



#Decarbonize 2020

Continental Presentation

Philippines

St. Joseph's Academy

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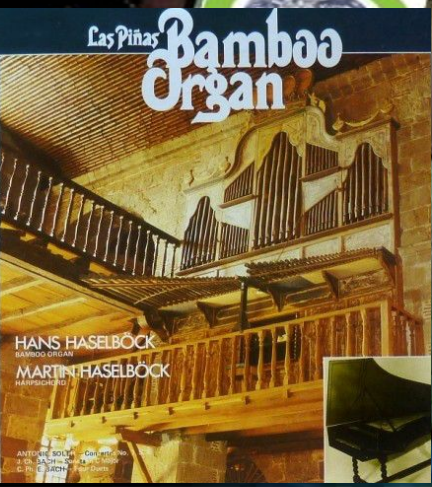
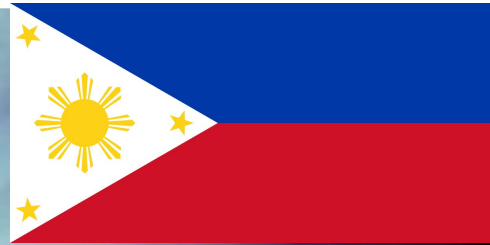
CGE
THE CENTRE FOR GLOBAL EDUCATION

St. Joseph's Academy





**ESTABLISHED IN 1914
RECOGNIZED IN 1916**



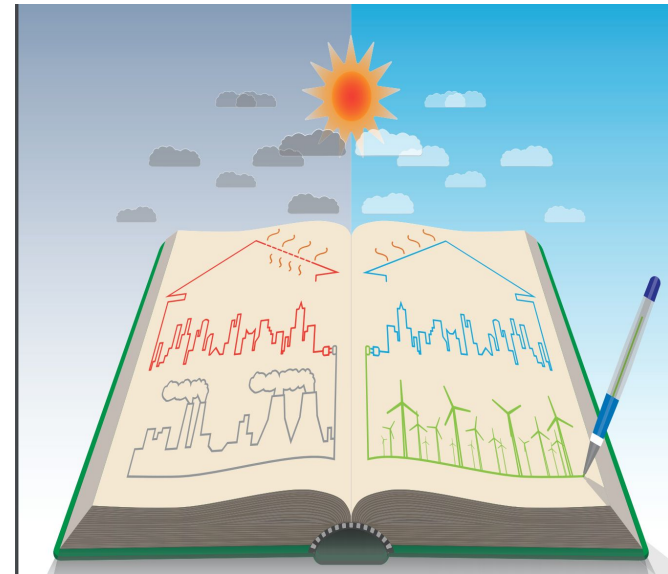
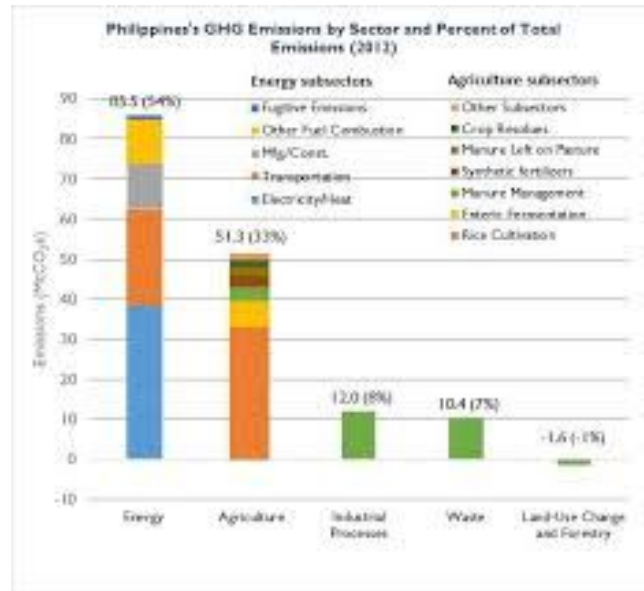
**The oldest
Catholic
educational
institution in
the Diocese
of Parañaque**
Nat Paraiso Photography



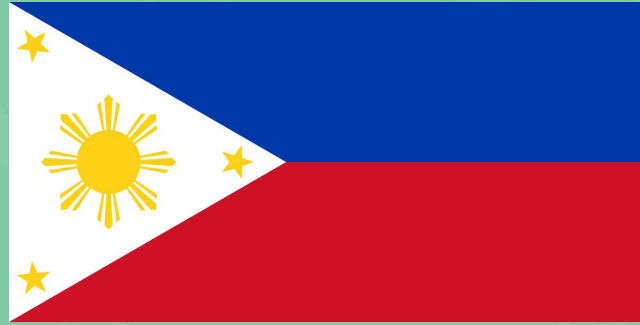
Nationally Determined Contributions (NDCs) Overview



To reduce up to 70% of our Greenhouse Gas (GHG) Emissions by 2030



THREE MAIN NDCs of the Philippines



Sustainable Infrastructure



To reduce the carbon footprint through **Energy-Efficient Design** and material for public infrastructure and settlements. The estimated minimized release of GHG a year would be **2,400,000 tons** after the complete implementation of the **Standard Green Buildings**. (National Framework Strategy on Climate Change, 2010-2022)

PHILIPPINES' RENEWABLE ENERGY GENERATION

Gross Power Generation- Renewable Energy (figures in megawatt-hours)

PHILIPPINES' POWER OUTPUT

23,188,735
RENEWABLE ENERGY

94,370,341
TOTAL GENERATION

	LUZON	VISAYAS	MINDANAO	TOTAL
 GEOTHERMAL	3,909,704	5,563,581	796,792	10,270,077
 HYDRO	5,729,567	90,087	3,791,144	9,610,799
 BIOMASS	598,665	414,483	0	1,013,148
 SOLAR	495,984	626,957	78,211	1,201,152
 WIND	899,397	194,161	0	1,093,558
TOTAL	11,633,318	6,889,270	4,666,147	

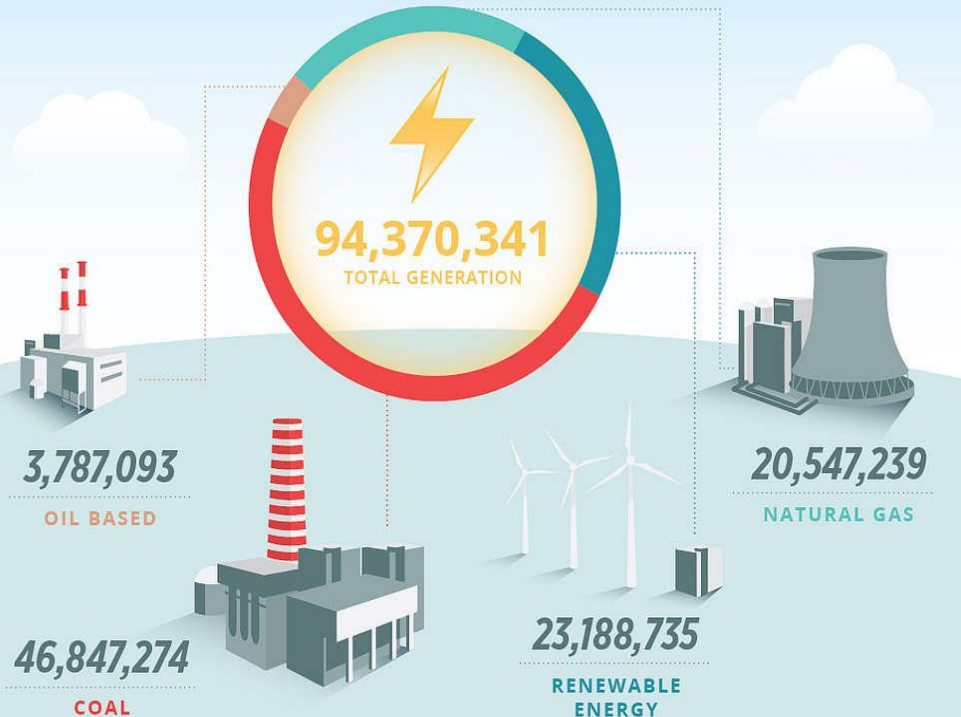
Note: Generation data includes grid connected, embedded and off-grid generator.

Renewable Energy

- To fast-track the development of **Renewable Energy Sources** and to reduce dependence on traditional energy sources such as coal and to put the Philippines on a path towards **Decarbonisation** of its energy system and meet **Sustainable Development goals**.

Coal still dominates the Philippines' energy mix

(BY PLANT TYPE; MEGAWATT HOURS)



NOTE: Generation data includes grid connected, embedded and off-grid generator. (Data as of 2017)

SOURCE : DEPARTMENT OF ENERGY
BUSINESSWORLD RESEARCH : CHRISTINE JOYCE S. CASTAÑEDA
BUSINESSWORLD GRAPHICS: TONE DAÑAS

<https://www.bworldonline.com/philippines-power-generation-sources-by-plant-type/>



BWORLDONLINE.COM

Renewable Energy

- Our country aims to use and develop more **Renewable and Alternative Energy Sources** because the Philippines still relies heavily on **Thermal Electric Power Generation**, particularly **Gas-fired, Oil-fired, and Coal-fired Power Plants** which power about 56 percent of the country's energy demand.






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<https://dost.gov.ph/knowledge-resources/news/56-infographics/infographics-2018/4487-how-reliant-is-the-philippines-on-renewable-energy.html>

Renewable Energy

- According to the **National Framework Strategy on Climate Change** 2010-2022, the Philippines is one of a few countries in the world where renewable energy, which is sourced from **Geothermal and Hydropower Plants**, accounts for the largest share of the total primary energy supply which is 43 percent. The Philippine government targets to double its current renewable energy capacity from 4,500 MW to 9,000 MW in the next 20 years.





<https://www.seo-business.com/news/why-plastic-clogged-philippines-must-face-up-to-dearth-of-waste-disposal-and-recycling/>



<https://www.rpa.gov.ph/articles/09080>

Proper Waste Management

- Unmanaged waste is one of the biggest contributors to **Greenhouse Gas Emission** which releases **Methane**, a greenhouse gas 20 times more lethal than carbon dioxide.
- It is the country's goal to create more effective implementations of waste management laws of the Philippines as stated in the **National Framework Strategy on Climate Change, 2010-2022**.



Proper Waste Management

- In our school, we have been following proper **Waste Management and Segregation**. Around the campus, multiple trash bins are found each having their own label in order for the students to segregate their trash accordingly to the categories of biodegradable, non-biodegradable, and recyclable. We have also done programs where students are encouraged to collect their plastic wastes such as “soft plastics” which are food wrappers and combine it with the plastic wastes of other grade levels which are then sent to our local government to be used for their **Plastic Recycling Program** which turns these soft plastics into school chairs that are donated for free to public schools.



<https://mb.com.ph/2020/09/08/villars-plastic-recycling-program-giving-livelihood-helps-solve-lack-of-chairs-2/>

Progress Towards Meeting NDCs



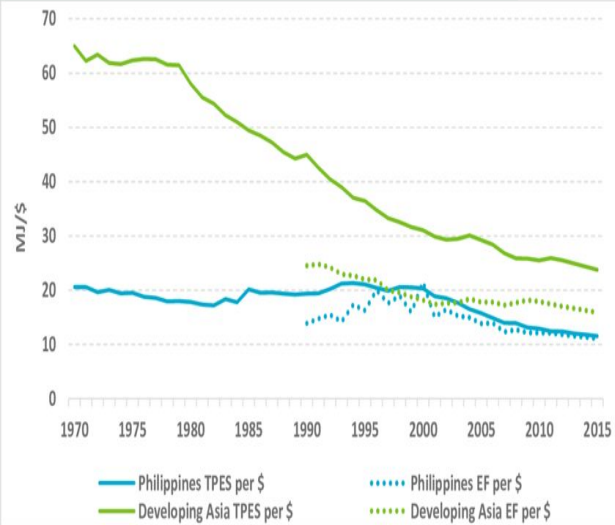


Progress towards NDCs

- In 2012, the **Climate Change Act** of 2009 was amended. This established the **Climate Change Commission** (CCC) which leads in policy development and coordinates, monitors and evaluates climate response. **The Cabinet Cluster on Climate Change Adaptation and Mitigation** (CCAM) was also created to focus on increasing convergence and coordination among government agencies.
- In 2019, several regulations that further support uptakes of renewables have either been put up for discussion or have been approved. For example, the **Department of Energy** (DOE) intends to foster a technology-neutral environment by ensuring transparent electricity prices.



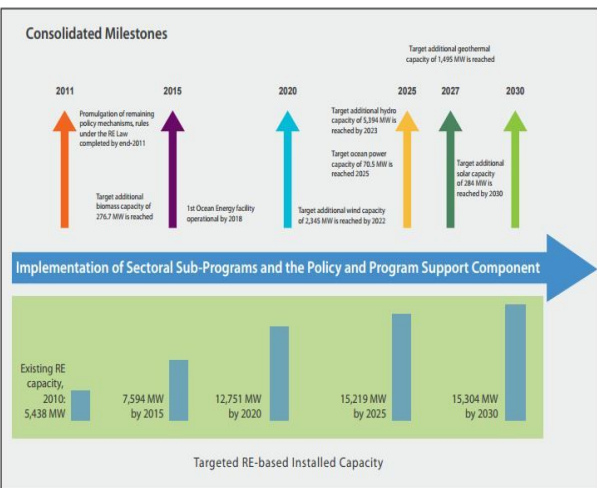
Progress towards NDCs



- The Philippines has achieved substantial progress in reducing the **Energy Intensity** of its economy between 2000 and 2017. Although per capita energy consumption decreased by 7% between 2000 and 2014, the potential per capita emissions reduction was outweighed by an **Increase** in the **Carbon Intensity** of the **Energy Sector**.

The National Renewable Energy Program (NREP) Consolidated RE Roadmap

- Full implementation of the **National Renewable Energy Program** (NREP) and **The Energy Efficiency and Conservation Roadmap** would lower emissions by 11% compared to current policy projections. The delay on the implementation of other policy instruments under the **Renewable Energy Act** (2008), such as the **Renewable Portfolio Standard** (RPS), has caused for the fulfillment of the renewable energy capacity set in the NREP to be significantly delayed.



Priorities



Top 2 Environmental Priorities for 2020-2030 towards meeting the NDCs



- **Mitigation**

- The mitigation contribution is conditioned on the extent of ***Financial Resources***, including ***Technology Development and Transfer***, and ***Capacity Building***.
- Offers opportunities for enhancing development and boosting the adaptation capacities of communities.
- Aims to facilitate the transition towards low greenhouse gas emissions for sustainable development.

Top 2 Environmental Priorities for 2020-2030 towards meeting the NDCs



- **Adaptation**

- the **Anchor Strategy** as espoused by the **National Framework Strategy on Climate Change** and subsequently elaborated in its **National Climate Change Action Plan**.
- The path towards low emission development will require **Climate Resilience** and **Improved Adaptive Capacity**.
- Financial resources, technology transfer and capacity building support for adaptation will ensure that the country's committed mitigation NDC would be attained.
- Special attention will be given to ensure **Equal** and **Equitable Protection** for the poor, women, children, and other disadvantaged sectors.

Role/ Responsibility in the Continent



Roles & Responsibilities of our Country within the Continent

- The Philippines had a 0.36% of global CO₂ emissions in 2018. **Philippines: CO₂ Country Profile.** However, while it seems minimal, it continues to grow. The Philippines heavily relies on fossil fuel imports, which account for 45% of the total primary energy supply in 2016. **Department of Energy, 2017a**



Annual share of global CO₂ emissions

Each country's share of global carbon dioxide (CO₂) emissions. This is measured as each country's emissions divided by the sum of all countries' emissions in a given year plus international aviation and shipping (known as 'bunkers') and 'statistical differences' in carbon accounts.

Our World in Data



Source: Our World in Data based on Global Carbon Project (2018) OurWorldInData.org/co2-and-other-greenhouse-gas-emissions • CC BY



https://climateactiontracker.org/documents/663/2019-10-31_CAT_ClimateGovernance_Philippines.pdf

Roles & Responsibilities of our Country within the Continent

- In terms of Energy-Related Greenhouse Gases, power generation is at 52% while transportation is at 28% **Department of Energy 2018**. The country's main transport are jeepneys that emit 40 kg of carbon dioxide each day.



<https://www.cnbc.com/2015/11/19/the-end-of-the-jeepney-mafia-goes-green.html>
<https://phillytoyota.com/stories/jeepney-modernization-debate-explained-pros-cons-latest-updates-str56>

Roles & Responsibilities of our Country within the Continent



- The Philippines' NDC is rated as 2°C compatible, indicating that the country's climate commitments are within the range of what is considered to be a fair share of global effort but is not consistent with the **Paris Agreement**. (*Philippine Climate Change Tracker, 2019*)
- One of the world's most vulnerable countries to the impacts of climate change is the Philippines. The Philippines is at present level of global warming of about 1°C above pre-industrial levels. The annual precipitation is projected to increase at almost double the rate as compared to 1.5°C in a 3°C warmer world, increasing the flooding risk greatly by more than 7%. (*Climate Analytics*)

Roles & Responsibilities of our Country within the Continent

- Renewable energy in the country is abundant and ideal for the energy needs because a country like the Philippines, which is composed of small islands, is more suitable to be provided **Renewable Electricity** than **Centralised Fossil Fuel Generation**.
- A transition to renewable energy could contribute to reducing energy security concerns and public expenditures on fossil fuel imports which mean freeing resources for other investments.



Youth Action



What can we and other youth do to help best meet the NDCs?

- By ***Practicing our Moral Responsibility*** to our environment in the smallest and simplest of ways, we can have a huge impact and influence in mitigating and sustaining the harsh effects of climate change.



<https://dumaguetcity.gov.ph/2019/10/14/barangays-to-collect-recyclable-and-biodegradables-city-to-take-residual-wastes/>



<https://www.philstar.com/headlines/2019/03/11/1900560/ecowaste-urges-public-take-water-conservation-more-seriously>



What can we and other youth do to help best meet the NDCs?

- The youth could also have a hand in making change by ***Being Hands-On***. Through joining environmental organizations and participating in various programs and projects against climate change, our voices can make an impact for the better.



<https://phys.org/news/2011-02-tree-planting-world-philippines.html>



<https://explore.traveloka.com/features/environmental-organizations-philippines>

What can we and other youth do to help best meet the NDCs?

- By **Actively Speaking Out Against Climate Injustice**, we can seek our government for action because they play a major role in developing a sustainable future.



<https://www.cbsnews.com/pictures/youth-climate-strike-student-s-march-against-inaction-on-climate-change/16/>



<https://globalclimatestrike.net/more/>

YOUTH can best help our government meet the NDCs by...

LOCAL ACTION

School-based: Maintaining the school initiatives on proper waste management and segregation that we have had. Our school also supports sustainability and eco-friendly outputs and activities.



<https://www.instagram.com/p/CGUZRnEIXe5/>

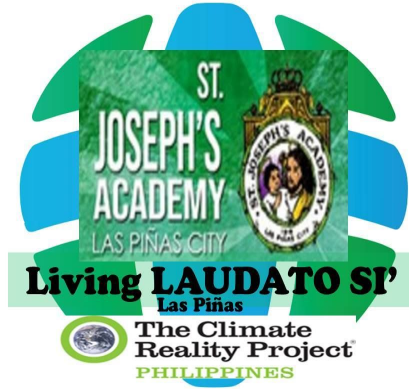


<https://www.facebook.com/sjaadmin1916/photos/369733393681862>



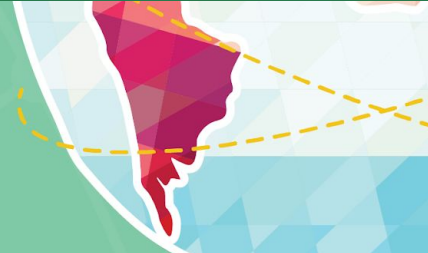
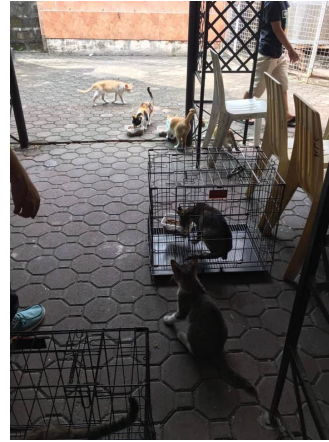
Laudato Si' Garden of SJA

Laudato si'

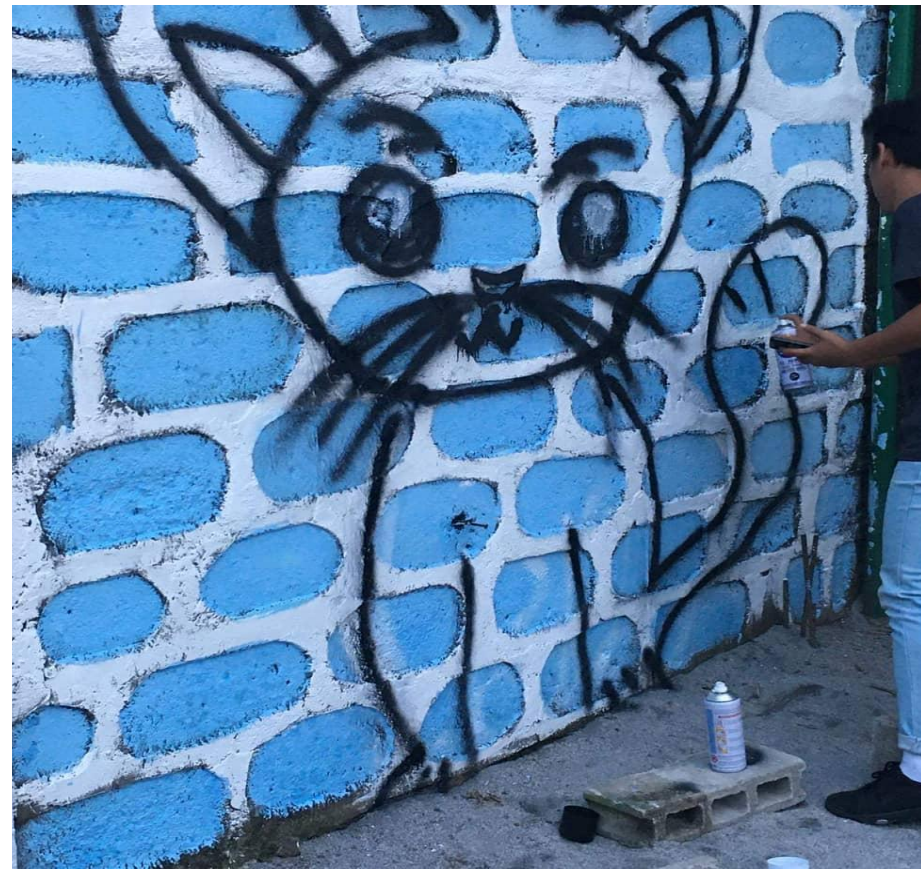
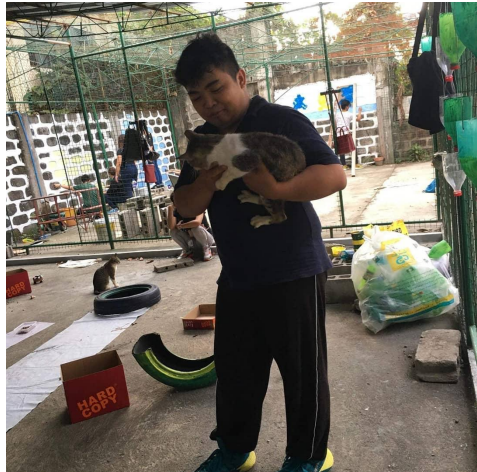


Students from our school planted throughout the campus and maintained a little garden as a way of preserving the beauty of our environment.

Adopt-a-Cat by ECO (Environment Conservation Organization)



Cat Sanctuary of SJA



Our school has decided to treat and vaccinate these cats for adoption. Higher grade students have also provided refuge and sanctuary for these cats.

YOUTH can best help our government meet the NDCs by...

LOCAL ACTION

Community-based: Converting waste in compost used for the cultivation of plants and crops together with, influencing more people to recycle.



<https://essc.org.ph/content/archives/9664/>

<https://interaksyon.philstar.com/trends-spotlights/2019/05/23/149413/sanggunian-g-kabataan-project-exchanges-plastic-bottles-for-school-supplies/>

REGIONAL/ NATIONAL ACTION

- On April 12 2019, ***The Energy Efficiency and Conservation (EE&C) Law*** was signed by President Rodrigo Duterte which established the general governance and strategies to improve energy use in the nation, aiming to reduce overall demand by 24% below business as usual(BAU) by 2040.



Benefits of the Energy Efficiency and Conservation Act

- Institutionalizes energy efficiency and conservation to secure sufficient and stable energy supply
- Promotes the development and use of efficient renewable energy technologies
- Reinforces related laws for a comprehensive approach across energy-consuming sectors
- Ensures a market-driven approach to energy efficiency and conservation

photo taken from
(<https://www.doe.gov.ph/eec-act-primer>)



REGIONAL/ NATIONAL ACTION

- One of the programs affected by the EE&C Law was the revamp and the update of the **National Energy Efficiency and Conservation Program** (NEECP) which was created way back in 2007.
- The NEECP has a 5 point plan; 1. Increase the energy reserves of the country, 2. Aggressively develop renewal sources of energy, 3. Increase the use of alternative fuels 4. Form strategic alliances with other countries and 5. Strengthen and enhance energy efficiency and conservation programs.



REGIONAL/ NATIONAL ACTION

NEECP 5-Point Plan

1. Increase the energy reserves of the country
2. Aggressively develop Renewable Energy potential such as Biomass, Solar, Wind and Ocean Resources
3. Increase the use of Alternative Fuels
4. Form Strategic Alliances with other Countries
5. Strengthen & Enhance Energy Efficiency and Conservation Programs



Latest Manifestation of Climate Change in the Philippines



Typhoon Ulysses

Typhoon Ulysses was the *Philippines' 21st tropical cyclone for 2020*. Still reeling from a previous super typhoon, Ulysses brought heavy rains and strong winds causing the worst flooding since 2009. For a fact, the flood height reached **22 meters**, which was unseen before in our country's history. In its strengthened peak, landfall came with **10-min sustained winds at 130 km/h** (81 mph), **1-minute sustained winds of 176 km/h** (109 mph) and pressure of **970 mbar**, indicating it as a high-end category 2 equivalent typhoon. To this day, there has been **73 validated deaths** and **12 missing persons**.





<https://twitter.com/home>



<https://www.nytimes.com/2020/11/18/world/asia/philippines-floods-photos.html>



<https://www.nytimes.com/2020/11/18/world/asia/philippines-floods-photos.html>



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<https://www.nytimes.com/2020/11/18/world/asia/philippines-floods-photos.html>



<https://chnphilippines.com/news/2020/11/13/ulysses-death-count-htm/>



<https://www.reportr.world/news/ulysses-exits-paras-filipinos-reel-from-devastation-a4736-20201113>



<https://www.linktr.ee/cagayanin>



<https://www.linktr.ee/cagayanin>



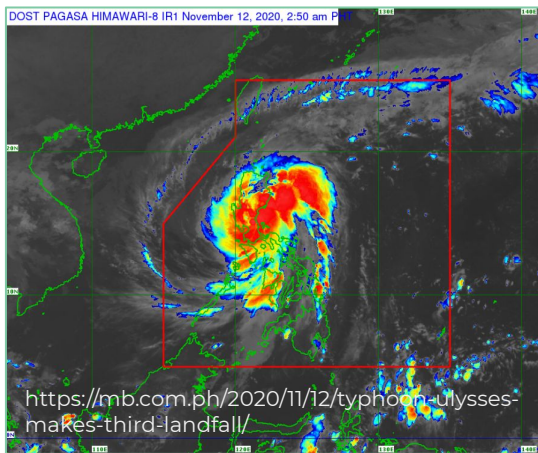
<https://mb.com.ph/2020/11/13/thousands-rescued-by-afp-pnp-from-ulysses-wrath/>



<https://www.rappler.com/nation/typhoon-ulysses-death-toll-november-12-2020>



<https://www.cnn.com/news/2020/11/13/Donation-drives-UlyssesPH.html>



<https://mb.com.ph/2020/11/12/typhoon-Ulysses-makes-third-landfall/>



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2020/11/12 13:21

<https://www.linktr.ee/cagayanin>



<https://www.licas.news/2020/11/12/photo-gallery-typhoon-ulysses-leave-s-thousands-homeless-in-philippine-capital/>



<https://news.abs-cbn.com/video/news/11/14/20/typhoon-ulysses-monsoon-rains-spawn-massive-floods-in-cagayan-province>



<https://www.linktr.ee/cagayanin>

Thank you

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