

# Policy Imperatives to Promote Urban Agriculture in Response to COVID-19 Pandemic Among Local Government Units in the Philippines

**Glenn B. Gregorio**

Director, SEARCA

Professor, UPLB

Academician, NAST

# Assessing the impact of COVID-19 pandemic on agriculture production in Southeast Asia



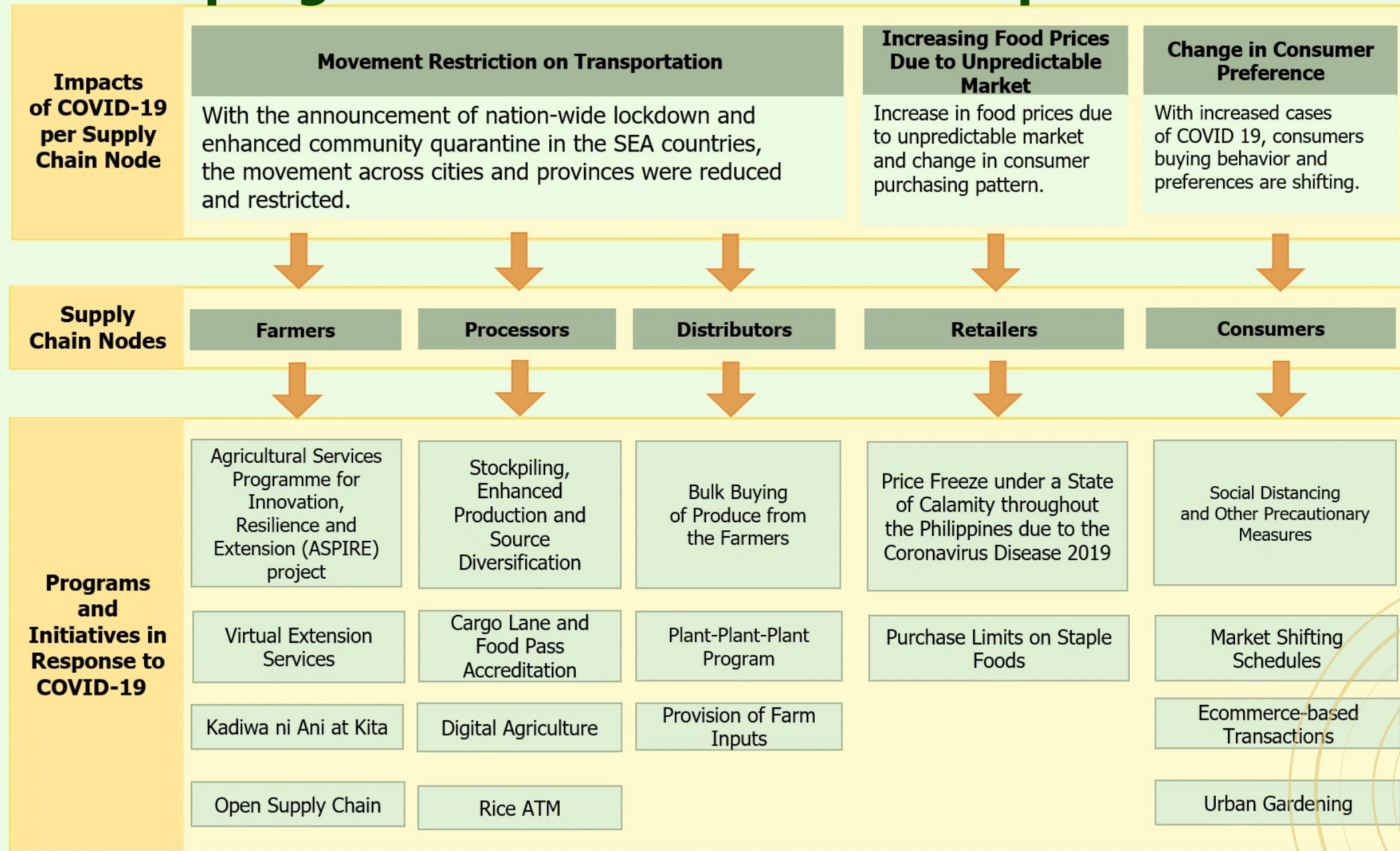
Disruptions in agriculture food systems create supply and demand shocks on economic performance and food security.

COVID-19 pandemic reduce vol. of production by 3.11% or 17.03M tons due to decline in agricultural farm labor affecting 100.77M people.

COVID-19 cause 1.4% decline in GDP of the SEA, equivalent to 3.76B USD.



# Different programs and initiatives in response to COVID-19



# Local Governance on the Ground

- There is a changing narrative on how people view food and in growing food;
- Urban agriculture is a conscious response to the pressing concerns about food security, climate resilience, and their overall well-being amid rapid urbanization and increasing urban population.





The pandemic has underscored the connections between supply chains and our consumption patterns, and the urgent **need to redefine agricultural systems as food systems.**



Also underscored the role of ***local government units to cultivate stakeholders with a transformative mindset*** who are adept in understanding the growing complex social concerns and are able to effect positive change now and in the future.





**Various designs of urban agriculture systems are up for the picking, but support for innovation would be critical to ensure compatibility, scalability and applicability to the conditions of the target adopters.**



# Examples of emerging ideas for urban farming

## 1. Containerized and modular farming.

- Food can be grown containers.
- Can make use of recycled products, surplus materials,.



## 2. Vertical farming.

- Utilizes height to maximize plant growth.
- This type of farming could be best utilized if integrated into the overall architecture and design of the infrastructure.

# Examples of emerging ideas for urban farming

## 3. Closed loop system.

- Combines technologies on crop production, water conservation, waste-to-energy, solar power, aquaculture, etc.
- Based on the concept of nutrient efficiency through reduced dependence on external farm inputs.





## **Basic cultural management in an urban setting can be broken down into these three general principles:**

---

- 1. Provide unrestricted conditions for the free movement and growth of roots**
- 2. Make nutrients (nitrogen, phosphorus, potassium, secondary and micronutrients) readily available to the plant using supplemental microorganisms and humic acid.**
- 3. Make a strong root system using a plant growth regulator supplement.**

# Some notable Urban Agriculture programs and projects by some local government units in the Philippines and how UA has been harnessed in response to COVID-19 pandemic

## Santa Rosa City, Laguna, Philippines

The City Government of Santa Rosa has implemented a pilot urban agriculture demonstration project as part of its efforts to strengthen the City's climate change adaptation program while also ensuring the promotion of safe and fresh produce. Spearheaded by the City Environment and Natural Resources Office, the City Government of Santa Rosa has jointly implemented the project with the School of Environmental Science and Management of the University of the Philippines Los Baños and with funding and technical support from the ICLEI-Local Governments for Sustainability-Southeast Asia. In addition to the establishment of a demonstration farm that showcases several containerized and modular set-ups, selected barangay representatives undergo a series of trainings on urban farming.



# Some notable Urban Agriculture programs and projects by some local government units in the Philippines and how UA has been harnessed in response to COVID-19 pandemic

## Science City of Muñoz, Nueva Ecija, Philippines

Through the efforts of Central Luzon State University, the Science City of Muñoz, Nueva Ecija has been implementing urban agriculture concepts since early 2000 using recyclable containers and receptacles, which have been disseminated and replicated in several barangays of the municipality. Through joint efforts of CLSU and its local partners, several initiatives related to hydroponics and aquaponics have also flourished thereby providing concrete UA modalities that potential farmers could follow and implement. The recent lockdown due to COVID-19 has further highlighted these UA efforts to ensure food security at the municipal, barangay, and household levels.

# Notable Urban Agriculture programs by some LGUs in the Philippines and how UA has been harnessed in response to COVID-19 pandemic

---

## Quezon City, Philippines

The Quezon City Government launched its UA program in 2010 dubbed as the *Joy of Urban Farming Program*. It piloted three demonstration farms in Quezon Memorial Circle, which has been instrumental in showcasing UA concepts and set-ups for interested individuals and organizations. In partnerships with the Department of Agriculture (DA) through the Agricultural Training Institute (ATI) and the Bureau of Plant Industry (BPI), the program has established community and commercial gardens. In response to the COVID-19 pandemic, the Quezon City Government has also encouraged its constituents to engage in UA and provided seeds, seedlings, and pots, along with some technical know-how.



# Urban Agriculture programs by some LGUs in the Philippines and how UA has been harnessed in response to COVID-19 pandemic



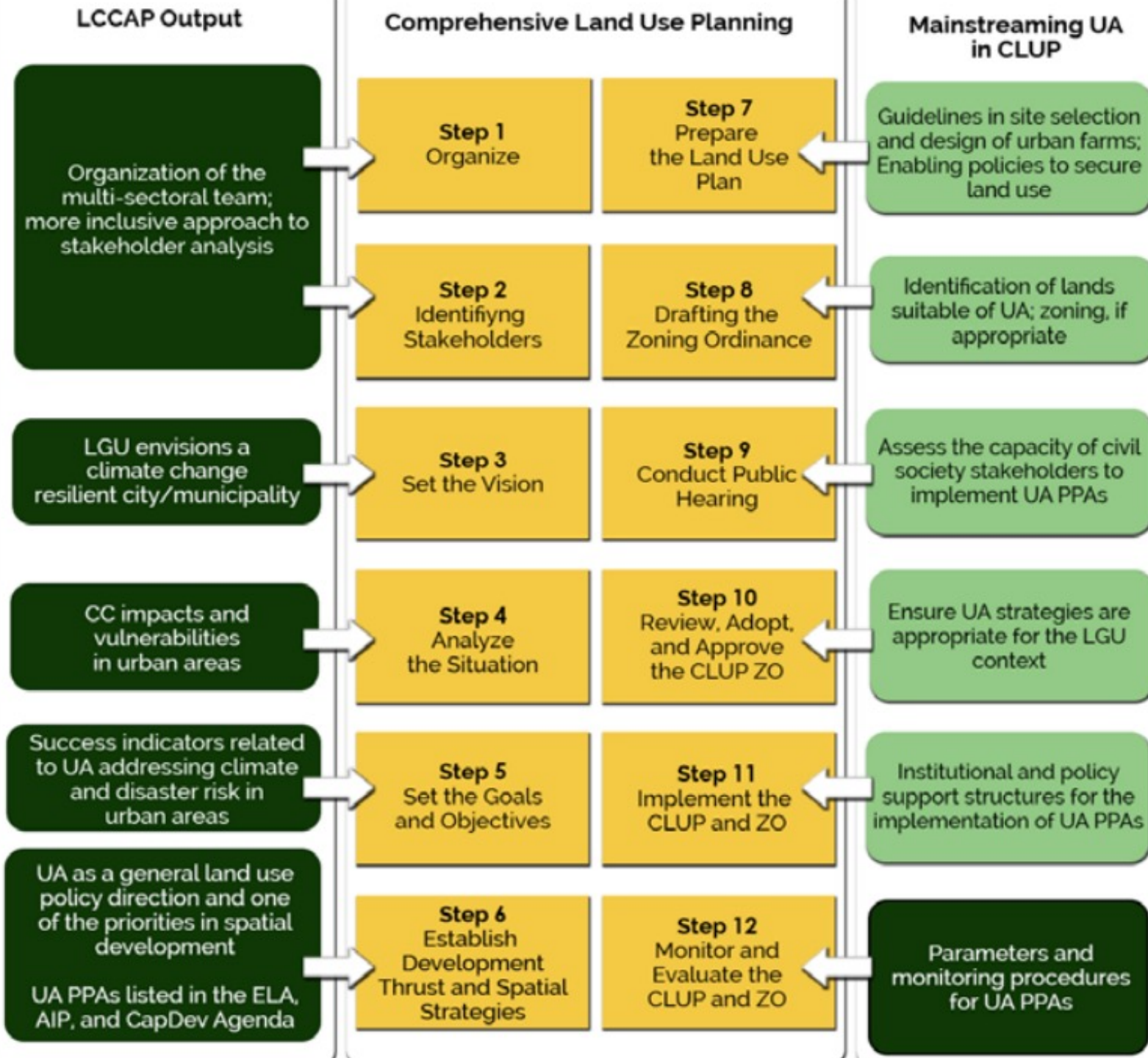
Central Luzon State University's hydroponics and aquaponics initiative



*Joy of Urban Farming Program*







## Entry points of mainstreaming the urban agriculture strategy in comprehensive land use planning



# Entry points of mainstreaming the urban agriculture strategy in the Local Climate Change Action Plan (LCCAP)

## LOCAL CLIMATE CHANGE ACTION PLAN\*

## MAINSTREAMING UA

## OUTPUT

1

### Preparatory Stage

- General Orientation
- Organice the LCCAP Team
- Stakeholder Analysis and Mapping
- Training of Trainers and Facilitators

Include the Agriculture Office in the LCCAP Team

Organization of the multi-sectoral team; more inclusive approach to stakeholder analysis



2

## Data Gathering, Assessment, Risk Analysis and Validation

### Mainstreaming UA

### OUTPUT

- Scoping LGU vision and goals in relation to CCA & DRRM, reality check and finding gaps

Identify Issues in urban areas such as food security, poverty, and flooding

LGU envisions a climate change resilient city/municipality

- Identifying climate-related hazards
- Identifying exposure of elements, sectors and institutions at risk
- Conduct of Vulnerability Assessment and Adaptation
- Determine how climate change will affect each exposed element given specific vulnerabilities and adaptive capacities
- Translating climate projections into probable impacts (with help from scientific community and experts)

Asses implication of CC hazards and risks to issues in urban areas

CC impacts and vulnerabilities in urban areas

- Identifying CC and DRR vulnerabilities to reduce and coping/adaptive capacities to enhance

Set target success indicators related to UA

Success indicators related to UA addressing climate and disaster risk in urban areas



3

### Planning, Priority and Budgeting

- Identifying programs, projects and activities (taking into consideration the existing CDP and ELA (if already done)
- Prioritizing PPAs (rating-based criteria, GAM and other relevant tools)
- Identify indicators, resources needed, budget sources, and office/person responsible
- Mainstreaming in the LDIP or AIP and other LGU planning and budget template
- Identify enabling policy requirements

### Mainstreaming UA

Identify UA PPAs as priority strategy and thrust for budgeting and mainstreaming in other LGU plans

### OUTPUT

UA as a general land use policy direction and one of the priorities in spatial development

UA PPAs listed in the ELA, AIP, and CapDev Agenda

4

### Monitoring and Evaluation

- M&E Team
- M&E Plan

Account impacts of UA in reducing climate risks and enhancing adaptive capacity

Parameters and monitoring procedures for UA PPAs





# Policy recommendations to mainstream urban agriculture in the LGU

Action Items	Proposed Policy Actions
<b>Mainstreaming UA in local development and policy planning</b>	Crucial to pass an ordinance institutionalizing, developing, and promoting urban agriculture, including mainstreaming UA in the LCCAP and CLUP. This is to ensure funding and support by the City/Municipal council. The active involvement and support of the Department of Interior and Local Government (DILG) is critical.
<b>Organization of a multi-sectoral team and encouraging champions of UA in the City/Municipality and Barangays</b>	Re-orientation of existing team, such as the Local Development Council (LDC) and the LCCAP Team or Executive Order to create the multi-sectoral team, if necessary. For the local government, it is important as a policy that Open Space and Parks directly managed by the local government can be planted with both agricultural crops and ornamental plants. This is strategic as this could boost tourism (e.g., grape farm in La Union, Philippines) and can also provide additional knowledge for school children. In particular, the role of the City/Municipal Agriculture Officers is crucial to sustain UA initiatives with strong partnerships and collaboration with government line agencies such as DA-BPI and local state universities and colleges (SUCs), among others.



# Policy recommendations to mainstream urban agriculture in the LGU

Action Items	Proposed Policy Actions
<b>Strengthened capacity of the barangay officials on UA</b>	The capacity of the barangay officials on UA would be crucial to operationalize the plans and projects. As they formulate their own Development Plan, the barangays are in the best position to identify and/or vet in identifying appropriate open spaces for UA, and in exploring potential funding sources to support UA.
<b>Inventory of spaces suitable for urban agriculture and security of land use</b>	Determining the types and area of urban agriculture applicable in the LGU context; identifying the location of suitable sites particularly during CLUP formulation.
<b>Regular capacity building and market development</b>	Inclusion of urban agriculture PPAs in the Capacity Development Agenda, network building, and organizing farmers' associations and communities and other stakeholders.
<b>Sustainable Funding and Financing</b>	<p>The Agriculture Office of every local government unit can allocate budget for urban agriculture in the Annual Investment Plan (AIP), organizing farmers' associations and cooperatives, and through private and industry partners, among others. Exploration of a financing schemes would be critical to sustain efforts in Urban Agriculture by LGUs and its partners.</p> <p>An ordinance for tax reduction schemes, lease agreements, and zoning mixed land use areas would afford an enabling environment to encourage LGU constituents to engage in Urban Agriculture. Special focus should be on idle lots within the jurisdiction of LGUs that may become productive through UA.</p>



# Policy Imperatives to Promote Urban Agriculture in Response to COVID-19 Pandemic Among Local Government Units in the Philippines



## Policy Imperatives to Promote Urban Agriculture in Response to COVID-19 Pandemic Among Local Government Units in the Philippines

Rico C. Ancog<sup>1,2,10</sup>, Glenn B. Gregorio<sup>1,3,4</sup>, Arlene B. Arcillas<sup>5</sup>, Erlinda C. Creencia<sup>6</sup>, Victorino E. Aquitania<sup>7</sup>, Gerald Glenn F. Panganiban<sup>8</sup>, and Garry A. Hidalgo<sup>9,10</sup>

Ancog, R.C., G.B. Gregorio, A.B. Arcillas, E.C. Creencia, V. Aquitania, G.G.F. Panganiban, and G.A. Hidalgo. 2020. "Policy Imperatives to Promote Urban Agriculture in response to COVID-19 Pandemic among Local Government Units in the Philippines." *SEARCA Policy Paper 2020-3*. SEARCA, College, Los Baños, Laguna, Philippines.

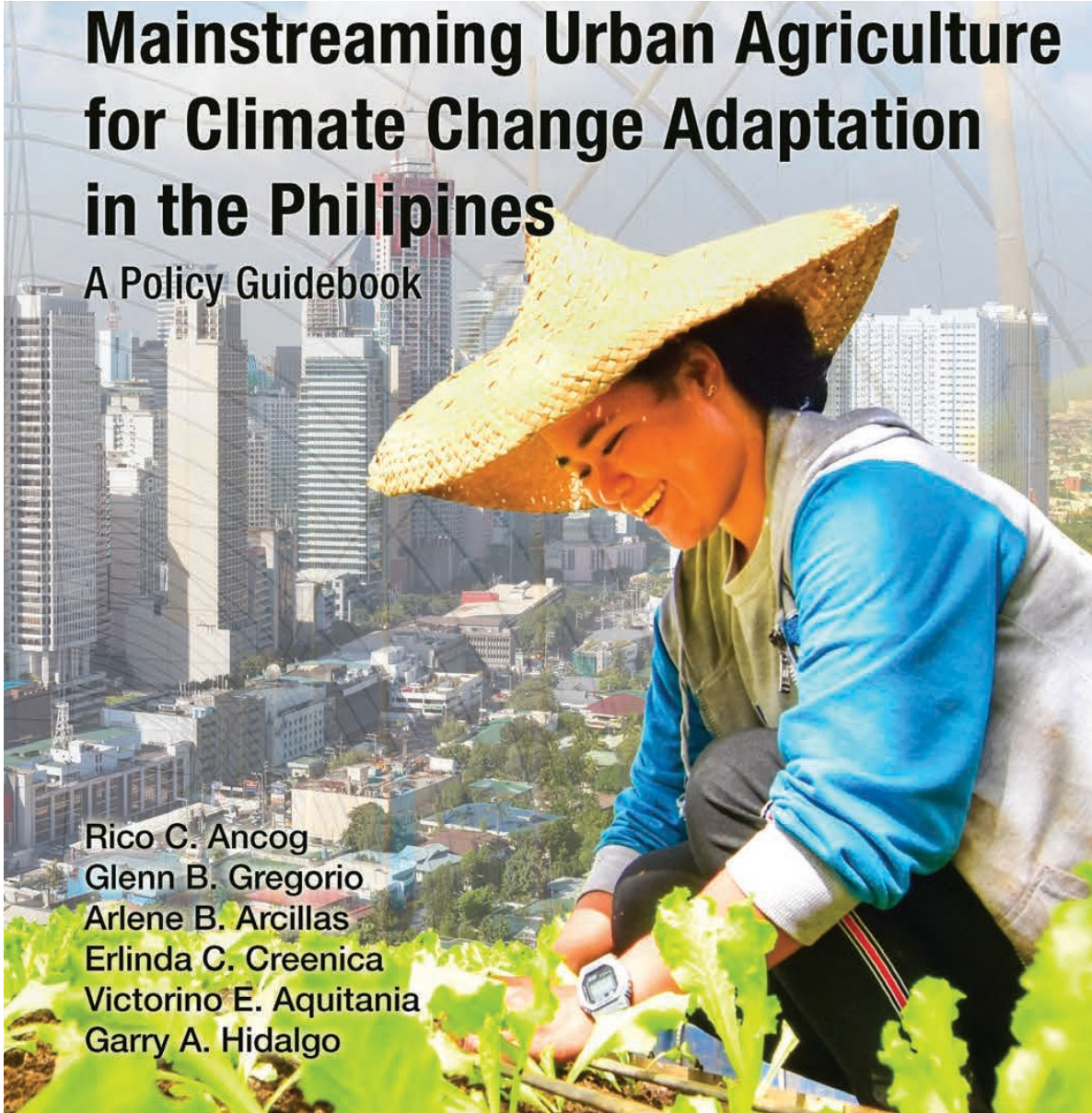
<https://www.searca.org/pubs/briefs-notes?pid=473>



# Mainstreaming Urban Agriculture for Climate Change Adaptation in the Philippines

A Policy Guidebook

Rico C. Ancog  
Glenn B. Gregorio  
Arlene B. Arcillas  
Erlinda C. Greenica  
Victorino E. Aquitania  
Garry A. Hidalgo





*“To institutionalize Urban Agriculture, the LGUs in the Philippines must take active leadership in mainstreaming UA, integrate in the formulation of Comprehensive Land Use Plan (CLUP) and Local Climate Change Adaptation Plan (LCCAP), then complement existing programs of the Department of Agriculture.”*

<https://www.searca.org/pubs/briefs-notes?pid=473>



# Capitalizing on Urban Agriculture and Agricultural Innovations Potential of LGUs



**The need to support local capacity toward being self-sufficient through well-planned local food production systems.**



**Basic socioeconomic research and Policy support are needed towards:**

1. Development of new and relevant crop varieties and livestock breeds
2. Seed and livestock production and distribution of technologies
3. Agricultural systems technologies
4. Post-harvest management
5. Farm produce transport and logistics systems
6. Facilities supporting food quality, nutrition, and safety maintenance
7. Diversified farming





**"Ensuring a systemic transformation of the agricultural systems into resilient, sustainable, productive, and inclusive food systems would be crucial for the future of Southeast Asia"**



S E A M E O  
**SEARCA**

Southeast Asian Regional Center for Graduate Study and Research in Agriculture  
College, Los Baños, Laguna 4031, Philippines

+63 (49) 536 2554; 536 2631

post@searca.org

/seameo.searca

SEARCAseminars