Organic Agriculture and Climate Responsibility in the Philippines

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Summary: Climate change negatively impacts on Philippine agriculture, a key component of the Philippine economy. At the same time, conventional agricultural methods, the mainstream farming method in the country, contributes to climate change by way of high carbon emissions. This makes organic agriculture a viable climate change adaptation strategy because it leads to carbon sequestration reducing energy emissions through crop rotation and increasing biodiversity and soil fertility. In tune with responsible agricultural production, farmers' cooperatives and entrepreneurs have implemented organic agriculture starting in the 1990s but most have just started in the last decade. The original intent of organic farmers is to provide a healthy alternative to insecticide and pesticide-infested conventional agricultural produce. But it turns out that organic farming is also earth friendly and can be developed into a climate change adaptation strategy. To make organic farming sustainable, such enterprises should be financially viable. As of now, producers either export their products, market their products in groceries, have moved toward an online distribution system, or are developing a text-based marketing-distribution system direct to responsible households. The obstacle toward developing the organic market is the higher prices of organic produce compared with produce of conventional farming. A 2011 research shows that organic agriculture can be financially rewarding, though. Farmers should try to resolve the dilemma on how to make organic agriculture sustainable and, at the same time, affordable to the large sectors of consumers. Government should also be involved in advocating for and supporting organic farming through incentives and financial support. Sustainability of organic farms also need the support and patronage of a responsible, healthy, and earth-friendly consumer base. This consumer movement can be developed from a strategic perspective. This makes education on climate change and organic agriculture an important component of such a program. It is a positive development that the Department of Education, in charge of the country's basic education is offering courses on climate change and sustainable development in its Grade 10 curriculum. The country's agency in charge of technical and vocational education, the Technical Education Skills and Development Authority, is offering a course on organic agriculture production. Organic farming is a way to develop a healthy population and to mitigate the impact of climate change that need participation from responsible producers, responsible distributors, responsible consumers, responsible finance, and responsible government, among others.

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Climate change impacts different countries in different ways. In the Philippines, hardest hit are the poor and vulnerable sectors who are not equipped to withstand the economic, social, and physical damages brought about by extreme weather conditions, be it drought or typhoons, now occurring even in odd, off-season periods.

Climate change has hit hard on the agricultural sector. This affects the production of staples such as rice and corn, vegetables, livestock and fisheries because of heavy rainfall, typhoons during off-season periods, flooding, and alternatively, drought, affecting production and supply, decreasing the income of farmers and fisherfolks, raising prices of agricultural produce, and ultimately, hurting the population, the direct consumers. Thus, climate change impacts the economic and socio-cultural life of the people directly and indirectly.

While climate change has negatively affected agriculture production, conventional methods of agricultural farming, which is the mainstream agricultural production method in the country, likewise contribute to climate change. High energy carbon emissions through nitrous oxides and methane are released through conventional farming, causing warming of the atmosphere and eventually, climate change (www.fao.org, n.d.).

It is in this light that scientists and researchers have argued for the shift towards organic agriculture as a viable and environmental-friendly alternative to conventional farming and as a climate change adaptation strategy because it is a “holistic sustainable production system” (Kolling and Elola-Calderon, 2012). The Food and Agriculture Organization of the United Nations said that “carbon sequestration, lower-input of fossil fuel dependant resources, and use of renewable energy all present opportunities for organic agriculture lead the way in reducing energy consumption and mitigating the negative effects of energy emissions” (www.fao.org, n.d.). Carbon sequestration is attained through crop rotation practices in organic agriculture that lead to increased biodiversity, healthy organisms, soil fertility and soil organic carbon levels (Muller, 2012). There is a need for “restructuring of our global food system with the goal of reversing climate change through photosynthesis and biology” through regenerative organic agriculture (Rodale Institute, 2014).

Organic farmers in the Philippines are just starting to make its presence felt on a more commercial scale although some farming cooperatives and fair trade advocates have led the way since the 1990s. Sugar planters from Negros and banana farmers from Iloilo have been exporting mascobado demerara sugar to Japan and Germany through Alter Trade Philippines, Inc. These exports comprise 80% of total produce while 20% is marketed locally because of the low local market demand (Naturland, n.d.) In fact, in Negros Island, “16,000 hectares of land are already being utilized to produce

organic products, from the famous Mt. Kanlaon coffee to gourmet rice, muscovado sugar, mango, papaya, squash fruit, lettuce, pork cuts and various herbs" (The Philippine Star, 2016).

Another enterprise engaged in organic farming and distribution of organic produce is LiveGreen, operating since 2009 (www.livegreen.ph, n.d.). It "ensures the protection and care of the environment through the use of farming methods that are not only efficient but likewise fundamentally waste-free and hazard-free". Add to this a growing number of entrepreneurs of organic vegetables and pigs that include Uma Verde Econature Farm in Candelaria, Quezon, the Costales Nature Farm in Majayjay, Laguna, and the Teofely Nature Farm in Silang, Cavite, (www.organicpig.ph, n.d.).

Organic farms started with the objective of producing whole and heathy food for family consumption and/or for a select niche of health-conscious consumers. However, as recent scientific researches have shown that organic farms may also be a strategic adaptation strategy in response to climate change, then the benefits of organic farming go well beyond eating healthy to mitigating and adapting to impacts of climate change. These initiatives then deserve promotion and financial support and/or incentives from government.

To make organic agriculture viable, the needs and interests of the entire organic agriculture supply chain - from organic farmers, to responsible distributors and responsible consumers should be taken into consideration and addressed. The enterprises can be sustainable by making it economically viable for both the producers and the consumers. The end-consumers must be conscious of the health benefits of organic produce and climate benefits of organic farming.

Some producers have already developed a loyal and growing market but the market share of organic farming is still quite minute although some products are already exported like the banana from Iloilo and Negros and mascobado demerara sugar from Negros (Naturaland, n.d.) while others are already available in mainstream groceries like LiveGreen (livegreen.ph), Costales Nature Farm (organicpig.ph), and Farms and Cottages (Federation of People's Sustainable Development Cooperative, n.d.) are already supplying to established groceries.

Other marketing systems are being developed. To reach ordinary households, a nationwide women's organization, PATAMABA, has developed a system whereby organic produce is made accessible to households. It has tapped both LiveGreen and Costales Nature Farm to deliver organic produce to its marketing office, and the organization reaches out to household consumers via a system of text ordering and pick-up. This system is still crude and small-scale but it is workable and may be one system of reaching out to a network of responsible consumers.

Another distribution and marketing initiative is through the online marketing of home-grown and organic products from the Philippines, e-cooptrade.coop, which was spearheaded by the Federation of People's Sustainable Development Cooperative, RedRoot Artists Cooperative and Cooperative Development Authority. It is intended to "help boost the competitiveness of cooperatives and community enterprises in the ever-changing global market by adapting to the trend of online presence" (Federation of People's Sustainable Development Cooperative (n.d.).

One issue that should be addressed from the consumers' perspective is the prices of organic produce, which should compete with prices of produce from conventional farming to make organic produce the choice of consumption of consumers at the household level. With majority of the population living below poverty level, price matters. As of now, organic produce costs at least 20% more than produce of conventional farming because commercial produce is large-scale, making production more efficient cost-wise and because agricultural produce is labor-intensive, a factor in cost of production.

However, research shows that organic produce is financially rewarding. Icamina (2011) presents a study that shows that Negros Occidental organic rice farmers produce .3 tons more rice per hectare compared to conventional rice farmers (citing Uychiat) while a "diversified organic farming system managed by Iliranan tribals at Mt. Kanlaon earns P332,000 in annual gross sales compared with P72,00 gross sales with traditional monocrop rice farming" (ibid).

If so, then organic agricultural entrepreneurs should find a way to make the prices of their products more competitive. As of now, the actual price of organic produce does not match the study of Icamina, but this tension between cost, price and affordability should be addressed if organic agricultural entrepreneurs, government and other stakeholders are to develop organic farming as a viable climate change adaptation strategy.

Aside from organic production, distribution and responsible consumption, another dimension in developing sustainable organic agriculture as a climate change adaptation measure is education. The Department of Education made a new Kindergarten to Grade 12 Curriculum, wherein the Grade 10 Social Studies course tackles climate change and disaster risk reduction, as well as sustainable development, with organic agriculture as one of the components (www.deped.gov.ph, 2015). The Center for Positive Futures – Banaba, San Mateo high school is conducting a case study on the effect of the curriculum on climate change concepts and practices. The said curriculum was piloted last schoolyear in the said high school and the curriculum is in full swing nationwide beginning this schoolyear.

Further on the education front, the country's Technical Education and Skills Development Authority is now offering a relatively new technical-vocational course –

Organic Agriculture Production (www.tesda.gov.ph, n.d.). This course will certainly boost organic agriculture among young people as the course can be given as a track in Senior High School Grades 11-12 under the new curriculum of the Department of Education or it could be given as a stand-alone course to high school graduates seeking a career in organic agricultural production.

While organic agricultural enterprises and the education sectors are doing bold steps toward mitigating the effects of climate change, the impact of organic agriculture as a climate change adaptation program can only be fully optimized with participation from local governments and with adequate national government support.

The Institute for Climate and Sustainable Cities (ICSC) is working with local government units and at times, in partnership with other local stakeholders in what is called a climate finance ecosystem, to produce proposals to access the People's Survival Fund (PSF) (www.icsc.ngo, 2017). The PSF was enacted into law in 2011 as an "annual fund intended for local government units and accredited local/community organizations to implement climate change adaptation projects that will better equip vulnerable communities to deal with the impacts of climate change" (psf.climate.gov.ph, 2011). In February 2011, ICSC conducted a writeshop, "Knowledge Exchange on the People's Survival Fund" participated in by fourteen (14) local government units from Benguet and Mountain Province, the Benguet State University, and people's organization. This writeshop attempts to help local government units and the climate finance ecosystem to produce proposals to access the PSF to address the "climate-related impacts" on their constituent's lives and economy.

With the participation of local government in policy-creation, the efforts of entrepreneurs and the education sectors will certainly be boosted. Climate education is one answer but this needs to be combined with best field practices and policy interventions to make more meaningful impact on the lives of the farmers, the entrepreneurs, and the consumers, and to be a viable climate adaptation measure.

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