



# **GREENING CO-OPS: WHAT, WHY AND HOW?**

## **A GUIDEBOOK FOR COOPERATIVES**

### **ACTIVATING CO-OPS' GREEN POTENTIALS**

by Karen P. Quilloy and Liezel S. Cruz



University of the Philippines Los Baños  
College of Economics and Management  
INSTITUTE OF COOPERATIVES AND  
BIO-ENTERPRISE DEVELOPMENT



Printed in the Republic of the Philippines  
First Edition, June 2017

Copyright © 2017  
Published by the University of the Philippines Los Baños  
College of Economics and Management  
Institute of Cooperatives and Bio-Enterprise Development

ISBN 978-621-95271-4-9

### **About the Authors**

**Karen P. Quilloy** and **Liezel S. Cruz**, Assistant Professors, Institute of Cooperatives and Bio-Enterprise Development, College of Economics and Management (CEM), University of the Philippines Los Baños

Cover design: Karen P. Quilloy  
Printer: M.M. Quintos Enterprises Printing Press, Batong Malake, Los Baños, Laguna

Suggested citation: Quilloy, K.P. and L.S. Cruz. 2017. *Greening Co-ops: What, Why and How?*. Guidebook, 1<sup>st</sup> Edition. Los Baños: UPLB-CEM ICOPED.

All Rights Reserved. No part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying, recording, or by any information storage and retrieval system, without permission from the publisher.

# GREENING CO-OPS: WHAT, WHY, AND HOW?

A GUIDEBOOK FOR COOPERATIVES

Activating Co-ops' Green Potentials



# Purpose of the Guidebook

This guidebook serves as a quick guide for cooperatives in pursuing a “green” approach in doing their business. It provides a basic understanding of the concept of green growth as explained in the context of cooperatives and presents a strategic process of incorporating green growth practices in their management and operations. It also contains examples of green growth practices that can be adopted by cooperatives and a methodical guide on prioritizing the practices.

With the information given herein, cooperatives are hoped to be enlightened on the importance of going green and on the opportunities and benefits that could be derived from such an action. Guiding them through this document also hopes to activate their capabilities and potentials not only in doing green growth practices but also in promoting green growth to contribute to the sustainability development goals of the cooperative sector’s and the Philippine economy, as a whole.

The “Greening Co-ops: What, Why, and How?” Guidebook has been developed with micro and small cooperatives and similar enterprises in mind. It is a free resource for continual reference to help cooperatives get started on their journey towards greening their enterprises and to inspire them to sustain their drive and commitment to go greener.

Do feel free to use, share and teach this material, provided that the Institute of Cooperatives and Bio-Enterprise Development (ICOPED) as source and the authors are properly cited and acknowledged.

This is the first edition of the Guidebook. Comments and suggestions on how to further improve the resource will be most welcome.

## ABOUT ICOPED AND THE PROJECT

The **Institute of Cooperatives and Bio-Enterprise Development (ICOPED)**, an academic unit under the College of Economics and Management, University of the Philippines Los Baños, provides a strong focus on the development of cooperatives as viable economic and social business enterprises through its instruction, research, extension and training, networking, and policy advocacy programs. ICOPED’s strength is rooted in decades of relevant experience in implementing academic and training programs and networking with the cooperative sector, government agencies and NGOs involved in cooperative development work. For more information about the Institute, visit [www.icoped.com](http://www.icoped.com).

The “**Greening Co-ops: What, Why, and How?**” Guidebook is a key output of the project, “**Leveraging Agricultural Cooperatives for Green Growth: A Pilot Study,**” which was implemented by ICOPED under the funding of the ASEAN CSR Network, Ltd., Singapore. The aim of the project is to enable agri-based cooperatives to capitalize on its capacity and opportunities in pursuing green growth practices by enhancing their knowledge and capabilities on greening their business.

# Acknowledgment

The authors would like to express their sincere gratitude and appreciation for the assistance extended to them by various individuals and groups in the preparation of this guidebook:

ASEAN CSR Network Ltd., Singapore for funding the 6-month project, entitled: Leveraging Agricultural Cooperatives for Green Growth: A Pilot Study and for CEM Alumni Foundation, Inc. (CEMAFI) for serving as the fund manager of the project;

The stakeholders consultation workshop participants from the various sectors of the government (Department of Trade and Industry (DTI) - Region IVA, Department of Trade and Industry - Laguna, Land Bank of the Philippines (LBP), National Economic and Development Authority Region IV-A and Cooperative Development Authority), cooperative (Calamba Rice Growers Multipurpose Cooperative, New Batong Malake Public Market Multipurpose Cooperative, Southern Tagalog Rubber Producers Cooperative and ERDB Employees Multipurpose Cooperative), and academe (the Department of Economics, Department of Agricultural and Applied Economics, and ICOPED, CEM and the College of Public Affairs and Development) for their experts' inputs, opinions and experiences that provided the diverse set of perspectives in the development of the green growth materials and activities incorporated in this guidebook;

The board of directors, officers and members of the two pilot cooperatives, Green Beans Multipurpose Cooperative and Calamba Vegetable Growers Marketing Cooperative, for opening their minds to the opportunities of green growth and for actively participating in the green growth seminar and the workshop conducted to pilot test the guidebook;

Last but not the least, the entire project team of ICOPED for their invaluable administrative, technical and manpower support in the preparation and development of this guidebook.

***Karen P. Quilloy***  
***Liesel S. Cruz***  
Authors



# What's in the Guidebook?

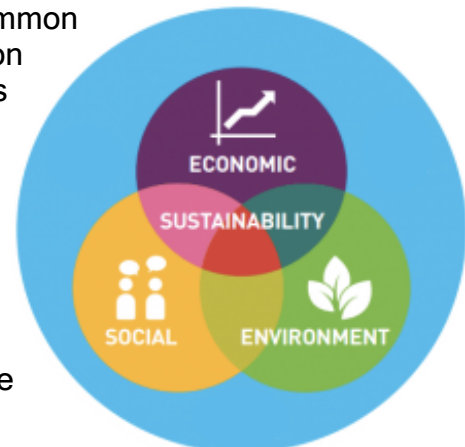


# Green Growth for Sustainable Development

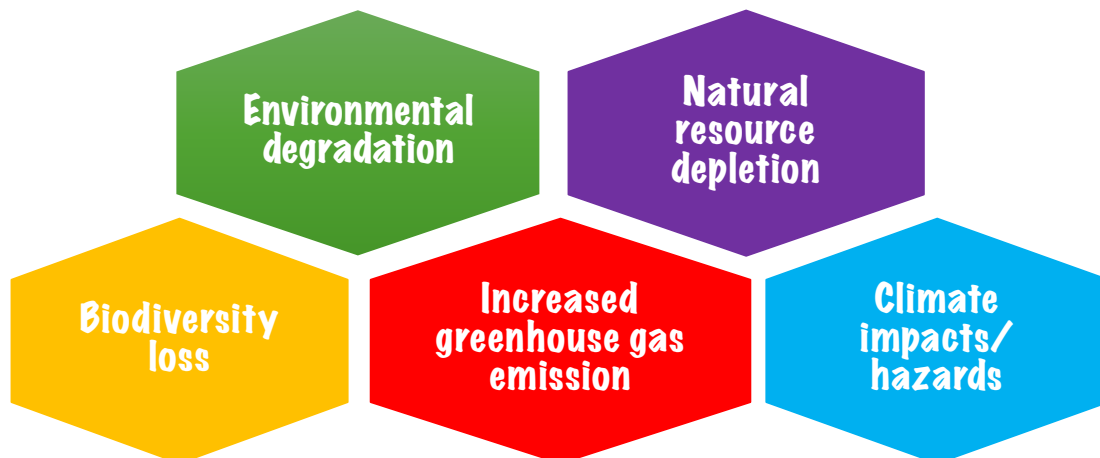
*Green growth is a kind of growth that does not compromise our social and environmental responsibilities.*

Our world faces the greatest challenge of **ending poverty in all its forms and dimensions**. This has called for concerted efforts from all countries to address the root causes of poverty and adopt the sustainable approach towards development.

The United Nations in its document, “Our Common Future: Report of the World Commission on Environment and Development,” defines **sustainable development** as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs” It aims to integrate the three mutually-reinforcing pillars of development: (1) **economic growth**, (2) **social inclusion**, and (3) **environmental protection**, in its path towards building an inclusive, sustainable, and resilient future for **people, planet, and prosperity**.



In pursuit of sustainable development, developing countries face greater problems and threats that add to the challenge of eradicating poverty and achieving sustainable growth. Problems that stem from **adverse impacts of climate change and human-induced environmental threats** cause stresses on our natural ecosystem, food security, human health, public infrastructure, energy, human settlement, job creation, and economic growth.



Our high dependence on natural resources as a source of growth and vulnerability to climate change even make the environmental pressures more intense. All these risks, if not addressed, will prevent us achieving a sustainable path towards development.



*So what do we do now? How do we deal with these? Where do we go from here?*

## Pursue green growth! Yes, green growth!

We need **a kind of growth that does not compromise our social and environmental responsibilities**. The goal is to minimize or avoid the trade-offs between economic and social progress and environmental sustainability. We should take a growth path that is not detrimental to our society and the environment. This is what **green growth** is basically all about - a strategy to achieve sustainable development.

### **GREEN GROWTH is...**

A means to foster economic growth and development while ensuring that natural assets continue to provide the resources and environmental services on which our well-being relies

A strategy that decouples economic growth from adverse environmental impacts that could result to inability of the environment to provide the resources and environmental services that are essential to us

A desire to exploit cleaner and more sustainable sources of growth and make investments in the environment a driver of economic growth that promote a rise in quality of life of people

A way of preventing environmental degradation, biodiversity loss, and unsustainable use of natural resources along our journey towards sustainable and inclusive development

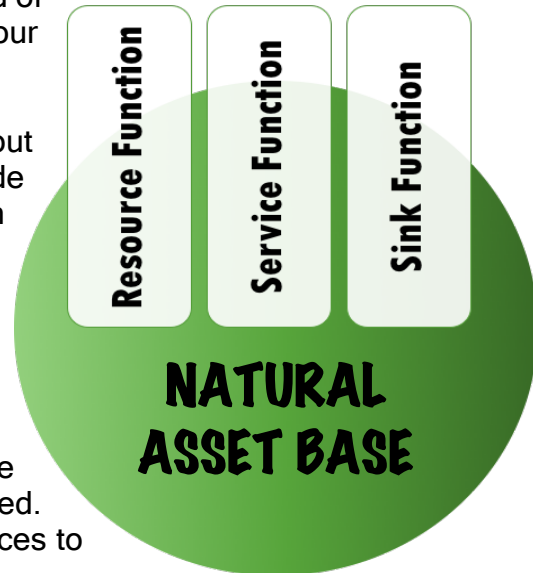
A kind of growth that is efficient, clean, resilient, and inclusive

*Note: The definitions are from OECD, Global Green Growth Institute, and World Bank.*

## *When and how do we pursue green growth?*

Our growth path cannot be “business as usual” anymore. Our unmet needs continue to grow, thereby requiring a more dynamic and faster growth amid limited ecological carrying capacity, causing more serious pressures on the environment. Growing at the expense of the environment is not the kind of economic activity that we want to pursue if our goal is to attain sustainable growth.

An economy or business grows by carrying out key economic activities which include production, consumption, and trade. In production, our natural asset base is our key source of inputs and at the same time our sink for wastes, pollutants and residues from production. In consumption, natural assets provide the environmental services that we need to ensure health and safety and again, serve as the absorber of our wastes as we consume the goods and services that we need. In trade, natural resources also provide services to facilitate the flow of the goods and services.

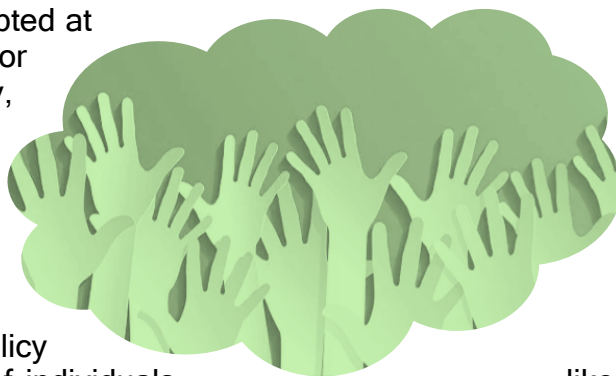


Obviously, our economic activities largely depend on natural resources. **To sustain our economic activities, we have to sustain our natural asset base.** Depletion and degradation of our natural resources are already happening now and thus it is urgent to address them, otherwise our natural asset base may collapse sooner than we expect. The challenge for us is to move **from the “grow first, clean up later” practice to the “grow clean, grow more later” approach.** Delaying the action may create risks to our growth. Therefore, the best time to start protecting and conserving our natural assets while growing is now.



## *Who can pursue green growth?*

The green growth approach can be adopted at all levels of the economy, from global or national down to industry, business/organization, community, or household level. While greening the growth path should be a joint effort that requires interrelated and complementing actions from different sectors and levels of the economy as well as enabling conditions and policy environment, an individual or a group of individuals like cooperatives can still define his/her or its own roles and capabilities in pursuing green growth.



**Green growth is an action that is up for everybody, where every human can contribute and make an impact.** For instance, reducing our carbon footprint or our own contribution to greenhouse gases in the atmosphere can be every individual's initiative at home, in the office, in the community, or any where he/she goes. Much as the scope, interpretation and impact of green growth might differ across levels of the economy, the desire to promote a **low-carbon and resource-efficient way of guiding sustainable production and consumption choices** remains at its core.

# The Cooperative and Green Growth Nexus

*Cooperatives are described as “highly sustainable businesses, combining financial health, environmental concern and social purpose in a triple bottom line.”*

Sustainability and cooperatives are directly linked with each other. Cooperatives are builders of sustainability, which is inherent in the nature of cooperatives. They can make positive contributions to sustainability, and therefore to green growth too. As environmentalist Philippe Cousteau said during the International Co-operative Alliance (ICA)’s General Assembly in 2011, “...Investing in communities, investing in people – there is nothing more sustainable than that.. We cannot have environmental sustainability without social sustainability.” This outlook emphasizes that cooperatives are in a good position to serve as catalyst of green growth, being community-based and people-centered business organizations.

## *How can cooperatives drive green growth?*

Cooperatives are described in the ICA’s Blueprint for a Co-operative Decade as “highly sustainable businesses, combining financial health, environmental concern and social purpose in a triple bottom line.”

Anchored also to the three pillars of sustainable development, cooperatives have a deep commitment to service and to improving the quality of life of people. They target areas with greatest member need rather than those with the most lucrative opportunities for maximizing returns. They are based on the values of self-help, self-responsibility, democracy, equality, equity, and solidarity and are committed to seven cooperative principles, many of which are supportive to green growth (<http://stories.coop/sustainability-inbuilt-in-the-cooperative-model/>).



The global cooperative movement is in full support of green growth. With the cooperative business model being more relevant than ever, it is every cooperative’s role and responsibility to serve as vehicle for promoting green growth. Intrinsic to their identity is the cooperative principle of “concern for community,” stating that “cooperatives work for the sustainable development of their communities through policies approved by their members.” Specifically, it states that “cooperatives have a special responsibility to ensure that the development of communities – economically, socially and culturally, is sustained. They have a responsibility to work steadily for the environmental protection of their communities” (RA 9520, Philippine Cooperative Code of 2008).



During the Third International Summit of Cooperatives in 2016, the cooperative movement set for itself the objective to act on social, environmental and economic issues and fulfill its role in achieving the SDGs. The movement's Power to Act Declaration emphasizes that cooperatives are in a position

to introduce sustainable development strategies in different societies. It has a specific section tackling the actions that can be taken by cooperatives to support climate change- and green growth-related SDGs, which can be checked in the its public document available online (<https://www.sommetinter.coop/en/2016-edition/2016-declaration>).

### *Why should cooperatives support green growth?*

Given their nature and characteristics, **cooperatives are a good entry point to influence an individual, entrepreneur, household, or community's behavior on embracing green growth practices.** They have the potential to create significant impact on operationalizing green growth, especially that they cut across different economic sectors and industries at all levels, thereby influencing a wider range of activities and people.

However, without proper knowledge and understanding of green growth, a cooperative may not be interested in going green. An important question that they need to be enlightened on is why should they adopt green growth approach in doing their business. What can they gain from it? Will it benefit them? Is it really needed or urgent? These are just some of the factors that could affect their decision to support green growth.

It should be emphasized that there is more to safeguarding the environment and reducing vulnerability when taking a greener path. Adopting green growth practices offer a range of benefits to us. **Moving towards cleaner and greener sources of growth may deliver economic, environmental, and social benefits both in the short and in the long run.** For a quick scan, below are just some of the general benefits that could be reaped from going green.

GREEN GROWTH		
Economic Benefits	Environmental Benefits	Social Benefits
<ul style="list-style-type: none"> <li>• Increased economic growth - production of green goods and services</li> <li>• Increased revenue from pricing ecosystem services</li> <li>• Economic diversification, i.e. improved management of economic risks and reduced vulnerability</li> <li>• Innovation, access and uptake of green technologies, i.e. improved market confidence</li> </ul>	<ul style="list-style-type: none"> <li>• Increased productivity and efficiency of natural resource use</li> <li>• Natural capital used within ecological limits</li> <li>• Reduced adverse environmental impact and improved natural hazard/risk management</li> </ul>	<ul style="list-style-type: none"> <li>• Increased livelihood opportunities, income and/or quality of life, notably of the poor</li> <li>• Decent jobs that benefit poor people created and sustained</li> <li>• Enhanced social, human and knowledge capital</li> <li>• Reduced inequality</li> </ul>

Source: OECD. 2012. *Green Growth and Developing Countries. Consultation Draft.*

It is a kind of growth where new opportunities can be unlocked and more sustainable benefits can be reaped. At enterprise level, greening a business is a way of reducing overhead costs and increasing savings through improved operational efficiency (e.g., lower electricity and water bills, lower transport costs). With consumers' increasing awareness of their environmental responsibilities, an enterprise can create a unique selling point and stand out against its conventional competitors by building its identity as a green and sustainable business. It can create new income streams that can increase current sales through greening products and services. Employees may also benefit in working in a green enterprise or having green jobs in terms of improving their morale, health, and productivity.



Sources: ProGED. 2014. *Greening Enterprises for Enhanced Competitiveness*  
The Carbon Trust. *Green your Business for Growth*. March 2012.



# A Framework for Greening Cooperatives

*A key to greening cooperatives is to align the goals of green growth with the existing goals of the cooperative.*

When pursuing green growth, it is important to bear in mind that no single green growth model exists for all cooperatives. Each cooperative's nature and enterprise context must be taken into consideration when developing its green growth strategy to ensure the suitability and effectiveness of the approach. However, while there is no "one size fits all" strategy for greening cooperatives, one can develop a general framework to guide a cooperative on where and how to introduce or develop a green growth commitment to its management and operations.

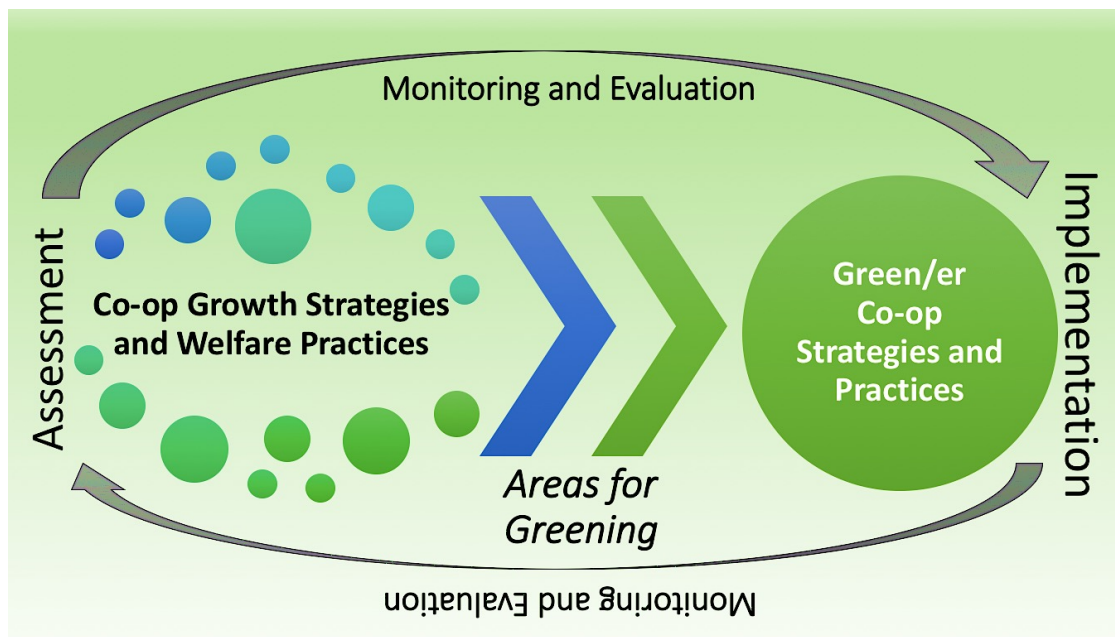
In this guidebook, a green growth pathway is framed in the context of the cooperative's overall goal for achieving growth and welfare. Since cooperatives are expected to have their own vision, mission and goals (VMGs) as a business organization, any cooperative can use its VMG as the backbone and starting point of its green growth strategy. If green growth strategy and practices are strongly anchored to the long-term goal or vision of a cooperative, the reception, adoption and implementation of the greening initiatives will make more sense for the stakeholders of the cooperative. The key is not to introduce an alien or a totally new set of activities to the cooperative, but rather improve its existing plans and activities through adoption of relevant green practices that would help the cooperative realize its VMG.

## *So, how do we do it?*

Before taking a bold step towards going green, it is important that the key constituents of the cooperative already have a technical knowhow on green growth and its practices because the understanding of the strategy is a prerequisite to identifying the specific green growth practices that they can do.

The first step in the process of greening cooperative is to **review the existing strategies and activities of the cooperative for achieving its VMG or for promoting growth and human welfare**. With our knowledge on green growth, one could initially evaluate whether or not an approach or an activity is already "green" or not by looking at how we use our natural assets in the cooperative's production, consumption, and socioeconomic activities.

Along with the review is **scanning what resources and enabling factors (e.g., policy and institutions) and economic opportunities** are available to support the cooperative's future greening activities.



### The General Green Growth Framework for Cooperatives

The review will then lead you to the next step, which is **identifying which of the existing activities of the cooperative “can be greened” or can be made “greener.”** In the green growth framework, the general areas for greening cooperatives are indicated to guide the cooperatives in exploring the potentials and opportunities for contributing to green growth. Among others, a cooperative has the opportunity to go green in the following areas:

- environmental and climate education;
- reducing energy and carbon emission;
- managing resources and wastes;
- investing in green and climate-smart technology;
- greening products and services;
- increasing green competitive advantage; and
- incorporating green in cooperative’s VMGs and/or bylaws.

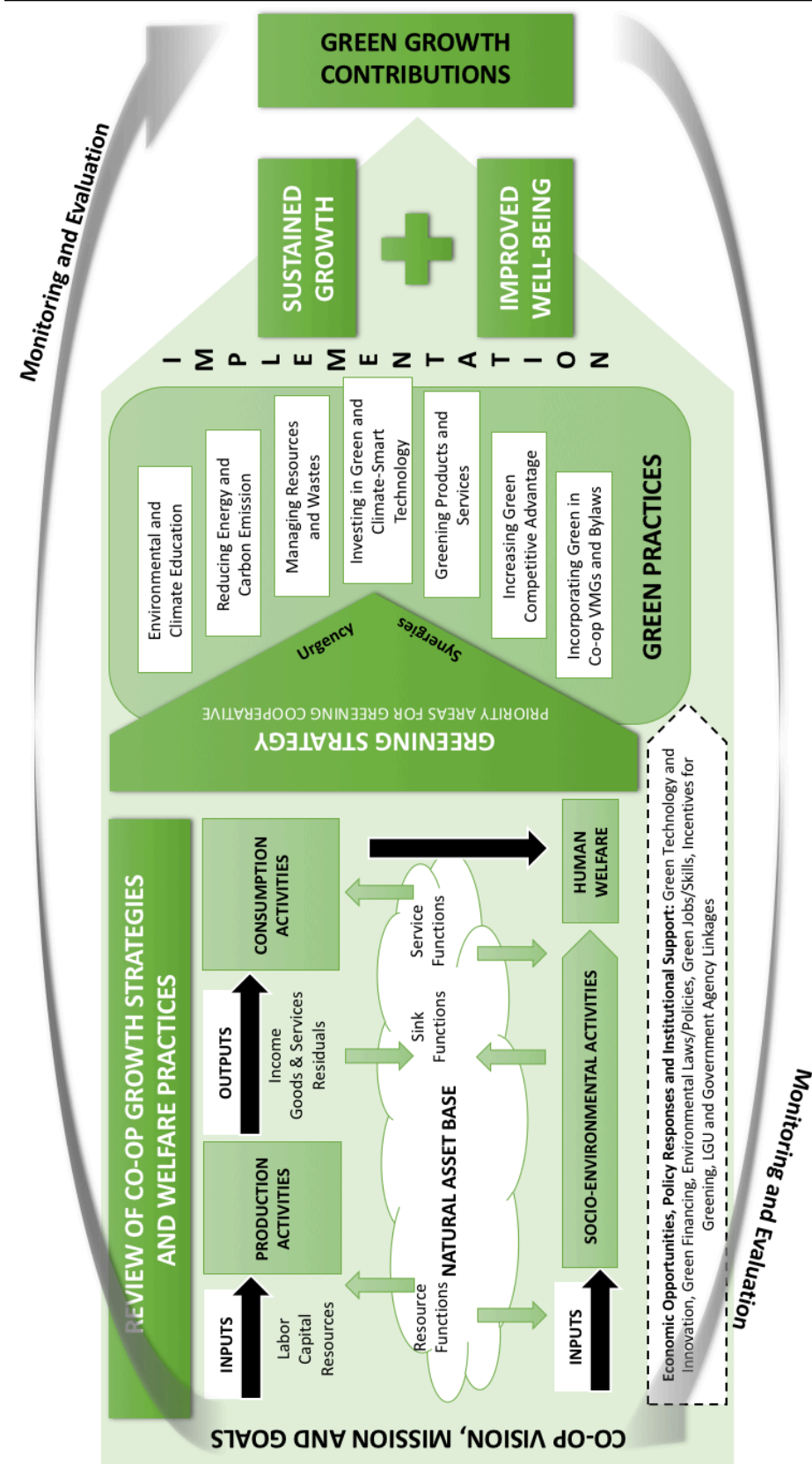
Under each area, there are a number of activities that could be adopted by the cooperative (see next section: **Menu of Green Growth Practices**). However, as we know, a cooperative can only do so much in greening its operations because of resource and capability constraints. **The implementation of green growth strategy is a gradual process and a cycle of review - identification - implementation - monitoring and evaluation.** It involves prioritization of green growth practices based on either synergies, urgency, or both and on the other factors that the cooperative considers important to them.



When we say **synergies**, our priority is based on the extent to which green practices provide immediate and local benefits to the cooperative and promote a faster and/or a more inclusive growth. **Urgency**, on the other hand, is basing our priority on the extent to which a green practice can be or cannot be postponed depending on the risk of irreversible damages or locking into unsustainable growth patterns that is associated with it. A more detailed process of prioritization of green practices is explained in the last section of this guidebook.

Once a cooperative has already identified and prioritized the green growth practices suited for itself and its people, it is now time for implementation. This is an important stage in the green growth pathway. Without implementation, all you have will only remain plans. **It is only when the strategic actions are implemented that we start seeing outcomes.** Ideally, the green growth strategy should contribute to the goals of having a sustained cooperative growth and improved well-being for the members, and ultimately to green growth of the economy.

Monitoring and evaluation will let the cooperative determine whether their green growth strategy are contributing to its VMGs and to the green growth goals. It will guide the cooperative on doing its next steps by discerning the areas for improvement and opportunities for further greening based on the results of the implementation. The green growth cycle then goes on as the cooperative continues to aspire to become greener over time.



## The Detailed Green Growth Framework for Cooperatives

# Menu of Green Growth Practices

*Make small, easy changes that leave big positive impacts to the farm and business operations of the cooperative.*

In selecting from the menu of green growth practices, it is best if we choose from a position that will reinforce our strengths and develop our weaknesses. It is also important to consider our existing capabilities and future goals when making this decision. Consistency is also key in ensuring that we reap the full benefits of greening our cooperative. It must be noted that starting gradually with mini steps is better than abruptly undertaking big changes that is not sustainable in the long run.

The list below is a compilation of selected green practices from existing literature, best practices from farmer-members of some cooperatives, technical advice from government experts and words of wisdom from academic consultants. This list, however, is not thorough and extensive. As such, you may freely choose and adopt other green practices outside of this list that are better-fitted and more relevant to your cooperative.

## A. Improve Environmental and Climate Awareness and Knowledge

- Incorporate green in the cooperatives Vision, Mission and Goals
- Advertise “green credentials” in documents & communications
- Communicate green in packaging, website, office signage
- Publicize green accreditations and certifications
- Conduct training to cooperative members on benefits of green and green practices
- Give preference to suppliers that implement green practices

## B. Reduce Energy and Emissions

- Check lighting and controls
- Install energy efficiency lighting (i.e. LED, solar-powered)
- Collect and record energy consumption information
- Set targets on energy consumption
  
- Check water usage and controls
- Capture and store water
- Check faucets, pipes and toilets for leaks
- Install water-saving devices in business or farm operations
- Collect and record water consumption information
- Set targets on water consumption

## C. Manage Resources and Wastes

- Send information electronically to save paper
- Do waste segregation and recycling
- Implement efficient waste disposal systems
- Collect and record waste information
- Set targets on waste for reduction
- Reduce, reuse, recycle materials in business and farm operations
- Check vehicle usage and reduce unnecessary trips/journeys
- Check and maintain vehicles regularly

## D. Invest in Green and Climate Smart Technology

- Make and use compost

- Repair and improve drainage

- Reduce cultivations

- Target fertilizer applications to soil conditions, crop requirements and weather

- Explore opportunities to build organic materials and use legumes to fix Nitrogen

- Limit the use of chemical fertilizer

- Use improved (e.g. climate-resistant) crop varieties

We encourage our cooperatives to take full advantage of this awesome opportunity of engaging in green practices for a more successful, sustainable and profitable organization. This is the time to evolve and grow greener. Take the green challenge now!



# Prioritizing Green Growth Practices

*“Most of us spend too much time on what is urgent, and not enough time on what is important.”*

*- Stephen Covey (Author of “The 7 Habits of Effective People”)*

Managing the farm and business operations of the cooperative entails optimizing available resources that are typically scarce. To be sustainable, the board of directors, along with the officers and the rest of the members, have to learn how to organize their activities in a way that will be beneficial to the whole organization. But which shall be done first? What will provide the maximum returns to the cooperative? In choosing from the menu of green growth activities (see previous section: **Menu of Green Growth Practices**), it is imperative that the cooperative learns how to prioritize. Prioritizing is the process of deciding what is the most important activity, project, or in this case, green growth practices to the cooperative, in general, and members in particular. We should be wary of being tempted to consider everything “urgent” and “important”. If all are “urgent and important” then everything loses its urgency and not one is the most important.

In this guidebook, we are going to introduce the use of the Prioritization Matrix which is a tool of prioritizing the list of green growth practices that a cooperative can engage in. This prioritization matrix helps sort out a diverse set of items into an order of importance. A numerical value is derived in using this tool which sets the relative importance of an activity, project or practice.

There are five (5) steps of using a prioritization matrix. These steps are:

## Step 1: Identify the rating scale and the prioritization criteria

- The rating scale will establish how well a particular green practice satisfies a particular criterion.
- **Visual Exercise:** A rating of “5” means strict adherence to the criterion while a “1” means that it is the least desirable practice in that particular criterion.
- A prioritization criteria assesses the level of importance of each project or practice. The criteria will set apart important factors from unimportant ones.
- The cooperative may choose from the list of **prioritization criteria** below or it can come up with more relevant factors that are important to the organization.
  1. Low-cost to implement
  2. High potential savings
  3. Ease of Implementation
  4. Maximizes readily-available / existing resources
  5. High customer satisfaction potential
  6. High improvement on Output / Yield
  7. Quick results
  8. Regulatory Compliance

## Step 2: Establish criteria weight

- Place criteria in descending order of importance and assign a weight per criterion.
- Visual Exercise:** if the prioritization criteria to be considered in the ranking and the criteria weights have been established as follows, then the descending order of importance would look like Table 1.
  - Low cost to implement : 40%
  - Highest savings potential : 30%
  - Maximizes existing resources : 15%
  - Easy to implement : 10%
  - Quick results : 5%
  - Total : 100%

Table 1: Visual Exercise on the Order of Importance of Prioritization Criteria

Criteria	Low cost to implement	Highest savings potential	Maximizes existing resources	Easy to implement	Quick results	Total Green Practice score
Weights	40%	30%	15%	10%	5%	100%

## Step 3: Create the prioritization matrix

- List the prioritization criteria and weights across the top and the green practices down the left column (please see Table 1 and Exhibit 1 as guide).
- Depending on the number of members that will participate in the scoring/evaluation process and if number of members allow, it is best to encourage members to work in groups (5 members per group is manageable) and for 2-3 groups to evaluate each practice. The advantages of using groups in the rating process are (1) to provide diverse perspectives; and (2) to speed up the evaluation process.

Table 2: Green Growth Prioritization Matrix

Criteria	Prioritization Criterion #1	Prioritization Criterion #2	Prioritization Criterion #3	Prioritization Criterion #4	Prioritization Criterion #5	Total Green Practice score
Weights						100%
Practice #1						
Practice #2						
Practice #3						
Practice #4						
Practice #5						

Exhibit 1: Actual “Green Growth Prioritization Matrix Form” used by the authors during the Training-workshop of pilot cooperatives

GOING GREEN: STRATEGIES, PRACTICES, AND OPPORTUNITIES FOR COOPERATIVES						
PRIORITIZATION MATRIX						
GROUP NAME : _____						
NAME OF COOPERATIVE : _____						
NAME OF MEMBER : _____						
CRITERIA						
						SUM
WEIGHT						
GREEN PRACTICES						
1.						
2.						
3.						
4.						
5.						

- **Visual Exercise:** if the group identified the following as the most important green practices to be prioritized, then the Prioritization Matrix would look like Table 3.
  - Check lighting and controls
  - Record and collect energy data
  - Make and use compost
  - Limit the use of chemical fertilizer
  - Segregate waste

Table 3: Visual Exercise on Prioritization Criteria, Weights and Green Practices

Criteria	Low cost to implement	Highest savings potential	Maximizes existing resources	Easy to implement	Quick results	Total Green Practice score
Weights	40%	30%	15%	10%	5%	100%
Check lighting and controls						
Record and collect energy data						
Make and use compost						
Limit the use of chemical fertilizer						
Segregate waste						

## Step 4: Individual and Group Evaluation

- Individually, the members has to review and rate each practice per criterion.
- Visual Exercise:** If “check lighting and controls” (practice #1) is the least costly to implement (criterion #1), and if the rating scale indicated in Step 1 is used wherein a “5” is the most preferred practice while “1” is the last choice for a certain criterion as indicated above, then it gets a score of “5” (Table 4). The practice of “limiting the use of chemical fertilizer”, on the other hand, entails the use of organic and more costly fertilizer-substitute making it the most expensive option therefore its rating is “1”.

Table 4: Visual Exercise on individual's Numerical Scoring

Criteria	Low cost to implement	Highest savings potential	Maximizes existing resources	Easy to implement	Quick results	Total Green Practice score
Weights	40%	30%	15%	10%	5%	100%
Check lighting and controls	5					
Record and collect energy data	4					
Make and use compost	3					
Limit the use of chemical fertilizer	1					
Segregate waste	2					

- To determine the group scores, each individual rating scores must be aggregated
- Visual Exercise:** If members A, B, C & D have given rating scores of 5, 3, 2 and 1, respectively, for practice #1 (check lighting and controls) then the aggregated rating score for that particular practice under criterion #1 (low cost to implement) will be  $5 + 3 + 2 + 1 = 11$  (Table 5).

Table 5: Visual Exercise on the Group's Numerical Scoring

Criteria	Low cost to implement	Highest savings potential	Maximizes existing resources	Easy to implement	Quick results	Total Green Practice score
Weights	40%	30%	15%	10%	5%	100%
Check lighting and controls	$5+3+2+1 = 11$					

- This group's rating score for this criterion has to be multiplied by the weight of the criterion as set in Step 2.
- Visual Exercise:** In our example, the weight of criterion #1 is set at 40%, then the group's weighted value score for practice #1 is  $11 \times 0.4 = 4.4$ . Hence 4.4 will be recorded for practice #1 under criterion #1 (Table 6). Do the same formula for the rest of the practices and criteria.



Table 6: Visual Exercise on Group's Weighted Scoring

Criteria	Low cost to implement	Highest savings potential	Maximizes existing resources	Easy to implement	Quick results	Total Green Practice score
Weights	40%	30%	15%	10%	5%	100%
Check lighting and controls	$11 * 0.4 = 4.4$					

- After putting all group scores for all practices against all criteria, sum up all the weighted value scores - horizontal sum across the Prioritization Matrix Table - to determine the Total Green Practice Score per practice (Table 7).
- The green practices will then be ranked with the highest total green practice score as the most high-impact green practice that the group has identified in this evaluation process using the Prioritization Matrix.

Table 7: Visual Exercise on the Group's Total Green Practice Score

Criteria	Low cost to implement	Highest savings potential	Maximizes existing resources	Easy to implement	Quick results	Total Green Practice score
Weights	40%	30%	15%	10%	5%	100%
Check lighting and controls	$11 * 0.4 = 4.4$	$9 * 0.3 = 2.7$	$12 * 0.15 = 1.8$	$13 * 0.1 = 1.3$	$14 * 0.05 = 0.7$	$4.4 + 2.7 + 1.8 + 1.3 + 0.7 = 10.9$

- **Visual Exercise:** In Table 8, the top green score is 13.55 under the practice “make and use compost” making this the most important practice.

Table 8: Visual Exercise on Green Practice Score Ranking

Criteria	Low cost to implement	Highest savings potential	Maximizes existing resources	Easy to implement	Quick results	Total Green Practice score
Weights	40%	30%	15%	10%	5%	100%
Check lighting and controls	$11 * 0.4 = 4.4$	$9 * 0.3 = 2.7$	$12 * 0.15 = 1.8$	$13 * 0.1 = 1.3$	$14 * 0.05 = 0.7$	10.90
Record and collect energy data						11.20
Make and use compost						<b>13.55</b>
Limit the use of chemical fertilizer						10.55
Segregate waste						13.00

- If there are more than one group who have evaluated the green practice priority list and If the number of members across all groups is the same, then the green practice score can be ranked in descending orders and the highest green practice score is the most relevant.
- **Visual Exercise:** If there are two groups with 4 members each (assuming both groups are equally well-represented by the board, officers and non-officer members) and Table 9 shows the output of both groups, then the most important practice would be the “creation of green-inspired vision and mission statements” which gets the highest green score of 13.72. In this exercise, a direct comparison on the green scores has been made for both groups.

Table 9: Comparing green practice scores across groups with the same member size

Group 1 (with 4 members)	Total Green Practice Score	Group 2 (with 4 members)	Maximizes existing resources
Check lighting and controls	10.90	Check vehicle usage and schedule trips systematically	12.12
Record and collect energy data	11.20	Conduct green training	11.04
Make and use compost	13.55	Save paper; communicate electronically	10.96
Limit the use of chemical fertilizer	10.55	Create green-inspired vision and mission	<b>13.72</b>
Segregate waste	13.00	Publicize green accreditation & certification	12.40

- However, if the member size is different across the groups, the green practice scores have to be divided by the number of members to provide relative importance when comparing the green practice scores across groups.
- **Visual Exercise:** In Table 10 (see next page), the two groups have member size of 4 and 5, respectively. The processed scores which takes into account the member size must be compared against groups instead of the raw scores where the numerical green scores correspondingly increase as the member size goes up. In this exercise, the highest processed green practice score is the “make and use compost” (3.39)

### Step 5: Discuss the Priority List of High-Impact Green Practices

- The result of the priority list using the prioritization matrix provides a good starting point when considering which green practices offer the most benefit to the cooperative. It is a great way to begin the discussion for the next steps in the implementation process. However, it must be noted that the priority matrix is just a tool and it is subject to the best judgement of the members who participated in the evaluation process. The cooperative must therefore exercise judgement and allow room for adjustment as needed.

Table 10: Comparing green practice scores across groups with different member size

Group 1 (with 4 members)	Total Green Practice Score	Group 2 (with 5 members)	Maximizes existing resources
Check lighting and controls	Raw score: 10.90 Processed score: $10.9/4 = 2.73$	Check vehicle usage and schedule trips systematically	Raw score: 12.12 Processed score: $12.12/5 = 2.42$
Record and collect energy data	Raw score: 11.20 Processed score: $11.2/4 = 2.80$	Conduct green training	Raw score: 11.04 Processed score: $11.04/5 = 2.21$
Make and use compost	Raw score: 13.55 Processed score: $13.55/4 = 3.39$	Save paper; communicate electronically	Raw score: 10.96 Processed score: $10.96/5 = 2.19$
Limit the use of chemical fertilizer	Raw score: 10.55 Processed score: $10.55/4 = 2.64$	Create green-inspired vision and mission	Raw score: 13.72 Processed score: $13.72/5 = 2.74$
Segregate waste	Raw score: 13.00 Processed score: $13.00/4 = 3.25$	Publicize green accreditation & certification	Raw score: 12.40 Processed score: $12.4/5 = 2.48$

Main reference for this section: Gosenheimer, C. 2012. *Project Prioritization: A structured approach to working on what matters most*. Office of Quality Improvement, University of Wisconsin System Board of Regents.

Copyright © 2017  
by the University of the Philippines Los Baños  
College of Economics and Management  
Institute of Cooperatives and Bio-Enterprise Development

ISBN 978-621-95271-4-9