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Designing U.S. Policy To Achieve Inclusive Agricultural Development And Food Systems

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DESIGNING U.S. POLICY TO ACHIEVE INCLUSIVE AGRICULTURAL DEVELOPMENT AND FOOD SYSTEMS

By

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Abstract

This Policy Analysis and Advocacy Methods (PAAM) course-linked capstone examines successes and failures of U.S. policy to adequately address global food insecurity and offers recommendations going forward through the use of a policy paper. President Obama called for global leaders to increase funding to agriculture at the 2009 G-8 Summit in Italy in an effort to decrease global hunger through long-term food security programs. The initial $3.5 billion President Obama pledged became the Feed the Future Initiative. The move to codify Feed the Future is currently seen in the Global Food Security Act 2015.

The U.S. approach to addressing long-term food security emphasizes inclusion, specifically of women and smallholder farmers. However, because policy implementation has roots in the Green Revolution, promotes a globalized food system, and prioritizes corporate agribusiness investment, disenfranchised populations are often excluded. Going forward implementation of U.S. policy to address long-term food security should focus on agro-ecology, locally based solutions, and public sector investment in order to ensure inclusion.

In addition to the policy paper, this capstone includes an overview of concepts relevant policy advocacy with focus on research and analysis, and techniques to produce effective policy papers. A reflection on lessons learned in the production of the policy paper is included as well.
Key terms: *Policy Paper, Policy Research and Analysis, Feed the Future, Green Revolution, Markets, Corporate Agribusiness, New Alliance, Agro-ecology, Local solutions, Inclusion*

Introduction

This is a Policy Analysis and Advocacy Methods (PAAM) course-linked capstone focusing on U.S. long-term food security policy. At the core is a policy paper emphasizing the need for the U.S. to prioritize inclusion in food security policy and programming. A policy paper is meant to define and provide evidence surrounding a problem, cause, and solution and is directed towards a policy influencing audience. This policy paper discusses the background of U.S. involvement in ending global food insecurity. Issues in past and current food security policy, specifically related to the Feed the Future Initiative, are identified and recommendations offered. Additionally, this course-linked capstone offers an overview of concepts used from readings and research in order to produce the policy paper, as well as lessons learned.

Prior to enrolling at SIT Graduate Institute I was a Peace Corps Volunteer in Ethiopia, although I was working in education my interest in food and nutrition security stemmed from my experiences in the rural community I lived in. People living in the community were largely based in agriculture and their economic security shifted based on growing seasons. Often women growing fruit and vegetables on small plots of land were not able to compete with market stalls that could source products from different parts of the country year round. Increased access to global food products was also largely changing buying habits from nutritionally dense local fruits and vegetables to more calorically dense processed foods.

Throughout my time at SIT Graduate Institute, I have focused on exploring issues around international development in relation to food security, specifically policies positively and negatively impacting agricultural development and nutrition, as well as program successes and

failures. I have been working for seven months at CARE USA as a Food and Nutrition Security Policy and Advocacy intern. My primary role has been research and analysis to inform CARE's global advocacy agenda, their work on codifying Feed the Future through the Global Food Security Act 2015, and on food aid reform. Throughout my studies and practical experience at CARE I have gained further insight on the necessity of designing policy at all levels to be as inclusive as possible. It is difficult to ensure programmatic work will be sustainable if the policy measures to support inclusion are not in place. I further expanded my work on food aid reform through the Advanced Policy Advocacy and Analysis course, in developing an advocacy portfolio. This policy paper is an expansion on my research surrounding agricultural development worldwide in the context of improving inclusivity in Feed the Future Initiative. The research and evidence is targeted to an audience of influencers, specifically the NGO community, to support relevant policy changes.

In order to produce the policy paper I conducted extensive policy research and analysis on topics impacting global food security, specifically agricultural development and the positives and negatives of U.S. policy on global food security. Building off the work I did surrounding U.S. policy on food aid, I furthered explored the role of the U.S. in creating an environment conducive to long-term food security around the world. I analyzed the framing of hunger and how it has helped build the current global food system. Additionally, I extensively reviewed current policy and implementation surrounding Feed the Future Initiative. Through my analysis I identified challenges in tackling food security inclusively and opportunities for improvement.

Following this introduction I will discuss concepts needed to produce a policy paper and a framework to conduct effective policy research and analysis. After the concepts section will be the full policy paper I produced titled, *Improving U.S. Food Security Policy for Inclusive*

Agricultural Development and Food Systems. The executive summary will first be provided, then the background, issues and recommendations given. Lastly a reflection on the process and outcome of producing the policy paper will be given to conclude this capstone.

Concepts

In order to produce a policy paper, an understanding of concepts surrounding policy research and analyses and the purpose and use of the paper in the context of policy advocacy were crucial. I used course readings and additional resources to ensure I included all elements necessary to produce the most effective product possible. I primarily drew from *Democracy Owner's Manual: A Practical Guide to Changing the World* by Jim Schultz and *Confronting Power: The Practice of Policy Advocacy* by Jeff Unsicker for guidance on policy research and analysis. Additionally, I looked to *Writing Effective Public Policy Papers: A Guide for Policy Advisers in Central and Eastern Europe* by Eóin Young and Lisa Quinn for information on writing policy papers.

Both policy research and analysis, in addition to writing policy papers are tools used in policy advocacy. Unsicker defines policy advocacy as:

> The process by which people, NGOs, other civil society organizations, networks and coalitions seek to enhance social and economic justice, environmental sustainability, and peace by influencing policies, policy implementation, and policy-making processes of governments, corporations, and other powerful institutions.[1]

In advocating for policy changes at different levels and to a variety of stakeholders, multiple methods and tools can be used to map out the most effective path to achieve the policy outcome desired. Policy papers and policy briefs are examples of tools that to influence policy makers and those impacting decisions of policy makers. Briefs are typically designed for an audience needing a quick overview of the key points surrounding an issue. A policy paper is a

[1] Unsicker, J. (2012). Chapter 1. Introduction. Confronting Power: The Practice of Policy Advocacy (4). Sterling, VA: Kumarian Press.

useful tool for allies in an advocacy campaign or those who need more in depth analysis surrounding and issue. Other tools used in advocacy include an Advocacy Plan, Communications Plan and Monitoring, Evaluation and Learning Plan, these are typically more internally focused.

Strategies for advocating effectively are also important. The strategy is included in an Advocacy Plan, but the methods given can impact any or all other areas of the campaign. Examples include policy research and analysis, grassroots organizing, building partnerships and lobbying. Within this concepts section the strategy and tool in focus are policy research and analysis and writing policy papers.

A great deal of research and analysis should be done before writing a policy paper, in order to make it the most effective tool possible. To discuss more on the necessity and methodology of policy research and analysis I will refer to *Democracy Owner's Manual: A Practical Guide to Changing the World* by Jim Schultz.

Schultz states policy research and analysis is about "common sense" and at its core breaks down the different issues in a way that shows the elements clearly. Two simple questions are in focus during debates surrounding public policy: What is the problem, and what is the solution?[2] Through policy analysis those questions can be answered in a step-by-step process. The five steps Schultz outlines are:

1. Define the problem
2. Get the information needed
3. Interpret the information
4. Develop and judge alternatives

[2] Schultz, J. (2002). Chapter 7. Research and Analysis. Democracy Owner's Manual: A Practical Guide to Changing the World (83-95). New Brunswick, NJ: Rutgers University Press.

5. Make a choice.[3]

In defining the problem it is important to state the issue in the simplest way possibly and then ask "how much," "why," and "so what."[4] Simple does not mean lacking detail; more detail makes it easier to create a sense of urgency and relevance in finding a solution. It is also important to recognize the problem should not be defined in terms of a solution. Additionally, data should be humanized to make it more relatable, especially when it is being used for advocacy.[5] When getting the information needed it is necessary to first look at the bigger picture, context and historical precedence and then "start assembling your inventory of specific facts."[6] It is important to first start with resources already available and ensure you are not spending time reproducing information that is already easily accessible. In collecting information government agencies, think tanks, advocacy groups are great places to start. The internet, books and newspapers are also sources of information. Making direct contact with experts in the field can also lead to relevant and useful information. Identifying "killer facts, "or particularly powerful statistics, is useful to create urgency around the issue and to effectively frame messaging.[7] The next step of interpreting information gathered is where statistics are given meaning and relevance. Schultz emphasizes that "Comparisons such as these turn raw numbers into new, valuable information about public problems, giving broader perspective and important insight

[3] Schultz, J. (2002). Chapter 7. Research and Analysis. Democracy Owner's Manual: A Practical Guide to Changing the World (83-95). New Brunswick, NJ: Rutgers University Press.
[4] Schultz, J. (2002). Chapter 7. Research and Analysis. Democracy Owner's Manual: A Practical Guide to Changing the World (83-95). New Brunswick, NJ: Rutgers University Press.
[5] Schultz, J. (2002). Chapter 7. Research and Analysis. Democracy Owner's Manual: A Practical Guide to Changing the World (83-95). New Brunswick, NJ: Rutgers University Press.
[6] Schultz, J. (2002). Chapter 7. Research and Analysis. Democracy Owner's Manual: A Practical Guide to Changing the World (83-95). New Brunswick, NJ: Rutgers University Press.
[7] Unsicker, J. (2012). Chapter 6. Policy, Problems, Causes and Solutions. *Confronting Power: The Practice of Policy Advocacy* (104). Sterling, VA: Kumarian Press

into possible solutions."[8] In avoiding possible traps it is important to use sources as close as possible to the original.

Developing and judging alternatives is the step in which possibly solutions to the defined problem and evidence are evaluated. Schultz suggests most public policy alternatives follow a fairly standard menu of alternatives. Outlawing, taxing or other financial disincentives, and education are the basic policy options when trying to eliminate a negative situation or behavior. When trying increase a situation or behavior, providing direct financing, tax breaks and education on the positive impacts are the policy options. Maintaining the status quo should also be an option, especially for the sake of building comparison.[9] The last step is to make a choice and decide which policy change will be pursued. Political considerations, cost, other problems that can result from the option, likeliness of implementation and whether or not the alternative will actually solve the problem are all key factors to take into consideration when deciding the best policy option to choose.[10]

Schultz' step-by-step guide to policy research and analysis is useful to make tackling a problem achievable and develop additional strategies to disseminate information. A tool used for this purpose is a policy paper. Understanding the elements and primary use of a policy paper is critical in effectively writing one. *Writing Effective Public Policy Papers: A Guide for Policy Advisers in Central and Eastern Europe* by Eóin Young and Lisa Quinn is a reference I used to learn about the elements of a policy paper.

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[8] Schultz, J. (2002). Chapter 7. Research and Analysis. Democracy Owner's Manual: A Practical Guide to Changing the World (83-95). New Brunswick, NJ: Rutgers University Press.
[9] Unsicker, J. (2012). Chapter 6. Policy, Problems, Causes and Solutions. *Confronting Power: The Practice of Policy Advocacy* (105). Sterling, VA: Kumarian Press
[10] Schultz, J. (2002). Chapter 7. Research and Analysis. Democracy Owner's Manual: A Practical Guide to Changing the World (83-95). New Brunswick, NJ: Rutgers University Press.

Part of understanding what a policy paper is, is understanding what a policy paper is not. Policy papers are problem and solution driven papers that offer a value-oriented argument on the recommendations necessary to adopt to achieve a certain outcome. A policy paper is not an academic paper; the research presented in a traditional academic paper must be able to be applied to a particular problem or issue in order for it to become a policy paper. Historical analysis can be useful in furthering an argument around a current policy issue. However, policy papers should be focused on a current day policy issues, offering recommendations on past policies are more suited towards a research paper.[11]

Furthermore, a policy paper is a decision making tool. One of its primary purposes is to present evidence in a clear and logical way and to offer recommendations on the necessary path to take. At its core a policy paper needs to be an effective communication tool and provide a persuasive argument on the necessary course of action to take. In order to do this using language that clearly defines a problem and adequately expresses the urgency of dealing with the problem is critical. Additionally, the writer should not only offer possible solutions but also analyze the likely outcomes. In recommending one solution over any others it is important to provide evidence of why this solution would achieve a more positive outcome than the others. Identifying a target audience and their current position on the policy issue is helpful as well. Because they are a communication tool policy papers are typically shorter than traditional academic papers.[12] They are preceded by an executive summary, which synthesizes the problem,

[11] Young, E., & Quinn, L. (2002). Writing Effective Public Policy Papers: A Guide for Policy Advisers in Central and Eastern Europe. Retrieved August 10, 2015, from http://www.icpolicyadvocacy.org/sites/icpa/files/downloads/writing_effective_public_policy_papers_young_quinn.pdf

[12] Young, E., & Quinn, L. (2002). Writing Effective Public Policy Papers: A Guide for Policy Advisers in Central and Eastern Europe. Retrieved August 10, 2015, from http://www.icpolicyadvocacy.org/sites/icpa/files/downloads/writing_effective_public_policy_papers_young_quinn.pdf

evidence and recommended solutions. Often they are accompanied by a policy brief, which includes the same information as the paper itself, but in a much shorter format.

The policy paper presented below titled *Designing U.S. Policy to Achieve Inclusive Agricultural Development and Food Systems* is a preliminary version of a document that could be used by the NGO community to push for more inclusive U.S. food security policy and implementation. In nearing the end of the President Obama's second term, a permanent whole of government strategy is needed to address global food insecurity, similar to the Feed the Future Initiative. The policy paper below is a synthesis of evidence recognizing the positive elements of Feed the Future but also recognizing the areas of weakness in inclusion of smallholder farmers and offering recommendations.

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Executive Summary

The inception of the U.S. Feed the Future Initiative was a monumental step towards shifting U.S. food security policy focus from food assistance alone, towards promotion of long-term food security. Unfortunately issues of inclusion in Feed the Future result from the reliance on Green Revolution technology, prioritizing a globalized market, and additionally the role of agribusiness as a primary investor and proponent for these techniques.

It is critical to learn lessons from the difficulties in creating food security through these methods, when codifying Feed the Future with the Global Food Security Act. It is time for U.S. government to prioritize sustainability, inclusivity of all smallholder farmers, and food sovereignty through agro-ecology, local food systems, and public sector investment at the core of their strategy for ending global hunger.

Overview & Background

Globally 795 million, or one in nine, people experience chronic food insecurity. Hunger kills more people every year than AIDS, malaria and tuberculosis combined. The overwhelming majority, 98 percent, of food insecure peoples live in developing countries. [1] The paradox is that in many of the world's most food insecure places, the majority of the population works in agriculture. Worldwide, 70 million farmers, artisan fisher folk, pastoralists, landless and indigenous peoples supply 70 percent of overall food production.[2] This means the people growing and supplying the majority of the world's food are often the same ones experiencing chronic hunger and under-nutrition. Development interventions, such as the U.S. Feed the Future Initiative, often strive to be inclusive to smallholder farmers. Unfortunately the primary focus is on increasing yield with Green Revolution high external input methods, prioritizing integration into global markets without the necessary safeguards and private sector investment. Smallholders are often left excluded, further economically disenfranchised, or continuing to face the same food insecurities or worse as pre-intervention.

The World Food Summit of 1996 defined food security as existing "when all people at all times have access to sufficient, safe, nutritious food to maintain a healthy and active life." Food security is built on three pillars: food availability, access and use.[3] Availability is whether or not food resources are physically present. Access means resources to obtain food are available, whether economic or otherwise. Use relates to the nutrition and care elements of food, whether

[1] 1 FAO, IFAD and WFP. 2015. The State of Food Insecurity in the World 2015. Meeting the 2015 international hunger targets: taking stock of uneven progress. Rome, FAO
[2] FAO**.** 2014b. International Year of Family Farming, Webportal (accessed April 22, 2015) available at: http://www.fao.org/family-farming-2014/home/what-is-family-farming/en/
[3] WHO Food Security. (2015). Retrieved July 23, 2017, from http://www.who.int/trade/glossary/story028/en/

or not nutrients from available and accessible foods can be fully utilized; this often has water, sanitation and hygiene components.

Since the end of World War II changes in agriculture have increasingly shaped global food security. The "Green Revolution" is the precursor to many food security interventions today, including Feed the Future. This emphasizes shifting agriculture to focus more on technologies, such as improved seeds, chemical fertilizers, and irrigation with the purpose of increasing crop yield. The inputs and methodology around the Green Revolution were seen between 1940 and 1970.[4] In a globalized world reliance on an international food system, dependent on crop specializations in different areas and agricultural imports and exports has increased, often replacing informal local food systems. With the Green Revolution and globalized markets comes the increased role of corporate agribusiness stakeholders.

Population growth has indirectly impacted every area of human security. Since the end of the Second World War global population has increased by nearly 5 billion people.[5] Despite this explosive growth there is currently enough food that if it were divided equally between everyone in the world, there would be 2700 calories and 75 grams of protein for each person per day.[6] This indicates accessibility and use, not availability, are the sources of difficulty in ensuring food security. This is also the indicated by the State of Food Insecurity Worldwide 2015 (SOFI,) use of The Prevalence of Undernourishment (PoU), monitored by the Food and Agriculture Organization of the United Nations (FAO), and The Prevalence of Underweight Children under five years of age (CU5), monitored by the United Nations Children's Fund (UNICEF) and the

[4] Patel, R. (2012). The Long Green Revolution. *The Journal of Peasant Studies*. Retrieved August 9, 2015, from http://www.tandfonline.com/doi/pdf/10.1080/03066150.2012.719224
[5] Human Population: Population Growth. (n.d.). Retrieved August 2, 2015, from http://www.prb.org/Publications/Lesson-Plans/HumanPopulation/PopulationGrowth.aspx
[6] Feeding Nine Billion Introduction Video Transcript. (n.d.). Retrieved August 1, 2015, from https://feedingninebillion.com/video/feeding-nine-billion-introduction-video#_ftn8

World Health Organization (WHO,) starting from a 1990-92 baseline. The PoU when measuring undernourishment with the basis of availability has been consistently decreasing, however undernourishment based on food utilization has not had the same successes.[7]

Critics of the Green Revolution, globalization of food systems, and corporate agribusiness investment often cite environmental degradation and further exclusion of disenfranchised populations and look towards agro-ecology, local food systems, and increased public investment as more sustainable options for ending food insecurity. Changes in U.S. policy to address global hunger came after the global food crisis of 2008 created a renewed focus on the necessity to fund agricultural development to achieve food security. In 2009 President Obama pledged $3.5 billion over three years to recommit to investing in to reduce poverty and end hunger and under-nutrition. This helped to leverage $18.5 billion from other G8 members and additional donors. The U.S. commitment came to be called "Feed the Future.[8] With the Obama administration coming to a close, there is support for legislation to institutionalize a whole of government strategy to promote long-term food security. The Global Food Security Act 2015, introduced in both the U.S. House of Representatives and Senate, would authorize Feed the Future through 2016, and require President Obama to submit a whole of government plan to address global hunger by October 1, 2016.[9]

President Obama's pledge of **$3.5 billion** over 3 years to recommit to investing in agriculture came to be known as the **Feed the Future Initiative**.

[7] 1 FAO, IFAD and WFP. 2015. The State of Food Insecurity in the World 2015. Meeting the 2015 international hunger targets: taking stock of uneven progress. Rome, FAO
[8] About. (n.d.). Retrieved July 24, 2015, from http://www.feedthefuture.gov/about
[9] H.R.1567 - Global Food Security Act of 2015114th Congress (2015-2016). (2014, March 24). Retrieved August 10, 2015, from https://www.congress.gov/bill/114th-congress/house-bill/1567

It is critical to learn lessons from the difficulties in creating food security through the reliance on Green Revolution technology with the primary purpose of increasing yield, prioritizing a globalized market, and additionally the role of agribusiness as a primary investor and proponent for these techniques. These methods have been the basis for the Feed the Future Initiative and resulted in weaknesses in adequately addressing food security in a manner that is fully inclusive. It is time for U.S. government to prioritize sustainability, inclusivity, and food sovereignty through agro-ecology, local food systems, and public investment at the core of their strategy for ending global hunger.

Issue

The U.S. approach to agriculture and food systems has been constantly evolving since the end of World War II. By further delving into the impacts of the Green Revolution, globalization of markets, and the role of corporate agribusiness it is possible to understand how these factors shape U.S. policy. Furthermore, analyzing the difficulties in Feed the Future programs over the past five years in relation to these factors, can indicate a path forward for future food security policy. It is necessary to note this analysis focuses primarily on areas for improvement. Despite weaknesses in Feed the Future implementation, it is a critically needed starting point. A whole of government strategy is necessary for the U.S. to address global food insecurity, to both end hunger and under-nutrition and also promote peace, security and economic growth.

U.S. Food Security Policy

The U.S. has a long history in providing food assistance to developing countries in both emergency and non-emergency situations. President Eisenhower signed the Agricultural Trade Development and Assistance Act of 1954, or Public Law 480. The objectives of food aid were not only to provide aid, but to fight communism by securing goodwill in newly emerging states,

provide development assistance, find outlets for food surpluses, and to build emerging markets.[10] The Departments of State and Agriculture originally implemented Food for Peace. President Kennedy signed the Foreign Assistance Act of 1961 mandating the creation of a single agency to coordinate foreign assistance, the United States Agency for International Development (USAID.)[11] Since then a variety of food assistance programs have come and gone implemented under both USAID and USDA. Congress plays a critical role in allocating funding for the implementation of these programs through the appropriations process, both through U.S. agencies and other multi-lateral and development organizations.[12] Although historically, agricultural development has been a significant component of the United States' foreign aid program, U.S. funding for such assistance has declined from about 20% of U.S. official development assistance (ODA) in 1980 to around 5% in 2007.[13] This decline coupled with the global food crisis prompted President Obama's commitment to additional agricultural investments. Despite over 60 years of food aid programming and other U.S. development and economic policy that impact global agricultural development, Feed the Future is the first U.S. policy specifically aimed to promote long-term food security worldwide.

Feed the Future

Feed the Future uses a four-part approach: selection, strategic planning, implementation and review/scaling up. In the selection round countries were chosen based on five specific criteria: level of need, opportunity for partnership, potential for agricultural growth, opportunity

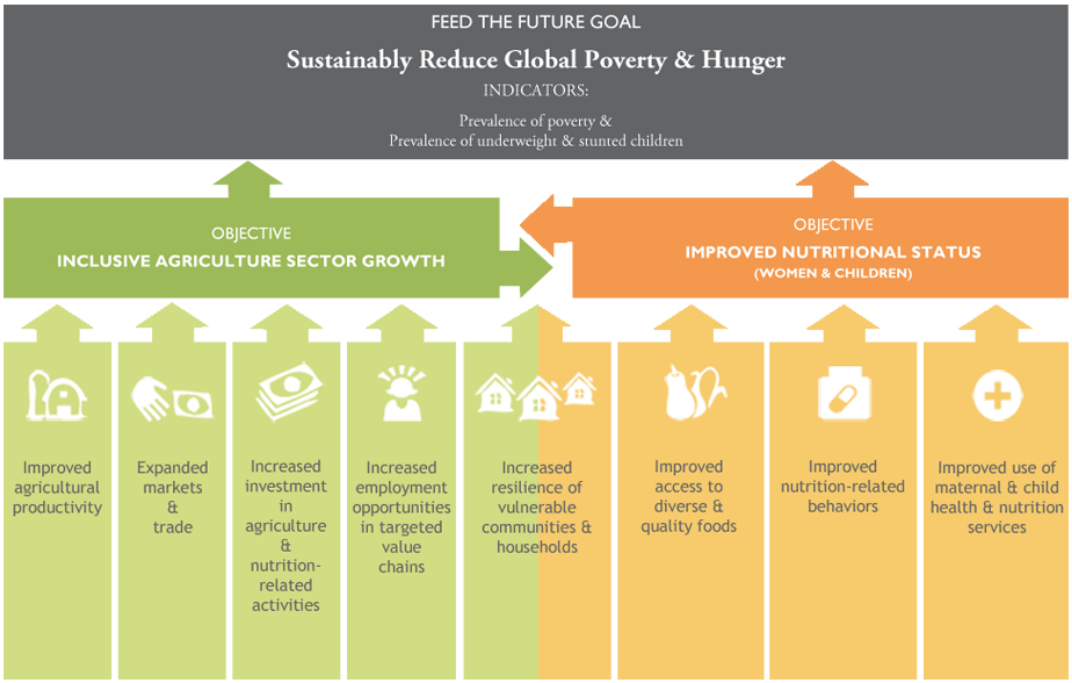
[10] Murphy, S., & McAfee, K. (2005, July 1). U.S. Food Aid: Time to Get It Right. Retrieved August 10, 2015, from http://www.iatp.org/files/451_2_73512.pdf
[11] USAID History. (n.d.). Retrieved August 10, 2015, from https://www.usaid.gov/who-we-are/usaid-history
[12] Food Aid Reform. (n.d.). Retrieved August 10, 2015, from http://www.interaction.org/work/food-aid-reform
[13] Ho, M. (2011, January 10). The Obama Administration's Feed the Future Initiative. Retrieved August 10, 2015, from http://fas.org/sgp/crs/misc/R41612.pdf

for regional synergy and resource availability. Based on these criteria 19 countries were selected in Africa, Asia, Central America and the Caribbean. Strategic planning encompasses a three-step approach. Country ownership is the first step; host countries design Country Investment Plans (CIPs) and Implementation Roadmaps. As the second step, the U.S. develops strategies based on these CIPs to maximize coordination. Capacity building and policy reform are the third step to ensure both scalability and sustainability.

During the implementation phase agricultural development and improved nutritional status for communities the key elements, investments are made in women's empowerment, diet quality and diversification, post-harvest infrastructure, high quality inputs and financial services. Finally, all Feed the Future activity is measured annually against the results framework, as seen in Figure 1, with the eventual goal of scaling up interventions. Additional focus areas of the initiative are climate-smart development, inclusive growth, private sector engagement, and research and capacity building.[14]

[14] Approach. (2015). Retrieved August 1, 2015, from http://feedthefuture.gov/approach/Inclusive--Agriculture--Sector--Growth

Figure 1: *Feed the Future Results Framework*



Retrieved from: http://www.feedthefuture.gov/progress

While Feed the Future prioritizes a comprehensive approach inclusive of multiple stakeholders, from the U. S. government down to smallholder farmers, emphasis on certain agricultural development techniques have hindered success. To fully comprehend these difficulties the next sections will look at the historical precedent for Feed the Future set by the Green Revolution in addition to the roles of globalized markets and corporate agribusiness stakeholders.

Green Revolution, Markets and Agribusiness

The picture painted of the "Green Revolution" is indicative of overwhelming success. This perpetuates the idea that technologies to increase crop yield are the primary tools needed to achieve food security. As we have already explored, yield alone will not result in the end of hunger if not coupled with increased access and utilization. The section will explore the

historical significance of the Green Revolution, including the further reliance on research and development for technologies, the revolution's role in instigating a global food system dependent on markets, and furthering the involvement of corporate agribusiness.

Green Revolution

By the early 1920's many of the elements of today's post-Green Revolution food system were already in place. A small number of corporations were in control of the international grain markets. The Haber-Bosch process of producing fertilizer, by combining hydrogen from the air and nitrogen from natural gas to produce synthetic ammonia, had been manufactured in the US since the end of the First World War. National governmental systems for agricultural research and innovation had existed for decades, as had the technologies of plant breeding. [15]

The U.S. based Rockefeller Foundation initiated the Green Revolution in 1941, when the Mexican Agricultural Program (MAP) began. In 1944 Norman Borlaug was hired to work on the MAP project. Borlaug is now famed for developing "miracle wheat" in 1954. With the assistance of the Rockefeller and Ford Foundations and eventually the U.S. government, miracle wheat, rice and corn were spread throughout the developing world in the 1950's and 1960's. The Green Revolution came to an end in 1970, but the principles inspired by the revolution have been seen through agricultural development and our food system to this day. The "improved seeds" developed during the revolution were primarily meant to increase crop yield. In order to maximize effectiveness irrigation techniques and nitrogen fertilizer had to be used in conjunction with the seed.[16]

[15] Patel, R. (2012). The Long Green Revolution. *The Journal of Peasant Studies*. Retrieved August 9, 2015, from http://www.tandfonline.com/doi/pdf/10.1080/03066150.2012.719224

[16] Patel, R. (2012). The Long Green Revolution. *The Journal of Peasant Studies*. Retrieved August 9, 2015, from http://www.tandfonline.com/doi/pdf/10.1080/03066150.2012.719224

Issues of inclusion within the Green Revolution were evident from the onset. "Success" seen in Mexico with wheat production increasing 50% was only among farmers holding 5 hectares or more of land. The majority of Mexicans farming on less than 2 hectares were not positively impacted by yield increases resulting from the Green Revolution. Furthermore, wheat production and consumption made up only a tiny portion of Mexico's agricultural sector. The Green Revolution excluded corn, Mexico's most valuable crop. Borlaug himself even felt that wealthier commercial farmers would better receive technologies of the Green Revolution.[17]

When Green Revolution technologies spread globally success was again perceived based solely on yield increase. In India, the most prominent example of Green Revolution success, wheat yields increased 50% from a period of 1965-1972. However, what is often not included in India's wheat yield increase success story, is during that time period farmers began planting more wheat due to factors unrelated to the Green Revolution. This was in part because of U.S. foreign food aid policy, beginning in 1965 less wheat was being received from the U.S., this incentivized Indian farmers to plant more because it became more profitable. Additionally in the period after 1967, India was recovering from a drought meaning that most production faired better in comparison to yield during the drought, regardless of Green Revolution technology utilization.[18]

While positive impacts of yield increase cannot be directly attributed to the Green Revolution in India, negative ones can. India remains largely food insecure today, with 18% of

[17] Patel, R. (2012). The Long Green Revolution. *The Journal of Peasant Studies*. Retrieved August 9, 2015, from http://www.tandfonline.com/doi/pdf/10.1080/03066150.2012.719224

[18] Patel, R. (2014, August 29). How to Be Curious About the Green Revolution. Retrieved August 9, 2015, from http://rajpatel.org/2014/08/29/every-factoid-is-a-mystery-how-to-think-more-clearly-about-the-green-revolution-and-other-agricultural-claims/#more-3648

their population undernourished.[19] The specific way in which Green Revolution technologies were designed to target favorable conditions left populations with minimal access to credit, land rights, areas with low rainfall untouched.[20] Yield increases did result in in lower prices for commodity crops allowing populations to use their income to purchase diverse foods. However, pressure to grow these commodity crops, resulted in less emphasis on growing nutritionally dense crops.[21] Furthermore, farmer suicides occur in India due to debt relating to purchases of seed and fertilizer with unsuccessful crop yield. It is estimated that in a period from 1995 to 2014 there were over 290,000 farmer suicides in relation to debt. [22]

In India, approximately **290,000 farmers** have committed **suicide** in a 19-year span in relation to debt.

The picture of success is proliferated in agricultural development today, despite the shortcomings of Green Revolution technology in inclusively addressing food security. With an anticipated population of 9 billion people by 2050, many believe the only way to adequately feed so many people is to continue research and development of farm inputs that can more effectively increase yield. Research to develop inputs including seeds, fertilizers, chemical herbicides and pesticides among others, is present in many agricultural initiatives today will be further explored in the Issues of Inclusion in Feed the Future Section.

Globalized Markets

[19] Country Profile India. (n.d.). Retrieved August 10, 2015, from http://faostat.fao.org/CountryProfiles/Country_Profile/Direct.aspx?lang=en&area=100
[20] Patel, R. (2012). The Long Green Revolution. *The Journal of Peasant Studies*. Retrieved August 9, 2015, from http://www.tandfonline.com/doi/pdf/10.1080/03066150.2012.719224
[21] Headey, D., & Hoddinott, J. (2015, March 1). Agriculture, Nutrition, and the Green Revolution in Bangladesh. Retrieved August 9, 2015, from http://ebrary.ifpri.org/utils/getfile/collection/p15738coll2/id/129063/filename/129274.pdf
[22] Barry, E. (2014, February 22). After Farmers Commit Suicide, Debts Fall on Families in India. Retrieved August 10, 2015, from http://www.nytimes.com/2014/02/23/world/asia/after-farmers-commit-suicide-debts-fall-on-families-in-india.html?_r=0

With technology, both agricultural and otherwise, came globalization. The Green Revolution's focus on producing massive amounts of certain commodity crops proliferated the need for open markets to sell excess yield. Policies for trade liberalization and elimination of trade barriers, such as tariffs, has helped facilitate increases in imports and exports and changed the very nature of who is producing food and where.[23] Increasingly producers are growing staple crops that can be processed into packaged foods and sold on a global market, as opposed to producing local foods to be sold in their natural state. Proponents of Green Revolution technology often cite a global market with specialization of commodity crops and trade on an open market as the only way to feed an increasing population.

However, with market liberalization comes issues of inclusion, the ability to import and export crops is a double-edged sword for many food insecure communities. Often smallholder farmers feel pressure to enter formal markets through trading and exporting their crops, in addition to staying competitive when mass-produced cheap imports enter the markets they already operate in. Without the proper safeguards in place smallholder farmers can be further disenfranchised and the gap between those with access and without access is further widened. Continued emphasis on well-established formal markets disregards improvement of informal, often locally based markets, that many smallholder farmers already have access to.[24]

The U.S. has consistently been a proponent for opening markets globally to support U.S. farmers and businesses.[25] The approach has sometimes hindered both small-scale farmers in the U.S. and especially those in developing countries. Prioritizing economic growth in agricultural

[23] USDA ERS - U.S. Agricultural Trade. (n.d.). Retrieved August 10, 2015, from http://ers.usda.gov/topics/international-markets-trade/us-agricultural-trade.aspx
[24] FAO. 2014b. International Year of Family Farming, Webportal (accessed April 22, 2015) available at: http://www.fao.org/family-farming-2014/home/what-is-family-farming/en/
[25] USDA ERS - U.S. Agricultural Trade. (n.d.). Retrieved August 10, 2015, from http://ers.usda.gov/topics/international-markets-trade/us-agricultural-trade.aspx

policy over tackling food security has undercut production capacity in many developing countries, altered dietary preferences worldwide, and created dependence on wheat and other grains. This dependence can lead to shocks to the global food system, like the one seen in 2008.[26] The U.S. policies around subsidies are part of what undercuts production capacity of other countries. When the U.S. offers farmers subsidies for growing certain grains, these grains are then grown in surplus. This allows them to be sold cheaply on the global market; farmers growing the same grains are no longer able to compete with the cheap U.S. commodities. With countries unable to compete they grow to rely on imports from the United States, this can be catastrophic when there is not enough food being imported but national production is not adequate. Additionally, growing these commodities in mass amounts has led to dietary shifts, these grains are often processed and packaged into other goods, used as live stock feed, and take emphasis away from growing and eating nutrient dense foods, like fruit and vegetables.

A prime example is the North American Free Trade Agreement (NAFTA,), which went into effect in 1994. U.S. farmers receive subsidies for growing certain commodities, including corn. With the elimination of trade barriers, the U.S. was able to export mass amounts of corn to Mexico to be sold at low costs. The influx of cheap U.S. corn made Mexican farmers growing corn unable to compete in their local markets. The livelihoods of smallholder farmers were negatively impacted which proliferated poverty instead of reducing it. Because of the Green Revolution technology in Mexico, many of the same farmers being pushed out by U.S. corn were also in debt from purchasing technologies to increase yield.[27] Additionally, NAFTA had negative impacts on smallholder farmers in the U.S. Increased emphasis on commercialized production

[26] Heffernan, W., Hendrickson, M., Arda, M., Burch, D., Rickson, R., Vorley, B., & Wilkinson, J. (n.d.). The Global Food System: A Research Agenda. Retrieved August 9, 2015, from http://www.foodcircles.missouri.edu/global.pdf
[27] Patel, R. (2012). The Long Green Revolution. *The Journal of Peasant Studies*. Retrieved August 9, 2015, from http://www.tandfonline.com/doi/pdf/10.1080/03066150.2012.719224

forced farmers to scale-up or lose the ability to compete against larger farmers with agribusiness ties.[28].

On the other side of the spectrum trade liberalization can also increase pressure on farmers to grow for the global market. This leads to land converted from smallholder farms growing a variety of local crops to farms specifically meant to grow crops to be exported to western countries. The same farmers who are experiencing chronic food security are being integrated in larger markets and then pressured to grow for those markets without first tackling the food insecurity in their own communities.[29]

Corporate Agribusiness

With research and development of new technologies in addition to trade and market liberalization, comes increased dominance of corporate stakeholders. Concentration of farming inputs is seen in the hands of only a few U.S. corporations. In the U.S. 93% of soybeans and 80% of corn is grown with patented seeds under the control of Monsanto.[30] Globally only four companies control 90% of global grain trade.[31] The decline of public investment in agriculture has furthered the opportunity for investment needs to be met by private stakeholders. The G8 countries never fully met their pledge of a combined $22 billion investment in agriculture from 2009-2012. Their pledge for 2011-2018 was only $6 billion, much of this is not new money, and goes towards meeting the original $22 billion.[32] This foray away from agricultural investment leaves additional room for corporate agribusiness investment. While this investment can

[28] Hansen-Kuhn, K. (2013, November 25). NAFTA and US Farmers-20 Years Later. Retrieved August 10, 2015, from http://www.commondreams.org/views/2013/11/25/nafta-and-us-farmers-20-years-later
[29] Heffernan, W., Hendrickson, M., Arda, M., Burch, D., Rickson, R., Vorley, B., & Wilkinson, J. (n.d.). The Global Food System: A Research Agenda. Retrieved August 9, 2015, from http://www.foodcircles.missouri.edu/global.pdf
[30] Monsanto: A Corporate Profile. (2013, April 3). Retrieved August 10, 2015, from http://www.foodandwaterwatch.org/reports/monsanto-a-corporate-profile/
[31] Nelson, W. (2011, December 16). Occupy the Food System. Retrieved August 10, 2015, from http://www.huffingtonpost.com/willie-nelson/occupy-food-system_b_1154212.html
[32] Facts about the G8's New Alliance in Africa. (2014). Retrieved August 1, 2015, from http://www.actionaidusa.org/sites/files/actionaid/newalliancefactsheet_1.pdf

sometimes be beneficial to people working in the agricultural sector in developing countries, this is only so long that profit for the agribusiness is ensured. Unlike with public investment "increasing the wealth of stockholders" is the primary motive of corporate agribusiness investment.[33]

Research and development of technologies is done, typically with large private and public investment. This research and development is typically both costly and profit centric. For this reason the feasibility of technologies able to reach poorer farmers and conducive to crops and conditions of those farmers is not likely in most cases. [34] Additionally, when countries work to create a business environment for profit-driven agribusiness stakeholders, they are often hindering their own ability to invest in agriculture. Policies that encourage agribusiness to invest by exempting them from taxes can eliminate sources of revenue necessary to increase public investment. These public investments are important because they can focus on increasing social protections in rural agricultural development; an area corporate agribusiness is not enthusiastic to invest in.

In order to provide further guidance on investing in agriculture in a way that safeguards the livelihoods and is protective of local peoples, frameworks for investing have been developed. One such framework is the *Principles for Responsible Agricultural Investment That Respects Rights, Livelihoods and Resources (PRAI*) developed by UNCTAD, FAO, IFAD and the World Bank and supported by the G20. These principles are included in Figure 2.

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[33] When referring to differing types of investment it is necessary to distinguish the difference between all private investment and that of corporate agribusiness, who are often foreign investors. Agriculture itself is a business; this means small-scale farmers in developing countries who are investing in their farms are also private investors. When discussing the negative impacts associated with private sector and exclusion of smallholder farmers, this analysis is referring specifically to corporate agribusiness stakeholders.

[34] Heffernan, W., Hendrickson, M., Arda, M., Burch, D., Rickson, R., Vorley, B., & Wilkinson, J. (n.d.). The Global Food System: A Research Agenda. Retrieved August 9, 2015, from http://www.foodcircles.missouri.edu/global.pdf

Frameworks such the PRAI are useful tools in evaluating private sector investment to ensure equity.

Figure 2: *Principles for Responsible Agricultural Investment that Respects Rights, Livelihoods and Resources*

Principles for Responsible Agricultural Investment that Respects Rights, Livelihoods and Resources	
Principle 1	Existing rights to land and associate natural resources are recognized and respected.
Principle 2	Investments do not jeopardize food security but rather strengthen it.
Principle 3	Processes relating to investment in agriculture are transparent, monitored, and ensure accountability by all stakeholders, within a proper business, legal, and regulatory environment.
Principle 4	All those materially affected are consulted, and agreements from consultations are recorded and enforced.
Principle 5	Investors ensure that projects respect the rule of law, reflect industry best practice, are viable economically, and result in durable shared value.
Principle 6	Investments generate desirable social and distributional impacts and do not increase vulnerability.
Principle 7	Environmental impacts of a project are quantified and measures taken to encourage sustainable resource use, while minimizing the risk/magnitude of negative impacts and mitigating them

Principles retrieved from: Unctad.org | The Practice of Responsible Investment Principles in Larger-Scale Agricultural Investments - Implications for corporate performance and impact on local communities. (n.d.). Retrieved August 10, 2015.

Building on the information presented within this section, the following will further explore research and development of technologies, globalization of the food systems through open markets, and corporate agribusiness investment in the U.S. Feed the Future Initiative. The initiative is the first whole of government U.S. commitment to tackling chronic food insecurity. With one in nine people chronically undernourished globally, and a growing triple burden of malnourishment, micronutrient deficiency, and obesity there is no question that a U.S. strategy is needed. However, there is room for improvement, specifically on issues of inclusion, when implementing Feed the Future programming going forward.

Issues of Inclusion in Feed the Future

Emphasis on Research, Technology and Markets

Feed the Future is committed to taking a holistic approach as evident by their results framework, and smallholder farmers serve as the primary target group. However, the Green Revolution has had a profound impact on the way the world looks at hunger. The foundational assumption of Feed the Future, that increased productivity is equivalent to less hunger, has its roots in the revolution.

In improving agricultural productivity Feed the Future is striving to increase access to, further develop and further knowledge on inputs such improved seeds, feed for livestock, and fertilizers. While the initiative emphasizes inclusivity, a 2015 Oxfam report found it to be falling short in this regard. The report summarized an analysis of Feed the Future activities in six countries, a specific function of the analysis was to report on the inclusivity of the projects. In assessing inclusivity three elements were reviewed, targeting investments to those in need,

enabling wider participation and women's participation.[35] The assessment found in a broad sense that much like within the Green Revolution, increasing crop productivity had national impacts contributing to economic growth, but that this did not translate to increased local level food security.

Oxfam took into consideration the typology of three "rural worlds" when analyzing inclusivity, as seen in Figure 3.

Figure 3: *Rural Worlds Typology*

Three Rural Worlds	
Rural World 1	The smallest, housing only 2–10 percent of producers; they have access to capital, organization, information, and infrastructure, and thus can more easily "step up" to formal and coordinated markets
Rural World 2	Consists of producers who have less access and for this reason are typically hesitant to invest their limited capital. They usually participate in informal markets and lack access to agribusiness and state resources.
Rural World 3	The most disenfranchised group of producers. They are, typically small-scale farmers at risk of losing their land or women-led farms. This is estimated to be 25% of sub-Saharan Africa and nearly half of the 450 million agricultural workers worldwide.

Information Retrieved from: *Promise and Potential Delivering Inclusive, Sustainable Development for Small-Scale Food Producers Through the Feed the Future Initiative Report*

The first element of inclusivity was targeting the investment to the people in need. Their findings showed an emphasis on Feed the Future programs in geographical regions of high

[35] Munoz, E., & Tumusiime, E. (2015, March 9). PROMISE AND POTENTIAL DELIVERING INCLUSIVE, SUSTAINABLE DEVELOPMENT FOR SMALL-SCALE FOOD PRODUCERS THROUGH THE FEED THE FUTURE INITIATIVE. Retrieved August 1, 2015, from http://www.oxfamamerica.org/static/media/files/Feed_Future_report_web.pdf

agricultural potential. Typically accessibility, water, soil fertility and climate were conducive to high yields and there was strong local or export market potential in the crops grown. For example, in Ethiopia 65% percent of the Feed the Future portfolio was found to be in the more food secure regions, whereas on 25% of the investments were in the regions considered to be least food secure.[36] Targeting had the potential to increase the livelihoods and incomes of those living in Rural World 2, but did not have the same impact for other farmers living without certain levels of access. Farmer's organizations in developing countries were often the primary means in which smallholders were targeted. While there are many benefits to these locally coordinated organization they often still exclude many of the most disenfranchised populations. Similar to the Green Revolution, targeting was specifically designed to reach smallholders who had access to the inputs necessary to use technologies successfully.

In examining wide participation there are similar difficulties. In Haiti and Tanzania, only farmers who had access to large plots of land and water benefited from program interventions. Limited access to capital, including credit resulted in many farmers participating passively, attending the trainings but unable to afford the inputs required to practice the techniques.[37] Despite being a whole of government approach USAID's Feed the Future initiative did not effectively coordinate with USAID's Food for Peace program. In the nine countries overlapping

[36] Munoz, E., & Tumusiime, E. (2015, March 9). PROMISE AND POTENTIAL DELIVERING INCLUSIVE, SUSTAINABLE DEVELOPMENT FOR SMALL-SCALE FOOD PRODUCERS THROUGH THE FEED THE FUTURE INITIATIVE. Retrieved August 1, 2015, from http://www.oxfamamerica.org/static/media/files/Feed_Future_report_web.pdf

[37] Munoz, E., & Tumusiime, E. (2015, March 9). PROMISE AND POTENTIAL DELIVERING INCLUSIVE, SUSTAINABLE DEVELOPMENT FOR SMALL-SCALE FOOD PRODUCERS THROUGH THE FEED THE FUTURE INITIATIVE. Retrieved August 1, 2015, from http://www.oxfamamerica.org/static/media/files/Feed_Future_report_web.pdf

only Guatemala saw the same households targeted.[38] In the other eight countries recipients of Food for Peace aid were too poor, with not enough resources to qualify for Feed the Future.

Finally in regard to women's participation, although the project strategy demonstrates commitment to inclusion of women, in actual implementation it is weaker. The project defines gender as a cross cutting issue. USAID has developed a Women's Empowerment in Agriculture Index (WEAI,) meant to measure inclusion and empowerment of women.[39] However, due to social and economic issues reaching women through interventions is difficult because they typically lack access to capital and do not have backing through farmer's organizations. In the Oxfam case studies a common observation was the control over land and access to credit remained for the most part with men. Additionally, women continued to have the largest workload.[40]

The impact of the U.S. commitment to building markets is evident in Feed the Future's strategic design, interagency coordination to promote policies enabling trade are part of Feed the Future implementation. Opening markets to import and export commodities, agricultural inputs, and food products, is seen as a critical part of ensuring food security.[41] To maintain this as a focal point, actors such as the Office of U.S. Trade Representative (USTR), U.S. Department of

[38] Integration and Coordination in Guatemala. (2014, March 16). Retrieved August 10, 2015, from https://www.spring-nutrition.org/publications/field-notes/integration-and-coordination-guatemala
[39] Munoz, E., & Tumusiime, E. (2015, March 9). PROMISE AND POTENTIAL DELIVERING INCLUSIVE, SUSTAINABLE DEVELOPMENT FOR SMALL-SCALE FOOD PRODUCERS THROUGH THE FEED THE FUTURE INITIATIVE. Retrieved August 1, 2015, from http://www.oxfamamerica.org/static/media/files/Feed_Future_report_web.pdf
[40] Munoz, E., & Tumusiime, E. (2015, March 9). PROMISE AND POTENTIAL DELIVERING INCLUSIVE, SUSTAINABLE DEVELOPMENT FOR SMALL-SCALE FOOD PRODUCERS THROUGH THE FEED THE FUTURE INITIATIVE. Retrieved August 1, 2015, from http://www.oxfamamerica.org/static/media/files/Feed_Future_report_web.pdf
[41] Global Hunger and Food Security Initiative: Consultation Document. (2009, September 28). Retrieved August 1, 2015, from http://www.state.gov/s/globalfoodsecurity/rls/other/129952.htm

Agriculture and U.S. Department of State have continuous involvement alongside USAID in Feed the Future programming.[42]

Examples of trade promotion in Feed the Future, are often at the national level through policy reform. The US Agency for International Development's Enabling Agricultural Trade (EAT) project's purpose is to "create enabling environments for agribusinesses that encourage private sector investment and promote food security."[43] The basis for this project is that agriculture is a business and any policy hindering business will negatively impact economic growth in the sector. Policies seen as roadblocks are "market-distorting" and "barriers impeding essential business functions," even if they are safeguarding the livelihoods of the poorer farmers.[44] Trade and Investment Framework Agreements (TIFAs,) are strategic frameworks and principles for dialogue on trade and investment issues between the United States and certain countries and regions. Currently Feed the Future countries such as Liberia, Ghana, and Rwanda have TIFAs.[45] Trade and market development are not inherently bad; however, the focus on globalized markets and changing national policies to ensure ease for agribusiness in markets can have negative impacts on smallholder farmers. Feed the Future initiatives are not immune to issues experienced in non-development focused trade policy shifts just because of the development focus.

New Alliance

[42] Siddiqui, I. (2013, May 22). Advancing Food Security by Opening Markets. Retrieved August 10, 2015, from http://feedthefuture.gov/article/advancing-food-security-opening-markets-0

[43] About EAT. (2014). Retrieved August 1, 2015, from http://www.eatproject.org/#abouteat
[44] About EAT. (2014). Retrieved August 1, 2015, from http://www.eatproject.org/#abouteat
[45] Siddiqui, I. (2013, May 22). Advancing Food Security by Opening Markets. Retrieved August 10, 2015, from http://feedthefuture.gov/article/advancing-food-security-opening-markets-0

The New Alliance for Food Security and Nutrition was launched in 2012 and was the start of a new phase of private investment in agriculture and nutrition[46]. President Obama hosted a G8 summit where African heads of state, corporate leaders and G-8 members pledged to partner through the New Alliance and to enable fifty million people to move out of poverty in sub-Saharan Africa by 2022[47]. Although not all countries receiving Feed the Future funding are part of the New Alliance and vice versa, Feed the Future initiative is the means in which the U.S. participates in the New Alliance. Proponents of the alliance consider it a "win-win" strategy for investors and farmers, big companies will provide the investment for large plantations and will provide jobs to African farmers.[48] New Alliance is seen as a tool to enhance country-led agricultural investment plans in Africa. Cooperation Frameworks to support the participating country's National Agriculture and Food Security Investment Plan are detailed by stakeholders based on policy and investment priorities.

The reality of the New Alliance is that it is representative of complacency for public investment in agriculture. Furthermore as previously discussed the private investment is not for the primary purpose of increasing food security, but specifically to make profit. The 180 companies signed onto New Alliance include Yara, Dupont, Syngenta, Monsanto, AGCO, Bunge, Cargill, Diageo, Louis Dreyfus, Kraft, and Unilever, all of which develop inputs necessary or resulting from commercial farming, such as fertilizers, seeds and chemicals, tractors, and commodities[49]. Participation in the New Alliance requires use of patented

[46] Private Sector Engagement Hub. (n.d.). Retrieved August 1, 2015, from http://feedthefuture.gov/private-sector-engagement-hub
[47] FACT SHEET: The New Alliance for Food Security and Nutrition. (2013, June 18). Retrieved August 1, 2015, from https://www.whitehouse.gov/the-press-office/2013/06/18/fact-sheet-new-alliance-food-security-and-nutrition
[48] Hertzler, D. (2015, July 2). The New Alliance model doesn't work – more evidence from Tanzania. Retrieved August 3, 2015, from http://www.actionaidusa.org/2015/07/new-alliance-model-doesnt-work-more-evidence-tanzania
[49] Facts about the G8's New Alliance in Africa. (2014). Retrieved August 1, 2015, from http://www.actionaidusa.org/sites/files/actionaid/newalliancefactsheet_1.pdf

"improved seeds," many of which have been genetically motivated. Further use of chemical inputs are also encouraged to complement these seeds. The design is focused on high external input farming techniques to benefit private partners, this makes it unlikely that ecologically sustainable techniques sustaining natural resources and not requiring access to capital and credit will ever be emphasized under New Alliance work.

Tanzania was one of the first countries to develop a Cooperation Framework through USAID for New Alliance involvement, alongside Ethiopia and Ghana. The country is now a prime example how the proper safeguards are not in place, and the same people the Feed the Future Initiative is meant to assist, are hindered. The Government of Tanzania, under USAID led New Alliance activity, has been enabling land grabs for sugar and rice agribusiness to use as plantations, often to contribute to biofuel production at the expense of smallholder farmers.[50] USAID even recognized the potential for negative impacts in a report released a month prior to project implementation, the report stated programming "will lead to displacement of villagers, loss of grazing rights, migratory corridors and water sources for pastoralists, and risks igniting land-based conflict."[51]

New Alliance implementation in Tanzania has highlighted multiple violations of the aforementioned PRAIT principles through agribusiness investment. Land rights are the most prominent violation coupled with lack of transparency; the government sells land being used by smallholder farmers to corporate investments at rates far below value. These investors then turn the land into plantations, rice in the case of British-based Agrica, and sugar for Swedish based

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[50] New Alliance, New Risk of Land Grabs: Evidence from Malawi, Nigeria, Senegal and Tanzania. (2015, May 1). Retrieved August 1, 2015, from http://www.actionaidusa.org/sites/files/actionaid/new_alliance_new_risks_of_land_grabs.pdf

[51] New Alliance, New Risk of Land Grabs: Evidence from Malawi, Nigeria, Senegal and Tanzania. (2015, May 1). Retrieved August 1, 2015, from http://www.actionaidusa.org/sites/files/actionaid/new_alliance_new_risks_of_land_grabs.pdf

EcoEnergy. Smallholders are displaced from the land, negatively impacting their ability to earn income and increasing inequality. In order for a smallholder to survive based on the plantation scheme they have to take a loan of US$16,000 per person, an amount over 30 times what the typical farmer will earn in Tanzania per year.[52] In the best case scenario it would take farmers seven years to pay back this loan before they can start earning profit, but this comes with high risk that smallholders are typically not informed of.

Recommendations

As we have explored in the previous two sections, historically the emphasis on Green Revolution technologies, global markets, and corporate agribusiness investment have not been inclusive to smallholder farmers. Feed the Future is no exception and through continued emphasis on these techniques the same issues of inclusion are experienced. The forthcoming confirmation of Gayle Smith as new USAID administrator in addition to the Global Food Security Act 2015 are opportunities for U.S. leadership to shift the whole of government strategy to one that is more inclusive and sustainable. Emphasizing agro-ecological farming techniques, recognition of the importance of informal local markets and safeguards to protect smallholders from issues surrounding global market integration and recommitting to public investment in agriculture are critical in building inclusive global food security.

Agro-ecology

Agro-ecology is the application of ecological science to the study, design, and management of sustainable agriculture to ultimately increase yield. It is based on practices such as recycling

[52] Take Action: Stop EcoEnergy's Land Grab in Bagamoyo, Tanzania. (2015, March 1). Retrieved August 10, 2015, from http://www.actionaidusa.org/sites/files/actionaid/take_action_-_stop_ecoenergys_land_grab_embargoed_report_0.pdf

biomass, using green manures to improve soils, minimizing water, nutrient and solar radiation losses, intercropping, and minimizing the use of chemical fertilizers, herbicides and pesticides.[53] Agro-ecology has many benefits in addition to high yield increase, not seen when using Green Revolution technologies. These include increased dietary diversity to improve nutrtional impacts, increased resilience, reduction of rural poverty and finally empowerment of smallholder farmers.[54]

As previously explored, yield increase is not the lone factor in influencing increased food security, however techniques to increase yield can be valuable. Especially when these techniques require no additional inputs. Agro-ecology uses similar inputs as traditional farming methods, but in a way that is more conducive to environmental synergy. Crop yields increased by an average of 79% in a survey of 286 ecological agriculture projects in 57 countries covering 37 million hectares on 12.6 million farms.[55] In terms of nutritional security, agro-ecology emphasizes growing of nutrionally dense local foods in addition to new foods compatiable with conditions. This means more fruit and vegetables are being grown. Intercropping methods often emphasis legumes to increase soil fertility, having additional positive nutrional impacts. Increased resilience is also an impact of agro-ecology, this refers to resilience in multiple dimensions. Agro-ecology ensures crops conducive to local conditions and variations in climate are primarily being grown, this takes into consideration factors such as water avaialbility and soil health and promotes crops that are both

Crop **yields increased by an average of 79% in** a survey of 286 ecological agriculture projects in 57 countries covering 37 million hectares on 12.6 million farms

[53] Wijeratna, A. (2012, June 1). Fed Up-Now's the Time to Invest in Agro-ecology. Retrieved August 1, 2015, from http://www.actionaidusa.org/sites/files/actionaid/ifsn_fed_up.pdf
[54] Wijeratna, A. (2012, June 1). Fed Up-Now's the Time to Invest in Agro-ecology. Retrieved August 1, 2015, from http://www.actionaidusa.org/sites/files/actionaid/ifsn_fed_up.pdf
[55] Wijeratna, A. (2012, June 1). Fed Up-Now's the Time to Invest in Agro-ecology. Retrieved August 1, 2015, from http://www.actionaidusa.org/sites/files/actionaid/ifsn_fed_up.pdf

culturally important and able to adapt to less than perfect conditions. Resilience is seen in the building of food soverignty as well, not relying on global markets for imports. These techniques ultimately result in a reduction of rural poverty, yield increases of diverse nutritional crops profitable in local markets can increase farmer income.[56] Because the additional inputs needed to practice agro-ecological methods are minimal inclusion can be maximized. Access to capital and credit to successfully increase yield is unnecessary. This maximizes inclusion because access is not needed to credit or markets to purchase technology. Smallholder farmers are able to work with the resources they already have to improve traditional farming methods.

Emphasis on Informal, Local Markets

It is critical to ensure global food markets and systems do not undermine smallholder farmers. Safeguards should be in place to protect smallholder farmers from harmful impacts resulting from increased emphasis on trade and commodity specialization. Furthermore, recognition of the value of informal markets the majority of small-scale producers operate in is necessary.[57]

Trade liberalization and building global markets has been at the core of U.S. economic policy in recent decades. In recognizing this priority of openeing markets to U.S. exports is unlikely to shift, especially with the proliferation of new trade promotion agreements with Europe and Asia, it is critical to ensure U.S. economic policies are not wholy interconnected with development policy. The whole of government approach of the Feed the Future initiative is commendable in the recognition of the multiple variables impacting food and nutrion security globally. However, in prioritizing poverty reduction and positive nutrtional impacts, specifically

[56] Wijeratna, A. (2012, June 1). Fed Up-Now's the Time to Invest in Agro-ecology. Retrieved August 1, 2015, from http://www.actionaidusa.org/sites/files/actionaid/ifsn_fed_up.pdf

[57] FAO**.** 2014b. International Year of Family Farming, Webportal (accessed April 22, 2015) available at: http://www.fao.org/family-farming-2014/home/what-is-family-farming/en/

among smallholder farmers, it is critical to ensure these farmers are not ultimately pitted against subsidized U.S. farmers when trying to sell crops. Local production and consumption of food, specifically in developing countries, can help shield against vulnerability. Additionally policies should not emphasize the need to "grow for the market" through crop specialization. Priority should be achieving food security on local and community levels with nutrtionally dense foods.

Corporate Agribusiness Investment

Corporate agribusiness should not be setting development priorities in food insecure communities. These private entities are profit motivated and are obligated to their stockholders over smallholder farmers. Recommiting to public investment in agricultural development to ensure techniques, such as agro-ecological methods and safeguards against negative impacts of globalizatioj, are being implemented is crucial.

With agribusiness involvement comes the need to ensure principles of sustainability are prioritized. These principles should be upheld by the most stringent definitions possible. The New Alliance should be accountable to the highest standards of transparency when interacting with local farmer organizations. Land rights of peoples living and working as smallholder farmers should codified through land tenure policy to maximize inclusion rather than allow for agribusiness investment. If the New Alliance cannot adequately meet stringent standards to protect smallholder farmers, is should be eliminated.

Assessment and Lessons Learned

In producing this policy paper I was able to gain further insight on the process of effectively conducting policy research and analysis and writing in a way in which is conducive to advocacy. This process allowed me to gain an additional understanding, outside of what was discussed in class, surrounding the use of policy papers to advocate for specific policy outcomes. Additionally, I experienced challenges in the ability to synthesize large amounts of technical information in a way that is clear to advocacy organizations and legislative aids that do not have a lot of background in the issues. I felt a strength in writing this paper was my ability to analyze large amounts of material. However, a weakness was using this material in the context of a communication tool.

Writing this paper allowed me to further knowledge gained during the Advanced Policy Advocacy and Analysis course. During the course I had an introduction to writing policy papers when writing on food aid reform. Food aid reform has been an ongoing campaign, starting in the Bush administration and continuing into the Obama, for this reason many advocacy materials had already been developed. When writing the policy paper it was easier for me to synthesize the information and pull key points because I could reference resources others had already created specifically for advocacy.

Writing this policy paper was a different experience than writing on food aid. There are substantial amounts of research surrounding impacts of the Green Revolution, global markets and private sector investment and their impacts on smallholder farmers. Additionally, information on Feed the Future implementation over the past five years is available through multiple sources. However, the information surrounding the initiative has primarily been synthesized in way to support scale up of the current implementation. In my analysis of Green

Revolution technologies, globalized markets, and corporate agribusiness investment and their relation to the Feed the Future Initiative, I felt a policy paper, as a tool for promoting inclusion was necessary. In advocacy surrounding implementation of U.S. policy and long-term food security programs, the NGO community can use this paper as a tool to further inclusion. I wanted to emphasize the important step Feed the Future Initiative takes, just by addressing food security. However, I also wanted to address that current implementation is not adequate in addressing hunger and poverty in a way that is fully inclusive.

While writing this paper I further felt policy research and analysis is my strength in policy advocacy field. I enjoy the elements associated with policy research and analysis and the step-by-step-approach involved in defining a problem, collecting evidence, and offering recommendations. I also enjoy thinking critically in my analysis and creating linkages that are not typically emphasized.

A challenge, similar to one I experienced in class, is the need to write persuasively and present information in a way that effectively communicates with a policy influencer. It is important when writing policy papers to place facts in a way that maximizes persuasive influence. This includes both writing style, in addition to formatting to highlight "killer facts." This has consistently been one of the most difficult parts of advocacy for me. However, in writing this paper I am slowly becoming more comfortable with writing in this style for advocacy. This leads me to believe that with further practice, writing for advocacy will become second nature.

Overall, I felt that the process of writing this policy paper challenged me because of the requirement to express linkages between different topics in a way that implied clear policy

connections. However, this challenge also allowed me to see strengths in my ability to write for policy advocacy.