GUIDE

CREDIT UNIONS CONTRIBUTION TO

Credit Union Business Solution No. 26

ASSOCIATION OF
ASIAN CONFEDERATION OF CREDIT UNIONS

In partnership with

AUSTRALIAN MUTUALS FOUNDATION

CONTENTS

CLIMATE ACTION RECOMMENDATIONS FOR CREDIT UNIONS

ASSOCIATION OF ASIAN CONFEDERATION OF CREDIT UNIONS
5th Floor FSCT Building
No. 199, Nakornin Rd.
(Rama V), Bangsrithong,
Bangkruay, Nonthaburi
Province 11130, THAILAND

+662-496-1262

accumail@aaccu.coop

www.aaccu.coop

Introduction

ACCU believes credit unions can significantly contribute to the Sustainable Goal No. 13 – Climate Action. Climate change presents significant educational challenges on its causes and consequences. Credit unions in Asia represent more than 39 million people. Educating the members to build more realistic perception of climate risks and their vulnerabilities is essential.

This document is a compilation of programs or projects credit unions can undertake to counter the impact of climate change. Everyone in this world needs to take part in saving the earth we all live in. Credit unions must consider their contributions because climate change will impact our future heavily and because every citizen and institution play a role in the complex challenge brought by changing climate.

Immediate actionable guide or "game changers" in this document are:

1. Inclusion of indicators on "Climate Compliance" as 6th "C" of Credit
2. Do-it-Yourself Energy/Climate Action Audit, a simple procedure for individual member to develop the habit of caring the environment. This can also be the tool for assessing the "Climate Compliance" of members when they apply for a loan.
3. Credit Union Waste Audit Self-Assessment promotes the responsible waste management.
4. Waste Management Audit for Business will be used to assess loans of members.
5. Adoption of Green and Climate Finance in lending
6. Integration of climate actions in the credit union business solutions (policies, sound business practices and training)

Our appreciation goes to Australian Mutuals Foundation for its important partnership with ACCU. The Foundation provides financial support to undertake international development projects in Laos, Myanmar, Bhutan and Timor Leste. AMF provides a vehicle for Mutual Banks, Credit Unions, Building Society and Cooperative banking to assist needy children in Australia, and to alleviate poverty in some of

the poorest communities in Asia and the Pacific by the creation of sustainable cooperative financial organizations.

The UN's SDG:

Goal 13: Climate Action

There is no country that is not experiencing the drastic effects of climate change. Greenhouse gas emissions are more than 50 percent higher than in 1990. Global warming is causing long-lasting changes to our climate system, which threatens irreversible consequences if we do not act.

The annual average economic losses from climate-related disasters are in the hundreds of billions of dollars. This is not to mention the human impact of geo-physical disasters, which are 91 percent climate-related, and which between 1998 and 2017 killed 1.3 million people and left 4.4 billion injured. The goal aims to mobilize US$100 billion annually by 2020 to address the needs of developing countries to both adapt to climate change and invest in low-carbon development.

Supporting vulnerable regions will directly contribute not only to Goal 13 but also to the other SDGs. These actions must also go hand in hand with efforts to integrate disaster risk measures, sustainable natural resource management, and human security into national development strategies. It is still possible, with strong political will, increased investment, and using existing technology, to limit the increase in global mean temperature to two degrees Celsius above pre-industrial levels, aiming at 1.5°C, but this requires urgent and ambitious collective action.

IN YOUR HOME

1. **Add solar panels to your house.**

Photovoltaic solar panels absorb sunlight as a source of energy to generate direct current electricity. A photovoltaic (PV) module is a packaged, connected assembly of photovoltaic solar cells available in different voltages and wattages. Photovoltaic modules constitute the photovoltaic array of a photovoltaic system that generates and supplies solar electricity in commercial and residential applications.

It is highly recommended that credit unions package a loan product financing commercial and residential solar panels. This will help members also decrease energy cost in the long run.

2. **Get a home energy audit.**

A simple home energy audit can show how much energy your home consumes and give you tips on changes that can make things more efficient. Most assessments help homeowners save between 5 to 30 percent on their energy bills, and audits can significantly reduce a home's carbon footprint**.** *Appendix 1 on Do-It-Yourself Energy Audit may help.*

3. **Change lightbulbs to LEDs.**

Quality LED lightbulbs can last 25 times longer, are more durable, and use at least 75 percent less energy than other bulbs.

4. **Clean or replace Air Conditioning filters every 3 months.**

A dirty filter on your air conditioner or heater will make the system work harder and waste energy.

5. **Upcycle your furniture.**

From shopping cart couches to chairs from old skis, upcycled furniture can be innovative and environmentally smart. Consider using recycled materials—like pallets—or repurposing the furniture you already have instead of buying new**.**

6. Recycle your clothes.

Not only is fast fashion wasteful, but the environmental cost of manufacturing and distributing new clothes is devastating. The credit union can offer recycling programs to resell gently worn garments.

7. Buy new appliances with the Energy Star label.

When you need to replace a refrigerator or dishwasher, choose an appliance that's Energy Star certified. Energy Star products are more efficient, meaning they can help lower your energy costs and reduce greenhouse gas emissions.

8. Unplug electronic devices when they aren't in use.

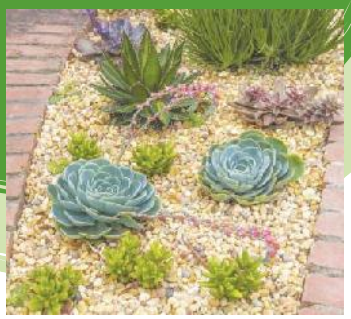
Just because a device or appliance appears to be off doesn't mean it's not drawing power. "Sleep mode" or plugged devices in idle power mode consume energy. Things like your cable box, laptop, microwave oven, television, electric fans, air conditioners, printer, and other home appliances should be turned off.

9. Design your workspace around natural light.

Here are some ways to increase natural light[1]:

- Add more mirrors and shiny objects such as decorative mirrors, furniture with glass, chrome or mirrored accents, metallic light fixtures and faucets, silver photo frames, decorative nickel cabinets, metallic finish on the ceiling, and other reflective surfaces
- Choose the right color palette- use shinier or semi-gloss paint to further enhance the reflective properties of the surface color
- Install larger windows or doors
- Replace wall space with glass blocks
- Lighter window treatments
- Add skylights
- Install solar tubes
- Trim trees and shrubs outside windows and doors

[1] www.ecolinewindows.ca



10. **Eat for a climate-stable planet**

The decisions we make about food can have a profound effect in the environment. Here are some ways you can make your family diet climate-friendly:

- Eat more meat-free meals
- Buy organic and local whenever possible
- Grow your own

11. **Use drought-resistant landscaping or plant decorations.**

It's going to be not just warmer but also drier in many communities. We should use native species wherever possible, so that homes, offices and neighborhoods can enjoy the benefits of attractive landscaping without exacerbating water shortages.

In fact, when practiced collectively, drought-resistant planting can help decrease water consumption, thus decreasing the use of energy, and decrease carbon emission.

12. **Recycle.**

- **Make recycling bins readily available**. Make sure your home is outfitted with recycling bins for paper, plastic and metal. Keep them out in the open and label them appropriately.
- **Recycle old newspapers laying around the house.** When finished reading the newspaper, either leave it for someone else to read or recycle it.
- **Look for the recycled option in all the products you buy**. It's not just paper that is recycled.
- **Buy rechargeable batteries**. It takes 1,000 regular batteries to equal the lifespan of one rechargeable battery. When you are discarding your batteries, recycle them.
- **Reuse your morning coffee cup**. Or better yet, buy a mug to avoid the waste caused by throwing away the paper or Styrofoam.

13. Start composting

Transforming food scraps and lawn clippings into fresh, nutrient-rich soil gives home gardens boost. Roughly 20 to 30 percent of what we normally throw out can be composted. The guide to Composting 101 is in Appendix 2.

14. Avoid drinking bottled water

Drinking bottled water is adding to our environmental problems. According to World Counts[2], more than 100 million plastic bottles are used worldwide every day, 1,500 plastic bottles end up as waste in landfills or thrown in the ocean every second.

Drink water from the water dispenser and carry with your own water bottle when traveling. This will help in saving the environment from plastic bottles.

15. Reduce food waste

- Make a list of weekly meals so that you will buy only what you need. You will end up having excessive food stuff in your fridge that ends to the trash bin.
- Based on your planned meals, make a list with quantities before shopping.
- Make sure that you review your refrigerator and cupboards to see what's available before making your list.
- Buy only what you need and will use. Buying in bulk only saves money if you can use the food before it spoils.
- Use perishable food first

[2] www.theworldcounts.com

IN YOUR CREDIT UNION

1. **Organize an Eco-ambassadors**

The CEO of your credit union can establish a team like-minded employee for green action. The team can rally together to help develop and implement new sustainability initiatives around the workplace.

2. **Introduce Zero Use Plastic and Styrofoam**

Introducing a zero single-use plastic policy can be a challenging but effective way of cutting your office's environmental impact. Start by exchanging plastic cups and takeaway boxes for reusable containers, before cutting back in other areas like office supplies.

Get buy-in from employees by gamifying the process. Create a leaderboard where employees can earn points for not using or accepting plastic. They can bring their own reusable food containers when buying food outside or bringing food from home.

3. **Conduct waste audit**

Conduct a waste audit (Sample tool on Appendix 3) of your facility to help gain a better understanding of what materials are being trashed and if any of these items can be recycled instead. Here's quick list of items your office may be tossing but could be recycled:

1. Papers
2. E-waste
3. Light bulbs
4. Batteries
5. Printer cartridges
6. Cardboard
7. Pizza boxes
8. Aluminum cans & bottles
9. Newspapers
10. Magazines

4. **Conduct carbon footprint audit and minimize emission**

Start by commissioning an audit of your credit union's CO2 emissions, then think about how you can neutralize them
Travels including flights and daily commutes, is generally a good place to target first, before looking at other areas such as energy consumption.

5. **Go vegetarian**

Animal agriculture is one of the planet's most energy-intensive industries, accounting for 9% of all greenhouse gas emissions[3].

Besides good for health, vegetarian diet can counter the impact of climate change. The credit union can appoint one day per week as "green day" in which diet is also included. You can also try taking one step further by introducing vegetarian catering for internal events or staff meetings.

6. **Use eco-friendly credit union souvenirs**

Set an ethical tone in choosing corporate souvenirs or gifts by opting for fair-trade and eco-friendly products. The credit union is encouraged to use souvenirs produced by members themselves.

7. **Green your energy**

Renewable energy today presents a readily available and competitively priced alternative to traditional energy sources.
Go one step further by also implementing energy-saving mechanisms, such as setting all computer screens to turn off after 5 minutes of inactivity.

[3] *Source: www.epa.gov: Greenhouse gas emissions from agriculture come from livestock such as cows, agricultural soils, and rice production.*

8. Get eco office supplies

Office supplies are often overlooked in the move to go green, but there are plenty of environmentally friendly options out there. Try looking for stationery, paper and cleaning products that are sustainably produced and have received a green certification.

9. Run environmental workshops with members

Maintain momentum around your new environmental initiatives by running workshops with members on how they can adopt practical climate action initiatives at their homes and places of work.

The credit union can also invite local NGOs to share more about the work they are doing on climate.

10. Green Finance

National federations can develop prototype loan products credit unions can adopt based on their local situation.

Some examples of Green Finance projects are but not limited to:

- The promotion of renewable energies, energy efficiency, water sanitation, environmental audits.
- The reduction of transportation and industrial pollution, climate change, deforestation, carbon footprint.

Renewable energies are those coming from sun, wind and biomass. Possible investment projects for members:

- Sun – solar panels for home and business
- Wind – windmills for home and business
- Biomass – animal manure converted into fuel

11. Organize a Farmers' Market

A farmers' market is a physical retail marketplace intended to sell foods directly by farmers to consumers. Farmers' markets typically consist of booths, tables or stands where farmers sell their homegrown produce, live animals and plants, and sometimes prepared foods and beverages. The program can support local entrepreneurs and encourage wellness by buying fresh local produce instead of processed food.

12. Organize Healthy Cooking Lessons

Cooking lessons for healthy food can be organized. There are tons of available resources from the internet on healthy cooking using organic produce. This program could help improve eating habits and overall health without renouncing tasty meals.

The Sister Society[4] of the credit union would be very appropriate to run the healthy cooking classes as their project.

13. Include the 6th "C" – Climate in Loan Evaluation

The basis of loan evaluation is the 5 Cs of credit which are: Character, Collateral, Capital, Capacity to Pay, and Condition. The inclusion of the 6th C which is Compliance to Climate Action would help in members being observant on lifestyle protecting the environment. The credit union can use the DIY Energy Audit in Appendix 1.

[4] Sister Societies are Global Women chapters established on a local level around the world to further the GWLN's global mission by making a local impact.

IN YOUR COMMUNITY

1. **Roadside plantings**

   Urgent efforts are needed to rehabilitate the urban environment by planting hardy, quick-growing trees of both exotic and indigenous origins.

2. **Rain gardens** - is a garden of native shrubs, perennials, and flowers, which is generally formed on a natural slope. It is designed to temporarily hold and soak in rain water runoff that flows from roofs, driveways, patios or lawns.

3. **Community-scaled gardens.**
   One type of vegetation that is a special case is gardening, including small urban orchards. These, too, can help lower temperature, and growing some of our own food right in our neighborhoods can also reduce the number of errands we need to run, while increasing health and fitness.

   Health and convenience are good things in a warming world. But this may require scale to create a visible impact on climate. The credit union can initiate this project with the local village administrative unit since most of the members of the community are also members of credit union. It is important to consolidate the climate action efforts rather than each organization doing action in isolation.

4. **Use light-colored roofing and pavement.**

   Dark surfaces absorb heat, while light-colored surfaces reflect it. Hot pavements aggravate urban heat islands by warming the local air, and contribute to global warming by radiating heat into the atmosphere - pavements can aggravate urban heat islands because they comprise about one third of urban surfaces. Hot pavements can also raise the temperature of storm water runoff.

5. **Save older buildings.**

New construction generates heat and disrupts existing vegetation while frequently failing to generate carbon-reduction benefits over older buildings, even with newer and more efficient technology. Our older buildings also remind us who we are as a community and tend to knit together existing neighborhoods.

6. **Support local river clean-up.**

Find out if the local government in the community the credit union is operating has a River clean up program. If not, the credit union can initiate a program involving members. The objective is to take waste out of the river and riverbanks, educate the community and transform the environment. The program is part of the credit union community engagement.

7. **Adopt a Forest**

In cooperation with the local community administration, the credit union can grow trees in a government owned land that can be populated with trees. It is not just merely planting trees but making sure the trees are sustainably growing.

8. **Come together to combat climate change**

Get involved in the local government programs in combating climate change. By collaborating and changing everyday behaviors, sharing tips on weatherproofing, and reducing energy usage can significantly help. Credit unions can do their part by educating their members.

9. **Get the youth on board**

Young people are increasingly aware of the challenges on climate change. Get them involved by developing awareness programs.

NDIX 1: Do-It-Yourself Energy Audit Checklist[5]

APPENDIX 1: Do-It-Yourself Energy Audit Checklist[6]

This energy audit checklist is a simple procedure to appraise the energy efficiency a member of credit union. By completing the checklist, a member will be able to spot areas that need improvement in the way they use energy.

Direction: Please check and rate yourself honestly based on what you do given the statements using the following:

0 – Never 1 – Sometimes 2 - Often 3 - Always

	0	1	2	3	Comment
HABITS *Evaluate your habits and daily activities to determine what you can do to improve them. Consider simple changes that have little or no-cost to make a meaningful impact on your overall energy performance. Commit to energy-saving changes and write them down.*					
Appliances and Devices					
1. I replace inefficient, energy-guzzling old appliances, even if they still seem to be doing their job.					They could be costing much more than you think.
2. I don't buy appliances that are too large for my needs.					It is better to buy a smaller A+ rated model than an A+++ version that's too big.
3. Thermostats and timers - set and save. The A/C is set somewhere between 22 and 24 degrees Celsius.					For every single degree of cooling you can do without, you're saving on your energy bill. Avoid setting it too cold in summertime. Setting your air conditioning unit one degree warmer than you normally do can cut costs by up to 10%. As a rule, set the thermostat less than 8 degrees below the outdoor temperature (so if it's 30 outside, aim for 22- or 23-degrees Celsius inside).

[5] *The tool can be contextualize depending on the members economic situation. Some items may not be applicable such as air-conditioning system, refrigerator, and other appliances.*
[6] *The tool can be contextualize depending on the members economic situation. Some items may not be applicable such as air-conditioning system, refrigerator, and other appliances.*

	0	1	2	3	Comment
4. **Turn off those heat-emitting culprits:** I turned off television, the computer, the printer, the lamp in the corner, the kitchen oven…!					In standby mode, the appliance is still drawing power even when turned off. Turn off the appliance at its main on switch or power point. Further, all these household essentials generate bucketloads of heat and will be forcing your air conditioner to work harder to keep the temperature under control.
5. **Keeping A/C clean to keep costs down** I ensure air conditioning unit is regularly maintained and that the filter is either replaced or cleaned for optimum efficiency.					A dirty filter makes any air conditioning unit work harder, meaning more electricity and higher energy costs!
6. Turn off at night and save while you sleep. I keep air conditioning on during the day, and off at night.					The evening air is naturally cooler, so you can take advantage of that by turning off the air conditioning and opening a window.
7. I clean the lamps and diffusers regularly as dust causes loss of efficiency.					Keeping the lamps and diffusers clean can make your room bright and fresh.
8. My appliances are unplugged when not in use.					To save energy, unplug your appliances when not in use.
9. I set the fridge thermostat to between 3°C and 5°C. The freezer should be set to between –15°C and – 18°C.					Every degree lower requires five per cent more energy. A fridge thermometer is a good idea.
10. I place the fridge or freezer in a cool spot out of direct sunlight and away from cookers, heaters and dishwashers.					Place the fridge away from direct sunlight because it can heat it up during the summer. It should also be placed away from the oven and microwave because they too produce heat.
11. I make sure the door seal is clean and in good condition.					To test: It should hold a piece of paper tightly in place when closed.
12. I make sure the warm air can escape from the back of the fridge or freezer by leaving a space between the back of the unit and the wall.					Two inches (2”) at the back, 1” on top and on the side are ideal spaces for the fridge so it doesn’t overheat and cause costly electric bill.

	0	1	2	3	Comment
13. I keep the metal grill on the back of the fridge clean and free of dust and grime is important to efficient running.					Dirt buildup on coils makes the engine works hard thus utilizing more energy. The refrigerator coils are cleaned at least once a year.
14. I avoid overloading the fridge or freezer.					Try to leave about 20 per cent free space for good air movement.
15. I defrost manual models regularly or when ice is more than five millimeters thick.					It will run more efficiently after being defrosted.
16. I allow hot things to cool before putting them into the fridge					Hot food should be brought down to room temperature (max of 2 hours) -because bacteria can spoil the food as well as the other food inside the fridge.
17. I service my appliances regularly, according to the manufacturer's instructions.					An appliance in poor condition usually uses more energy than one in good condition.
18. I buy new appliances with energy star label					The ENERGY STAR label was established to reduce greenhouse gas emissions and other pollutants caused by the inefficient use of energy.
In the Kitchen					
19. I plan out our meals by making sure we're having meals together whenever possible. How can planning meals reduce energy? If you all have meals at the same time, **there is no need to reheat food**.					This is a great strategy that will help you not only save energy but also have the entire family together.
20. I prepare simple and healthy meals that does not consume a lot of energy to cook.					There are many dishes that takes short time for cooking. Tenderizing meat would consume lots of energy consumption.

	0	1	2	3	Comment
21. I use pressure cookers when preparing food that takes a long time to cook.					The high pressure helps force liquid and moisture into the food quickly, which helps it cook faster and also helps certain foods, like tough meat, get very tender very quickly.
22. When using a kettle, I boil just the right amount of water or use a thermos to keep the extra boiled water.					The most efficient electric kettle is the one that boils water while using the least amount of electricity via its plug. Boiling excess water means more energy consumption and higher cost.
23. If I am boiling an egg, I turn the heat off early and let the egg finish cooking in the residual heat.					Allow three and 3.5 minutes for a medium-sized egg and 4 minutes for a large egg. Cook for a further minute if it's soft-boiled eggs.
24. I plan when cooking something frozen.					Defrosting the meat in the microwave or over consume energy.
25. I use pot lids when cooking.					Keep lids on pans when cooking can reduce the energy required.
26. I am exploring the use of solar cooker to replace firewood in cooking.					Solar cookers use exclusively free renewable energy from the sun. These are also clean objects that don't emit harmful smoke and safe solutions in arid and fire-prone areas.
Throughout the rest of your home and work					
27. **Get shady and shut out the sun.** To get shady, I keep blinds, curtains, drapes and awnings drawn and closed. For sun-facing windows, light-colored backings for blinds and curtains will help deflect sun heat too.					Your air conditioning unit won't have to work so hard, and your energy bill will be reduced. During a hot summer, you can't turn down the sun, but you can add some shade to turn down the heat.
28. I grow my own vegetables in the garden without putting any sprays or insecticides.					By growing your own garden, you are the one to decide what goes on your plants and into your soil, allowing you to reduce the amount of harmful chemicals polluting our environment and waterways. Organically growing your own food is sustainable and nourishes your soil by using safe and natural fertilizers and products.

	0	1	2	3	Comment
29. I avoid buying small items in sachets like shampoo, soap, toothpaste at the sari-sari store.					Sachets also undermine the reduce, reuse and recycle system. Used sachets, coated with used product such as shampoo, will not be physically segregated by consumers even if they contain plastic and metal film. Instead, they end up as trash – often in landfills where they do not really biodegrade.
30. I turn the lights off when not in the room.					
31. I take 2-minute showers					Take short showers instead of long showers.
32. I don't leave the tap running while brushing teeth, shaving or washing face.					A running tap wastes more than six liters of water a minute.
33. I save the rainwater by installing a simple machine to catch the pour.					By simply using rainwater for toilet flushing, washing the car and in your laundry and garden, you can reduce your mains water use by 70%. Read more at Gardening Know How: Using Rain Barrels: Learn About Collecting Rainwater for Gardening https://www.gardeningknowhow.com/garden-how-to/watering/collecting-rainwater.htm
34. I dry my clothes on a clothesline or drying rack.					If you have a dryer: not using the dryer for 6 months/per year can prevent 1000 pounds of CO2/year.
35. Trees, vines and shrubs provide shade to my house.					Plants that provide shade can cool down your home by 3-6 degrees and save you up to 25% of household energy use.
36. I use light colors on the walls our home.					Dark colors tend to absorb light, requiring using more energy from light bulbs to achieve the same effect.
37. I harness the power of the wind/and/or sun to generate electricity in my home.					Using solar power that is renewable and abundant in Asia benefits the environment because there are no direct greenhouse gas emissions; no need for burning fossil fuels like when using electricity.

	0	1	2	3	Comment
38. I recycle/donate my old appliances as appropriate.					When appliances are recycled/donated, they can be looked upon as valuable resources. If disposed of improperly, they become environmentally harmful and poison ecosystems.
39. I make sure laundry is done on a weekly basis.					This will help in saving water and thus saving energy as well.
40. I iron clothes once a week.					Ironing or pressing clothes should be scheduled instead of ironing clothes whenever you need it. It consumes more electricity.
41. I choose clothing a low maintenance clothing for me and my family.					Wash and wear clothing would save you a lot of money on electricity.
42. I neatly fold clothes after laundry to avoid being heavily creased.					Neatly folded clothes can be easily ironed, and this saves energy.
43. I take chargers out of the wall socket.					Never leave them switched on, whether they're for your mobile, your e-reader, your laptop or your digital camera. They use power even when the device isn't charging.
44. I buy new appliances with energy star label					Energy Star certified appliances help save money on operating costs by reducing energy use without sacrificing performance.
45. I design my workspace around natural light					Natural light in work spaces improves worker satisfaction and productivity, aside from saving on electricity.
46. I use drought resistant landscaping or plant decorations					These plants do not require frequent watering
47. I plant my own vegetables.					This saves money on groceries or reduces food bill.
48. I am composting.					Roughly 20 to 30% of what we normally throw out can be composted. Composting saves money on shipping organic waste to landfills and improve fertility of soil.

	0	1	2	3	Comment
49. I don't water the plants using clean, fresh water from the well. Instead, I recycled the water used in the kitchen in watering the plants.					Gallons of used water are lost when we just throw it during laundry instead of re-using it to clean our homes, animal pens, and car.
Outside my home					
50. I avoid single use bottled water but use refillable bottled water or bottles.					Eighty percent (80%) of plastic bottles end up in landfills. It takes up to 1,000 years for every single bottle to decompose.
51. I bring my own shopping bag.					Plastic bags are incredibly destructive to the environment: They take hundreds of years to break down, contaminate soil and waterways, and cause widespread marine animal deaths.
52. I only use native baskets in doing my marketing. For fishes and meat, I bring my container to avoid putting it in a plastic container.					Using eco-friendly bags or reusable containers is one of the simplest and most economical ways to decrease plastic consumption.
53. I throw trash in the proper trash bin when I am outside home.					
54. I don't burn the garbage especially the fallen leaves in my backyard to dispose them. Instead, I put it in the compost pit.					Burning leaves releases airborne particulates like dust and soot, mold, and other allergens that were tamped down with rain and decomposition. Leaf smoke may also contain hazardous chemicals such as carbon monoxide, which can bind with hemoglobin in the bloodstream and reduce the amount of oxygen in the blood and lungs.
55. I don't do slash and burn agriculture to clean and prepare the soil					There are many problems that result from this method of growing crops, including deforestation, a direct consequence of cutting down forests for crop land; loss of habitat and species; an increase in air pollution and the release of carbon into the atmosphere—which contributes to global climate change.

	0	1	2	3	Comment
56. I take public transportation.					
57. We only have one car that with just enough space for the family.					Car pollution is one of the major causes of global warming. Big cars and trucks emit carbon dioxide and other greenhouse gases, which contribute to the global warming pollution.
58. I use the stairs instead of taking elevator when going one floor down or up.					Public transportation carries many more people in much less space than individual automobiles, which helps to keep traffic congestion lower, which in turn reduces air pollution from idling vehicles, and helps riders avoid the stress that comes from daily driving in highly congested areas.
59. I only go to the market once a week to save on energy and resources. If possible, I walk my way to the market instead of riding the tricycle.					One of the most effective ways to reduce our carbon footprint is to reconsider how much, and how often, we travel.
60. I return plastic spoon and fork and straw that goes along with takeout food.					More than half of plastic eating utensils are disposed without being considered for recycling or being put to other uses. They clog water system. Even when eating out, bringing own spoon and fork is advised.
Total Score					

Resources:
https://www.ovoenergy.com/guides/energy-guides/120-ways-to-save-energy.html

Scoring:

144>	Outstanding
108 – 143	Satisfactory
90 – 107	Fair
Below 90	Poor

APPPENDIX 2 - COMPOSTING 101[7]

BEFORE YOU BEGIN

You need to select a location for your bin. You will want a level area with good water drainage, a partially shaded spot is best. Keep your bin 8" to 12" away from walls, fences, bushes, plants, and openings to your home.

Before you place your bin on the ground, loosen the soil so it is sitting in dirt. Once your bin is in place, put a 4" to 6" layer of dead plants, twigs, or small branches on the bottom.

COMPOSTING 101

Compost is called The Gardener's Gold because it is an invaluable partner in keeping the soil healthy. In organic gardening making compost a part of the gardener's To-Do list every growing season. If you are thinking of using compost that you made yourself instead of buying it from your favorite garden store, here are seven simple things to remember before you start making compost.

#1 – WHAT COMPOST IS NOT

Compost is a wonderful recycling facility right at your home. Food scraps need not go to the landfill anymore, but you can use it in your garden as organic soil improver. Your soil will love you for it. But for all its wonderful benefits compost isn't meant to be used as fertilizer. What compost does well though is help improve soil structure, prevent the growth of weeds and regulate moisture in the sail.

Most importantly, compost teems with microbial life – good microorganisms that keep the soil healthy and make nutrients readily available to plant.

#2 – WHAT TO CONSIDER BEFORE MAKING COMPOST

Where you will place your compost bin or compost pile and how large your compost heap will depend on many things:

- The amount of space you have in your garden for composting.
- The kind of materials you will be using to make compost.
- How you will use compost and how much.
- The time and effort you will spend making compost.

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[7] *Source: http://agverra.com/blog/making-compost/*
http://www.napi.ca/composting/6types_of_compost_bins.htm

- How you will keep your compost pile spic and span.

Decide on these things first before you start making compost so you will not face a bigger problem down the line. You may find one day that you have made way too big a compost bin when you only have a small source of organic material to build on.

#3 WHAT HAPPENS WHEN MAKING COMPOST

Making compost is like fermenting beer: you need bacteria, air moisture and warmth so the magic – the breakdown of compost ingredients – can happen.

Keep in mind the following when you start making your compost:

- Microbes are responsible for digesting or decomposing compost ingredients like kitchen scraps, grass clippings, twigs, and other materials that you are using.

- When the compost pile starts to heat up, that is when the microbes are hard at work, breaking down organic materials.

- The compost heap can get as hot as 76 degrees Celsius.

- When the compost pile cools down, it may mean two things: (1) composting is complete or (2) anaerobic organisms have taken over your compost pile….which means you need to mix the pile to keep oxygen circulating enough to encourage aerobic microbes to start working again.

- Compost starts heating up two days after you have started your pile.

- Turn your compost pile every 2 or 3 days to let air circulate and speed up the decomposition of organic materials. Alternatively, you can wedge a PVC or steel pipe riddled with holes in the center of the compost so air can get through the heap.

- Cover the compost heap to protect it from rain. Too much water ferments the decomposing materials, which can stink to high heavens if you are not careful.

- A smaller compost heap is easier to manage, neater and will decompose much more quickly than a larger pile. Composting materials all at one will also help speed up composting time.

#4 – WHAT GOES INTO MAKING COMPOST?

Anything that once lived is potential compost material. They say "potential" because there are some materials that you can't use, for simple health and practical reasons.

The best compost is a mixture of "green" and "brown" materials.

"Greens" are young, sappy materials that rot quickly and are high in nitrogen while "Browns" are organic materials made from tougher materials, have usually dried, and are high in carbon.

Greens	**Browns**
• Grass clippings • Poultry manure • Young weeds and plants • Fruit and vegetable scraps • Fish meal • Coffee grounds • Alfalfa meal • Tea bags and tea leaves • Cut flowers • Soybean meal • Bedding from herbivorous pets	• Fall leaves • Spoiled hay / old straw • Wood chips • Twigs • Sawdust • Cardboard • Egg cartons • Shredded newsprint and office paper • Shredded tree bark • Paper bags and paper towels

Experts suggest a 30:1 ratio of carbon to nitrogen organic materials when making compost.

#5 – WHAT NOT TO COMPOST

There are materials that are not suitable to make compost.

- One, because they simply do not decompose and will still be there when the rest of the composted material is ready. These materials include plastic, Styrofoam, glass or metal.

- Two, they may spread disease and harmful pathogens like dog feces, used cat litter, and disposable diapers.

- Three, because they encourage unwanted visitors like rodents to rummage in your compost because they are attracted to the compost's nasty smell. Things like animal bones, fat, meat and fish scraps, greasy items, and other dairy products fall in this category.

#6 – COMPOST IS READY WHEN…

It has turned into a dark soil and you can't recognize the original ingredients anymore. (Although sometimes, you will see the odd bark, twig or eggshell in it)

If you start making compost in late spring or early summer, the heat helps quicken composting time to as little as 12 weeks. In the fall, if you are composting a large pile, your composting materials are mostly slow-rotting or you are not mixing the compost heap often, compost can take up to a year – sometimes even two years – to be ready.

Most experienced gardeners and commercial growers have discovered though the secret of using compost activators – the professional type with real biology specifically designed for composting. Some call them compost starters but the principle is the same: They add specially selected microbial species to the compost pile so that these beneficial microorganisms can start working on making compost immediately.

#7 – HOW TO USE COMPOST

It is considered as medium – fertility soil improver, compost is used as mulch in spring or summers to regulate moisture and prevent evaporation, so plants do not starve during a drought. How much compost you use depends on the soil's fertility and structure.

Experienced gardeners spread about 2 to 4 inches of compost on their garden beds or incorporate it 8 inches into the topsoil every year, some even twice a year. In the winter the half – composted material will have decomposed fully and would have added the much-needed soil amendments in time for spring sowing.

Making compost is not difficult at all and is well worth the effort because gardening is one endeavor where you can literally see the fruits of your labor.

Ten Easy Steps to Making Compost[8]

1. **Select a site:** In a sunny, well-drained location, measure out an area to site your bin. Three square feet is an ideal bin size and is the minimum size necessary to generate the required heat in the shortest possible time.

[8] https://www.evergreen.ca/downloads/pdfs/Backyard-Composting-Guide.pdf

2. **Purchase or construct a bin:** from a local store or build your own rodent-proof compost bin.

3. **Form base layer:** In the bottom of the bin, arrange a six-inch layer of coarse materials such as sticks, pruning, and bark pieces. This will allow air to filter into the center of the heap without smothering the soil surface.

4. **Alternate layers:** After the base layer is formed, you can start using your compost bin daily. As you accumulate kitchen or yard waste, add it to the bin in layers, starting with 2 to 4 inches of "green" organic matter. Follow this with more carbon-rich "brown" matter, and continue to alternate between green and brown, ensuring that no organic layer is ever more than 15 inches deep.

5. **Moisten:** Lightly water the pile if necessary—compost ingredients should be damp, not soaking.

6. **Cover:** The compost pile should always be topped by a thick carbon (brown) layer. Using a lid will discourage rodents and other animals.

7. **Monitor:** Each time you add material to the bin, give it a look and a sniff. If the pile has an unpleasant odor, or does not appear to be gradually shrinking, this indicates a problem with the pile.

8. **Add more layers:** The pile will shrink as its contents decompose; continue adding material.

9. **Check:** Compost is generally ready to use after about 2–3 months. This can vary depending on things like temperature and the materials used. Once your bin starts to get full, check to see if the bottom portion of the pile is ready to harvest in order to make room at the top.

10. **Harvest:** Begin harvesting when the compost at the bottom and center is decomposed. Dig out the compost with a shovel, using the door at the bottom of a commercial bin. If you have built your own bin, remove the top new layers and dig the compost from the center.

APPENDIX 3 - SAMPLE WASTE AUDIT
ABC CREDIT UNION

For each category of waste that is produced, explain how the waste will be produced and how management decisions and policies will affect the production of waste.

Categories of Waste	**How is the waste produced?**	**What management decisions or policies affect its production?**
Example: Disposable food packaging	Generated by staff members bringing lunch package.	Incentivize staff for not using disposable food package. This can be done on a monthly basis.
Aluminum food and beverage cans		
Cardboard		
Bond Paper		
Glass food and beverage bottles/jars		
Newsprint		
Styrofoam food package		
Organics – food waste		
Glossy magazines, catalogues, flyers		
Tarpaulin marketing materials		
Paper towels and toilet papers		
Printer cartridges		
Photo copier ink toner		
Furniture (tables, chairs, sofa, cupboards, filing cabinets)		
Old electronics, computers, telephones, light bulbs		

Categories of Waste	How is the waste produced?	What management decisions or policies affect its production?
Old curtains, tablecloths and cloth napkins		
Office vehicles		
Vehicle Tires and spare parts		
Old stationery and publications		
Others (you may use other page, if necessary)		

Note: When completing this form, write "n/a" in the columns where the entity will not produce any waste for a category of waste.

APPENDIX 4: Waste Audit and Management for Business

Name of Loan Applicant			
Business Name		Type of Business	

For each category of waste that is produced, explain how the waste will be produced and how management decisions and policies will affect the production of waste.

INPUT *What are the resources you put in the process?*	**PROCESS** *How the waste is produced?*	**Output** *What waste is created?*	**CONTROL** *How do you currently manage/dispose the waste?*	**ELIMINATE OR REDUCE** *How can you eliminate or reduce?*

Prepared by:

Borrower: _____

Recommendations by the Loan Officer:

Instructions:

1. The form will be used in assessing the 6th "C" of credit which is the extent to which the business applied for loan is complying the "climate action."
2. The loan officer is expected to help the member analyze the waste generated by the business and how it can be eliminated or reduced.
3. The loan officer provide recommendation based on the waste assessment.

Sample Waste Audit and Management for Business

Name of Loan Applicant	John Doe		
Business Name	John's Donuts	Type of Business	Food

INPUT *What are the resources you put in the process?*	**PROCESS** *How the waste is produced?*	**Output** *What waste is created?*	**CONTROL** *How do you currently manage/dispose the waste?*	**ELIMINATE OR REDUCE** *How can you eliminate or reduce?*
Gasoline (Drive a Motorbike to Market and back home)	Purchasing raw materials	Air pollution (GHG), Heat emission	None	I will use nature friendly gasoline, keep my motorbike engine in check and clean to ensure it will not cause more pollution.
	Preparation removing any packaging	Waste plastic and paper	Throw them into trash bin	I will sort them before putting into recycle bins. I will bring my own recyclable container so as not to use plastic bags from the vendors.
Milk, electricity for oven	Place milk on Microwave until heated	Spilled milk, Air pollution (GHG), Heat emission	Spilled milk will be cleaned later, cannot do anything with Air pollution or heat	I will keep my Microwave clean and in check to ensure it will not cause too much electricity consumption / air / heat pollution than it should be.

				I will use a cup / spoon to measure milk to avoid too much consumption and unnecessary waste.
Flour, butter, sugar, cinnamon	Sift flour into a bowl, add milk, mix to form a soft dough	Spilled ingredients	They will be cleaned later	I will use a cup / spoon or appropriate tools to measure the ingredients to avoid too much consumption and unnecessary waste.
	Using your fist, punch dough down. Turn out onto a lightly floured surface. Knead until smooth.	Spilled materials	They will be cleaned later	I will use a bowl to ensure no dough waste.
	Press dough out. cutter, cut circles from the center of each round.	Wasted dough	Throwing them into trash bin	I will cook the unused dough so that it will not waste.
electricity	preheat oven to 200°C/ 180°C fan forced. Cook doughnuts for 10 to 12 minutes or until golden brown and cooked through	Overcooked donuts, Air pollution (GHG), Heat emission	Throw overcooked donuts into trash bin; Cannot do anything with Air pollution or heat.	I will use appropriate temperature and close monitor to avoid too much electricity consumption, overcooked donuts, air pollution I will keep my oven clean and check it regularly.

Sugar, butter, chocolate etc.	Dip in sugar mixture, shaking off excess.	Spilled material	They will be cleaned later	I will use a cup / spoon or appropriate tools to measure the ingredients to avoid too much consumption and unnecessary waste. I will keep excess material for future and not throw them away.
Water, one-time use paper	Cleaning the kitchen	Wasted water, Used paper	Water will be discharge into kitchen's sewer and Used paper will be thrown in trash bin.	I will replace paper with cleaning cloth. I will avoid too much waste in all production process to save the amount of water. The wastewater will be put in purifier tank before discharge. I will recycle water as much as possible.

Gasoline (Drive a car)	Transportation to the shop	Air pollution (GHG), Heat emission	Cannot do anything with Air pollution or heat	I will use nature friendly gasoline and keep my car engine in check and clean to ensure it will not cause more pollution than it should be.
Plastic / paper for packaging	Selling Donuts	wasted paper or plastic after customer finish the donuts	Customer often throw away at their homes or elsewhere	I will redesign my packaging to be more nature friendly / using less paper and no plastic at all cost.

Appendix 5 – SAMPLE CLIMATE ACTION PLAN (CREDIT UNION LEVEL)

Action 1: Raising awareness on Climate Change issues through member and public education			
Steps necessary for delivery	Timeline by Quarter	Lead	Indicators
Develop resource materials highlighting the social and economic impacts of climate change and contributions individual members and the society can provide for			
Training of trainers			
Integrate climate change training or lectures during membership meetings.			
Use other forms of awareness building campaigns such as: • Infographics • Local partnerships (village or town administrative office) • Run social media contents i.e. Facebook, Instagram, twitter etc. • Tell magnetic stories in blogs • Create podcasts (an audio program just like talk radio that is downloadable) • Influence marketing (using known personality or thought leaders) • Shareable video content featuring knowledge moments and DIY moments			

Action 2: Ensure all policies and procedures are considered against their carbon impact and climate mitigation			
Steps necessary for delivery	Timeline by Quarter	Lead	Indicators
Review and update policies that accelerate the creation of waste and carbon footprint i.e. unnecessary documentation, transportation, others			
Adopt Waste Management Audit system and process			

Action 3: Reform the lending services to introduce more robust consideration of climate impacts in project appraisal			
Steps necessary for delivery	Timeline by Quarter	Lead	Indicators
Integrate the 6th C of credit which is Climate Action Compliance. *(Tools that can be used: Energy audit for individual and Waste Audit for business or both)*			
Develop and introduce new loan products that counter the impact of climate change. Examples of these are: renewable energies (solar panel, windmill, biogas for fuel), organic farming, electric motor vehicles, organic agricultural products processing, etc.			

Action 4: Build the culture of climate stewardship in the credit union			
Steps necessary for delivery	Timeline by Quarter	Lead	Indicators
Organize the youth as Eco Ambassadors			
Institutionalize in the policy: • zero use plastic and Styrofoam • waste audit • carbon footprint audit • use of eco-friendly souvenirs • supplies greening of energy			
Implement an all year programs, but not limited to the following: • Go vegetarian • Environment workshops with members • Farmers' market • Healthy cooking lessons for members			
Incentivize members who demonstrated impacts in caring for the environment.			

Action 5: Build partnership with civil societies (members) and local governments on nature conservation and resist the effects of climate change and environmental pollution[9]			
Steps necessary for delivery	Timeline by Quarter	Lead	Indicators
Create Eco Ambassadors team			
Create an inventory of climate action programs implemented by local government and civil society organizations with the intention of complimenting their efforts.			
Develop partnership with them by signing a memorandum of understanding on the collaboration.			
Launch programs with members and in partnership with local government some of the following: • Roadside plantings • Rain gardens • Community scaled gardens • Use light-colored roofing and pavements • Saving older buildings • Local river clean-up • Adopt a forest			

[9] *It is advisable to collaborate for greater impact and saving precious human and financial resources.*

ASSOCIATION OF ASIAN CONFEDERATION OF CREDIT UNIONS
5th Floor FSCT Building, No. 199, Nakornin Rd. (Rama V), Bangsrithong, Bangkruay,
Nonthaburi Province 11130, THAILAND
Tel: +662-496-1262 and +662-496-1264
Fax:+662-496-1263