Ghanaian Journal of Economics, Vol. 2, December 2014
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Moving from vision to reality: Ending hunger and under nutrition in Africa by 2025

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Abstract

The world continues to face serious challenges of hunger and under nutrition and nowhere is this more evident than Sub-Saharan Africa (SSA). Despite the region's unprecedented economic growth in recent years, SSA is home to the highest prevalence of hungry people in the world and is one of the only two developing regions where the number of hungry people has steadily risen since 1990 (alongside Western Asia). In a monumental move, African leaders pledged in 2013 to work together to end hunger by 2025. This powerful commitment comes on the heels of the tenth anniversary of the Comprehensive Africa Agriculture Development Plan (CAADP), a regional framework that has helped spur food production and food security over the last decade. African governments have shown their commitment to achieving food security, but the task ahead for improving SSA's food security remains immense, especially given the spectrum of country-specific pathways required. The challenge remains how to transform the vision of ending hunger in SSA by 2025 into reality.

Keywords: *Food security, Food policy, nutrition, Sub Saharan Africa*

1. Africa's vision for food security and improved nutrition

With less than two years to go, the deadline for achieving the Millennium Development Goals (MDGs) is fast approaching. The fight to end hunger and under nutrition must continue and be made a priority after 2015. Momentum for this agenda is fast building up. Events such as the 2013 "High-Level Consultation on Hunger, Food Security, and Nutrition in the Post-2015 Development Agenda" – which was hosted by the Governments of Spain and Colombia and led by the Food and Agriculture Organization (FAO) and World Food Programme – have brought together members from governments, non-governmental organizations, civil society, and the private sector to discuss and inform the design of a post-2015 development

agenda as it relates to global food and nutrition security. It is essential that the post-2015 development agenda focus on poor and hungry people while pursuing sustainable development goals.[1] With proper planning, investments, and actions, it is possible to end hunger sustainably by 2025—an ambitious and precise goal that is achievable, as shown in many countries including Brazil, China, Ghana, Mexico, and Vietnam (Fan and Polman, 2013).

In June 2013, leaders of African governments, together with members of international organizations, civil society, and the private sector, adopted the Declaration to end hunger in Africa by 2025 at a high-level meeting on food security jointly convened by the African Union, the FAO and the Lula Institute.[2] The main aim of the Declaration is to catalyze concrete actions that build on the momentum established thus far under CAADP. In the declaration, African leaders pledged their political commitment to this monumental target, emphasizing the importance of strengthening public investment in agricultural development and cross-sectoral collaboration among private and public sector actors for the implementation of this agenda. They also promised to complement food and agricultural productivity efforts with social protection, paying special attention to nutrition and environmental sustainability. Special focus was also given to the role of women, youth, and smallholders as significant actors in promoting agricultural development and prosperity.

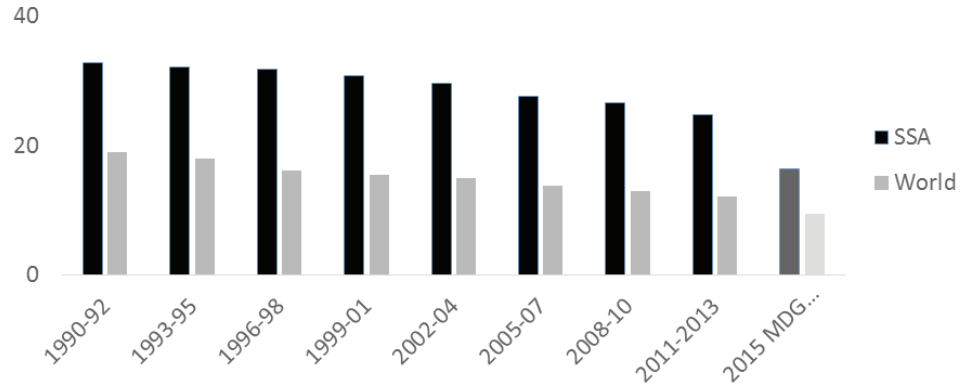
2. Current progress in reducing hunger and malnutrition

The world has made significant progress in raising food security over the past three decades (Figure 1). Globally, the number of chronically hungry people has gradually declined from approximately 1 billion to 842 million, a reduction of 17 percent, between 1990/1992 and 2011/2013 (FAO 2013a). This means that about one in eight people in the world suffers from hunger today, the majority of whom live in developing countries. A wide spectrum of regional and country level variation exists behind these global trends. The number and proportion of undernourished people have fallen significantly throughout most of Asia, especially Southeast Asia and China, as well as Latin America and Central Asia. In contrast, hunger continues to be a substantial problem in SSA and Western Asia, with the number of undernourished people in SSA rising from 173 million in 1990/19992 to 223 million in 2011/2013. SSA is currently home to over a quarter of the world's hungry, compared to 17 percent in 1990/1992. Although the prevalence of undernourishment in SSA has been on the decline (from 32.7 percent to 24.8 percent), hunger rates in SSA remain the highest in the world compared to other regions. This means that SSA as a whole is not on track to achieve the first MDG of halving the prevalence of hunger by 2015.

[1] *http://dgcorner.ifpri.info/2013/04/11towards-a-post-2015-development-agenda-on-food-and-nutrition-security/*

[2] *http://www.fao.org/fileadmin/user_upload/newsroom/docs/DECLARATION_FINAL.pdf*

Figure 1. Prevalence of Undernourishment, SSA (%)



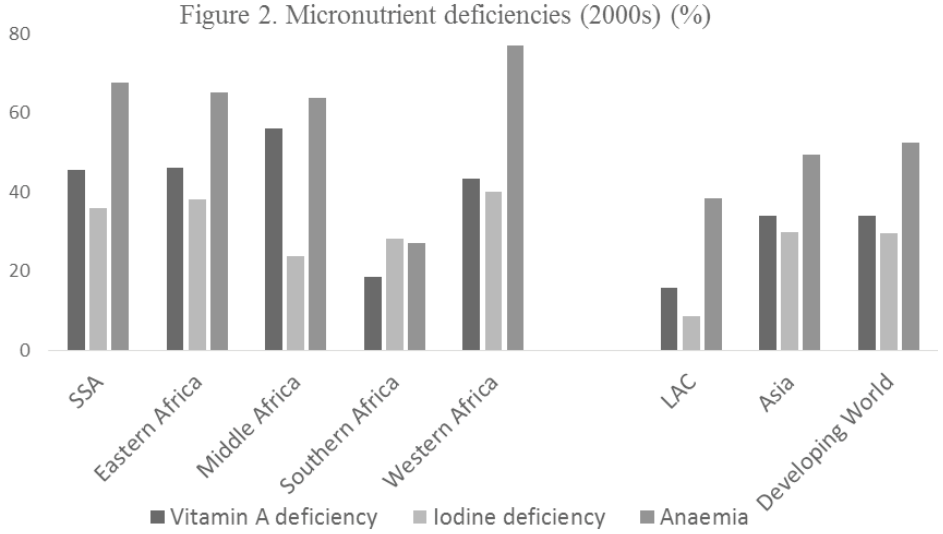
Source: *FAO 2013a*

SSA's food security situation should, however, not be judged as one story, but rather as a compilation of many country-level experiences (FAO, 2013a). By far, Ghana and South Africa have the best food security record, with the current rate of hunger less than five percent in both countries. Another 15 countries in SSA have experienced a reduction in both the number and prevalence of undernourishment between 1990 and 2013: Angola, Benin, Cameroon, Central African Republic, Chad, Ethiopia, Gabon, Mali, Malawi, Mauritius, Niger, Nigeria, Rwanda, Togo, and Zimbabwe. These countries have already met or are on track to meet the first MDG hunger target, while progress in 17 other SSA countries is not sufficient to reach the target if current trends continue. At the other end of the spectrum, nine countries have experienced an increase in both the prevalence and number of undernourished people and have made no progress toward the hunger MDG: Botswana, Burkina Faso, Burundi, Ivory Coast, Madagascar, Swaziland, Uganda, Tanzania, and Zambia.

Individuals need more than calories for health and well-being; they also need a nutritious and balanced diet. Under nutrition refers to deficiencies of macronutrients, such as protein, or of essential micronutrients, such as vitamin A, iron, and zinc. The inadequate consumption of macro- and micronutrients is often known as "hidden hunger", affecting more than 2 billion people globally, especially in Africa. Globally, a significant segment of children in developing countries suffer from micronutrient deficiencies, including anaemia (52.4 percent), vitamin A deficiency (34 percent), and iodine deficiency (29.6 percent) (Figure 2). Micronutrient rates in SSA are higher than in the rest of the world: anaemia (67.8 percent), vitamin A deficiency (45.6), and iodine deficiency (36 percent). Although micronutrient deficiencies have been on the decline throughout the developing world (including SSA) over the past several decades, the decline has been much less pronounced in SSA than in Asia and Latin America (FAO, 2013b). Food price hikes and the recurring droughts in the

Sahel and the Horn of Africa are among key factors accounting for slow progress in nutrition levels.

Figure 2. Micronutrient deficiencies (2000s) (%)



Source: *FAO 2013b*

Another commonly used indicator of under nutrition is stunting (height-for-age), which captures the long-term effects of dietary deprivation (often beginning with maternal under nutrition). Significant progress has been made throughout the developing world in the reduction of stunting over the last almost twenty years, and projections indicate that this decline will continue for at least another decade (Figure 3). Especially noteworthy progress can be seen in Asia and LAC, with both regions decreasing stunting rates by approximately 40 percent between 1995 and 2012, albeit Asia started at a much higher level: the prevalence of stunting in Asia fell from 42 percent in 1992 to 25 percent in 2012 compared to LAC's decrease from 22 percent to 13 percent during the same period. Africa as a whole also made strides in decreasing stunting, but progress was more muted and varied across different sub-regions. With a stunting rate of 42 percent, eastern Africa continues to have the highest prevalence of stunting on the continent, whereas middle Africa has made the most significant progress, decreasing stunting rates from 44 percent to 33 percent between 1995 and 2012.

Figure 3. Prevalence of Stunting (%)

Source: *UNICEF-WHO-World Bank 2014*

Insufficient food intake (including macronutrients or essential micronutrients) has the potential to weaken the mental and physical development of children and adolescents and to reduce the productivity of adults due to illness and reduced work capacity (Ruel and Hoddinott, 2008). For example, evidence from Uganda indicates that nutrient consumption (especially Vitamins B12 and B6 and protein) has a significant positive effect on farmer's labour productivity and income (Ulimwengu et al., 2011). The current levels of stunting alongside the overall under nutrition situation in Africa reveal that much remains to be done to accelerate progress.

3. Challenges remain to Africa's food security efforts

3.1 Low agricultural productivity

An essential component of easing Africa's food insecurity burden is improving its agricultural productivity, that is to say getting more output from existing resources. However, food production systems in Africa have been characterized by low productivity over the last several decades, due in part to an acute lack of skills, well-functioning institutions, and investments. Global food production has been increasingly driven by improvements in total factor productivity (the ratio of total commodity output to total inputs) during the last decade, with the developing world experiencing especially high productivity growth of 1.29 percent (particularly LAC, China, and Southeast Asia) (Fuglie and Nin-Pratt, 2013). Average annual TFP growth in SSA has been 0.85 percent between 2001 and 2009 (compared to 0.5 percent between 1971 and 2009) – although some SSA countries, including Benin, Cameroon, and Senegal, have experienced annual TFP growth between 2 and 3 percent. This implies that production growth in Africa has been driven by use

of more inputs than by improved technologies and efficiency improvement, thus presenting problems for future productivity growth. At the same time, a comparison of SSA's current and potential agricultural productivity (based on assumptions regarding optimal management of local soil and water resources) shows that current yields in SSA are only 24 percent of their potential (compared to 11 percent in East Asia) (FAO, 2011).

Agricultural production systems in Africa are dominated by small farms, and any conversation about increasing the region's productivity needs to focus on smallholder farmers. Estimates indicate that Africa is home to approximately 33 million smallholder farms (less than two hectares), representing 80 percent of all farms in SSA and generating up to 90 percent of food production in some countries (Wiggins and Keates, 2013). Moreover, farm size is declining in a number of countries (Otsuka and Place, 2014). Many smallholders in Africa are unable to participate in food value chains because they cannot meet increasingly specific and strict quality and safety standards, high volume requirements, and logistics specifications of domestic (especially urban) and international markets. Smallholders often lack access to agricultural inputs and the necessary credit and technologies to sustainably increase production, compounded with poor physical and structural access to major markets. All these factors contribute to limiting the smallholders' productivity and potential role in food production value chains.

3.2 Limited agricultural investments

Under the CAADP framework, African governments committed to combat poverty and food insecurity by investing at least 10 percent of total government expenditures in the sector—popularly known as the Maputo Declaration. Although agricultural expenditures increased between 2003 and 2010 in Africa, neither Africa nor any of the sub-regions achieved the Maputo target (Benin and Yu, 2013). In fact, the most recent estimates indicate that Africa devoted 3.9 percent of its total expenditures on the agricultural sector in 2010, equal to 2003 levels, but down from a high of 4.4 percent in 2005 and 2006. Some sub-regions did better than others, with eastern and western Africa allocating an average of 7.7 and 7 percent of their total expenditures toward agriculture, respectively, between 2003 and 2010 (compared to Africa's average of 4 percent). Since 2003, the performance of African countries in achieving the CAADP 10 percent target has been mixed, with 13 countries surpassing the target during at least one year: Burundi, Burkina Faso, Republic of Congo, Ethiopia, Ghana, Guinea, Madagascar, Malawi, Mali, Niger, Senegal, Zambia, and Zimbabwe. Only seven of these countries surpassed the target in most years: Burkina Faso, Ethiopia, Guinea, Malawi, Mali, Niger, and Senegal.

Evidence from within and outside of Africa shows that the effects of different types of agricultural spending vary across countries and time (see for example, Fan, 2008

and Alston, 2010). Investments in agricultural research and development (R&D) can be an especially effective tool to increase agricultural productivity and reduce poverty, especially over the long term. According to recent evidence, increased public spending on agricultural R&D in SSA was driven by a relatively limited set of countries, especially Nigeria, Tanzania, and Uganda (Beintema and Stads, 2013). Other often small and donor-dependent countries are stuck in a vicious cycle of underinvestment and serious capacity constraints in agricultural R&D. Moreover, recent evidence points to an increasing emphasis in many African countries on short-term agricultural investments (such as subsidies) over long-term investments (e.g. agricultural R&D) (Benin and Yu, 2013).

3.3 Weak governance and public sector capacity

The lack of strong governance and public sector capacity within many SSA countries can compromise their potential for effective policymaking and agricultural activities toward reducing hunger and under nutrition (African Capacity Building Foundation, 2012). According to various indices, a large portion of SSA countries have low capacity for country-driven development and weak governance systems, which manifest themselves in the form of declining rule of law indicators, low levels of capacity development outcomes, and limited capacity to build the necessary skills and innovation to transform agriculture (Mo Ibrahim Foundation, 2013; African Capacity Building Foundation, 2012). Challenges also persist in terms of inadequate legislative and civil society participation in budget oversight and rent-seeking activities of tax and customs officials (African Development Bank Group, 2013). In fact, approximately 90 percent of SSA countries are perceived to have a serious corruption problem (Transparency International, 2014). Likewise, the capacity to design a comprehensive approach to food and nutrition security is also limited by the lack of timely and reliable data from weak agricultural research systems that are struggling with a shortage of qualified scientists, low salaries, high staff turnover, and poor conditions of service and facilities (Beintema and Steds, 2013). For example, a recent institutional review of Ghana's Ministry of Food and Agriculture offered insights on the limitations to the capacity of the Ministry, including: weak coordination with other institutions; questionable quality and reliability of the data collected, compounded by lack of quality checks; and, disproportionate access of high-level staff to training opportunities compared to field staff (Kolavalli, 2010). Similarly, an analysis of fertilizer subsidies in Malawi indicates that the country's Ministry of Agriculture is in need of higher capacity for policy analysis in order for it to become more proactive in the policy process.

Secure land resources are a governance issues that is especially relevant to effective food security strategies, with evidence showing that land tenure security is a major determinant of land use, farm investments, and agricultural intensification (Otsuka and Place, 2014). Nearly half of the world's uncultivated arable land can be

found in SSA (202 million hectares) (Fisher and Shah, 2010). Poor land governance – namely the laws, processes, and institutions that govern access to land – is cited as a significant contributing factor in this food production under-performance (FAO, 2012). In an environment plagued by an outdated and opaque land tenure systems, an overwhelming share (approximately 90 percent) of rural land in SSA is not registered and thus held informally by local residents (Byamugisha, 2013), making the land highly susceptible to expropriation. At the same time, land administrations in SSA are inefficient (requiring nearly double the costs and time to transfer land compared to developed countries), corrupt, and lacking the essential resources and capacity. Land ownership has become an especially relevant topic recently in conjunction with the high levels of attention (both in the media and policy discourse) given to large-scale land acquisition deals in Africa (Cotula et al., 2010; Robertson and Pinstrup-Andersen, 2010).

3.4 Conflict

Over half of the world's fragile and conflict-affected countries (29 out of 53 countries) are found in SSA (OECD 2014). Food security is both a catalyst and consequence of social and political conflict (Brinkman and Hendrix, 2011). On one hand, state fragility and the presence of conflict are a major constraint to development efforts such as improving food security (World Bank, 2011). Children living in conflict-affected or fragile developing countries are twice as likely to be undernourished as children in other developing countries. The agricultural sector seems to be disproportionally affected by conflicts and faces important difficulties in recovering from such disruptive events. While the nature of conflicts varies, many longer lasting conflicts take place in rural areas and lead to large productivity-reducing impacts through the destruction of agricultural assets and infrastructure (Deininger and Castagnini, 2006). On the other hand, food insecurity is one of the contributing factors (and risk multipliers) behind political mobilization. Recent events in the Arab and Sahel regions are examples of how food insecurity (driven by higher food prices and agroclimatic variability), combined with other factors such as high unemployment, lack of democratic institutions, and growing inequalities, can spark civil conflict (Breisinger et al., 2011; Brinkman and Hendrix, 2011; Helland and Sørbø, 2014). However, the strength of the relationship between conflict and food security is not constant but rather very context-specific, depending on a number of extenuating demographic, social, economic, and political factors within the surrounding environment.

3.5 Climate change

Food security in many SSA countries is particularly vulnerable to the negative impacts of climate change–including higher temperatures and more variable precipitation patterns–through channels such as reduced yields, farm incomes, and welfare. This

vulnerability is grounded in the region's high poverty rates and high dependence on rain fed agriculture alongside its low levels of human and physical capital and infrastructure. A recent meta-analysis of the projected impacts of climate change on crop productivity in SSA shows that average crop yields are projected to decline by 8 percent by 2050 (Knox et al, 2012). Future scenarios for climate change indicate a range of sub regional consequences for agriculture, food security, and resource management. For example, without adequate adaptation measures, climate change in eastern Africa is predicted to decrease yields in the region by 5 to 20 percent for wheat, soybean, sorghum, and irrigated rice, whereas rain fed maize and rain fed rice yields are projected to increase slightly (Waithaka et al., 2013). The impact will also vary within countries, with certain areas becoming no longer suitable to grow crops (such as maize in parts of West Pokot County in Kenya), while other areas will develop the potential for crop production (such as irrigated maize in the Rift Valley). Similar analyses can also be found for western and southern Africa, albeit with differing sub regional, country (and sub-country), and crop impacts (Hachigonta et al., 2013 and Jalloh et al., 2013).

The impacts of a changing climate on agro ecosystems will challenge food production systems already under pressure to feed a growing population throughout Africa. Under a climate change scenario, SSA's food availability in 2050 will be approximately 500 calories less than the no-climate-change scenario and 400 calories less than the 2000 average (Nelson et al., 2009). Even without climate change, Africa is the only region where the number of malnourished children is projected to increase between 2000 and 2050, from 33 to 42 million.

4. Policy options

4.1. Strengthen climate-smart, nutrition-sensitive growth in agricultural productivity

Policymakers should focus on institutions, policies, and investments that increase productivity, especially among smallholders, and address the agro climatic, natural resource, and nutrition challenges facing future food security. Countries with weak land governance need to facilitate the efficient transfer of land through the certification of land rights and well-functioning land rental and sales markets. Higher agricultural R&D investments should, for example, aim to increase the availability and consumption of nutritious foods through the development of more nutritious crop varieties (using, for example, bio fortification technologies), alongside public information campaigns and pricing policies. At the same time, a recent study from Kenya shows that the advancement of triple-win practices and technologies is an especially effective approach to raising productivity alongside climate change mitigation and adaptation benefits in a synergized manner (Bryan et al., 2011). Such efforts include developing and introducing crop varieties that are more resilient to adverse and uncertain climatic condition, but such initiatives need to be grounded in an environment of increased investments in agricultural R&D. However, it is

also important to identify, prioritize, and promote different types of investments in different locations and to find the correct balance between investments with short- and long-term benefits.

4.2. Establish efficient and inclusive food value chains

Linking smallholders to agri food value chains is an important component of improving agricultural productivity and food security in Africa, extending from production and processing to marketing. Overcoming barriers to value chain access requires institutional innovations for vertical and horizontal co-ordination among smallholders, including group lending, rural marketing, and producer associations. Rather than pushing for one-size-fits-all solutions, policies should encourage the development and coexistence of various farming and co-ordination models. Such mechanisms require strong institutional capacity alongside information and communication technologies to reduce transaction costs for smallholder farmers, increase their bargaining power, and acquire real-time market information—on, for example, prices, demand, quality standards and weather. With this information, farmers can make better-informed production and marketing decisions and participate more actively in value chains. Smallholder-friendly financial services bundled with development services such as extension and advisory services can be very effective. Complementary investments in rural infrastructure, including roads and irrigation, also need to be scaled up.

4.3. Promote productive social safety nets

Better-targeted and more productive social protection policies are needed in Africa both to cushion livelihood shocks and to offer opportunities to escape food and nutrition insecurity. The establishment of social protection systems in rural and urban areas should be accelerated, targeting vulnerable segments of the population – especially women, children, and the elderly – and the most food-insecure regions. Possible interventions include conditional cash and food transfers, maternal and child nutrition programs, public works, and insurance schemes. Such schemes should focus on short-term food assistance to cushion against food safety shocks and long-term efforts—in areas such as education, infrastructure, and public health—to help vulnerable populations build productive and resilient livelihood strategies. Innovative social protection programs in Bangladesh, Brazil, Ethiopia, and Mexico are a few examples of how the government can consolidated scattered initiatives and provided an integrated package of social protection, nutrition/education/health initiatives, and agricultural support interventions.

4.4. Scale-up support for country-specific, evidence-based policymaking

Adapting policies to the local context can increase the efficiency and sustainability of policies aimed at ending hunger and under nutrition. For example, ending hunger and under nutrition in conflict-affected countries is an unrealistic aspiration, and

focus should rather be directed toward integrating food security interventions into peacebuilding efforts. National strategies should be guided by on-the-ground evidence. Quality, reliable, and timely data and measures on hunger and under nutrition alongside improved analytical capacity play an important role in monitoring the progress and impact of food and nutrition interventions. Robust accountability systems require a clearly defined baseline, independently measured impacts, and performance assessments based on progress made thus far. Initiatives that promote dialogue between research and policy making communities should be supported. A policy environment that enables local experimentation and impartial evaluation of innovative pilot projects, policies, and reforms is essential before scaling up successful policies and programs.

4.5. Engage new players and enhance global partnerships

Critical to sustainably ending hunger by 2025 is the successful engagement of key actors, including emerging economy donors, researchers, the private sector, and philanthropic organizations. Lessons from the successful implementation of policy, institutional, and technological innovations in other developing countries can provide guidance for positive changes to eliminate hunger and under nutrition in Africa. Successful developing countries should especially engage in knowledge-sharing and transfer with other developing countries, especially with regard to agricultural research and technologies. The private sector also has the potential to generate sustainable solutions to ending hunger and under nutrition but only when supported by a business-friendly environment and a sound legal and regulatory framework to ensure that the private sector's activities are socially and environmentally responsible.

5. Conclusion

Ending hunger and under nutrition by 2025 should have top priority in the post-2015 development agenda in many countries throughout Africa. Concerted actions and collaboration by all stakeholders, including national governments, donors, civil society, and the private sector, are needed to make this happen. Moving forward, policy actions should focus on strengthening the following areas: climate-smart and nutrition-sensitive agricultural productivity, smallholder-friendly value chains, productive social safety nets, evidence-based policymaking, and the engagement of new players. These efforts will of course need to be adapted to the country-specific socioeconomic and environmental challenges and opportunities in the region. The commitment to the goal of ending hunger and under nutrition in Africa by 2025 is already there, now the real work begins to make it happen.

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