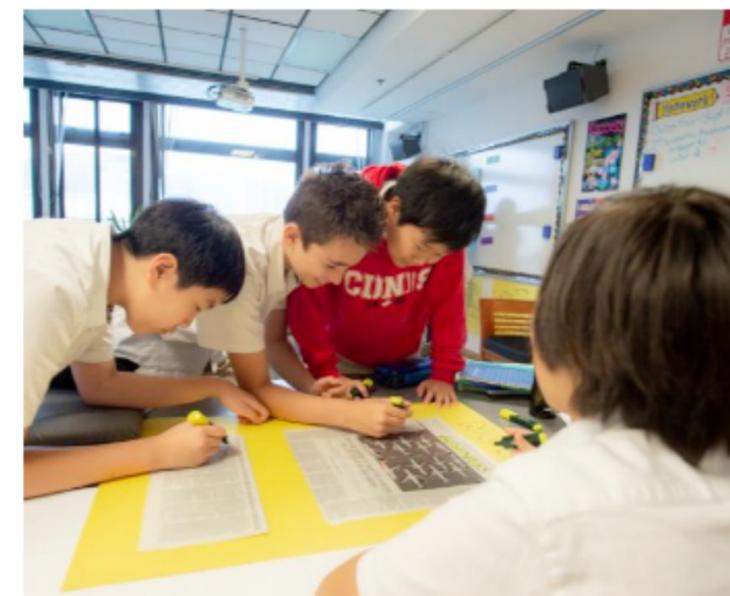


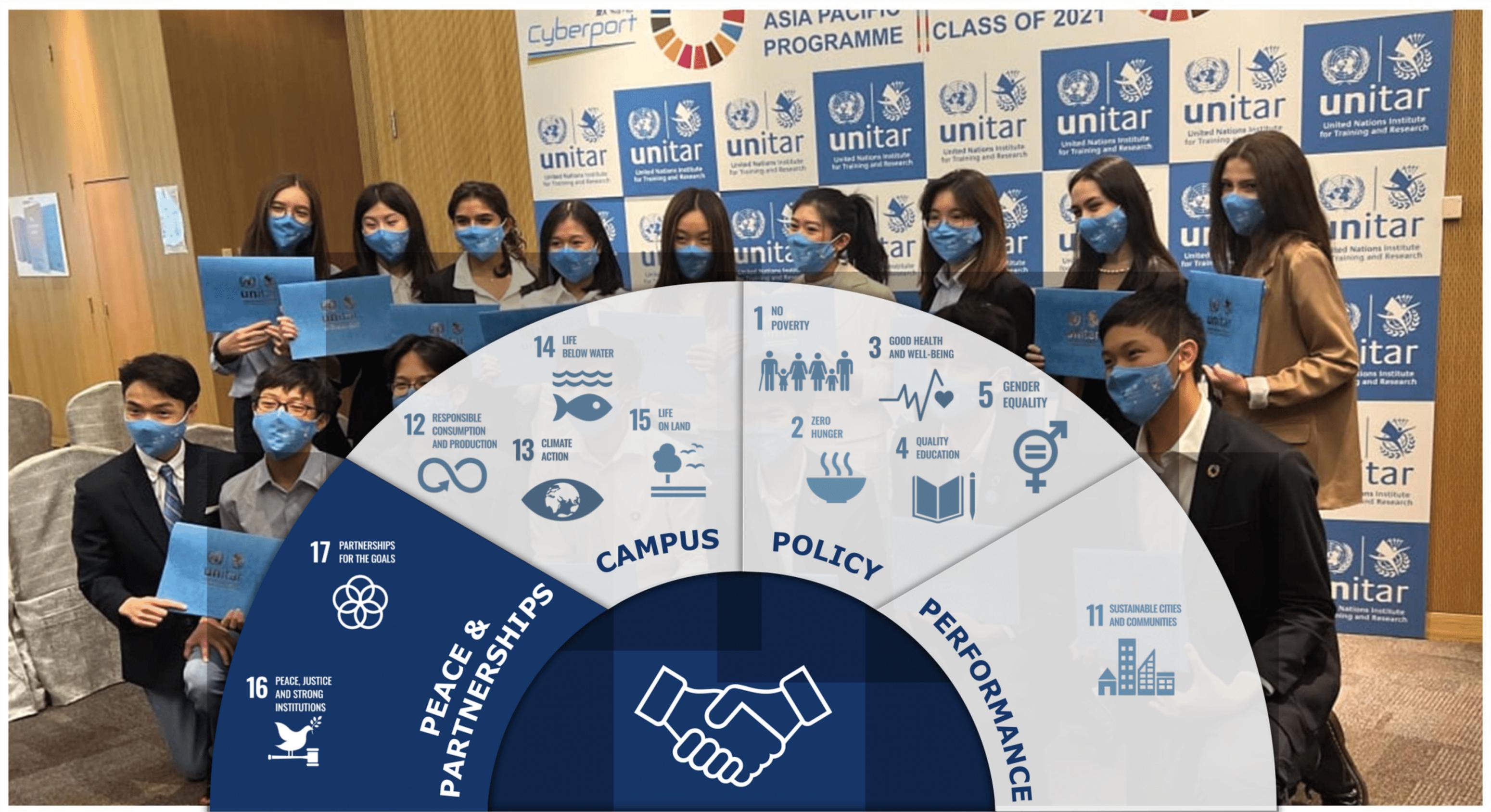


**Canadian International School of Hong Kong**  
香港加拿大國際學校

# **ENVIRONMENTAL SUSTAINABILITY**

## **2022/2023**







## PARTNERSHIPS

This year's theme for the 3<sup>rd</sup> Hong Kong Sustainable Development Goals Summit was "Action for Impact".

# GLOBAL GOALS COUNCIL AND 2023 SDG SUMMIT



At CDNIS, we see sustainability as core to fulfilling our vision and mission, and we believe that partnerships are indispensable to helping our students thrive with purpose in a rapidly changing world.

The CDNIS Global Goals Council (GGC) is a union of 18 student-led clubs, focused on contributing to the UN Sustainable Development Goals (SDGs) through education, advocacy, and service. These clubs are unique opportunities for students to leverage and create impact greater than themselves, and to manage accountable bodies with clear financial records and annual reports.

This year, we continued to welcome leading sustainability voices to our campus with our third Annual Hong Kong SDG Summit organized by the GGC, counting over 200 participants from more than 30 schools, NGOs, and universities.

We would like to thank this year's guest organizations, who presented and organized panels and workshops for our students and staff:



VISIT [WWW.GGCCOUNCIL.COM](http://WWW.GGCCOUNCIL.COM) TO LEARN MORE.



# PERSPECTIVES ON THE HK SDG SUMMIT



## Sohana

*Event Organizer*

The 2023 SDG Summit was a monumental moment for the GGC Council, as it showed HK's youth can come together to make a difference. The level of engagement in the event was astonishing! Over 200 passionate changemakers attended the event and 30+ NGOs and student-led organizations were able to make insightful contributions to the day.



## Agnes

*Participant*

The 2023 HK SDG Summit was truly an eye-opening experience. The summit had a good mix of interactive sessions, inspirational speaker panels and fruitful networking among participants. I met passionate changemakers and received insights on how to make change. To initiate impact, you have to first learn about it, and I think the Summit was the right place to do so.



## Chris Brown

*NGO Panel Leader*

I was delighted to participate in the 2023 SDG Summit — after two editions of online finally getting to see the Summit happening in person was fantastic. The engagement from the students during the planning was at a professional level and it was an honor to host the NGO discussion on the day.



## Olivia Cotes-James

*Keynote Speaker*

I loved being part of the 2023 SDG Summit. You could feel the genuine passion and commitment for positive impact demonstrated by the CDNIS community of students, teachers and partners. I may have been invited to do the Keynote, but it was I who left feeling inspired and motivated by those I met during the event.



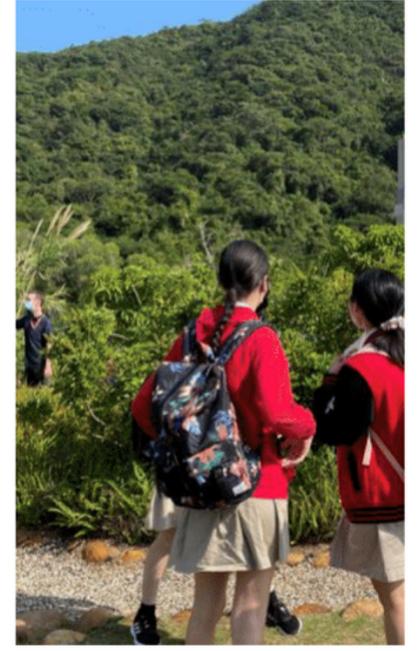
# GLOBAL GOALS CLUBS WITH AN ENVIRONMENTAL FOCUS

## Environmental Clubs



### Eco-Action Club

is focused on finding and implementing sustainable solutions for conserving and restoring the natural environment. Bridging service with advocacy for the environment.



### Animal Welfare

cultivates a stronger sense of awareness for the issue of animal endangerment, creating a lasting, positive impact within our school and local community.



### The Greenhouse Club

is an advocacy group committed to driving meaningful environmental change through the use of art, film and direct action.

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# STUDENT SUSTAINABILITY LEADERSHIP POSITIONS

CDNIS believes in the power of experiential learning in developing local and global leaders. Many of our students assume leadership positions in organizations outside of CDNIS, driving awareness and change both externally and within our student body.



**Bryan**

*United Nations Institute for Training and Research (UNITAR) Youth Ambassador*

I was honoured to have received the grand prize at the graduation ceremony of the UNITAR programme. This chance has opened doors to many learning opportunities and meaningful connections with like-minded peers who are also trying to change the world.



**Max**

*Fridays for Our Future Hong Kong Ambassador*

I was invited by the leader of Hong Kong's Fridays for Future to join the team in 2021. This opportunity enables me to gain first-hand experience in interacting with people from various age groups and across different income levels to gain insight on their thoughts on the climate crisis.



**Mira**

*ITS Education Asia Foundation Youth Advisory Board*

As a member of the ITS Advisory Board I'm very thankful for the opportunity to work with and hear the perspectives of students from various schools. I valued participating in planning inter-school sustainability events and giving advice to ITS from the perspective of a student who is highly involved in the SDGs.



# STUDENT SUSTAINABILITY LEADERSHIP POSITIONS

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**Ricca**

*HandsOn HK Youth Advisory Board —  
Rights for domestic Workers*

Working on the HandsOn HK Youth Advisory Board expanded my perspective on the issues that migrant domestic workers face, and I have continued to engage with by working with Africa Center and HELP for DW. Leading and working with others equally passionate about these issues was an amazing experience.



**Michelle**

*United Nations Institute for Training and Research (UNITAR) Youth Ambassador*

I had the honour of being chosen to take part in an intensive programme in partnership with ITS education and UNITAR. Through this, I had the chance to connect with inspiring individuals driving change locally and globally. The programme's one-on-one mentoring provided invaluable insight into creating meaningful and scalable impact.



**Sohana**

*HandsOn HK Youth Advisory Board —  
Support for refugees and asylum seekers*

I had the opportunity to join the HandsOn HK Youth Advisory Board from 2022-2023. This experience enriched my understanding of how to scale impact as a leader and mobilize passionate youth. I learned the importance of partnership, and to this day collaborate with fellow students.



# JOINING AN ALLIANCE FOR GOOD

CDNIS recognizes that collaboration is crucial to the success of our sustainability efforts. Only by sharing our knowledge, aligning our goals, and combining multilateral efforts will we overcome the complex challenges that we face today.

We are proud to share that we have become a founding member of The Alliance for Sustainable Schools (TASS), an NGO that works to address systems-level sustainability challenges in areas such as school uniforms, food, buses and buildings.

Through TASS, our students have been exposed to numerous educational opportunities, such as visiting biofuel facilities, and collaborating with student ambassadors across Hong Kong, exchanging ideas and exploring new policy options to improve our sustainability practices.



## The Alliance for Sustainable Schools

### Sarah

*Student Ambassador, TASS*

Being a TASS Ambassador provided me with the opportunity to engage with others who share my passion for environmental protection and take action that contributes to sustainability within TASS's five focus areas.



### Valerie

*Student Ambassador, TASS*

During my time as a TASS ambassador, I have been given the experience to let my passions for environmental sustainability drive action within the TASS areas of focus. Furthermore, it was a wonderful opportunity to meet like-minded people.





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2 ZERO HUNGER



3 GOOD HEALTH AND WELL-BEING



4 QUALITY EDUCATION



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## CAMPUS

CDNIS's continued investment in the sustainability of its campus continues to reap benefits and offer new opportunities for staff and student development.



## DOING OUR PART FOR HONG KONG'S NET-ZERO TARGET

In 2019, CDNIS commissioned its solar array, placing 88 solar panels on the Lower School Tower and 261 atop its Leo Lee Arts Centre, totalling 349 panels. We see this facility as key to our contribution to Hong Kong's 2050 net-zero goal, and an indispensable asset to our sustainability education programme.

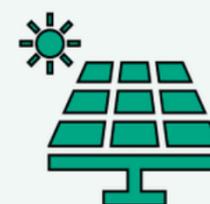
The Hong Kong government's Feed-in Tariff (FiT), a scheme that rewards private renewable electricity generation, is a key part of its decarbonization strategy. Its current interim goal, outlined in its *Climate Action Plan 2050* is to increase the share of renewable energy in its city-wide fuel mix for electricity generation from the current <1% to at least 7.5% by 2035.

CDNIS's solar array generates an amount ranging from 9000 kWh per month in the winter to >16,000 kWh per month in mid-summer, amounting to 3.0% and 4.8% of electricity consumption for November 2022 and May 2023 respectively.

### RENEWABLE ENERGY AT CDNIS



**103.7 MWh**  
ENERGY  
GENERATED



**349**  
SOLAR PANELS  
ON CAMPUS



**3.1%**  
OF ELECTRICITY  
CONSUMPTION



**73.6**  
TCO<sub>2</sub>E AVOIDED

# Progress: electricity use

With the exception of the years impacted by COVID-19-induced school site closures, our total electricity consumption has **decreased year-on-year** since 2015-16.

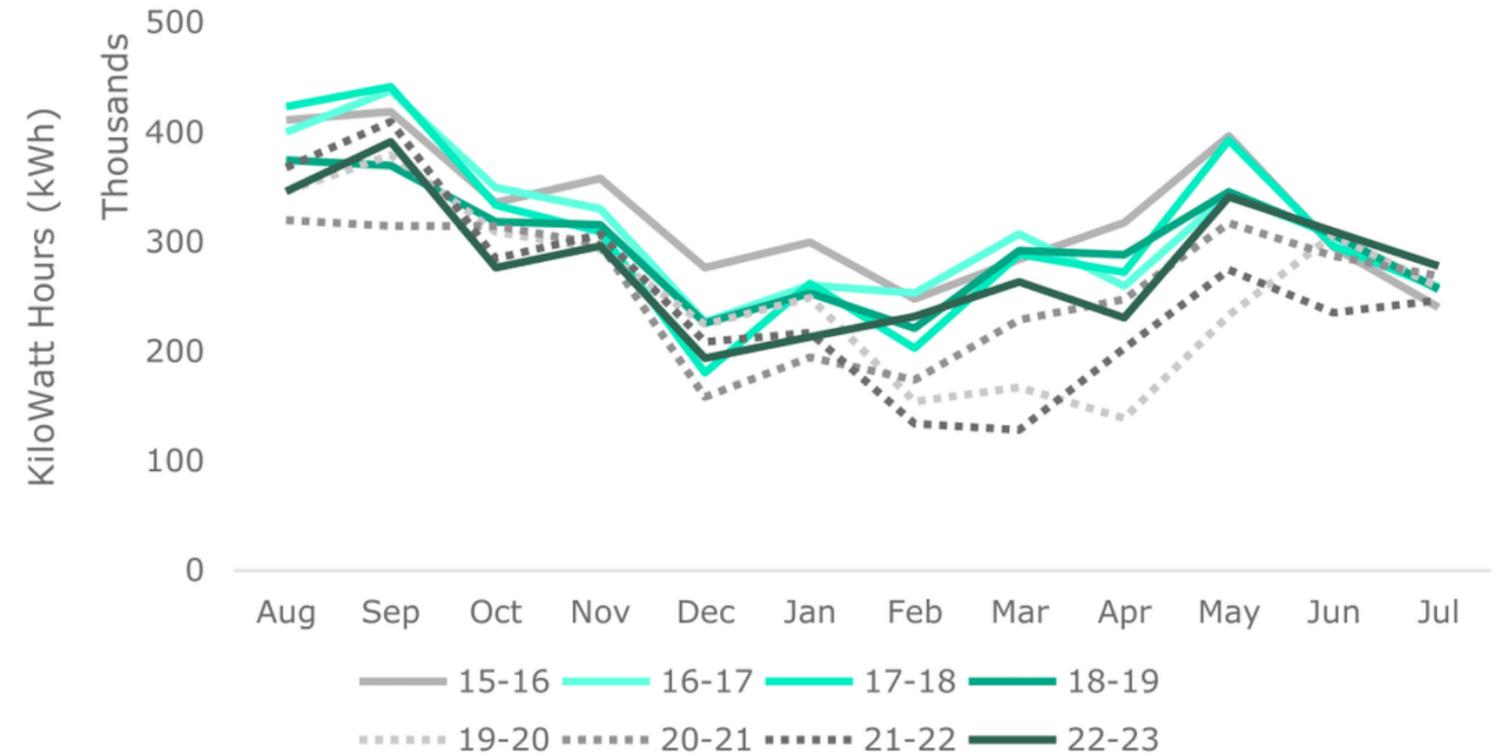
Thanks to our ongoing energy reduction initiatives, we are pleased to report that CDNIS has further reduced our total electricity consumption by over **13%** since 2015-16.

Academic year	Total electricity use (kWh)
2015-16	3,879,168
2016-17	3,729,142
2017-18	3,660,110
2018-19	3,566,779
2019-20	3,058,211
2020-21	3,121,170
2021-22	3,015,808
2022-23	3,370,256

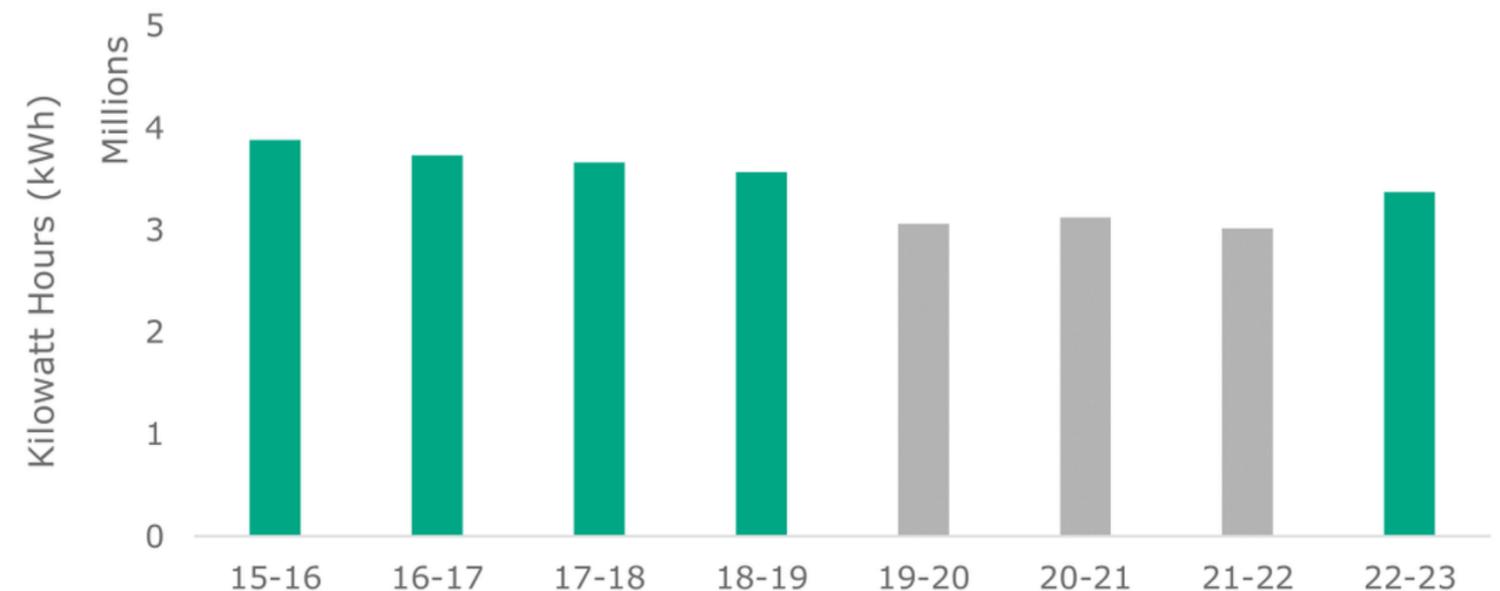
COVID-19



## Monthly electricity consumption at CDNIS



## Annual electricity consumption at CDNIS



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## CAMPUS

Biodiversity decline was one of the top three risks to our world according to the World Economic Forum. As an educational institution, we recognize our duty to impart to our community the crucial role that biodiversity plays in our well-being.



## ADDING NEW LIFE TO OUR ROOFTOP GARDEN

We are fortunate enough at CDNIS to have access to 510 m<sup>2</sup> of rooftop space that is optimized for students' experiential learning, with 83 m<sup>2</sup> for organic farming. Although the public health restrictions during the COVID-19 pandemic challenged our use of this space, CDNIS saw this as an opportunity to expand the capacity of our planting space.

This year, CDNIS partnered with Rooftop Republic, a local impact-oriented firm. Over the course of three months after school activity, our staff were coached by experienced members of the Rooftop Republic team, who guided them through general farming principles, soil requirements, planting schedules, and the ecological characteristics of individual species.



From this, we have been able to create a system in preparation for a transformation of the space into a centre of learning, well-being, and even food production. This included a green roof booking system where student societies, with supervision, may use the space. CDNIS has also kick-started its gardening club, *Working Bees*, to maintain the space. We are grateful to Nespresso for sponsoring this engagement.





## CAMPUS

CDNIS believes that managing waste effectively is not only crucial to our environmental protection but also to changing mindsets through education, transforming our resource dependence, and maintaining a robust recycling programme.



## SORTING OUR WASTE

The CDNIS Trash Lab acts as both a learning resource and a collection point for the school's waste. Here, waste is quantified, studied, and processed into new materials for use in various spaces. Our composting machine is operated daily and produces nourishing fertilizer to be used in CDNIS's rooftop gardens, forming a crucial node in the school's very own circular economy.

CDNIS has been donating excess compost to Ocean Park Hong Kong, where it is also used to enhance green spaces.

## ELIMINATING WASTE AT ITS SOURCE

The CDNIS Maple Cafe has, for the first time, phased out the usage of single use plastic cups for all school members except for visitors with its "No Cup, No Coffee" policy. Reusable mugs are also now available to borrow, including second hand mugs that were donated by CDNIS community members, and are compatible with all catering options.

### WASTE SEPARATION BINS ON CAMPUS

**3**  
NEW  
CATEGORIES

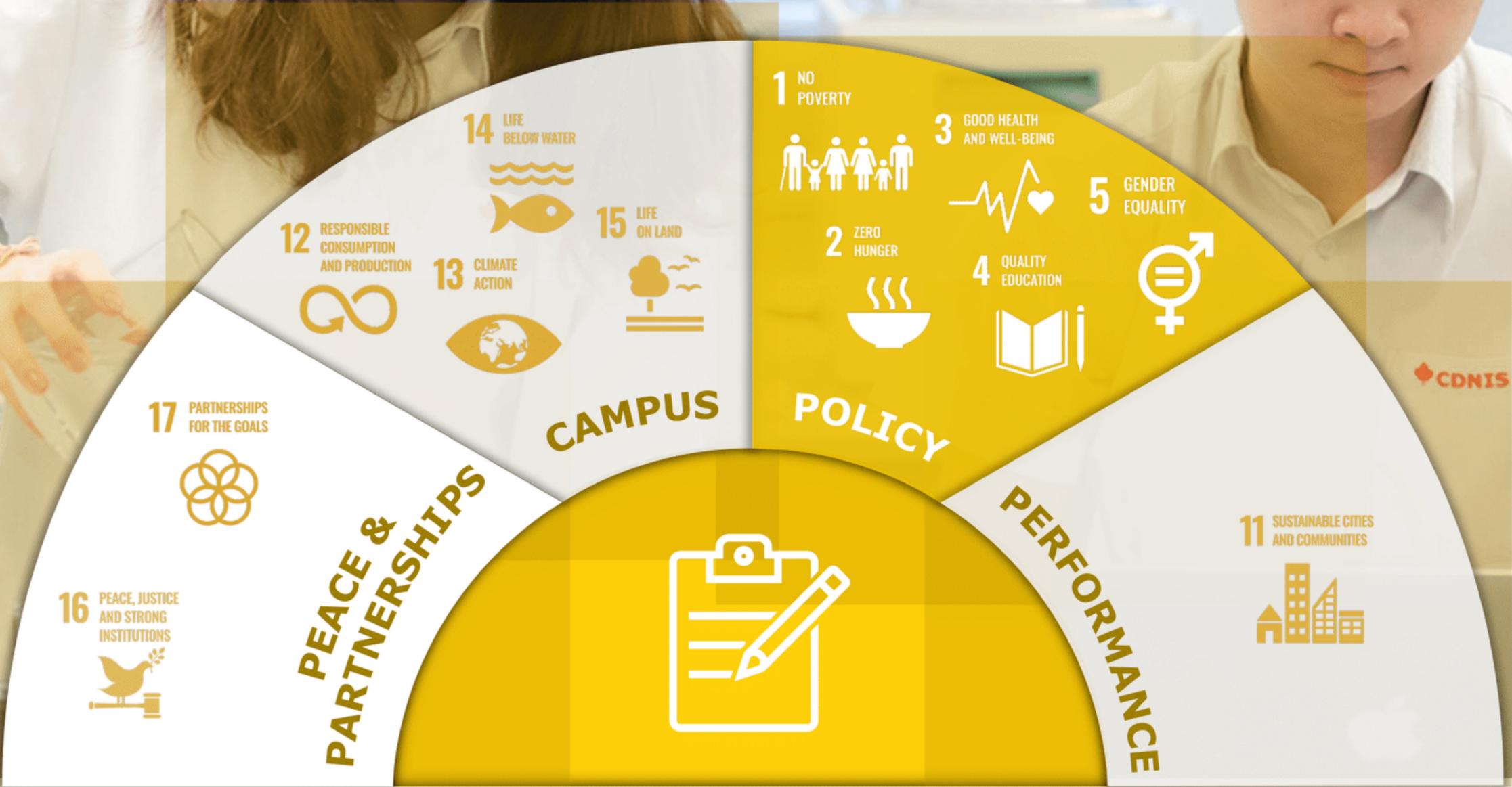
**12**  
TOTAL BIN  
TYPES

**3.8t**  
FOOD WASTE  
COLLECTED

**6**  
YEARS  
RUNNING

**21**  
LOCATIONS

**BIN CATEGORIES INCLUDE:** PLASTICS, ALUMINIUM CANS, PAPER, FOOD WASTE, GLASS, E-WASTE, STYROFOAM, LAMINATED PAPER, BATTERIES, NESPRESSO, MILK CARTONS, AND TETRA PACKS.



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2 ZERO HUNGER

3 GOOD HEALTH AND WELL-BEING

5 GENDER EQUALITY



## POLICY

CDNIS recognizes that climate change is our foremost threat. But we also believe that it presents a unique opportunity for the school to cement itself as a leader.



## IMPROVING OUR EMISSIONS MONITORING CAPACITY

CDNIS has recorded and reported its greenhouse gas (GHG) emissions since 2018, and this year we have made data a priority. We did so by creating a unified GHG calculator that systematizes and increases the accessibility of GHG accounting to students. This tool adheres to the principles of the globally-accepted GHG Protocol and allows us to monitor for a greater range of emitting activities and to disaggregate and study this data in greater longitudinal and lateral detail.

## FORMULATING A COMPREHENSIVE PLAN AND STRATEGY

CDNIS recognizes that we, as a school, have a disproportionate impact on climate change. We may not have the environmental footprint of a multinational corporation, but we see an immense responsibility in fostering environmental stewardship in our students and preparing them for the future. We have therefore committed resources to producing a comprehensive plan outlining the climate change-related risks, opportunities, and action we can take on both our operations and education.



# Progress: climate action

CDNIS’s emissions reporting encompass the entirety of its Scope 2 greenhouse gas (GHG) emissions, and we are pleased to report that they have fallen since last year.

Our internal audit capabilities have also expanded significantly this year, adding **five** new categories, mostly in difficult-to-quantify Scope 3 greenhouse gas emissions.

GHG emissions are mostly classified into three categories called “scopes”. **Scope 1** emissions are caused by operating facilities CDNIS owns or controls. **Scope 2** emissions are created by the production of the energy that CDNIS buys. **Scope 3** emissions result from all other indirect emissions, such as water use and treatment and contracted transport.



## EMISSIONS ACTIVITIES ADDED



Contracted local transport



Flights



Refrigerants



Water use



Water treatment

COVID-19

Academic year	Unit	Scope 1 emissions	Scope 2 emissions	Scope 3 emissions	Refrigerants
2019-20	tCO <sub>2</sub> e	Not available	2,208	Not available	Not available
2020-21	tCO <sub>2</sub> e	Not available	2,346	Not available	Not available
2021-22	tCO <sub>2</sub> e	Not available	2,324	Not available	Not available
2022-23	tCO <sub>2</sub> e	Nil	2,692	5,741	18

**Refrigerants:** substances that are used in the refrigeration and air conditioning systems. Leakage while refilling refrigerants is difficult to mitigate, and exacerbate the greenhouse effect, contributing to current climate change.





## BUSSING PROGRAMME

Increasing the utilization of school buses instead of private vehicles reduces traffic congestion and harmful emissions. We introduced a more comprehensive bussing programme for our staff and full-time students in 2021-22 to address traffic congestion on Nam Long Shan Road, with strong encouragement for Early Years 1 and 2 half-day students to also use the school bus.

To ensure that we cater to everyone's needs, we have organized customized pick-up and drop-off points and provided one-way ridership options. Our bus service covers approximately 1,170 bus stops in Hong Kong Island and Kowloon, and we also offer free shuttle services between our campus and various MTR stations, optimizing routes for distance where possible.

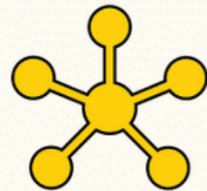


## POLICY

CDNIS recognizes that public transportation provides an array of benefits, both to its riders and our surrounding community.



### BUSSING AT CDNIS



**86**  
ROUTES IN OUR  
NETWORK



**93%**  
OF STUDENTS  
USE OUR BUSES



**100%**  
EURO 4 EMISSIONS  
STANDARD OR ABOVE



**2,383**  
TCO<sub>2</sub>E EMISSIONS



## POLICY

Overseas travel is a crucial part of CDNIS's operations. This year, we have taken steps to capture and analyze our flights to account for our impact on climate change.



## OVERSEAS FLIGHTS

Global engagement has always been an essential component of the CDNIS learning experience. We travel to achieve teaching and learning outcomes, recruitment, networking, and professional development to enhance our global presence and competitiveness.

However, we acknowledge that air travel can contribute significantly to GHG emissions furthering climate change. This year, the number of flights recorded remains low due to COVID-19 induced travel restrictions. We anticipate a significant increase in international travel for the 2023-2024 school year with the resumption of Experience Week and other programmes.

We have created data collection systems to track our flights and quantify resultant GHG emissions. In addition, CDNIS has made the choice to predominately book flight seats in economy class, these seats require less floor space relative to other seat classes which reduces GHG emissions by roughly half. By continuing to measure and understand the environmental impacts of flights, CDNIS will be able to consider ways to reduce and offset emissions for future travel.

### FLIGHTS AT CDNIS



**20**  
**SEATS BOOKED**



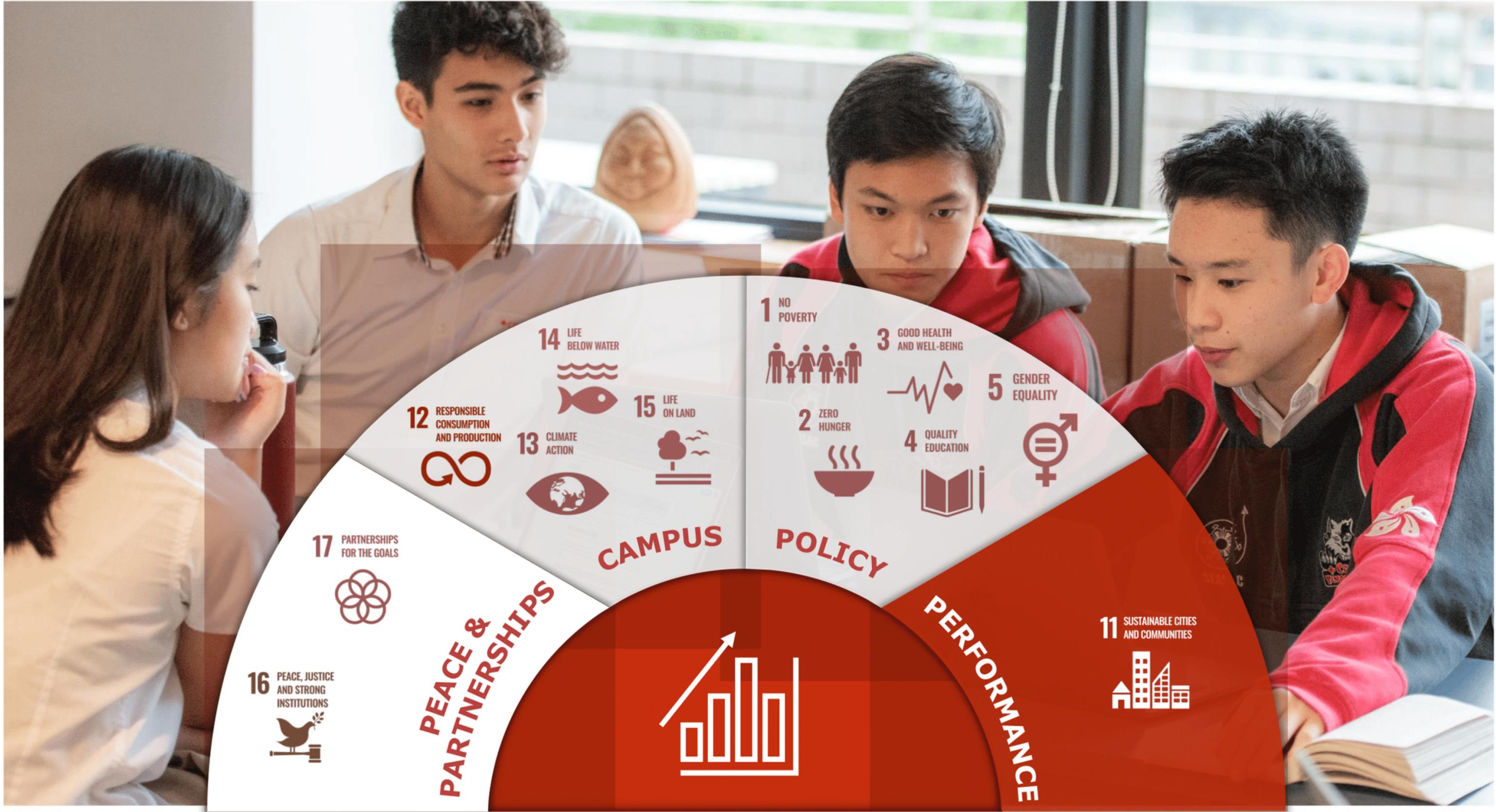
**9**  
**DESTINATIONS**



**45,087 km**  
**TRAVELLED**



**3,443**  
**TCO<sub>2</sub>E EMISSIONS**



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# GREENHOUSE GAS CALCULATION METHODOLOGY



**Electricity** emission factors are provided by Hong Kong Electric's Carbon Calculator. The carbon emission factor for 2022 was 0.68 kg CO<sub>2</sub>e per unit of electricity (kWh) purchased. This was combined with data from our on-site energy sensors.



**Water** emission factors are derived from the territory-wide default emission factors for water supply and treatment from the Water Supplies and Drainage Services Departments. Data on water consumption comes from regular water bills.



**Vehicle** emissions are measured by consulting with our transportation providers to provide metrics on the make and model of the fleet and distances travelled by route when it is servicing CDNIS's community.



**Flight** information is collated by the sustainability office from our coordinating staff. The International Civil Aviation Organization (ICAO) Carbon Emissions Calculator is then used to convert this data into greenhouse gas emissions.



**Refrigerant** release is measured based on annual top up amount, as amount lost is equal to volume needed to be refilled. Data is then converted to carbon emissions based on the 2022 UK Government Greenhouse Gas Reporting Conversion Factors.



# KPIs FOR ENVIRONMENTAL SUSTAINABILITY

August 2019 to July 2023

	UNIT	2022/23	2021/22	2020/21	2019/20
<b>Raw data</b>					
Purchased electricity	'000 kWh	3,273	2,998	3,121	2,891
Purchased towngas	'000 joules	614.5	246.4	Not available	Not available
Solar energy generated	'000 kWh	141.3	140.5	141.9	111.9
Income from Feed-in-Tariff	HKD	565,248	563,540	506,960	498,420
Purchased water	megalitres	6.5	7.6	6.0	5.5
<b>Greenhouse gas emissions</b>					
Fugitive: refrigerants	tCO <sub>2</sub> e	18	Not available	Not available	Not available
Scope 2: electricity	tCO <sub>2</sub> e	2,324	2,259	2,346	2,208
Scope 2: towngas*	tCO <sub>2</sub> e	368.7	144.9	Not available	Not available
Scope 3: water use and treatment	tCO <sub>2</sub> e	4	Not available	Not available	Not available
Scope 3: local travel	tCO <sub>2</sub> e	6	Not available	Not available	Not available
Scope 3: overseas travel	tCO <sub>2</sub> e	3,443	Not available	Not available	Not available

**KPI:** key performance indicator | \* **Towngas** is a manufactured gaseous fuel produced for domestic and industrial use.

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# GOALS AND TARGETS

## **SUSTAINABILITY CURRICULUM MAPPING**

**In devising a roadmap to navigate this environmental crisis, we are working to fully map and integrate pertinent sustainability issues and concepts into our curriculum across the school.**

## **NEW GREENHOUSE GAS-EMITTING ACTIVITIES REPORTED**

**This year, we made great strides in expanding the scope of emitting activities captured under our monitoring programme. Building on this, we plan to increase the types of emissions we monitor from new activities, such as food, compost, landfill-bound waste, recycled waste, local off-campus transportation and overseas hotel stays.**



An aerial photograph of a school campus, showing various buildings, a large green field, and a road. A prominent red rectangular box is overlaid in the center of the image, containing white text. The text provides the school's name, address, and website.

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