AKSYON KLIMA PILIPINAS

OXFAM Pilipinas

THE CASE FOR NET-ZERO

in the Philippine Context of Just Energy Transition

INTRODUCTION

We are facing a planetary crisis – one that, unless urgent and immediate actions are made, will lead to even greater risks, both to people and biodiversity. Already, the planet is suffering from decades of reliance on fossil fuels, as countries, both developed and developing, are now facing the brunt of climate change. Canada and the United States have been experiencing wildfires in frequencies and intensities that were previously unheard of, while the United Kingdom and most of mainland Europe reported their hottest summers thus far in 2023. Pakistan experienced the worst floods the country has ever experienced in 2022, and in September, Hong Kong experienced its heaviest rainfall episodes in over a century.

The Philippines is not an exception. In the last four years alone, it has faced numerous Category 5 typhoons, which have left in their wake millions of pesos in damages and numerous losses to lives and damages to property. In 2020, Typhoon Goni (Super Typhoon Rolly) hit the country amidst the height of the COVID-19 pandemic. Almost exactly a year later, Typhoon Rai (Super Typhoon Odette) hit much of southern Luzon including Palawan and central and western Visayas, making it one of the costliest typhoons to hit the country. In 2022, Typhoon Noru (Super Typhoon Karding) made landfall, and in May to June 2023, Typhoon Mawar (Super Typhoon Betty) hit the Bicol and Cagayan regions; it is, as of this writing, the strongest tropical cyclone for 2023. Heavy rains and flooding that brings to a standstill transportation and other economic activities are becoming more commonplace across Metro Manila.

All of these are results of changes in our climate, which have been exacerbated by the planet's continued reliance on fossil fuels. To try and combat this, in 2015, countries came together to negotiate the Paris Agreement, one of the goals of which was to limit global temperature increase to 2°C, if not 1.5°C. The Agreement, the first of its kind, provided many measures to achieve this global goal, including the submission of country ambitions for addressing the climate crisis through their Nationally Determined Contributions. Moreover, the years since its ratification have been crucial in opening the discussion on the mechanisms to achieve this goal, including net-zero targets and just energy transition.

This paper provides an overview of the current perspectives and context on just energy transition, as well as the case for a net-zero target for the Philippines to meet its national commitments, and take part in the global initiative to achieve the goals of the Paris Agreement.

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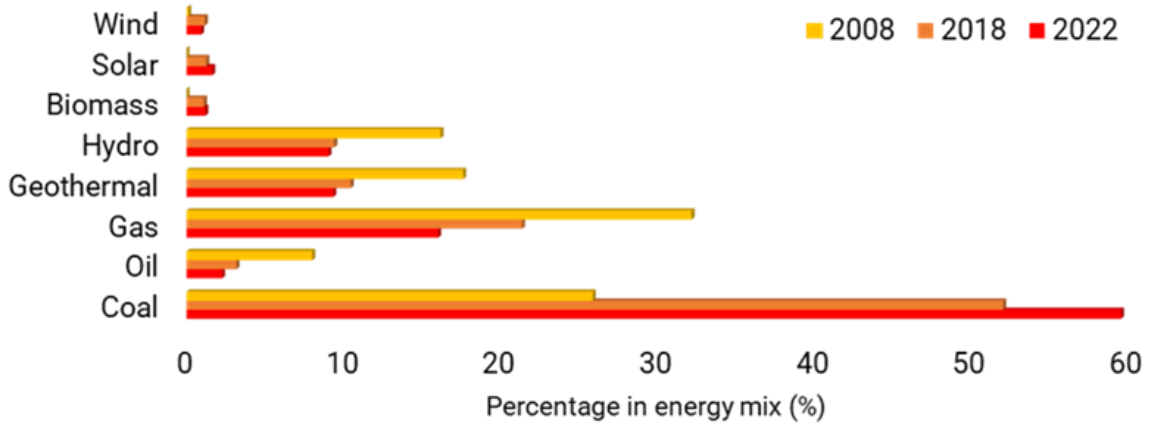

Figure 1. Gross power generation in the Philippines by fuel type in 2008 (the enactment of the RA 9513), 2018 (a decade after the passage of RA 9513), and 2022 (Source: DOE, 2023).

The Philippines is an industrializing, lower middle-income nation. Heavily reliant on coal in its energy mix, the Philippines' electricity is expensive, unreliable, and inaccessible, with many areas in the country still without access to electricity. The country is ranked as having one of the highest electricity rates in Asia[1]. Coal dominates the energy mix, with the Department of Energy reporting that it forms 42% of the total mix, followed by renewable energy (RE; this includes solar, hydroelectric, wind, geothermal, and biomass) at 29.3%, with oil-based sources and fossil gas forming 16.2% and 12.4% of the mix, respectively[2].

This continued heavy reliance on coal, despite (1) the country's commitments to shift to 35% RE share in the power generation mix by 2040, (2) the moratorium on coal that the Department of Energy has imposed[3], and (3) its commitment to reduce its greenhouse gas (GHG) emissions by 75% by 2030[4], means that the country is highly unlikely to meet its self-determined targets for climate action.

In order to meet these targets, therefore, the Philippine government has to urgently commit to two things – to ensure a just energy transition in the country's energy transition policies and programs, and to consider setting a policy on net-zero emissions for the country.

Just energy transition

Historically finding its roots in the labor sector[5], just energy transition (JET) has since broadened into economic, energy, and environmental policies globally. For its part, the Philippine government has started to

[1] Tachev (2022)
[2] DOE (2023)
[3] This comes with reservations, as those whose permits have already been approved will still continue to operate.
[4] Of which 72.29% is conditional, and only 2.71% is unconditional. These numbers represent the country's ambition for GHG mitigation for the period 2020-2030 for the following sectors: agriculture, wastes, industry, transport, and energy.
[5] Tony Mazzocchi, an American labor leader who fought for transition benefits to be granted to World War II veterans, is often recognized as one of the pioneers of just transition. He said workers who were employed by oil, chemical, and atomic sectors needed to be given benefits to avoid disenfranchisement by the government's disarmament policy.

embody energy transition in its laws, including the Renewable Energy Act of 2008 (Republic Act No. 9513)[6], the Biofuels Act of 2006 (Republic Act No. 9367)[7], the Electric Power Industry Reform Act of 2001 (Republic Act No. 9136), and the Green Jobs Act of 2016 (Republic Act No. 10771)[8], among others. Regionally, the Asian Development Bank (ADB) announced in COP26 in Glasgow, Scotland in 2021 the launch of the Energy Transition Mechanism (ETM), a funding vehicle whose goal is the scaling out of coal while scaling up RE in Southeast Asia[9].

However, JET still remains elusive and has not yet been fully implemented across all sectors and levels of governance, making its implementation difficult. This may be due several factors such as, but not limited to, (1) the absence of a country-level JET framework, (2) the lack of national and local-level policies, (3) the lack of country-level research on the economic, social, and environmental impacts of RE and the appropriate scales of operation vis-a-vis available land and water resources, and (4) the presence of environmental and energy-related issues that have been going around even before the call for an urgent JET, which impedes the speed of such a transition in the country.

To fully incorporate JET in Philippine policies, there is a need to review the current Philippine energy, climate, and development landscape, and ensure that in the shift towards a future that is sustainable, just, inclusive, and green, especially post-pandemic, there will be no one left behind.

Several Philippine civil society organizations and community representatives[10] believe that there are certain principles that should underlie the country's framing of JET. These include, but are not limited to, renewables-focused, climate-aligned, peoples-centered, rights-based, and inclusive[11].

Nevertheless, the network has non-negotiables, foremost of which is that JET should put at the forefront human rights, and especially include indigenous peoples' and workers' rights. This includes recognizing and respecting the rights of marginalized economic, social, and cultural groups, and addressing their concerns and experienced injustices. An energy transition which does not take into consideration the concerns and needs of workers who will be left with no jobs or opportunities is not just; in the same vein; the same applies for an energy transition that pushes vulnerable communities (i.e., youth, women, indigenous peoples, persons with disabilities, farmers, urban folk, fisherfolk, elderly) further towards the margins. Thus, it is equally important to highlight that people should be fairly compensated for any harm resulting from energy projects or loss and damage from climate change.

[6] "accelerated development and enhancement of renewable energy resources, and the development of a strategic program to increase its utilization"
[7] Mandated the use of biofuels as a measure to develop and utilize indigenous renewable and sustainable-sourced clean energy sources to reduced dependence on imported oil, and mitigate GHG emissions
[8] Declaration of policies included the need of the State to identify needed skills, develop training programs, and train and certify workers for jobs in a range of industries that produce goods and render services for the benefit of the environment, conserve natural resources for the future generation, and ensure the sustainable development of the country and its transition into a green economy
[9] Hickey (2021)
[10] These stakeholders are the attendees of the "National Convening of Philippine CSOs on Just Energy Transition", held on 19 September 2023 in Quezon City, Philippines, organized by Aksyon Klima Pilipinas, Oxfam Pilipinas, and Rice Watch Action Network.
[11] Other JET principles include the following: human-secure; equitable; ecologically-respective; transparent and accountable; and developmentally-sustainable.

A genuine JET in the Philippines should be defined by the following principles:

- An intentional and conscious move away from the use of fossil fuels, and towards indigenous RE sources;
- A transition that is not extractivist and developmentally-aggressive, and instead protective of biodiverse areas and ancestral domains;
- A shift that is inclusive, democratic, and enables participation in energy access and management, including the provision of free retraining and capacity building of those who will be affected by the transition from a fossil fuel-reliant country to a low-carbon economy;
- In the context of democratic and inclusive participation, a fair distribution of responsibilities, costs, and benefits of climate and energy actions across the economic and social groups and the protection of the right to life, an adequate standard of living, health, and access to land, among others; and
- A transition that is procedurally and substantially just, respectful of indigenous peoples and local communities, and driven by science and community-based stories.

It is of utmost importance to note that RE projects are not automatically just – a solar farm for instance, which is built without the free, prior, and informed consent of the indigenous peoples, will displace them without fair compensation and benefits the indigenous peoples are not able to avail, renders their livelihoods inutile or burdensome, and/or negatively affects their food and water security is not a genuine shift towards an energy-just Philippines.

This means that all alternatives, including RE, to fossil fuels should as well be closely examined – nuclear energy remains to be extractivist and unsafe especially for a country that is prone to earthquakes; solar and wind industries have to ensure that they secure necessary permits before encroaching into indigenous peoples' territories. A mere shift to RE, without taking a rights-based approach, is not just.

JET, therefore, fundamentally, requires policymakers and stakeholders to take a look at the status quo and understand that "business-as-usual" can no longer be the way forward. The continued reliance on fossil fuels, particularly coal, is exacerbating the country's vulnerability to the climate crisis, as well as the dynamic changes in the energy landscape brought about by geo-political conflicts; thus, the commitment to shift to RE has to be followed through with a renewed sense of urgency and vigor. It is also of equal magnitude to see JET as a way of ensuring energy access and security in unserved and underserved areas, which shall contribute to their quality of life, and towards better socio-economic opportunities.

Of equal importance in the process of shifting to RE is the need to ensure that everyone is given an opportunity to take part in the decision-making, and that this transition takes into highest consideration the needs, concerns, demands, and priorities of the most marginalized and vulnerable communities.

NET-ZERO TARGET

Another way by which the Philippines can strengthen its national and international climate commitments is to implement a **net-zero emissions** (or **net-zero**) target for the country. Defined as the state when the amount of emitted greenhouse gases (GHGs) by a country or company is matched by how much of said pollution they removed from the environment, a net-zero target can help in ensuring the significant reduction of such emissions that contribute to the climate crisis.

While the Philippines is not a heavy GHG emitter, it still has an obligation to not contribute to further global warming, which in turn will render it even more vulnerable to disasters. And while the Philippines has recently shown signs of potentially supporting net-zero, such as its support for net-zero on global shipping[12], much remains to be done.

The net-zero target should be streamlined in all levels of governance, and both local and national government units have to take a look at their priorities in order to make sure that their projects, plans, and programs are aligned with said target. The national government, in particular, should at the very least consider a **conditional** net-zero target in its updated Nationally Determined Contribution as well, especially as we enter the midpoint of this crucial decade for climate action.

Further, the Philippines has to continue putting pressure on developed countries to commit to net-zero targets, as well as international climate finance and investments. As a mitigation strategy, net-zero can only truly work if countries that are historically the biggest GHG emitters also commit to it – otherwise, while the work of developing nations, especially on adaptation and addressing loss and damage, is vital in the fight against the climate crisis, it will still be insufficient if developed countries who have benefited most from industrialization, which led to the resulting pollution, do not recognize their privilege and the role that they need to play in the overall mitigation agenda. Net-zero can only be achieved through the collective work of countries everywhere, developing and developed alike, and based on the principle of "common but differentiated responsibilities".

As a middle-income country that is vulnerable to the effects of the climate crisis, the Philippines has the potential to be a leader in net-zero. As of 2010, the Philippines is a net-emitter of GHGs, producing 144.3 million metric tons of CO_2 equivalent, compared to 35 Mt CO_2-eq that was sequestered by its natural carbon sinks (i.e., forests)[13]. Creating a net-zero target, coupled with strict policies for subsequent emissions reductions, does not only show the country's commitment to take the fight against climate change seriously, but also makes a statement that it prioritizes its people and environment.

Nevertheless, net-zero should not be the end-all and be-all of climate change mitigation strategies. The true end-goal remains clear: to achieve an overall net decrease in GHG emissions, if not the complete removal of GHG emissions globally only through natural carbon sinks. A net-zero target is simply an indicator of how soon the Philippines is ready to fully commit to meet true decarbonization.

In this regard, there has to be a deep look into current net-zero mechanisms and programs to ensure that they are scientifically-sound, peoples-centered, and are not harmful to communities and ecosystems. The Intergovernmental Panel on Climate Change (IPCC) had already sounded the alarms on the need to drastically reduce GHG emissions, and

[12] Fernandez (2023)
[13] Climate Change Commission (n.d.)

have made pronouncements on the fact that carbon capture, utilization, and storage (CCUS) and geoengineering solutions remain unproven, especially at scale. It has also been found that natural carbon sinks are becoming increasingly ineffective at sequestering carbon dioxide at higher levels of warming[14]. Processes such as enhancing carbon sequestration in forests, afforestation and reforestation, enhancing soil carbon, the use of biochar, and bioenergy with carbon capture and storage, are also some of the land-based carbon removal methods that have been mentioned and discussed.

However, it must be emphasized that even with their benefits, these methods are not foolproof ways of removing carbon, can be very expensive, and come with a number of risks and uncertainties that need to be looked into, both internationally and in the Philippine context. This makes these processes options of last-resort (if at all), and the discussion of net-zero even more urgent and critical. In the case of afforestation and reforestation, social and environmental safeguards must be placed to ensure that the ecological integrity of project sites are maintained or enhanced and would not result in harm to nearby communities and/or ecosystems.

Policymakers have to ensure that current and potential net-zero policies do not inevitably incentivize industries and corporations to continue emitting even more GHGs under the guise of development or the provision of employment opportunities. These policies should also emphasize phasing out support for new fossil fuel production – net-zero cannot be a prop to be used by the fossil fuel industry to continue with "business-as-usual".

Lastly, once a net-zero policy has been formalized, it should have transparent targets on carbon removal instead of having blurry boundaries with short-term, medium-term, and long-term targets. Again, it is of prime importance that such a policy will have the protection of human rights and ecosystem health at its core.

Cross-Section Box.1: Understanding Net Zero CO_2 and Net Zero GHG Emissions

Limiting human-caused global warming to a specific level requires limiting cumulative CO_2 emissions, reaching net zero or net negative CO_2 emissions, along with strong reductions in other GHG emissions (see 3.3.2). Future additional warming will depend on future emissions, with total warming dominated by past and future cumulative CO_2 emissions. {*WGI SPM D.1.1, WGI Figure SPM.4; SR1.5 SPM A.2.2*}

Reaching net zero CO_2 emissions is different from reaching net zero GHG emissions. The timing of net zero for a basket of GHGs depends on the emissions metric, such as global warming potential over a 100-year period, chosen to convert non-CO_2 emissions into CO_2-equivalent (*high confidence*). However, for a given emissions pathway, the physical climate response is independent of the metric chosen (*high confidence*). {*WGI SPM D.1.8; WGIII Box TS.6, WGIII Cross-Chapter Box 2*}

Achieving global net zero GHG emissions requires all remaining CO_2 and metric-weighted[38] non-CO_2 GHG emissions to be counterbalanced by durably stored CO_2 removals (*high confidence*). Some non-CO_2 emissions, such as CH_4 and N_2O from agriculture, cannot be fully eliminated using existing and anticipated technical measures. {*WGIII SPM C.2.4, WGIII SPM C.11.4, WGIII Cross-Chapter Box 3*}

Global net zero CO_2 or GHG emissions can be achieved even if some sectors and regions are net emitters, provided that others reach net negative emissions (see Figure 4.1). The potential and cost of achieving net zero or even net negative emissions vary by sector and region. If and when net zero emissions for a given sector or region are reached depends on multiple factors, including the potential to reduce GHG emissions and undertake carbon dioxide removal, the associated costs, and the availability of policy mechanisms to balance emissions and removals between sectors and countries. (*high confidence*) {*WGIII Box TS.6, WGIII Cross-Chapter Box 3*}

The adoption and implementation of net zero emission targets by countries and regions also depend on equity and capacity considerations (*high confidence*). The formulation of net zero pathways by countries will benefit from clarity on scope, plans-of-action, and fairness. Achieving net zero emission targets relies on policies, institutions, and milestones against which to track progress. Least-cost global modelled pathways have been shown to distribute the mitigation effort unevenly, and the incorporation of equity principles could change the country-level timing of net zero (*high confidence*). The Paris Agreement also recognizes that peaking of emissions will occur later in developing countries than developed countries (Article 4.1). {*WGIII Box TS.6, WGIII Cross-Chapter Box 3, WGIII 14.3*}

More information on country-level net zero pledges is provided in Section 2.3.1, on the timing of global net zero emissions in Section 3.3.2, and on sectoral aspects of net zero in Section 4.1.

Figure 2. IPCC discussion on understanding net-zero (Source: IPCC, 2023)

[14] Carbon Brief (2023)

Why net-zero then?

Net-zero is a good indicator of the readiness of a country or business to achieve the ultimate goal of being carbon-negative. It is forgiving in that it takes into consideration contexts (industries like aviation and agriculture will have more difficulty in minimizing, if not bringing their emissions to zero), but demanding in that it urges an almost complete overhaul of existing policies and laws. Many countries have since made the net-zero commitment, and it is expected that the Philippines does the same.

Moreover, net-zero, while expensive in the short-term, is more economically feasible in the long-term. Investing, for instance, in RE and in sustainable practices can create new economic opportunities, and lead to job creation and technological innovation. It will ease the burden on an overwhelmed healthcare system because it will have benefits on human health, including better air quality and active mobility. Changes to the way we use our land will have numerous benefits to resource security and biodiversity[15]. It can also help the country become more self-sufficient, specifically more independent and resilient to global energy price fluctuations, which can be exorbitant without being accessible.

JET & net-zero: on climate justice

Both JET and net-zero require envisioning a world beyond the myopia of current Philippine laws and policies. It also requires the Philippine government to ensure that its laws are neither outdated nor inconsistent with its commitments; for instance, while the coal moratorium on paper is a good step in the right direction, it remains to be an insufficient policy in practice considering there remain to be coal plant constructions in the pipeline.

If the Philippines is to remain faithful to its ambition, then it should phase out coal sooner rather than later. In the same vein, the country should also strengthen its protection of land and environmental defenders, who stand at the forefront in the fight against the climate crisis. Instead, the Philippines has, for the tenth time, been ranked as the most dangerous place in Asia for environmental defenders[16].

Further, it should continue to commit itself to suspending land reclamation projects, and should move away from maladaptive projects that do more harm than good – these include the Pasig River Expressway (PAREX), which will destroy vital ecosystems and heritage that are of national importance[17], and the construction of the Bulacan Aeropolis, which have led to the displacement of communities and the construction of which is largely attributed as the reason for the exacerbated flooding in the province[18].

The Climate Change Act of 2009 (Republic Act No. 9729, as amended by Republic Act No. 10174) and other related policy instruments need to be revisited to ensure that they are consistent with international commitments. The Clean Air Act of 1999 (Republic Act No. 8749), for instance, is not compliant with international standards – the country's PM2.5 limits are not the same as those by the World Health Organization. This needs to be a top priority of the country if it wants to show that

[15] Keeping in caution as well, that land use must ensure zero hunger while achieving our net-zero targets. Nature based solutions which combine both the adaptation and mitigation aspects of climate action must strengthen the rights and livelihoods of local communities and protect ecosystems, and be subject to strong social and environmental safeguards that ensure that local communities, indigenous people, and frontline defenders have a seat at the table. All while achieving our net-zero targets.
[16] Global Witness (2023)
[17] Enano (2023)
[18] Bello (2016)

it takes its climate and environmental commitments seriously.

A number of proposed legislations already lodged in the legislature also need to be urgently passed by the Philippine Congress – these include the Alternative Minerals Management Bill (AMMB) and the Climate Accountability (KLIMA) Bill, drafted bills which put at the forefront environmental justice.

The AMMB is vital because while mining accounts for a fraction of the country's gross domestic product, the extraction of minerals needed for it leads to deforestation, displacement for communities, and exacerbated threats to food and water security of those who live in the areas affected by the mining. The bill therefore "proposes a transformation of the present minerals regime by balancing the need for minerals with environmental, social, and economic considerations"[19].

The KLIMA Bill, on the other hand, has for its goal the creation of a mechanism that will hold corporations accountable for their human rights and climate violations and created the Climate Change Victims Fund, a pool of money that communities can resort to after they experience climate-related hazards.

The Philippines as well should update its NDC not only to reflect its commitments, but also to make it more comprehensive and in line with the temperature goal of the Paris Agreement. Its priorities of social and climate justice and the shift of its socio-economic sectors "towards a climate and disaster-resilient and low carbon economy" need to be seen in practice, so should its commitment to "peak its emissions by 2030 in the context of accelerating the just transition of its sectors into a green economy and the delivery of green jobs and other benefits of a climate and disaster-resilient and low carbon development to its people, among others."[20]

These must be reflected in the NDC Implementation Plan, which remains unfinished as of this writing. What should be reflected in this policy document are concrete steps on how the Philippines plans to cut its emissions more drastically than its current committed number, and ensure that these percentages are unconditional (i.e., budgeted for, implemented, and included in the annual General Appropriations Act) and do not rely on external aid and support for their implementation. While NDC targets are not legally-binding, the government has to commit to these numbers, and create plans that are credible, fast, and have metrics for success as part of its numerous mandates.

The Philippine government, through its line departments, needs to engage more meaningfully with stakeholders in order to create policies that are responsive and data-driven. These include transport workers, youth, rural poor, scientists, and indigenous peoples, among others. It also needs to work closely with businesses to incentivize them to implement their own net-zero targets, while making sure, at the same time, that these businesses are not given permits or tolerated to increase their pollution.

Further, the government needs to provide subsidies, especially to micro, small, and medium sized enterprises, as well as transport services, so that they can make the shift towards low-carbon and net-zero in the most sustainable, just way. Carbon offsetting, while potentially helpful, should not be the main policy objective, and should be the option of last resort.

[19] Cabico (2023)
[20] UNFCCC (2021)

CONCLUSIONS

The IPCC said that "[t]here is a rapidly closing window of opportunity to secure a liveable and sustainable future for all." At its core, therefore, the main thing that the planet needs to achieve the commitments it made in the Paris Agreement is to significantly and urgently shift away from fossil fuels, and to stop emitting GHGs into an atmosphere that is already choking on its abundance.

While new technologies exist, countries should not be highly reliant on these technologies, and instead look at indigenous RE alternatives, which have not only proven to be efficient and more effective in climate change mitigation, but also have much lesser impact on indigenous peoples and local communities as well.

It should be highlighted that just like RE or any other proposed component of climate action, net-zero can become more harmful to communities and ecosystems if it is allowed to become an excuse or a disguise to cover the perpetuation of pollutive practices that prioritizes maximizing profits at the expense of peoples' and planetary well-being.

Any Philippine net-zero commitment must be science-based, rights-based, and ecologically-respectful, and used only as an indicator of the readiness to achieve genuine decarbonization through JET.

As one of the signatories of the Paris Agreement, the Philippines should do its best to mitigate its GHG emissions and incentivize corporations to also make similar commitments. Certainly, "business-as-usual" can no longer be the case, and sooner rather than later, neither can neutrality. It is only through shifts in all levels of governance and in action as well as policy can a more inclusive, just, sustainable, and green world be envisioned and attained.

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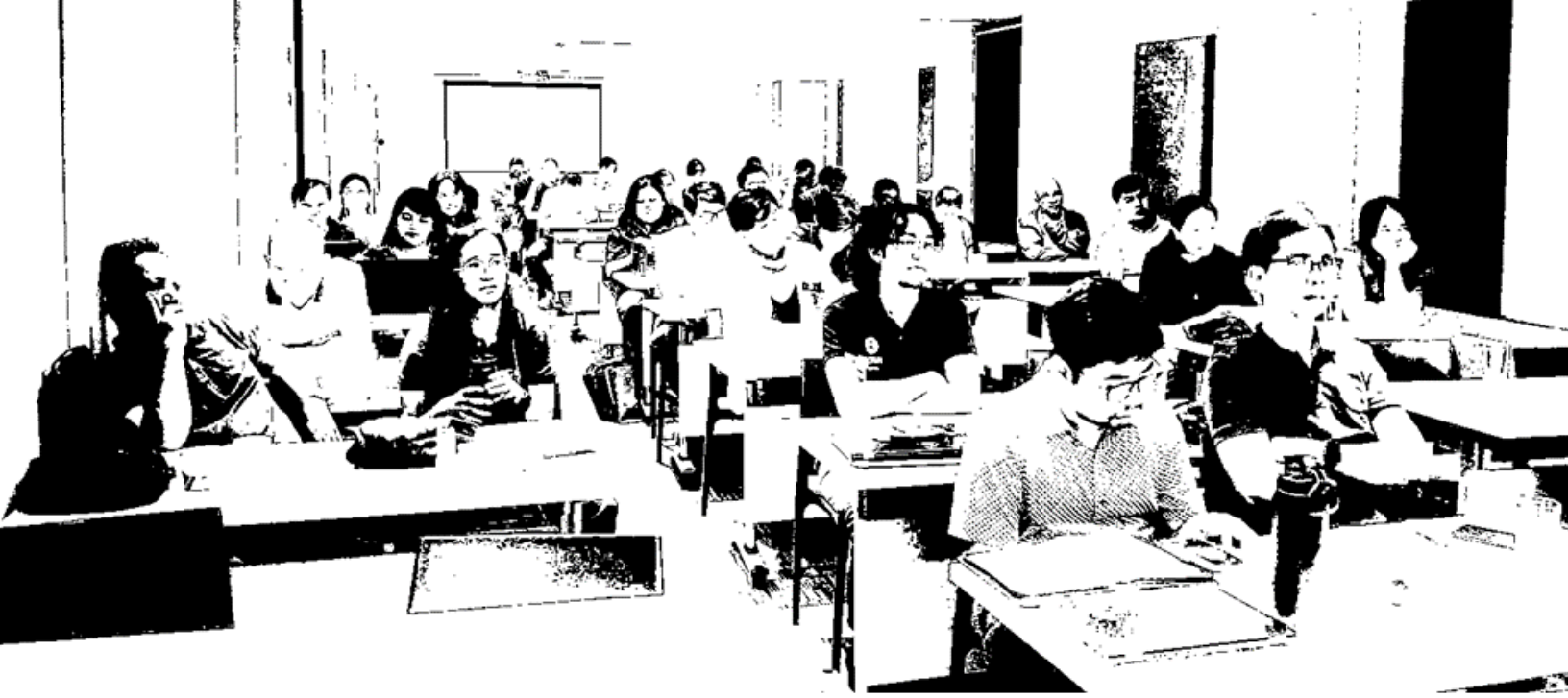

Aksyon Klima Pilipinas is the Philippines's largest civil society network for climate action, aiming to build campaigning capacities and leadership among its partner communities, NGOs, and the academe on climate and environment-related policies, issues, and actions. It strives for a low-carbon, climate-resilient, sustainably-developed, and justice-grounded Philippines.

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