to become further radicalized and develop motivation for participation in terrorism activities.⁴⁹ By focusing on preventing recruitment and the travel of individuals, states will be able to limit the number of people that are able to join the Syrian conflict, become FTFs and bring the violence home to Europe. 

48 Byman, Daniel, and Jeremy Shapiro. "Homeward Bound?: Don't Hype the Threat of Returning Jihadists." *Foreign Affairs* 93.6 (2014).

49 Ibid.

APPENDICES

APPENDIX A:

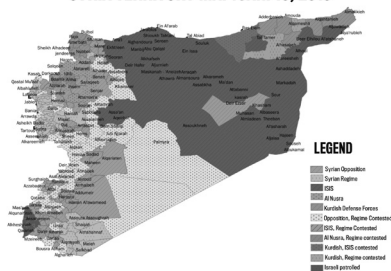
The pro-democratic protests in Syria were part of the 2011 Arab Spring protests. The Assad government violently suppressed protestors, who then also responded with violence. Rebel groups quickly organized to fight the government and chaos very quickly broke out. Various other groups in the region have taken advantage of the chaos to get involved and seize territory. The conflict has also spilled over to areas surrounding Syria. The conflict has been extremely bloody and there are many allegations of human rights violations throughout the conflict. The following map shows the territory held by groups as of January 10, 2015.



Retrieved from: <http://www.thedailybeast.com/articles/2015/01/14/exclusive-isis-gaining-ground-in-syria-despite-u-s-strikes.html>

APPENDIX B:

SYRIA TERRITORY MAP: JAN. 10, 2015



Retrieved from: <http://www.rferl.org/content/infographics/infographics/26584940.html>

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Options for Emissions Reduction in the Face of Global Climate Change

– Jillian Greene

ABSTRACT

Global climate change is an issue at the forefront of international discussions because of the unique position it has in being non discriminatory of international borders. Greenhouse gas emissions have increased rapidly over the last century, which has exacerbated climate change. Greenhouse gas emissions from anthropogenic causes must be addressed immediately to slow the onset of climate change and global warming. The international community should decide upon a course of action that will successfully lower global emissions immediately. This paper outlines possible solutions for reducing anthropogenic global greenhouse gas emissions, and suggests the most viable option for climate change mitigation.

OVERVIEW AND BACKGROUND

The negative effects of global climate change include global warming, sea level rise, reduced crop yield, increase in severity of natural disasters, increase in droughts and floods, and decreased water and food security.¹ Climate change is an example of a Tragedy of the Commons – individual entities act in their own self-interest resulting in the depletion of a common resource.² In the case of climate change the commons that is being overexploited is the atmosphere. Atmospheric CO₂ levels have increased 40% since the preindustrial era,³ and continue to rise steadily, suggesting that anthropogenic greenhouse gas (GHG) emissions are the cause.⁴ Increases in anthropogenic GHG emissions result in atmospheric GHG concentration increases; this leads to the greenhouse gas effect. The greenhouse gas effect is the trapping of radiation from the sun by the lower atmosphere. This phenomenon is responsible for creating a stable and mild climate for the Earth, therefore making it livable. However, increasing

1 Intergovernmental Panel on Climate Change. The Physical Science Basis: A Summary for Policy Makers (p.5) IPCC 2013

2 Garret Hardin. “The Tragedy of the Commons” *Science, New Series* 162:3895 (1968), 1243.

3 IPCC 2013, 9

4 See Appendix B

atmospheric GHG concentrations at such rapid rates will result in a disrupted climate system and thus increase global droughts and floods, decrease crop yield, and increase severity of natural disasters. This will also result in higher global temperatures, which will cause sea ice melt, ocean acidification, and decreased food and water security.⁵

The International Panel on Climate Change (IPCC) was created in 1988. This was the beginning of the international climate change discussions. The mandate of the IPCC is to provide a clear scientific view of climate change to the world, as well as present the potential environmental and socio-economic impacts.⁶ There are three Working Groups (WG) within the IPCC. WGI is responsible for assessing the physical science behind climate change and the climate system, WGI evaluates the socio-economic impacts of climate change, and WGIII explores and presents mitigation and adaptation techniques. Together these Working Groups publish assessments and reports for policy makers that summarize their findings and provide suggestions towards addressing climate change.⁷ In 1992 the United Nations Framework Convention on Climate Change (UNFCCC) was created at the Rio Summit, under the direction of the IPCC and the United Nations Environmental Programme (UNEP). The UNFCCC has nearly universal membership with 196 countries making up the Conference of Parties (COP), which meets annually.⁸ The third COP in 1997 achieved the creation of the Kyoto Protocol – the only binding international climate change agreement to date. The Kyoto Protocol requires all Annex I (developed states) parties to reduce GHG emissions by 5% of 1990 levels during the commitment period of 2008-2012.⁹ Though the

Kyoto Protocol was a good first step in climate change negotiations, it has failed mainly due to poor participation and inability to hold states accountable.¹⁰

International agreements concerning climate change are difficult to negotiate because of the complexity of climate change. This issue has many multifaceted aspects, though one of the most troubling is that through industrialization developed states have contributed the most GHG emissions,^{11 12 13} while developing states receive the worst consequences.¹⁴ This discrepancy should be addressed immediately by reducing GHG emissions globally to mitigate climate change.

POSSIBLE SOLUTIONS

Approach 1: Global Carbon Cap and Trade Scheme

Cap and trade schemes are market-based approaches to emissions reductions. Cap and trade schemes work by setting a price on a metric ton of carbon dioxide. Every greenhouse gas affects the atmosphere to different degrees; carbon dioxide is used as a common denominator to unify all GHGs to the same unit, called metric tons of carbon dioxide equivalent (mTCO2E). A cap and trade scheme works by setting a certain cap on the amount of mTCO2E emitted annually this is known as carbon allowances.¹⁵ There must also be an agreed upon annual reduction to allowances, thus resulting in annual emissions reductions. A global market would allow for trade across states and sectors. This would also show

5 Intergovernmental Panel on Climate Change. *Impacts, Adaptation and Vulnerability: A Summary for Policy Makers* IPCC Impacts
 6 Intergovernmental Panel on Climate Change. *Organization* IPCC
 7 Intergovernmental Panel on Climate Change. *Climate Change 2014 Synthesis Report for Policy Makers*. (p.1) IPCC2014.
 8 United Nations Framework Convention on Climate Change. *About*.UNFCCC
 9 United Nations Framework Convention on Climate Change. *Kyoto Protocol to the UNFCCC*. Kyoto Protocol

10 David G. Victor. *The Collapse of the Kyoto Protocol: and the Struggle to Slow Global Warming*. (Princeton. Princeton University Press, 2001).
 11 See Appendix C
 12 See Appendix G
 13 World Wide Fund for Nature: Germany. *Making Sense of the Voluntary Carbon Market: A Comparison of Carbon Offset Standards* WWF 2008
 14 World Bank. *Status and Trends of the Carbon Market 2012*. (p. 13) WorldBank2012
 15 Nelson Berney. *Climate Change and its Causes, Effects, and Predictions: Carbon Tax and Cap and Trade Tools: Market Based Approaches to Controlling GHG Emissions* (New York, Nova Science Publisher Inc, 2010), 67.

commitment to international cooperation for the future of climate policy.¹⁶

A single mTCO₂E affects the globe the same no matter where it is emitted, therefore a global carbon cap and trade scheme would equalize incentives to emit less.¹⁷ Developing states hold a unique position because they require more mTCO₂E to develop and often will not be able to purchase additional credits. For these states a one-sided commitment can be negotiated. This allows for a cap goal to be set, if they are below this goal they can sell excess credit but if they are above the cap then they are not required to pay.¹⁸ Cap and trade schemes work by incentivizing governments and businesses to develop sustainable technology and invest in renewable energy. A global scheme is attractive because it encompasses all sectors and governments, however it is difficult on a multinational level due to cap setting and allocation.¹⁹

Approach 2: Expanding Regional Carbon Cap and Trade Schemes

Cap and trade schemes are already functioning on a regional scale in twelve locations.²⁰ These regional schemes are present on multinational, national, provincial, and city levels.²¹ The European Union Emissions Trading Scheme (EU ETS) has been active for ten years,²² and has seen an increase in trading volumes that has correlated to emissions reductions.^{23 24}

California successfully implemented a cap and trade scheme in 2013, and has since integrated with Quebec's cap and trade scheme to allow trading between markets.²⁵ Regional cap and trade schemes can be beneficial for increasing participation in the carbon market because it is easier to develop agreements on the number of allowances sold and the annual reduction of the cap. Regional schemes can also be tailored to specific economic sectors, this is known as a sectoral agreement. A sectoral approach can be beneficial because it is generally simpler to target specific sectors due to fewer actors involved and higher availability of emissions data.²⁶ Another aspect of a sectoral approach is having the ability to target high emissions sectors, so that sectors of the most concern can be addressed individually.

An operational protocol dedicated to implementing regional markets could be built under the UNFCCC. This protocol would be able to further develop regional schemes based off of current operational schemes. A protocol would also be able to customize regional schemes to sectors that emit a lot of carbon. The Montreal Protocol on Substances that Deplete the Ozone Layer has shown that this approach can be successful for environmental issues.²⁷

Approach 3: Implementing a Carbon Tax

A carbon tax can come in the form of a Pigouvian tax – a unitary tax that places the cost of the externalities associated with GHG emissions onto the emitter.²⁸ A carbon tax would result in each emitter paying for the increment of damage associated with the emission of one mTCO₂E. This model displays economic efficiency through low administration and

16 Christian Flachslund, Robert Marschinski, Ottmar Edenhofer. "To Link or Not Link: Benefits and Disadvantages of Linking Cap-and-Trade Systems." *Climate Policy* 9:4 (2009), 359

17 Richard Newell, William Pizer, Daniel Raimi. "Carbon Market Lessons and Global Policy Outlook" *Science* 43:1 (2014), 1

18 Ross Garnaut. *The Garnaut Climate Change Review* (Cambridge. Cambridge University Press, 2008), 175

19 Eric Brousseau, Tom Dedeurwaerdere, Pierre-Andre Jouviet & Marc Willinger. *Global Environmental Commons: Analytical and Political Challenges in Building Governance Mechanisms* (Oxford. Oxford University Press, 2012) 182.

20 See Appendix H

21 Peter Sopher. "Emissions Trading around the World: Dynamic Progress in Developed and Developing Countries" *Carbon and Climate Law Review* 4:1 (2012), 306

22 Ibid, 307

23 World Bank, 18

24 See Appendix I

25 Newell, 1

26 Jake Schmidt, Ned Helme, Jin Lee & Mark Houdashelt. "Sector-Based Approach to the Post-2012 Climate Change Policy Architecture" *Climate Policy* 8:5 (2008), 495

27 UNEP Ozone Secretariat. *The Montreal Protocol on Substances that Deplete the Ozone Layer* UNEP

28 Shi-Ling Hsu. *The Case for Carbon Tax: Getting Past Our Hang-ups on Effective Climate Policy*. (London. Island Press, 2011), 27.

compliance cost.²⁹ The benefit of a carbon tax is that it can be implemented on a global scale through individual governments that allows states to exercise some control over their own jurisdiction. This is exceptionally beneficial in determining what goals to achieve from the tax and how the revenue is distributed.

A carbon tax would increase the price of fuel, as well as many other products that have a high carbon input for manufacturing. Increase in fuel price and price of goods from a carbon tax can result in behavioral changes within a society, consumers can become more conscious of buying environmentally friendly alternatives. The tax can also be “revenue-neutral” by decreasing other taxes such as income; this would further incentivize consumers to be environmentally conscious without putting strain on the economy.³⁰ Revenue can also be used for research and development of climate change mitigation strategies, or reverted to supplement government budget.³¹

Approach 4: Agreement for Carbon Sequestration

Carbon sequestration is the natural or deliberate diversion of CO₂ from the atmosphere or the emitting source into natural carbon sinks such as oceans, biological ecosystems, or geological formations.³² Carbon sinks are areas of the Earth that naturally absorb carbon through plant growth and exchange of gases with the atmosphere. Diverting carbon from fossil fuel power plants directly into porous geologic formations would greatly decrease the emissions from these plants. Carbon can be sequestered from power plants in three technological pathways, pre-combustion, post-combustion, or oxy-combustion.³³ Carbon

sequestration technologies can be implemented in all new power plants, as well as retrofitted for power plants currently running. There are currently pilot projects in place to learn more about potential advantages and disadvantages of carbon sequestration. RECOPOL is the first sequestration project in Europe, and resulted in an average injection of 12-15 tons of CO₂ a day.³⁴

An international agreement to move toward implementation of carbon sequestration technologies on all new power plants, as well as retrofitting to power plants that are already in place would allow for continued use of fossil fuels with less negative impacts associated with emissions. Due to autonomy of states, an agreement would not be binding, however it could allow for some allocation of funds toward sequestration technologies. Carbon sequestration is not cheap and thus a global requirement for sequestration from fossil fuel power plants could incentive governments to invest in renewable energy sources.

Approach 5: Reducing Emissions through Land Use, Land-Use Change, and Forestry

Forest systems are the largest terrestrial carbon sink, and the third largest global carbon sink – the atmosphere and ocean being the larger two.³⁵ Land use, land-use change, and forestry (LULUCF) are different ways to address the use of these carbon sinks in both positive and negative ways. Land use change in the form of deforestation is the second highest source of CO₂ emissions behind fossil fuel use.³⁶ Carbon credits can be assigned to hectares of forests depending on the amount of carbon reuptake demonstrated by that forest. The credits create incentives to reduce deforestation as well as increase reforestation and afforestation, which is the process of growing forests and plants in places that they are not found naturally. If the private sector wishes to extract resources from a forest they would be required to pay for the carbon credits associated with that area of

29 Jean-Marc Burniaux, Jean Chateau, Romain Duval, Stéphanie Jamet. *Economics of Climate Change Mitigation: Policies and Options for the Future*. (Paris. OECD Publishing, 2008), 58.

30 National Renewable Energy Lab. *Carbon Taxes: A Review of Experience and Policy Design Considerations (NREL/TP-6A2-47312)*. (pg. 5) NRELTechnicalReport

31 Ibid, 23.

32 United States Geological Survey. *Carbon Sequestration to Mitigate Climate Change*. (pg.3) USGSCarbonSequestration

33 See Appendix D

34 “The RECOPOL Project” International Energy Agency Report “The RECOPOL Project” International Energy Agency

35 See Appendix E

36 See Appendix F

forest, and thus internalize the environmental costs of emissions.

The above global framework to reduce emissions from LULUCF would benefit national governments through capacity building for creating protected areas and enforcing logging laws.

This would also develop initiatives for investment into sustainable economies and technology transfer.³⁷ Profits from carbon credits would be directed toward investment in clean energy, or into sustainable LULUCF programs for reforestation or afforestation.³⁸

Approach 6: Maintenance of the Status Quo

The global estimates of greenhouse gas emission for 2010 were 46 billion metric tons, this equates to a 35% increase in emissions from 1990 level.³⁹ Carbon dioxide emissions increased 42% between 1990 and 2010. About 34 billion metric tons of carbon dioxide was emitted in 2010, making up about 74% of total emissions. Energy production, including fossil fuel use by vehicles makes up 71% of emissions; agriculture is the next largest source of emissions at 13%.⁴⁰⁻⁴¹ The IPCC in collaboration with climate model organizations have created models for future emissions and effects called Representative Concentration Pathways (RCP). Maintenance of the status quo, or 'Business as Usual,' is demonstrated by RCP 8.5, which expects an increase of 3.5-6 degrees Celsius by 2100 from 1990 levels.⁴² The IPCC predicts with high confidence that an increase between 1-2 degrees Celsius would disrupt unique and threatened systems, increase extreme weather

events, and result in uneven distribution of impacts that could cause decreased water and food security.⁴³

A business as usual approach to climate change would be economically beneficial for developing states as well as developed states for the current time being. Over the next century these economic benefits would decrease substantially as the need to adapt to climate change increases. The most significant economic impacts would occur in the agriculture sector as crop yields decrease due to higher temperature, changing growing seasons, and lack of access to water.⁴⁴

Approach 7: Non-Binding, Voluntary Emissions Reduction

Striving for a binding agreement has potential to result in resistance from the global community due to restrictions and possible implications on sovereignty. Therefore it could be argued that global agreements on climate change should be more fluid in requirements in order to increase feasibility of acceptance. The international community should identify what actors are willing to begin combatting climate change in order to organize these actors for a succinct climate change entity.⁴⁵ This would allow for exchange of ideas and technology to further assist research and development of climate change mitigation strategies.

The private sector can be incentivized to voluntarily reduce emissions because business reputations that are perceived as responsible can increase revenue. Businesses that adhere to a set of moral standards and work closely with non-profit organizations toward a common cause can be seen as more responsible to consumers. This increases the likelihood of consumers choosing their products.⁴⁶ The private sector working with NGOs and governments toward research and development of mitigation strategies and technologies would

37 United Nations REDD Programme. *The UN-REDD Programme Strategy 2011-2015*. (pg.3) UN-REDD 2011-2015

38 B. Schlamadinger. "A Synopsis of Land Use, Land-Use Change, and Forestry (LULUCF) Under the Kyoto Protocol and Marrakech Accords" *Environmental Science and Policy* 10:4 (2007)

39 Environmental Protection Agency. *Climate Change Indicators in the United States 2014, Third Edition* EPA_2014. (pg. 18)

40 Ibid, 19.

41 See Appendix F

42 Intergovernmental Panel on Climate Change. *WG II Impacts, Adaptation and Vulnerability Summary for Policy Maker 2014* IPCC WG II, (pg. 13).

43 Ibid, 19.

44 Ibid, 18.

45 David Shorr. "Think Again: Climate Treaties" *Foreign Policy* 205:1 (2014), 3.

46 Peggy Bronn & Albana Vrioni "Corporate Social Responsibility and Cause-Related Marketing: An Overview" *International Journal of Advertising* 2:20, (2001).


be beneficial for voluntarily tapping into new markets and mainstreaming a green economy.

RECOMMENDED COURSE OF ACTION

Climate change is an issue of international importance as it transcends political and ecological borders. Atmospheric GHG levels have been increasing steadily as anthropogenic GHG emissions have increased. British economist and Chair of the Grantham Research Institute on Climate Change and the Environment, Nicolas Stern states “climate change is an example of market failure involving externalities,”⁴⁷ this suggests that the market can also be used to mitigate the effects of these externalities. The externalities associated with climate change are the GHGs emitted through economic practices. The Kyoto Protocol was the first attempt at creating a global market for carbon, this failed though largely due to lack of participation from developed states such as the United States and Canada.

In the interest of increasing participation in a carbon market, regional schemes should be pursued. Regional schemes allow for more participation because setting caps and allowances is simpler on a regional and sectoral scale than globally. A protocol under the UNFCCC would be beneficial for providing support to develop regional schemes. Regional emissions trading systems can be modeled after current schemes, though they can be customized depending on the region. For instance, states with large tropical forests can have a system that includes LULUCF into the market. The current EU ETS demonstrates that multilateral systems are a possibility, though they would be easiest to pursued only when states have similar economies and sectors. A municipal system is already in place in Tokyo, and five cities in China are being considered for systems.⁴⁸ Though it is still in infancy, Tokyo has seen a 23% decrease in emissions from the start year, showing that

municipal systems are viable.⁴⁹ The five Chinese projects are being used as pilot projects toward an eventual national program. Regional schemes created under a UNFCCC protocol could be used as pilot projects to move toward a global market. By developing schemes under a protocol there would be enough homogeneity to eventually explore linking markets while still maintaining the ability to customize systems to different regions and sectors. A protocol would also be beneficial for increasing capacity for voluntary emissions reduction. A database could be created that links environmentally conscious businesses, states, and NGOs to facilitate transfer of technology and ideas.

Global emissions must be reduced in order to mitigate the worst effects of climate change. Regional schemes cannot guarantee global participation, however regional schemes created under one protocol can give access to states and sectors that want to proactively mitigate climate change. A protocol would also be able to encourage voluntary emissions reduction by providing access to information and technology. Implementing regional schemes under one protocol also offers enough homogeneity to allow for a global market to emerge when the international community is ready. 

47 Stern, 27

48 Sopher, 311

49 Tokyo Metropolitan Government. *The Tokyo Cap and Trade Program*. (2010) Tokyo

APPENDICES

APPENDIX A

List of Relevant Acronyms

EU ETS – European Union Emissions Trading Scheme

GHG – Greenhouse Gas

IPCC – Intergovernmental Panel on Climate Change

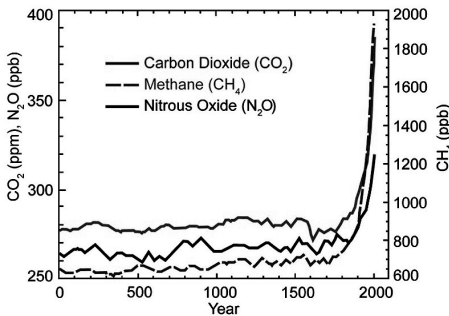
LULUCF – Land use, land use change, and forestry

mTCO2E – Metric tons of carbon dioxide equivalent

UNFCCC – United Nations Framework Convention on Climate Change

APPENDIX B

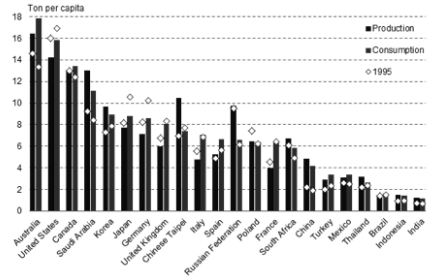
Levels of Atmospheric GHGs Taken From Ice Cores and Direct Measures.⁵⁰



50 Environmental Protection Agency. *Causes of Climate Change EPA Climate Graphs*

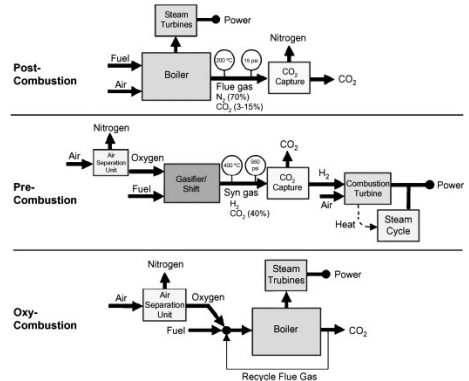
APPENDIX C

Per Capita CO₂ Production and Consumption, 1995 and 2009⁵¹



APPENDIX D

Technological Pathways for Carbon Sequestration from the Source.⁵²



51 “Carbon Dioxide Emissions Embodied in International Trade” Organization for Economic Cooperation and Development. “Carbon Dioxide Emissions.” OECD

52 Jose Figueroa, Timothy Fout, Sean Plasynski, Howard McIlvried, Rameshwat Srivastava. “Advances in CO₂ Technology – The US Department of Energy’s Carbon Sequestration Program” *International Journal of Greenhouse Gas Control* 2:1 (2008), 2.

APPENDIX E

Global Carbon Sources and Sinks.⁵³

Table 3

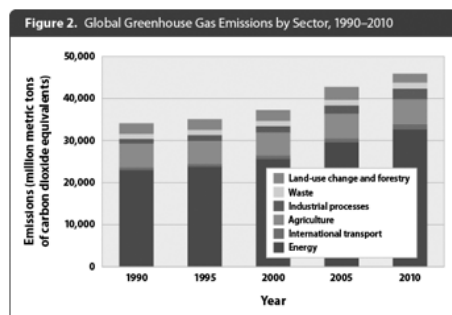
The global carbon budget for two time periods (Pg C year^{-1}). There are different arrangements to account for elements of the global C budget (see also table S6). Here, the accounting was based on global C sources and sinks. The terrestrial sink was the residual derived from constraints of two major anthropogenic sources and the sinks in the atmosphere and oceans. We used the C sink in global established forests as a proxy for the terrestrial sink.

Sources and sinks	1990–1999	2000–2007
<i>Sources (C emissions)</i>		
Fossil fuel and cement*	6.5 ± 0.4	7.6 ± 0.4
Land-use change†	1.5 ± 0.7	1.1 ± 0.7
Total sources	8.0 ± 0.8	8.7 ± 0.8
<i>Sinks (C uptake)</i>		
Atmosphere‡	3.2 ± 0.1	4.1 ± 0.1
Ocean‡	2.2 ± 0.4	2.3 ± 0.4
Terrestrial (established forests)§	2.5 ± 0.4	2.3 ± 0.5
Total sinks	7.9 ± 0.6	8.7 ± 0.7
Global residuals	0.1 ± 1.0	0.0 ± 1.0

53 Yude Pan. "A Large and Persistent Carbon Sink in the World's Forests." *Science* 33:6045 (2011)

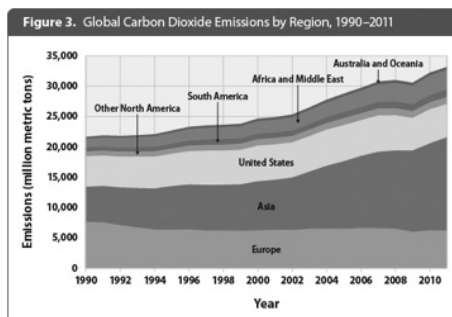
APPENDIX F

Global GHG Emissions by Sector⁵⁴



APPENDIX G

Global Carbon Dioxide Emissions by Region⁵⁵

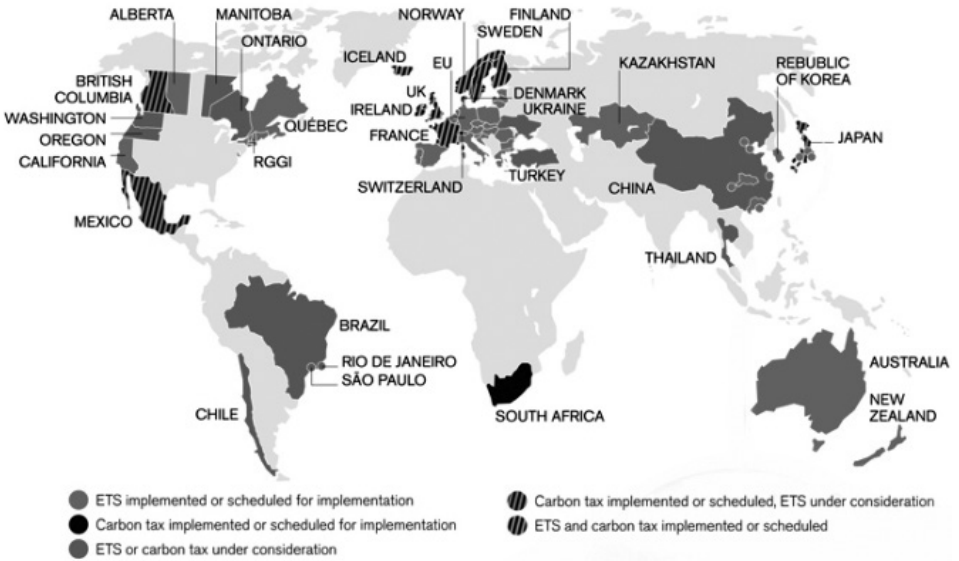


54 EPA EPA_2014. (pg.19)

55 EPA, (pg. 19)

APPENDIX H

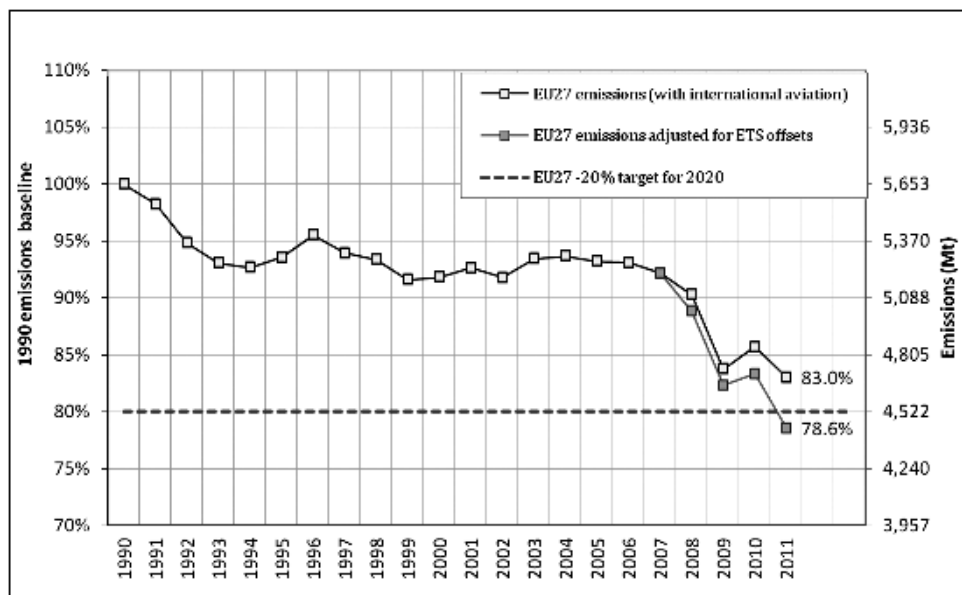
Regional Carbon Markets⁵⁶



56 World Bank, 2014

APPENDIX I

Emissions Reduction Under EU ETS





Preventing and Treating Chikungunya in the Americas

– Daniel Lewis

ABSTRACT

Chikungunya is a viral disease that causes an acute fever and chronic joint pain. Transmission of the virus occurs through two species of mosquitoes. The virus has been endemic to Africa and Asia for some decades but just spread to the Americas in 2013. Due to lack of immunity and the presence of both vector species, chikungunya spread quite rapidly throughout the region. There is currently no vaccine for the virus and the disease is primarily treated symptomatically. Potential approaches to preventing the transmission of the virus include epidemiological surveillance and response, vector control, community health education, and vaccination development. Potential approaches to treating chikungunya patients include health care capacity building and antiviral drug development. This paper recommends using vector control in conjunction with epidemiological surveillance and community health education for preventing chikungunya transmission and health care capacity building for treating the disease.

OVERVIEW AND BACKGROUND

Chikungunya is a mosquito-borne, viral disease that causes an acute fever, as well joint pain that can persist for months after the infection. First observed in Tanzania in the 1950s, chikungunya derives its name from a local dialect in which it means “bent over in pain,” a reference to the severe joint pain that accompanies the disease.¹ Outbreaks of the disease among the Makonde people of Tanzania in the 1950s were highly infectious and severe, infecting 60-80% of the people in the villages to which it spread.² Work done by Ronald Ross, a doctor and scientist famous for his work regarding malaria, confirmed that a previously unknown virus caused the disease, which he named CHIKV.³ The chikungunya virus spreads through two species of mosquitoes, *Aedes aegypti* and *Aedes albopictus*, which are broadly distributed in tropical and subtropical climates around

1 [Pan American Health Organization. *Chikungunya: A New Virus in the Region of the Americas*.](#)

2 Michael A. Johansson. “Chikungunya on the move” *Trends in Parasitology* 31:2 (2015), 43.

3 Ibid.

the world.⁴ These are the same vector species responsible for the transmission of dengue fever (See Appendices A and B).⁵

For decades, the virus remained isolated in sporadic outbreaks in Africa and in Southeast Asia, two regions where it is now considered endemic.⁶ However, since the start of the 20th century, there have been several notable outbreaks in areas previously unexposed to CHIKV. In 2004, an outbreak in Kenya spread to Réunion Island, an island in the Indian Ocean on which the virus had not previously been transmitted, before spreading to mainland Asia. This outbreak lasted several years and led to more than a million cases of the virus.⁷ The first European transmission of the virus occurred in Italy in 2007, supported by the introduced population of *Aedes albopictus* mosquitoes in the region.⁸ Though the outbreak proved to be limited in its scale, it still signaled a dangerous precedent in the spread of chikungunya. Public health officials feared that the virus could become entrenched in areas where the vector was present, with the Americas being the region of the foremost concern.

Finally, in 2013, what had been long feared occurred when officials reported the first local transmission of the chikungunya virus on the Caribbean island of St. Martin.⁹ Within a year of its introduction in December of 2013, CHIKV spread to 43 countries or territories in the Americas in which transmission of the virus had never previously occurred.¹⁰ Over a million cases have been reported, in countries as far north as the United States and as far south as Paraguay (See Appendix C).¹¹ Because chikungunya is not indigenous to the Americas, the population lacks any immunity to the virus that would result from previous exposure and the development

of antibodies. The Americas also have all the factors for the spread of chikungunya that have made dengue fever so difficult to control in the region. Due to the debilitating nature of the disease, the spread of the chikungunya virus will have severe economic costs from out-of-pocket health care expenses and from loss of income from missing work.¹² These losses will not be insignificant; researchers estimate that the previously mentioned 2005-2006 outbreak on the island of Réunion cost in total over \$35 million (USD in 2006 values).¹³ Expedient measures must be taken in order to mitigate the damages that will inevitably be caused by this disease.

POSSIBLE SOLUTIONS

A. Prevention

Approach 1: Epidemiological Surveillance and Response

One possible approach for preventing chikungunya is epidemiological surveillance and response. This approach involves the use of both mathematical models and mapping systems in order to function as an early warning system.¹⁴ These systems have proven effective in predicting other outbreaks, such as those of dengue fever. In Puerto Rico, their surveillance system successfully predicted three major dengue fever outbreaks in 1986, 1994, and 1999.¹⁵ Because the chikungunya virus has already spread to the Americas, the aim of surveillance and response would be to

4 Center for Disease Control and Prevention. *Chikungunya Nowcast for the Americas*.

5 Pan American Health Organization. *Preparedness and Response for Chikungunya Virus: Introduction in the Americas*. (pg. 6)

6 Ibid.

7 Ibid., (pg. 15)

8 Ibid.

9 Johansson, 43.

10 Ibid.

11 CDC. *Chikungunya Nowcast*.

12 Gopalan, Saji Saraswathy, and Ashis Das. "Household economic impact of an emerging disease in terms of catastrophic out-of-pocket health care expenditure and loss of productivity: investigation of an outbreak of chikungunya in Orissa, India" *Journal of Vector Borne Diseases* 46 (2209), 57.

13 Soumahoro, Man-Koumba, Pierre-Yves Boelle, Bernard-Alex Gaüzere, Kokuvi Atsou, Camille Pelat, et. al. "The Chikungunya Epidemic on La Réunion Island in 2005-2006: A Cost-of-Illness Study." *PLoS Neglected Tropical Diseases* 5:6 (2011), e1197.

14 Raclou, Vanessa, Rebecca Ramsey, Shilu Tong, and Wenbiao Hu. "Surveillance of Dengue Fever: A Review of Epidemiological Models and Early Warning Systems" *PLoS Neglected Tropical Diseases* 6:5 (2012), 4.

15 Gubler, Duane J. "How effectively is Epidemiological Surveillance Used for Dengue Programme Planning and Epidemic Response?" *Dengue Bulletin* 26 (2002), 102.

predict areas and times of increased likelihood for an outbreak in a similar manner. These early warning systems take into account a wide variety of factors including environmental factors, climate-related factors, season factors, social and human factors, vector-related factors, and disease transmission factors.¹⁶ In particular, human movement and seasonality have been particularly important factors in CHIKV's transmission in the Americas, with the warm and wet conditions of the summer favoring its spread because of the breeding habits of the vector species.¹⁷ By incorporating this knowledge into models and maps, early warning surveillance systems could then be used as an aid to wisely implement and target areas of increased need for other preventative measures, such as vector control or vaccine administration. The principal drawback is the difficulty of making accurate predictions due to a variety of challenges, including the complexity of factors, the lack of up-to-date data and input, and the significant investment needed to develop these systems.¹⁸

Approach 2: Vector Control

Because the chikungunya virus is transmitted through mosquitoes, one approach to preventing its transmission is to control and reduce the populations of *Aedes aegypti* and *Aedes albopictus*. These efforts can target source reduction, larval control, or adult mosquito control.¹⁹ Source reduction means eliminating the habitats and conditions that mosquitoes use to lay their eggs.²⁰ This primarily involves the reduction of standing, stagnant water. This can be done on a large scale but a crucial aspect of source reduction involves public involvement.²¹ The removal and discard of containers of standing water in and around the home are especially important, due to the proximity

of these containers to human hosts.²² This household source reduction can be encouraged through public education campaigns.²³ Vector control can also be carried out through larval control through the use of larvicides or more alternative methods such as ovitraps or gravid female mosquito traps, which trap larvae or pregnant female mosquitoes respectively.²⁴ Although source reduction and larval control are the most effective methods of vector control for the *Aedes* species, adult mosquito control can also be used.²⁵ Adult mosquito control involves ultra-low volume (ULV) applications of insecticide at dusk and dawn during outbreaks.²⁶ When used correctly, these insecticides do not pose a risk to human health or to the environment.²⁷ The advantage of vector control is that it helps prevent the spread of other infectious diseases that share the same vectors, such as dengue fever and yellow fever.²⁸ Its primary limitation is that it requires broad implementation and regional cooperation in order to be effective.²⁹

Approach 3: Community Health Education

Community health education is one preventive approach that could be used to help stop the spread of chikungunya. This approach focuses on efforts to educate people about household source reduction, the disease process, and measures to prevent transmission of the virus. Household source reduction is an important part of vector control, as discussed earlier. Community health education also includes programs to inform people of the symptoms of chikungunya.³⁰ These types of programs are beneficial in decreasing the amount of time from infection to treatment. This helps to not

16 Racloz et. al., 4.
 17 Johansson, 43.
 18 Racloz et. al., 6-7.
 19 Center for Disease Control and Prevention. *Chikungunya: Information for vector control programs.* (pg. 2)
 20 Ibid.
 21 Ooi, Eng-eong, Kee-Tai Goh, and Duane J. Gubler. "Dengue Prevention and 35 Years of Vector Control in Singapore" *Emerging Infectious Diseases* 12:6 (2006), 888.

22 CDC. *Vector control.* (pg. 2)
 23 Ooi et. al., 888.
 24 Ibid., 890-891.
 25 Ibid., 890.
 26 CDC. *Vector control.* (pg. 2)
 27 Environmental Protection Agency. *Controlling Adult Mosquitoes.*
 28 Center for Disease Control and Prevention. *Dengue and the Aedes aegypti mosquito.* (pg. 1)
 29 Ooi et. al., 891-892.
 30 Elius, Doudly. "Community engagement is vital for Haiti's chikungunya prevention campaign" *International Federation of Red Cross and Red Crescent Societies.*

only promote better health outcomes, but to also decrease transmission by getting patients isolated sooner. Other community health initiatives also help to mitigate the spread of the chikungunya virus. These campaigns educate people about how the virus is spread through the vector and about personal measures that can be taken to prevent its spread, such as the use of insect repellent and mosquito nets.³¹ All of this information can be transmitted to a population via various communication mediums including television, radio, door-to-door sensitization, and training-the-trainer sessions.³² Trainer-the-trainer approaches equip local community members to train other people in their communities to share vital health information.³³ In this way, community health education efforts can have a broad impact at a local scale. This is the advantage of these programs: there are relatively simple, being low-tech and easy to implement, and yet have a wide impact. The only downside of this approach is that it takes time to change people's attitudes and habits relating to their health.

Approach 4: Vaccination Development

There is currently no vaccine for chikungunya but the development of one could provide another avenue for preventing the disease. There have been several promising prospects over the years for developing a CHIKV vaccine. The U.S. Army prototyped and tested a vaccine using a live attenuated (meaning weakened) virus with mostly successful results.³⁴ This type of vaccine would be the most cost-effective because of the simplicity of its production and because only a single dose is required to confer immunity.³⁵ However, although this vaccine proved to be

successful under initial tests, it still poses some risks. Because this vaccine uses a live virus genetically engineered to be nonpathogenic, there are safety concerns that the modified virus could revert back to a virulent strain.³⁶ For this reason, the U.S. Army abandoned the development of this prototype.³⁷ Other methods of vaccination development have been attempted to circumvent these safety concerns, such as consensus-based DNA vaccines and virus-like particles (VLPs). Although these are safer, they require multiple injections in order to become effective.³⁸ The primary advantage of developing and administering a vaccine is that it could immediately halt the transmission of the virus once implemented. In the long term, this approach could prove to be more cost-effective than the cost of treatment and sustained prevention efforts.³⁹ However, considering that a report to the WHO estimated the cost to develop a vaccine to be between US\$163 and US\$513 million dollars, the main limitation is financing the development and administration of a vaccine.⁴⁰

B. Treatment

Approach 5: Health Care Capacity Building

One approach to providing better treatment for chikungunya patients is to build the capacity of health care systems of affected and vulnerable states in the Americas. This includes both the development of protocol and procedures as well as the training of health care professionals. The implementation of protocol regarding surveillance and reporting can be the first step, helping to gather data regarding the spread of chikungunya.⁴¹ Additional protocol can be established regarding how patients are isolated from mosquitoes. Measures to avoid exposing infected patients to mosquito bites can help to curb the transmission of the virus.⁴² Standard procedures can also be developed in regards to

31 Patil, Supriya Satish, Satish R. Patil, P.M. Durgawale, and A.G. Patil. "A study of the outbreak of Chikungunya fever" *Journal of Clinical and Diagnostic Research* 7:6 (2013), 1061

32 Elius.

33 Ibid.

34 Pulmanusahakul, Rajjanaporn, Sittiruk Roytrakul, Prasert Auewarakul, and Duncan R. Smith. "Chikungunya in Southeast Asia: understanding its emergence and finding solutions" *International Journal of Infectious Diseases* 15 (2011), e674.

35 Weaver, Scott C., Jorge E. Osorio, Jill A. Livengood, Rubing Chin, and Dan T. Stinchcomb. "Chikungunya virus and prospects for a vaccine" *Expert Rev Vaccines* 11:9 (2012), 10.

36 Pulmanusahakul et al., e674.

37 Ibid.

38 Weaver et. al., 12.

39 Ibid.

40 PATH. *Investing in Vaccines for the Developing World*. (pg. 1)

41 Center for Disease Control. *Chikungunya: Information for healthcare providers*. (pg. 2)

42 PAHO. *Preparedness and Response*. (pg. 34)

laboratory testing of serum or plasma for clinical diagnoses.⁴³ Because the disease process of chikungunya has a very similar presentation to that of dengue fever, these laboratory tests can be critical to effective treatment.⁴⁴ Beyond the development of protocols and standard procedures, training healthcare personnel can also play a role in treatment. Differentiating between dengue fever, chikungunya, and other diseases like malaria can be improved through training programs, which would certainly lead to better health outcomes in a variety of scenarios.⁴⁵ Training health care workers at smaller hospitals and clinics can be especially important because it allows for a greater capacity for treatment during widespread outbreaks.⁴⁶ Building health care capacity is a good approach to treatment because it also helps in the treatment of other harmful diseases. However, it requires a significant initial investment of resources and the benefits would not be seen immediately.

Approach 6: Development of Antiviral Drugs

The second approach to treatment would be to develop antiviral drugs to specifically treat chikungunya. Currently, health care workers treat the disease symptomatically, meaning that they address the symptoms while ignoring the underlying causes. This symptomatic treatment primarily involves the use of non-steroidal anti-inflammatory drugs (NSAIDs), non-salicylate analgesics (painkillers not related to aspirin), and in some cases steroids to treat joint pain.⁴⁷ Researchers have investigated many chemical compounds for their potential as antiviral treatments for chikungunya. One of the more researched options, chloroquine, had conflicting results in various tests, despite initially promising reports. A clinical trial showed that it had no effect versus a placebo group while a mouse model showed that it could actually

have negative effects.⁴⁸ Another potential candidate for an antiviral drug, ribavirin, has demonstrated inhibitory effects against RNA viruses in general.⁴⁹ Initial tests and observations demonstrated ribavirin to be effective against the chikungunya virus and tests revealed another similar compound, azauridine-6, to be even more effective.⁵⁰ Another option is ribavirin in combination with interferon-alpha, which interrupted CHIKV replication in cell culture tests.⁵¹ These show examples of a wide range of potential antiviral treatments. The advantage of developing an antiviral drug is that it could be used to address the most serious and debilitating aspect of the disease, the chronic arthralgia, by targeting the virus. The difficulty of this approach would be securing funding for the research and development of these drugs.

RECOMMENDED COURSE OF ACTION

The recommended course of action for prevention is to use vector control in combination with epidemiological surveillance and community health education, an approach known as integrated vector management (IVM).⁵² IVM approaches have been shown to be the most effective approach to vector control and have been successfully implemented in other contexts.⁵³ An IVM program focused on dengue fever in Cuba in the early 1980s reduced the number of cases per year from 12,456 per 100,000 people to 23 per 100,000 people in only a three-year time period.⁵⁴ An integrated vector control program for chikungunya would prevent the spread of other harmful tropical diseases,

43 CDC. *Healthcare providers*. (pg. 1)

44 Ibid., (pg. 2)

45 PAHO. *Preparedness and Response*. (pg. 17)

46 Singh, Bir. "Dengue outbreak in 2006: failure of the public health system?" *Indian Journal of Community Medicine* 32:2 (2007), 99-100.

47 Parashar, Deepti, and Sarah Cherian. "Antiviral Perspectives for Chikungunya Virus" *BioMed Research International* (2014), 2.

48 Bettadapura, Jayaram, Lara J. Herrero, Adam Taylor, and Suresh Mahalingam. "Approaches to the treatment of disease induced by chikungunya virus" *Indian Journal of Medical Research* 138:5 (2013), 2.

49 Parashar and Cherian, 2.

50 Ibid.

51 Bettadapura et. al., 2.

52 World Health Organization. *Integrated Vector Management (IVM)*.


53 Erlanger, T.E., J. Keiser, and J. Utzinger. "Effect of dengue vector control interventions on entomological parameters in developing countries: a systematic review and meta-analysis" *Medical and Veterinary Entomology* 22 (2008), 203.

54 Ibid., 208.

such as dengue fever and yellow fever, which are spread by the same vector species.⁵⁵ Epidemiological surveillance is a critical component of IVM programs. By monitoring the factors associated with the spread of the virus, vector control programs can be implemented in areas where they are most needed and at times when they are most needed.⁵⁶ This would avoid unnecessary expenditures on large-scale vector control programs in areas where they would be less effective or less necessary. Community health education should also be integrated into vector control programs as well, as this is the most realistic approach to source reduction. Implementing this sort of community health education would also be relatively easy through training-the-trainer approaches and would have a broad impact at the local level.⁵⁷ These programs could be incorporated into existing programs addressing other mosquito-borne diseases such as malaria and dengue fever. Unlike vaccination development and distribution, the development of an IVM program involving epidemiological surveillance and community health education would be able to address all of these diseases simultaneously.⁵⁸

In terms of providing better treatment to chikungunya patients in the Americas, health care capacity building is the recommended approach. Developing standard procedures would help aid in epidemiological surveillance through reporting requirements, prevent spread of the virus through isolation protocols, and diagnose chikungunya more quickly through procedures for differential diagnoses.⁵⁹ Training health care professionals to differentiate between diseases like chikungunya, dengue fever, and malaria would also be beneficial and would help improve outcomes for patients of all of these maladies.⁶⁰ This type of capacity building would require significant investment but it would certainly prove to be beneficial in the long term. Health care capacity building is the recommended course of action because

it would help to address a variety of tropical diseases damaging the region, rather than addressing just one, as the development of an antiviral drug would do.

Chikungunya is a complex and emerging threat in the Americas. Like dengue fever, chikungunya will likely become endemic to the region. Solutions must therefore consider not only preventing its spread in the short term, but also dealing with its presence in the long term. A course of action addressing chikungunya in conjunction with other endemic mosquito-borne diseases will therefore be the most viable and effective approach. 

55 CDC. *Dengue*. (pg. 1)

56 Raclouz et. al., 7.

57 Elius.

58 WHO. *IVM*.

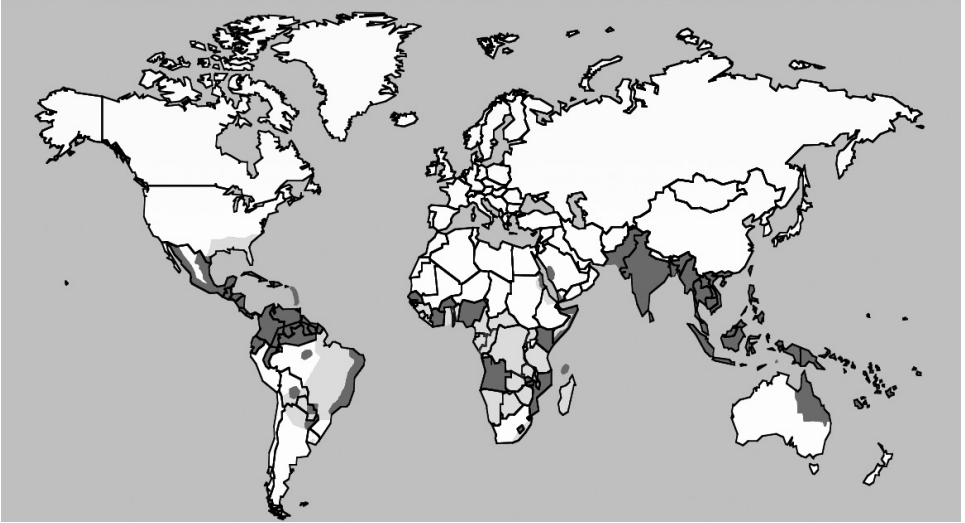
59 PAHO. *Preparedness and Response*. (pg. 34-36)

60 Ibid., (pg. 17).

APPENDICES

APPENDIX A

Map of *Aedes aegypti* distribution (in light shading) and dengue fever epidemic (in dark shading) in 2006⁶¹



APPENDIX B

Map of distribution of native (in dark shading) and introduced (in light shading) populations of *Aedes albopictus* in 2007⁶²

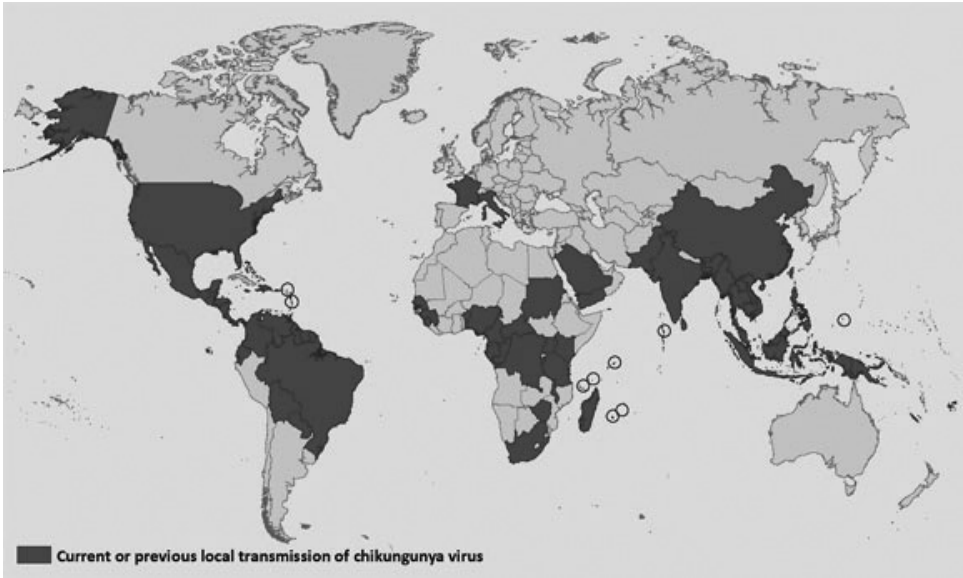


61 "Dengue06." Wikimedia Commons.

62 "Worldwide distribution of *Aedes albopictus* (*Stegomyia albopicta*) in 2007." Wikimedia Commons.

APPENDIX C

Map of countries and territories reporting local transmission of the chikungunya virus as of March 2015⁶³



List of countries and territories reporting local transmission of the chikungunya virus as of March 2015⁶⁴

AFRICA

Benin
Burundi
Cameroon
Central African Republic
Comoros
Dem. Republic of the Congo
Equatorial Guinea
Gabon
Guinea
Kenya
Madagascar
Malawi
Mauritius
Mayotte
Nigeria
Republic of Congo
Reunion
Senegal
Seychelles
Sierra Leone
South Africa
Sudan
Tanzania
Uganda
Zimbabwe

ASIA

Bangladesh
Bhutan
Cambodia
China
India
Indonesia
Laos
Malaysia
Maldives
Myanmar (Burma)
Pakistan
Philippines
Saudi Arabia
Singapore
Sri Lanka
Taiwan
Thailand
Timor
Vietnam
Yemen

EUROPE

France
Italy

AMERICAS

Anguilla
Antigua and Barbuda
Aruba
Bahamas
Barbados
Belize
Bolivia
Brazil
British Virgin Islands
Cayman Islands
Colombia
Costa Rica
Curacao
Dominica
Dominican Republic
Ecuador
El Salvador
French Guiana
Grenada
Guadeloupe
Guatemala
Guyana
Haiti
Honduras
Jamaica
Martinique
Mexico
Montserrat
Nicaragua
Panama
Paraguay
Puerto Rico
Saint Barthelemy
Saint Kitts and Nevis
Saint Lucia
Saint Martin
Saint Vincent & the Grenadines
Sint Maarten
Suriname
Trinidad and Tobago
Turks and Caicos Islands
United States
US Virgin Islands
Venezuela

OCEANIA/PACIFIC ISLANDS

American Samoa
Cook Islands
Federated States of Micronesia
French Polynesia
Kiribati
New Caledonia
Papua New Guinea
Samoa
Tokelau
Tonga

63 Center for Disease Control. *Countries and territories where chikungunya cases have been reported.* (pg. 1)

64 Ibid.



Increasing Cereal Yields in Sub-Saharan Africa

– Samuel Hermann

ABSTRACT

Cereal grains are the backbone of human diet throughout the world, accounting for roughly 50% of caloric intake. With the introduction of the Green Revolution in the 1960s, cereal grain yields have increased dramatically throughout the developing regions of the world, and, as expected, issues of hunger and poverty have been alleviated. While dramatic changes were seen throughout South Asia and Latin America, sub-Saharan Africa's agricultural production remained stagnant, left out due to poor infrastructure, high transport costs, limited investment, and poor pricing and marketing policies. Access to improved inputs and practices such as fertilizers, high-yielding seed varieties, herbicides, and irrigation have proven crucial to improving yields, as well as public investment and extension services. A solution to sub-Saharan Africa's stagnant cereal yields must take place in order to eradicate hunger and poverty throughout the region, bringing security to the world's fastest growing continent.

OVERVIEW & BACKGROUND

A 1967 report from the U.S. President's Science Advisory Committee concluded that "the scale, severity and duration of the world food problems are so great that a massive, long-range, innovative effort unprecedented in human history will be required to master it."¹ The effort came in the form of the Green Revolution, an era of the 1960s and 70s dedicated to the agricultural overhaul of the world's food production system. The Green Revolution brought with it new crop varieties, farming practices, and introduced technologies that drastically increased the efficiency and production of agricultural systems throughout the developing world. While dramatic changes in food production and poverty alleviation were seen throughout South Asia and Latin America, Africa's agricultural production remained stagnant, left out due to poor infrastructure, high transport costs, limited investment, and

1 International Food Policy Research Institute. *Green Revolution: Curse or Blessing*. (2002).

poor pricing and marketing policies.² Since the 1960s, cereal grain yields have increased dramatically throughout the developing regions of the world, with the exception being Africa, specifically sub-Saharan Africa.³

Principally, the Green Revolution drastically improved the yields and overall production of cereal grains⁴, the single most important source of caloric intake in the world – with about 50% of the calories consumed being obtained from them.⁵ As well, cereals supply most of the nutrients for livestock, a significant part of diet in developed countries and of growing importance in the diets of developing states.⁶ Though it varies from region to region in sub-Saharan Africa, rice, millet, and sorghum are the most widely consumed cereal grains, accounting for about 46% of caloric intake throughout Africa.⁷ In addition, maize and wheat are widely produced and consumed, with wheat consumption estimated to escalate drastically following the current trends of urbanization and growth throughout the region.⁸

Though cereal grains play a pivotal role in feeding Africans, sub-Saharan Africa's cereal yields are just a quarter of the global average.⁹ While overall production has increased, this is due to expanding the area of production – contributing to deforestation and reduced fallow periods, both of which lead to land degradation. Further, sub-Saharan Africa is projected to

double its population by 2050, pressuring a food production system that cannot support feeding the 1.1 billion people that currently rely upon it.¹⁰

Though urbanization is readily expanding, agriculture is still the economic engine of Africa, employing 60% of sub-Saharan Africa's labor force and accounting for 32% of the region's GDP.¹¹ Thus, the sector not only has the greatest potential to feed the region, but also decrease poverty. A recent report from the Food and Agriculture Organization of the United Nations (FAO) stated that "agriculture is the backbone of overall growth for the majority of countries in the region" and that increasing agricultural production is "essential for poverty reduction".¹² In order to eradicate the extreme poverty and hunger that persist throughout its regions, sub-Saharan Africa must increase agricultural production, starting first with cereal grains, its most important commodity.

POSSIBLE SOLUTIONS

Approach 1: Improve Soil Health

In order to meet the food demands of a growing population, many African farmers have steadily abandoned traditional practices that restore essential soil nutrients, chiefly, nitrogen, phosphorous and potassium, the three most crucial to cereal production. Due to the pressure to grow more, sub-Saharan African farmers lose roughly 8 million tonnes¹³ of these essential soil nutrients annually, estimated to be worth around \$4 billion in fertilizers. Because of this, more than 95 million hectares of sub-Saharan Africa's arable land (about 75%) has serious soil fertility problems.¹⁴

Replenishing soil nutrients through the use of

2 Ibid.

3 See Appendix A.

4 Yield refers to production over area, typically described in tonnes per hectare – or tonnes/ha – whereas production describes solely the amount of crop harvested. Therefore, an increase in yield reflects an increase in production (tonnes) grown from the same unit of area (ha).

5 Joseph M. Awika. "Major Cereal Grains Production and Use around the World". *Advances in Cereal Science: Implications to Food Processing and Health Promotion* 1089 (American Chemical Society. 2011). 1.

6 Ibid., 2.

7 African Health Observatory. *Country Profiles: Food Production and Consumption*. (2010).

8 Integrated Regional Information Network. *FOOD: We Want Wheat – Africa's Growing Cereal Demand*. (2012).

9 Gary Toenniessen et al. "Building an Alliance for a Green Revolution in Africa". *Annals of the New York Academy of Sciences* 1136. (2008). 234.

10 Population Reference Bureau. *2013 World Population Data Sheet*. (2013).

11 Michael Fleshman. "Boosting African Farm Yields". *African Renewal* (2014).

12 FAO. *How to Feed the World 2050: The Special Challenge for Sub-Saharan Africa* (2009). 1.

13 1 tonne – or metric ton – is equivalent to 1,000 kilograms (2,205 lbs). While different metrics are used in different regions and for different crops, tonnes are recognized internationally for cereal production.

14 Toenniessen et al., 237.

fertilizer inputs and better farming practices are among the fastest ways to increase cereal yields, and vital to keeping current yields from declining. Even in small doses, the use of mineral fertilizer has proven in various test plots to increase yields by upwards of two- to three-times that of what is achieved without them.¹⁵¹⁶ Though the introduction of mineral fertilizers can have drastic effects on the yields of cereals, poor public policy and infrastructure has resulted in the inability of farmers to afford these inputs – it is estimated that African farmers pay between two and six times the average world price for fertilizer.¹⁷ Due to this, sub-Saharan African farmers utilize about 1/10 the average rate commonly applied on farms around the globe.¹⁸ Lack of public subsidization and unimproved infrastructure has deterred the use of fertilizer inputs and practices in cereal production, and must be resolved in order for its use to occur. Even if immediate introduction of mineral fertilizers is not rapidly feasible, practices such as crop rotation, cover crops, and incorporation of organic fertilizers can begin to combat the issues of soil infertility.

Approach 2: Introduce the Use of Herbicides

For a long time, uncontrolled weeds have been a major cause of low crop yields in sub-Saharan Africa. Globally, developing countries have begun to adopt the use of herbicides to face the shortage and inability of hand-weeding labor to significantly reduce weed pressure.¹⁹ Applied by spraying directly on crop fields, herbicides allow for farmers to effectively control weeds and pests that rob crops of water, nutrients, and space. It is estimated that around 2.3 million tonnes of rice, about 15% of the total potential production, is lost annually as a result of weed pressure in Africa.²⁰ Furthermore, herbicides allow for farmers to incorporate practices

such as zero-to-reduced tillage, increasing the amount of organic matter integrated within the soil, as well as retaining moisture – key factors for increasing yields.

While the use of herbicides has the potential to dramatically increase cereal yields, its inclusion as a common practice by sub-Saharan African farmers is unlikely to be met in the near future. Herbicides are unrealistic without the presence of equipment to apply them, and although extensive studies have been done in Africa showing their effectiveness, there has been no mechanism available to disseminate the technology to smallholder farms.²¹

Approach 3: Increase Small-Scale Irrigation Practice

Though only 3.5% of the cultivated area in sub-Saharan Africa is equipped for irrigation, 24.5% of the total value of agricultural output comes from irrigated agricultural systems. Further, irrigation has the potential to increase agricultural productivities by at least 50%.²² By tapping into this extremely underutilized resource, smallholder farms gain the ability to produce more consistent, higher-yielding cereal crops in areas with irregular or inadequate rainfall. Additionally, by targeting the development of small-scale irrigation systems, environmental degradation can be held in check. Most importantly, irrigation technology is inexpensive while highly effective. For example, in communities in India, water harvesting and the rehabilitation of degraded land has led to a 600% boost in farmers' incomes.²³

The challenges to increasing water management methods are often social and managerial, not technical. While individual farmers can apply basic techniques that boost water infiltration in soils, most forms of water-harvesting and irrigation require community willingness and cooperation.²⁴ Efforts to establish and improve

15 *Africa Agriculture Status Report: Focus on Staple Crops*. Alliance for a Green Revolution in Africa. (Nairobi, 2013). 47.

16 See Appendix B.

17 Fleshman.

18 Toenniessen et al., 237.

19 Leonard P. Gianessi. "The Increasing Importance of Herbicides in Worldwide Crop Production". *Pest Management Science* 69:10 (2013). 1099.

20 *Ibid.*, 1102.

21 *Ibid.*, 1102.

22 Liangzhi You et al. "What is the Irrigation Potential for Africa? A Combined Biophysical and Socioeconomic Approach". *Food Policy* 36 (2011). 770-71.

23 UN Millennium Project 2005. *Halving Hunger: It Can Be Done*. Task Force on Hunger (UK & US. Earthscan. 2005). 115-16.

24 *Ibid.*, 115.

water management projects have often failed because of a lack of attention brought to the social capital needed to establish and maintain such projects; however, water user associations, with clearly defined roles and adequate training have proven to be effective at establishing small-scale water management systems.²⁵

Approach 4: Access to Better Seeds

The success of the Green Revolution that occurred throughout South Asia and Latin America was largely the result of the development of new, high-yielding varieties (HYVs) of wheat and rice, varieties that used nutrients and water more efficiently, fended off disease, and boosted the nutritional value of the grain.²⁶ With the exception of Africa, these HYVs now make up the vast majority of all cereal grain production worldwide. Currently, farmer-saved seed accounts for about 80% of planted seeds in sub-Saharan Africa, compared to the global average of 35%.²⁷ The development of new, high-yielding varieties is especially pertinent to increasing cereal yields in sub-Saharan Africa, where there is a heavy reliance on rain-fed farms and where adverse effects of climate change create environments unsuitable for traditional seed varieties.²⁸ There has been success in creating new varieties of cereal grains developed to tolerate typical African stresses, most notably the rice variety NERICA, which has not only increased yields, but decreased labor burden and improved grain quality.²⁹

While HYVs have proven to be effective, significant challenges hinder their utilization. Once researchers develop a new variety, there are extensive difficulties in multiplying and distributing the seeds, especially to resource poor farmers in remote or marginal areas; however, given appropriate incentives and strengthened partnerships with government and non-governmental organizations (NGOs), the private sector shows potential to take on such challenges.³⁰

Approach 5: Enhanced Extension Services, Specifically Targeted at Women

Women produce 80% of the food in sub-Saharan Africa, yet only 5% of extension services have been focused on rural women.^{31,32} Further, the FAO notes that “rural women have less access than men to land, credit, labor-saving technologies, and resources such as fertilizer and improved seeds”.³³ Though extension services have played a fundamental role in the education and development of smallholder agriculture, reducing their shortcomings and gaining a renewed focus on female farmers has the potential to significantly increase the adoption of new farming practices and inputs, in turn boosting crop yields.

If inputs such as fertilizer, herbicides, and better seeds are to reach smallholder farms in sub-Saharan Africa (the predominant form of farm organization) then extension services must relate more effectively to African farmers. Increasing the role and accessibility women have to these services is just a first step, but can go a long way. The International Fund for Agricultural Development notes that “when women gain equal access to inputs, food production increased as much as 20%”.³⁴ Beyond that, the UNDP’s Task Force on Hunger strongly supports actions that involve the direct involvement of local farmers, rather than relying solely on outside experts. By doing so, farmers can work with extension officials in the development of new ideas and innovations, creating solutions that work best for the local environment.³⁵

Difficulty with overcoming the issues of cultural gender roles and relatability to farmers hinders the effectiveness of extension services, and may prove problematic in the future. Regardless, extension services have demonstrated to be an integral part of increased yields, and may be

25 Ibid, 115.

26 International Food Policy Research Institute.

27 Alliance for a Green Revolution in Africa, 54.

28 UN Millennium Project 2005, 116.

29 AfricaRice. *Upland NERICA*.

30 UN Millennium Project 2005, 116.

31 Eunice Ajambo & Gry Synnevag. “Women: Key to Food Security & Climate Change”. *Appropriate Technology* 38:4 (2011). 40.

32 FAO. *Women: The Key to Food Security* (1997).

33 Savitri Mohapatra. “The Pillars of Africa’s Agriculture”. *Appropriate Technology* 38:2 (2011). 45.

34 Ajambo & Synnevag, 42.

35 UN Millennium Project 2005, 123.

essential to resolving the various other issues in Africa's cereal production.

Approach 6: Increase Agricultural Spending

Macroeconomic policies geared towards agriculture have proven to play a significant role in increasing crop yields throughout sub-Saharan Africa. The Comprehensive Africa Agriculture Development Programme (CAADP) signed by 40 African countries in 2003 has shown that increased public investment can produce large production returns. For example, Rwanda, the first nation to adopt the programme in 2007, saw maize yields rise by over 200% – from less than 0.8 tonnes per hectare to 2.5 tonnes – over a period of just 3 years.³⁶ Though only nine nations have achieved the CAADP's requirement of agricultural spending (10% of their budgets), annual agricultural growth has averaged nearly 4% since its adoption, well above the growth rates of previous decades.³⁷

While the CAADP is a step in the right direction, even stronger public investment is needed to increase the yields of sub-Saharan Africa. Take, for instance, the European Union's farm subsidy program, the Common Agriculture Policy (CAP), which takes up 40% of the EU's budget; and, as a result, has secured food production throughout Europe.³⁸ African public farm subsidies – such as those in the EU – can work to increase farmer confidence through payment guarantees, and allow African-grown cereals to compete in the international market. Through public funding, private markets are able to develop and grow, creating the incentive for farmers to produce more and invest in the future of their farmland. Without market incentive or production confidence, there is no motivation for farmers to invest in expensive inputs or adopt new practices, both factors that lead to greater yields.

RECOMMENDED COURSE OF ACTION

Solving the issue of stagnant cereal yields will not be achieved by utilizing just one solution; rather, a combination of solutions must be put in place in order to fully reach sub-Saharan Africa's potential. An approach which includes increased agricultural spending and enhancement of extension services is recommended in order to make significant and sustained increases in cereal yields.

The CAADP has proven that with increased public funding in the agricultural sector, crop yields increase significantly. With this being said, only 9 of the 40 countries that have signed the CAADP have attained the 10% target, and as a result, yields have not increased at their fullest potential. While reaching the 10% target will surely improve crop yields, greater investment must be called for by the African Union (AU). Taking steps similar to those made by the EU's CAP can work to increase yields and create a secure food production system. Though dedicating 40% of budgets to agriculture is unrealistic and unfeasible for poorer sub-Saharan African countries, it proves that agricultural investment is a smart investment, one that provides solutions to Africa's biggest problems: hunger and poverty. Instruments like those that supported the Green Revolution in Asian countries, such as price supports, credit and fertilizer subsidies, and irrigation schemes worked to dramatically boost cereal yields and production, and can work to do the same for Africa.³⁹ The AU has greatest potential to motivate increased agricultural subsidization, and must strive to keep states focused on reaching the CAADP's budget target. The appropriate targets are in place, but the drive to accomplish them must improve. As well, the international community – particularly donor countries – can play a role in motivating increased agricultural budget allocation.

Though investment is crucial to increasing yields, it will be ineffective without a focus on enhancing extension services. At their most


36 Masimba Tafirenyika. "Africa's Food Policy Needs Sharper Teeth". *Africa Renewal* (2014). 3.

37 Ibid., 3.

38 Ibid., 3.

39 Diao Xinshen et al. *The Role of Agriculture in Development: Implications for Sub-Saharan Africa*. Research Report 153. (International Food Policy Research Institute, 2007). 15.

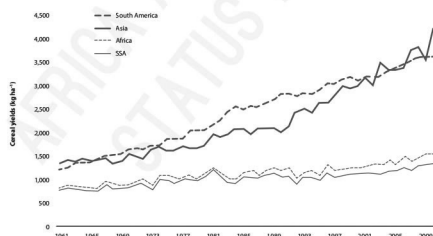
basic form, extension services work to provide farmers with training and information critical to the improvement of practices that increase yields; however, these services can do more. With financial support, extension agencies can create markets and facilitate the use of inputs such as fertilizers, herbicides, and improved seed varieties. As well, they work as a line of collaboration between researchers and farmers, aiding in the development of adequate and effective technologies. With 80% of sub-Saharan Africa's farmers being small in scale (less than two hectares), enhanced extension services can provide the support needed for small-scale farmers to access markets that are otherwise geared towards large-scale operations.⁴⁰ Finally, with 80% of production coming from women farmers, these extensions services must do more to include and aid female farmers if they realistically hope to improve yields.⁴¹

Sub-Saharan Africa is so diverse that it will need not one green revolution, but many.⁴² The recommended course of action will allow for increased yields in a variety of ecological zones, and solve the most pressing issues hindering farmers. With increased public investment and enhanced extension services, sub-Saharan Africa can increase its cereal yields, alleviating poverty and eradicating hunger. 

APPENDICES

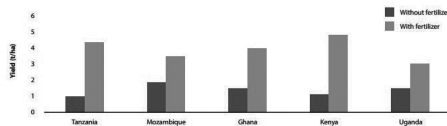
APPENDIX A:

FIGURE 13. CEREAL YIELD TRENDS, 1961-2009



APPENDIX B:

FIGURE 15. MAIZE YIELDS WITH AND WITHOUT FERTILIZER APPLICATION IN FIVE AFRICAN COUNTRIES UNDER ON-FARM CONDITIONS*



*Graphs taken from the Alliance for a Green Revolution in Africa

ADDITIONAL WORKS CONSULTED

Mary Tiffen. "Transition in Sub-Saharan Africa: Agriculture, Urbanization and Income Growth".

World Development 31:8 (2003). 1343-1366.

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Sibiri Jean Zoundi and Léonida Hitimana. "The Challenges Facing West African Family Farms in Accessing Agricultural Innovations: Institutional and Political Implications". *OECD*.

1-14.

40 FAO. *How to Feed the World 2050: The Special Challenge for Sub-Saharan Africa*. 2.

41 Ajambo & Synnevag, 40.

42 Roger Thurow. "The Fertile Continent: Africa, Agriculture's Final Frontier". *Foreign Affairs* 89:6 (2010). 110.



Greening the Common Agricultural Policy

– Carly Joerger

ABSTRACT

The European Union funds all agriculture through the Common Agricultural Policy. Created in 1957, it has gone through several reforms to accommodate the changing social, environmental, and economic interests of member states. The current reform introduces a green payment, where farmers receive subsidies according to their compliance with maintaining permanent grassland, ecological focus areas, and crop diversification. The intention is to transition the CAP to become more environmentally sustainable. However, many problems persist such as the per hectare based subsidies which incentive over production instead of sustainable production. In the 2020, reducing the per hectare payments to be distributed according to a means test, and expanding the support for Rural Development Programs under Pillar 2 will bring the CAP one step closer to promoting sustainable agricultural practices while also ensuring the policies original stipulations of providing food security, fair food prices to consumers, and a sustainable living wage for farmers.

OVERVIEW AND BACKGROUND

The European Union's Common Agricultural Policy (CAP) supports a sector that provides for 1.8% of European Union (EU) GDP, and employs 5.2% of the European Union labor force, yet takes up nearly half of the EU budget — 41% in 2012 (See Appendix 1).^{1,2,3} The current debate is how to approach its next formal reform in 2020 in a way that strikes a balance between supporting sustainable agricultural practices to protect the environment while also maintaining food security, fair prices to consumers, and a livable wage for farmers.

- 1 *The World Factbook*. "GDP - Composition , by Sector of Origin." 2013-14. Washington, DC: Central Intelligence Agency, 2013 <<https://www.cia.gov/library/publications/the-world-factbook/fields/2012.html>>
- 2 *The World Factbook* "Labor Force by Occupation." 2013-14. Washington, DC: Central Intelligence Agency, 2013 <<https://www.cia.gov/library/publications/the-world-factbook/fields/2048.html>>
- 3 "CAP post-2013: Key Graphs and Figures". The European Commission.

Six original member states signed the Treaty of Rome in 1957, where, in Article 39, the objectives for the CAP are outlined.⁴ The goals are to increase agricultural productivity, to ensure a fair standard of living for farmers, stabilize markets, assure food supplies, and provide consumers with food at reasonable prices.⁵ The CAP separates the EU internal market from the world market by establishing the free movement of agricultural products across all borders within the EU, giving preference to EU products over non-EU imports, and by granting financial solidarity (as the CAP is entirely funded from the EU budget).⁶ The budget is divided into two pillars, Pillar 1 provides direct payments to farmers and Pillar 2 supports rural development programs.

The central problem in the CAP affecting the environment lies in the nature of subsidies. They eliminate farmer's ability to set supply according to demand, which can create mass over-production. Overproduction can lead to a depletion of nutrients in the soil and is often associated with the overuse of pesticides and fertilizers, both leading to environmental degradation.⁷ In 2003, the CAP attempted to mitigate this problem by ceasing payments to farmers based on production.⁸ Instead, farmers received a per hectare payment conditional on their compliance with environmental, animal welfare, and food safety standards.⁹ This process is referred to as cross-compliance, and is still in effect today.

In response to societal pressure for a more environmentally sound CAP the 2013 reform is referred to as "Greening the CAP". (See Appendix 2 for a detailed history of the reforms). It introduces several reforms, discussed further below, but the most important one is

the introduction of the green payment. This falls under Pillar 1, subjecting it to the cross-compliance established in 2003. Taking up 30% of the national budgetary envelope, it rewards farmers for engaging in three required practices, the maintenance of permanent grassland, ecological focus areas, and crop diversification.

¹⁰

Several environmental NGOs, agri-environmental activists, journalists, and researchers feel the green payment is an attempt to justify the continuation of per hectare direct payments, which are harmful to the environment as farmers are incentivized to produce more instead of produce sustainably.¹¹ In order for the Commission to propose a realistic 2020 reform historical precedent, environmental demands, interests of farmers, interests of individual member states, and time and cost efficiency will all be key components to consider.

POSSIBLE SOLUTIONS

Approach #1: Maintain Status Quo

The 2013 reform introduces a restructuring of the direct payment system. There is now a more targeted and simplified version of the older cross-compliance — the basic compulsory agri-environmental measures that must be met in order to receive full CAP funding (See Appendix 3). Outside of the green payment mentioned above, the 2013 CAP includes other reforms under Pillar 1, as well. Member states are granted the power to further target their direct payments as they see fit to young farmers, coupled support where payment is linked to production, farmers in natural constraint areas (areas where farming is inhibited by geography, topography, or climate), through re-distributive schemes to support small farms, as well as support to small farms that can be exempt from

4 Andreas Staab. "The European Union Explained: Institutions, Actors, Global Impact". Bloomington. Indiana University Press, 2011. p. 116.

5 Staab, 116

6 Staab, 117

7 Marcelo Ostria. "How U.S. Agricultural Subsidies Harm the Environment, Taxpayers and the Poor". National Center for Policy Analysis. 126. (2013).

8 The European Commission. "The EU Explained: Agriculture." (2014). 5.

9 Ibid., 5.

10 European Commission. "Overview of CAP Reform 2014-2020". (2013). 7.

11 Actors include but are not limited to online debate forums such as Reform the CAP, Friends of Europe, Friends of the Earth, CAP 2020, Intereconomics, and agri-environmental groups such as but not limited to IFOAM, ARC 2020, CEJA, EPHA, and European Crop Protection.

the basic requirements of cross-compliance.¹²

¹³ Member states also see more flexibility in their budgets with the new ability to transfer up to 15% of their national envelope between the two pillars, allowing them to better channel spending to specific priorities.¹⁴ The last major reform is a more specific targeting for Rural Development Programs. Member states must select four out of six common EU properties proposed by the European Commission when building their programs. (See Appendix 5) These reforms are consistent with past reforms and provide a balanced direction towards more cost-efficient and less distorting forms of farm support, while also encouraging sustainable agricultural practices. The results are yet to be seen, however, as the newest reform has taken much longer than anticipated to be implemented, inspiring further complaints about the complicated CAP administration.

Solution #2: Reduction of Direct Payments from a per hectare basis to a means test

Direct payments were first introduced to the CAP in the 1992 reform as compensation to farmers due to necessary cuts in price support.¹⁵ However necessary this compensation was at the time, it cannot be justified forever. Supporters of market liberalization feel that the elimination of direct payments would free up the natural market forces to signal to farmers exactly how much production is needed, therefore greatly reducing harmful environmental effects of over-production. However, as the CAP is the world's largest system of agricultural subsidies, spending \$55 billion in 2010, the elimination of direct payments would entail severe drops in land use and farmers' incomes, and is not a politically sustainable solution as it would isolate

two generations of farmers who have depended on the support.¹⁶

A possible solution is to use a means test to distribute the direct payments to those who truly are in need of support, instead of using the current per hectare basis where the inequality of support distribution varies greatly from country to country and amongst large and small farms.¹⁷ Given the wide variation in natural, economic, and social conditions of agriculture across the EU, the generalized per hectare payments to all farmers is a far cry from a well targeted policy that focuses on the provision of public goods.^{18,19} A means test would be location specific and enable the direct payments to target low income farmers instead of benefiting those farmers who own primary factors of production or production rights and are not the intended beneficiaries of the CAP.²⁰

Solution #3: A Greening "Menu" Approach

Among the various responses to the green payment, a commonality is that the one size fits all approach is too rigid. The current green payment is only distributed to those who comply with maintaining permanent grassland, crop diversification, and maintaining an ecological focus area.²¹ Some member states are proposing a "menu" approach to greening, where they would choose the measures they

12 European Commission. "Overview of CAP Reform 2014-2020". (2013). 4.

13 European Commission: Agriculture and Rural Development. "Glossary of Terms Related to the Common Agricultural Policy". (2015).

14 European Commission. "Overview of CAP Reform 2014-2020". (2013). 4.

15 Ibid., 4

16 David Howden. "Institution in Crisis: European Perspectives on the Recession." (USA/UK. Edward Elgar Publishing, 2011) 206.

17 A means test is an official investigation into someone's financial circumstances to determine whether they are eligible for a welfare payment or other public funds

18 European Parliament. "Direct Payments in the CAP Post-2013." (2011). 31.

19 Public goods are products that one person can consume without reducing its availability to another consumer from which no one is excluded. In agriculture specifically these can be, but are not limited to, the maintenance of farmland biodiversity, water quality and availability, soil functionality, climate stability, rural vitality, and food security.

20 Ferrer, Jorge Núñez and Kaditi, Eleni A. Center for European Policy Studies. "The EU added value of agricultural expenditure – from market to multifunctionality – gathering criticism and success stories of the CAP." (2006). 12.

21 An ecological focus area brings benefits for the environment, improve biodiversity and maintain attractive landscapes.

make compulsory from a list of green practices drawn up at an EU level or a longer list that the respective member states would determine themselves.²² While this would enable member states to include local farmers' voices on what areas of environmental sustainability they deem important and enable them to tailor the options to local demand, there is also concern that this flexibility will permit some low-ambition member states to get away with minimal effort on improving their agricultural practices.²³ However, enforcing the menu approach would be costly in both time and money for the national and regional paying agencies (those who administer the distribution of CAP funding to farmers) to implement. Perhaps more complicated, however, is that the menu approach threatens the entire "common" aspect to the CAP moving it away from its original intention to even the playing field in the sector. The decentralization trend has shown itself in many of the past policy reforms, including the current reform as member states have more freedom to distribute payments and allocate their budgets as they see fit. However, the absolute decentralization of the only sector entirely funded at the EU level is unlikely considering the highly socialized culture of the EU.

Solution #4: Transfer payments from Pillar 1 to Pillar 2 to Promote Rural Development Programs

The central question here takes into account the nature of the two pillars and which avenue is most effective for providing sustainable incentives to farmers to engage in agri-environmental practices. Pillar 1 embodies the "common" feature of the CAP allowing the commission to prescribe rules-based, universal applications of certain measures while Pillar 2 however, gives member states flexibility to create their own Rural Development Programs which function at farm-level. As discussed previously, the more member state specific the measures become in the green Pillar 1 payment, the stronger the argument is for transferring this portion of the

budget to Pillar 2 which is already dedicated to addressing individual member states needs.

The latest reform makes an attempt at solving this problem, granting member states the freedom to transfer 15%, some states 25%, of their budget between the two pillars.^{24,25} While there has already been a positive net shift in resources from Pillar 1 to Pillar 2, unfortunately five member states have transferred portions of their budget, some the full amount possible, from Pillar 2 to Pillar 1 in order to prop up their direct payments, demonstrating a step backwards in contributing to a greener CAP.^{26,27} The CAP 2020 forum argues that transferring the 30% of the national envelope currently dedicated to the green payment in Pillar 1 to Pillar 2 would quintuple EU support for agri-environmental measures.²⁸ However, there is no political willingness from Council, Parliament, and other actors to make this switch as it would be costly and bureaucratically intensive to regulate as opposed to the flat, universal, per hectare payment.

RECOMMENDED COURSE OF ACTION

With the 2020 reform around the corner, reducing the per hectare payments to be distributed according to a means test, and expanding the support for Rural Development Programs under Pillar 2 will bring the CAP one step closer to promoting sustainable agricultural practices while also ensuring the policies original stipulations of providing food security, fair food prices to consumers, and a sustainable living wage for farmers.

22 Alan Matthews. "Greening the Common Agricultural Policy Post-2013". *Intereconomics: Review of European Economic Policy* 47:6. (2012). 328-329.

23 Alan Matthews. "Greening the Common Agricultural Policy Post-2013". *Intereconomics: Review of European Economic Policy* 47:6. (2012). 328-329.

24 Kaley Hart. "Member State Choices on Pillar 1 Implementation Revealed". *CAP2020*. (2015).

25 States able to transfer 25% of their budget between Pillars: Bulgaria, Finland, Greece, Latvia, Lithuania, Poland, Portugal, Romania, Slovakia, Spain, and the UK.

26 Ibid.


27 States who have transferred their budget from Pillar 2 to Pillar 1: Croatia, Malta, Poland, Slovakia, and Hungary. States who have transferred their budget from Pillar 1 to Pillar 2: France, Germany, Latvia, Netherlands, England, Scotland, and Wales.

28 Ibid.

To begin, if the direct payments under Pillar 1 transition from being distributed simply on a per hectare basis towards being distributed to those farmers who truly need them, as defined by a means test, there will be less incentive for overproduction and will decrease the harmful environmental effects. The flat, per hectare rate, irrespective to the local conditions farmers work under, fails to incentivize farmers to provide public goods.²⁹ Without disregarding the political economy reality of restructuring such a central proponent of the policy, a slow transition, occurring over a specified amount of time would be beneficial in allowing farmers time to adjust to the declining amount of payments.³⁰ Another reason this will have to happen slowly is to give the national and regional paying agencies sufficient time to strategize how they will implement the means test and how they will administer the corresponding direct payments. This will be a significantly larger workload in comparison to administering the flat, per hectare rate, but if member states' interests continue to align with transitioning towards sustainable farming, then a compromise on the time and money required will be unavoidable.

While the “menu” approach appears to incentivize farmers to green their practices in a practical manner, depending on their respective conditions, it is inconsistently placed in Pillar 1, and would fit much better in Pillar 2. Advocating for a decentralized, member state specific plan under Pillar 1 threatens the original intent of the policy and ignores the inescapable benefits of the European Union Common Market — gains from trade due to resource allocation according to comparative advantage and positive effects of scale, food security, and consistent and affordable pricing.³¹ That being said, a balance must be struck when incorporating environmental measures, as a universal application does not provide enough incentive. Expanding the budget for Pillar 2 and emphasizing the agri-environmental measures being taken in the

farm specific Rural Development Programs is a more effective avenue by which to implement greening measures in 2020.

The transition of distributing direct payments from a per hectare basis to those in need as determined by a means test, in conjunction with propping up the budget for Rural Development Programs in Pillar 2 will be the most effective route to continue “Greening the CAP”. However, the Commission will have to balance the interests of member states, farm and environmental lobbyists, NGOs, and activists when deciding on the 2020 reform. 

29 Stefan Tangermann. “CAP Reform and the Future of Direct Payments”. *Intereconomics: Review of European Economic Policy* 47:6. (2012). 325.

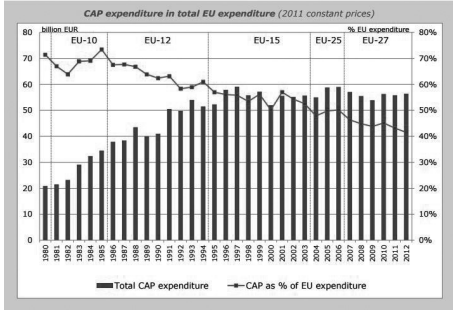
30 *Ibid.*, 325.

31 Harald Grethe. “Environmental and Agricultural Policy: What Roles for the EU and the Member States?”(2006). 11.

APPENDICES

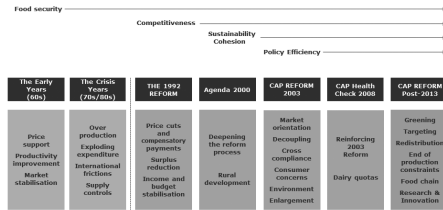
APPENDIX 1

Graph taken from the European Commission Agricultural Policy Perspectives Brief: Overview of CAP Reform 2014-2020



APPENDIX 2

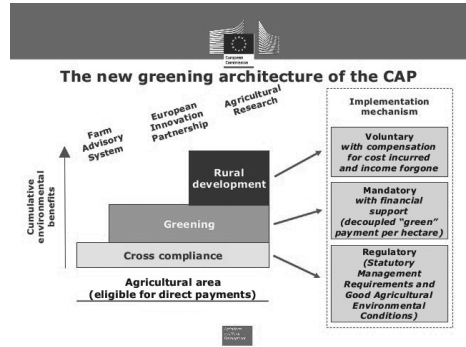
Historical development of the CAP (1962 →)



Graph taken from European Commission, Agricultural and Rural Development, CAP

APPENDIX 3

Graph taken from the European Commission Agricultural Policy Perspectives Brief: Overview of CAP Reform 2014-2020



APPENDIX 4

Chart 4 The new design of direct payments (and share of direct payments envelope)

Cross Compliance	**Coupled Support	**Natural constraint support	OR	**Small Farmer Scheme
	up to 10% or 15%	up to 5%		
	**Redistributive Payment			
	<ul style="list-style-type: none"> o up to 30% o max 65% of average direct payments (first ha) 			
	*Young Farmers Scheme			
	<ul style="list-style-type: none"> o up to 2% o +25% payments (max 5 years) 			
	*Green Payment			
<ul style="list-style-type: none"> o mandatory 30% o greening practices or equivalent 		up to 10% max. 1250 EUR simplified		
*Basic Payment Scheme				
<ul style="list-style-type: none"> o no fixed percentage o 5% degressivity over 150 000 EUR 				
* Compulsory ** Voluntary				

Source: DG Agriculture and Rural Development.

Graph taken from the European Commission Agricultural Policy Perspectives Brief: Overview of CAP Reform 2014-2020

APPENDIX 5

Chart 6 Rural Development Priorities

<i>1. Fostering knowledge transfer and innovation in agriculture, forestry, and rural areas</i>
<i>2. Enhancing farm viability and competitiveness of all types of agriculture in all regions and promoting innovative farm technologies and sustainable management of forests</i>
<i>3. Promoting food chain organisation, including processing and marketing of agricultural products, animal welfare and risk management in agriculture</i>
<i>4. Restoring, preserving and enhancing ecosystems related to agriculture and forestry</i>
<i>5. Promoting resource efficiency and supporting the shift towards a low carbon and climate resilient economy in agriculture, food and forestry sectors</i>
<i>6. Promoting social inclusion, poverty reduction and economic development in rural areas</i>

Source: DG Agriculture and Rural Development

Graph taken from the European Commission Agricultural Policy Perspectives Brief: Overview of CAP Reform 2014-2020

ADDITIONAL WORKS CONSULTED

Reform the CAP. (2010). <http://www.reformthecap.eu/home>.

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