

SUSTAINABILITY IMPACT REPORT 2022



2022 SUSTAINABILITY IMPACT REPORT



The International School of Beijing (ISB) continues to evolve into a more sustainable educational institution in which joyful learning and the freedom to explore foster values of compassion and care for the planet. Through this Sustainability Impact Report, we continue sharing with our students, staff, parents, and the greater international community the progress we have made towards our <u>Sustainability Roadmap 2025</u> commitments.

2022 continued to present challenges for our school and community during the Covid-19 pandemic; however, we continued to strive to be engaged and we found opportunities to make progress towards many of our sustainability goals by involving community members as much as possible during the in-person and online teaching periods. Despite the difficult times, ISB stayed committed to making a positive impact on the planet.

Because the involvement of our students has always been at the center of our initiatives and progress towards sustainability, a highlight of last year was the construction of our rooftop garden, which was achieved in collaboration with Grade 11 students whose dedication and passion turned this facility into reality. This green space now hosts students of all ages to experience hands-on learning with a strong focus on sustainability.

ISB commissioned a utility-use audit that was conducted by a third party in partnership with our facilities management and food services partner, Sodexo. This audit measured aspects of our energy usage and identified improvements in the management of our facility. The recommendations given to us will be implemented in 2023 with the support our facilities team and the involvement of our community members. However, as we continue to power our campus with renewable energies and already implement measures to reduce our impact on the environment, this year's reduction of our greenhouse gas emissions was over 14 percent.

This report not only aims to deliver news about our progress, but it is also an invitation to all readers to join these efforts through any of the actionable steps they might find relevant and impactful.

The ISB community is looking forward to the opportunities that 2023 will bring for us to continue meeting our sustainability goals, and we hope that a new year with our school functioning without interruptions will allow us to make a bigger and more meaningful impact in the fight against climate change.

About this report: This Sustainability Impact Report covers events and activities that occurred during the 2022 calendar year. A preview of the goals that we aim to achieve during the whole of 2023 will be included here as well, as we laid much of the groundwork for these actions during 2022. The data presented in this report includes items over which we have operational control (e.g., our campus and busing). Climate data was determined in alignment with the GHG Protocol Corporate Accounting and Reporting Standard methodology.

CURRICULUM LEARNING + SHARING

2022 provided an opportunity to continue conversations with the ISB Office of Learning leadership team to look at how sustainability themes have been integrated into the ISB curriculum. In collaboration with the Elementary and Secondary Curriculum Coordinators and with the support of the Curriculum Area Leaders, we created a criterion to assess which subject areas and grade levels currently cover these topics in their lessons.

Middle School and High School teachers used the Sustainability Indicators from The Cloud Institute for Sustainability Education to identify and track the sustainability topics included in their curricula and lessons. This data will tell us where ISB can enhance and improve our instruction regarding sustainability. The same exercise will be conducted in Elementary School in 2023.

2023 is a year of opportunity to expand this work and support teachers to embed sustainability in their lessons regardless of the grade or subject.

CO-CURRICULAR

LEARNING + SHARING

Goal

Develop and introduce service learning and sustainability guidelines for whole school cocurricular program with the intent of establishing holistic impact thinking and action by 2020.

Commitment to

Foster a new generation of environmental leaders by providing mentoring, networking, and experiential learning opportunities that prepare students with the insight and foresight to safeguard our environment in the years and decades to come.

Commitment to

Support student entrepreneurship by facilitating sustainability-minded opportunities on campus.

Although 2022 was a challenging year for the continuation of co-curricular activities, ISB was still able to incorporate sustainability and service learning into some co-curricular activities.

- Service groups such as the High School Roots & Shoots club continued to work with the local organization Love and Hope in Beijing (a home for children of migrant workers from rural areas) to bring people together and make a positive impact on the community.
- The former HS environmental clubs were merged to form the Green Impact club. This club continued to support the strong initiatives that ISB had already been implementing in the field of sustainability and has added the objective of growing and innovating new approaches that our school can take.
- ISB's <u>Student Empowerment Fund</u>, created to support student projects and initiatives aligned with the school's Mission and Vision, was used in 2021 by a group of students working with the Power Baseball Academy, a local non-profit organization focused on helping underprivileged children access a proper education and professional baseball training.

Students and staff continue to set high expectations together around sustainability on campus. Highlights from their work include:

- The rooftop garden facility was collaboratively designed by ISB's Sustainability Manager, Paola Alonso, and High School students Nicole S, Ray F, Austin H, Kamsen Y, May T, and Tom C. The students led the design process by measuring, engineering, and personalizing the blueprints, staying true to the vision of empowering students with purpose and compassion.
- The Net Impact and Green Keepers ISB clubs supported various activities to celebrate Earth Week at ISB. These included Bike to School, Earth Hour, promotion of plant-based food options such as ice cream, plant sales, among others.

ISB was also able to continue the work with Keru (a non-profit organization focusing on training the next generation of young leaders to tackle issues of sustainability), who led the design of the Global Citizenship unit with our Grade 5 students. This program is designed to encourage students to think critically and invites them to reflect on the actions that can harm the environment. The unit also highlights the United Nation's Sustainable Development Goals with these students.







Roots & Shoots members working with students from Love and Hope, a home for children of migrant workers



ISB's rooftop garden designers

GOVERNANCE LEARNING + SHARING

Goal

Establish Sustainability Guiding Statements and develop a Sustainability Action Plan to support achievement of the Sustainability Roadmap 2025 by 2019.

Goal

Develop and integrate a Social Cost of Carbon and Water into purchasing processes by 2025. **Commitment to**

Facilitate strong governance structures to ensure integration of sustainability into all operational practices and participation of the ISB community.

Commitment to

Create, maintain, and continuously improve programs that drive progress towards this Sustainability Roadmap.

The Social Cost of Carbon and Water is a measurement that helps ISB assess the economic damage that would result from greater emissions of carbon dioxide to the atmosphere. To keep its commitment to this social cost, ISB created an Environmental Purchasing Standard that delineates best practices for purchasing goods such as paper, lighting, and electronics. This standard is now included in ISB's contract with the third-party vendor that supports the maintenance of our campus.

Other policies such as lighting, indoor air, and landscape have also been included in the previously mentioned contract to ensure that ISB vendors follow through on our sustainability commitments.

IMPACTFUL SHARING

LEARNING + SHARING

Commitment to

Transparent and open sharing of ISB's progress in this Roadmap via ISB's public website on an annual basis starting in 2019.

Commitment to

Communicate ISB's 'People, Planet, Purpose' sustainability story to educate, engage, and motivate the ISB community.

Commitment to

Recognize individuals providing significant contributions to ISB's sustainability accomplishments

Commitment to

Cultivate external partnerships within the wider community that help inform ISB's efforts and amplify our local and global impact.

We continue to publicly share our <u>Sustainability Impact Report</u> for the years 2019 and 2020-2021, the second of which was published in April of 2022. Our Sustainability Impact Reports can be easily accessed through <u>our website</u> by the school's community members and also by the public at large, should anyone wish to review, learn from, and/or replicate our actions.

During the 2022 calendar year, we continued to have a strong presence in the Staying Connected internal newsletter in which updates about the program were shared with ISB staff. Our newly opened garden was also featured on various social media channels and a story about its construction and planning ran in our ISB blog.







2020-2021 Sustainability Impact Report

FOOD PEOPLE

Standard

Develop Sustainable + Healthful Food Standard (with consideration towards nutrition, labeling, sourcing, and impact) by 2020.

Commitment to

Educate and empower the ISB community to make sustainable food choices and form healthy eating habits.

Commitment to Promote drinking water on campus to support healthy choices and hydration.

With the adoption of the Sustainable + Healthy Food Standard, our catering provider Sodexo has helped us to improve nutritional offerings and better communicate the nutritional values of the food served in our cafeterias.

At the same time, we've successfully incorporated more beans, grains, and vegetables into our menus without compromising the taste or the meal preferences of our community members. ISB's aim is to create more awareness of the impact that some foods have on the environment. Our hope is that the greater community continues to support healthy, sustainable food choices by members of the ISB community that support their own values and preferences.





Sodexo's meal information displays nutritional values

Waste PEOPLE

Target

Reduce waste per student by 60 percent by 2025 from a 2017 baseline, where waste is defined as "no-longer-wanted materials leaving the campus not managed by one of the 5Rs."

Commitment to

Improve awareness and education of the ISB community on the 5Rs (refuse, reduce, reuse, recycling, rot) and the impacts of the waste we generate.

Commitment to

Long-term ambition to become a zero-waste school.

In our previous report, we estimated that our waste generation in 2020 and 2021 was lower than 2019 because of Covid-related campus closures. Because of the continuing delays of regular activities on our campus and the frequent school closures, we were not able to complete a reliable food waste audit that would allow us to compare the results of the one conducted in 2018. However, we are aware of the need to complete this analysis, as the cafeteria manager from Sodexo has brought to our attention the opportunity that ISB has to reduce food waste on campus.



WATER PEOPLE

Target

Reduce water withdrawal by 25 percent by 2025 from a 2018 baseline.

Commitment to Minimizing additional stress on the Beijing water system from new water needs through focus on reuse and efficiency.

ISB consumed 69,943 cubic meters of water across the campus in 2022. This reflects a 17-percent reduction compared to our 2018 baseline. It is important to note that this significant reduction is certainly a result of the Covid-related campus closures, and that reduction in consumption does not happen this quickly under regular circumstances. Therefore, it is important that as a community we continue to establish guidelines that help us manage our water usage and to reduce consumption over time.



WELLNESS + SAFETY PEOPLE

Commitment to

Review staff and student injury rates with the intent of establishing a target by 2025.

Commitment to

Assessing compensation of all on-site workers with comparison to the Beijing-specific living wage.

Commitment to

Promote healthy lifestyles via existing wellness + safety programs and positive campus nudges. **Commitment to**

Assess and communicate results of community satisfaction with indoor environment biannually.

To continue meeting our goals related to energy savings, ISB installed new LED lighting in our fields and stadiums. This significant upgrade has also reduced the light pollution of these fixtures. Not only do these new lighting systems use less energy, but at the same time reduce the disruption of ecosystems and improve the well-being of the communities around our campus. ISB is not only making an impact within the school grounds, but also on our campus vicinity by preventing the glare and sky glow often created by outdated field and stadium lighting systems.

Based on a report issued by government body the China National Center of Quality, Supervision, and Testing for Buildings Energy Conservation, with the newly installed lights, we are projecting an energy savings of 77kw/h from our stadium, soccer field, and baseball field.





Upgraded LED lighting on ISB's stadiums and fields

EMISSIONS PLANET

Target

100 percent of electricity from renewable sources starting in 2020.

Target

Reduce Scope 1 and 2 greenhouse gas emissions by 80 percent by 2025 from a 2018 baseline. Target

Achieve net-zero greenhouse gas emissions by 2050. As part of this target ISB commits to reducing Scope 1+2+3 emissions by 90 percent by 2050 from a 2018 baseline.

Commitment to

Reducing greenhouse gas emissions to align with the most ambitious aim of the Paris Agreement, to limit global temperature rise to 1.5C above pre-industrial levels, meaning to reach net-zero emissions by no later than 2050.

After a dramatic reduction in emissions with the switch that ISB made to renewable wind power two years ago, last year's reduction of 17 percent remains significant given that we continue to lower our emissions.

In 2022, we also had the opportunity to work with three different vendors to learn about options for solar panels for our school. We conducted two site visits to existing local projects and interviewed solar installers.

We aimed to build our solar project in the summer of 2022, but with Covid-19 cases spiking in Beijing, our campus was not accessible, and we had to pause the project. In the fall, however, we continued the conversations to fulfill our goal and ISB will complete a rooftop solar project in 2023.





Shunyi Solar Project

ENERGY PLANET

Target

Achieve an ENERGY STAR building score of 50 by 2025 and 75 by 2030.

Commitment to

Assess energy use by building and space type to inform ENERGY STAR goal setting by 2020.

Commitment to

Engaging campus in energy conservation.

Commitment to

Conduct on-site renewable energy study to inform goal setting.

Commitment to

Assess feasibility, timeline, and develop initial action steps for the transition into a fossil-free campus.

ISB achieved an ENERGY STAR score of 26 in 2020 and 16 in 2021 (on a scale of 0 to 100, where 100 represents the best-performing buildings). The score is still reasonably good because of the periods of school closure, but it reflects a significant improvement from the year 2019 when a score of 10 was achieved.

On December 6, 2022, a formal energy audit was conducted, and this audit confirmed that our main energy consumption can be attributed to facility lighting and HVAC systems, accounting for 16 percent and 78 percent of our total usage respectively. As a result of this audit, ISB decided that the greatest improvements in energy use can be made by changing user habits rather than focusing on large upgrades to our infrastructure for the time being.





Chart depicts our energy usage over the last six years per month. Trends show that consumption has been reduced, but that there is still a tendency for this to spike

PROCUREMENT

PLANET

Target

Fifty percent of procurement spend meeting sustainability purchasing standard by 2025, 100 percent by 2030.

Standard

Develop sustainable purchasing standard for paper, lighting, and electronics by 2022, other relevant items by 2025.

Commitment to

Purchasing in an environmental, social, and financially sustainable manner.

Commitment to

Creating a culture of sustainable purchasing across the community.

Commitment to

Including environmental and social criteria as part of major partner procurement and require major partners to support the achievement of and provide reporting for relevant ISB targets and commitments.

Sustainable procurement is an area that gained momentum across the school during 2022, but this was also a result from the pandemic.

To face the challenges that 2023 might bring, business relationships with local and sustainable companies started in November in 2022 to identify potential vendors that can meet the school's needs.

We also continued to work with the Student Activities Department and students' Dragon to support the partnership with Tsunami Sports to procure environmentally friendly athletic clothing for coaches and students.

Implementation of the Sustainable Purchasing Standard continues, and we made plans for it to be extended to be used by all our school departments in 2023.

RESILIENCE + ADAPTATION

PLANET

Goal

Develop a Climate Preparedness and Campus Resilience Plan by 2023.

The recent IPCC Special Report on the impacts of global warming of 1.5°C builds on past climate science to present us with a range of potential impacts to our planet.

With the use of the World Resource Institute's Aqueduct Water Risk Atlas, we can see the water risks related to the area where our campus is located and the potential for water depletion, drought risks, etc.

The creation of a scenario that shows how ISB could be impacted by these changes and how to plan for them is in the beginning stages.







DESIGN CAMPUS

Commitment to

Responsible campus design that minimizes negative impacts on the local community.

Commitment to

Enhance student and staff well-being and productivity through incorporation of biophilia into campus design and subsequent ISB strategic planning processes.

The ISB garden was envisioned to enhance our approach towards biophilic design. The term "biophilia" was coined by biologist and Harvard University professor Edward Osborne Wilson from the Greek "bios," meaning life, and "philia," meaning fondness. It has since evolved to the idea that humans possess an innate love of nature, essential for our health and productivity. Students researched and proposed sustainable materials that, at the same time, would enhance the connection between people and nature.

This design not only welcomes people to enjoy a calming environment, but the space has inspired deep reflections and conversations on the importance of local farming and its correlation with the environment.





LANDSCAPE CAMPUS

Target

Electrify 75 percent of maintenance equipment by 2025; 100 percent by 2030.

Standard

Develop Sustainable Landscape Guidelines to outline methods to review, discuss, and decide how best to maintain or improve campus landscape space from an ecological, functional, and aesthetic perspective.

Commitment to

Reduce the negative impacts of landscape design and maintenance practices towards the wellness of the ISB community and ecosystem.

We continued to implement our landscape policy and followed up closely the correct implementation of our irrigation system. This approach is also being implemented in the newly built garden in order to maximize our watering opportunities without compromising the growth and development of the plants that are growing in the area.

As we continue to surround our campus with more trees, in the spring of 2022, the Net Impact club planted its first tree in the school grounds as a symbol of their commitment to continue being advocates for the fight against the climate crisis.



APPROACHING

MASTERING

MEETING



Net Impact club plants a tree in collaboration with Grade 5 students

OPERATIONS CAMPUS

Goal

Achieve LEED Operation + Maintenance certification by 2030 at Silver level or higher.

Standard

Develop ISB Green Cleaning Standard by 2022.

Commitment to

Develop best practice guidelines for managing and operating buildings and capital goods in excess of 500,000 RMB in a sustainable and energy-efficient manner in order to assist in achievement of sustainability-related targets, standards, and commitments.

The incorporation of our policies and standards in the daily operations of our campus could not have been possible without the support of our third-party vendor Sodexo. Through training and explanation of the expectations of how our campus needs to be operated to achieve savings and have a lesser negative impact on the environment, we continue to witness significant savings in our electricity and water usage.



BEGINNING BEGINNING APPROACHING MEETING MASTERING

CONSTRUCTION CAMPUS

Standard

Develop ISB Green Building Standards by 2024, reviewed and revised every four years.

All significant standalone new construction to achieve LEED certification at Silver level or higher.

Prioritizing sustainable design elements determined by research to have a positive impact on student and staff wellness and academic learning and performance.

Development of ISB's Green Building Standard is delayed until 2024 as we prioritize time and resources towards progressing with operational targets. However, as ISB plans for future modifications in our main building, considerations of sustainable materials and approaches continue to be at the center of our projects.

TRANSPORTATION CAMPUS

Target

Electrify 75 percent of bus and taxi fleet by 2025; 100 percent by 2030.

Commitment to Reduce emissions of harmful vehicle-related air pollutants within the community and particularly on campus.

No changes in our transportation were made in 2022; however, 2023 will be the year to think about the further efforts that ISB can make to fully electrify our bus fleet, as well as the incorporation of more electric charges for vehicles.







IMPACT DATA

As part of ISB's commitment to transparency, below is a compilation of environmental, social, and governance indicators. All reported values represent the best available data at the time of publication. Data may be adjusted in the future to incorporate updated methodology, structural changes, and/or minor corrections. Additional details on these changes are included as footnotes where applicable. Environmental Data is based on the calendar year.

	Units	2022	2021	2020	2019
Students (EY3 - Grade 12 / September) Staff Female Male	# # %	1722 422 69% 31%	1660 420 65% 35%	1790	1784 418
Women in Leadership	%	61%	54%		
Women in Faculty	%	57%	137	134	
women in Support Staff	%	83%	146	141	
Student-Driven Sustainability Projects Implemented	#	1	2	0	2
Staff Recognized as Sustainability Change Agents	#	2	11	13	6
Students Making an Impact News Articles	#	5	3	3	3
Scope 1 - Direct ¹	MTCO ₂ e	11799	3198	2639	3415
Scope 2 - Purchased Electricity ²	MTCO ₂ e	8624	0	0	10118
Scope 1 + 2 Emission Reduction from 2018 (Target 80% by 2025)	%	14	77%	81%	4%
Scope 2 - Electricity (default supply) ²	MTCO ₂ e	8624	9439	7447	10118
Scope 3 - Fuel- and Energy Related Activities ³	MTCO ₂ e	41	58	63	682
Scope 3 - Waste	MTCO ₂ e	14	61	63	68
Scope 3 - School Travel	MTCO ₂ e	96	96	8	943
Scope 3 - Employee Commuting	MTCO ₂ e	399	0	0	3162
Total Energy Use	MWH	26257	26179	20752	27166
Electricity - Buildings	MWH	8939	9587	7689	10268
Electricity - Buses+Owned Vehicles	MWH	192	434	217	184
Natural Gas / Diesel / Petrol	MWH	17126	16158	12846	16714
Renewable Electricity Use	MWH	12000	10021	7906	0
Renewable Electricity	%	100	100	100	0
Bus Fleet Electrification (Target 75 by 2025)	%	50	50	50	50
ISB Vehicle Electrification	%	33	33	0	0
ENERGY STAR Scores (Target 50 by 2025)	1 to 100 (100 is best)	26	16	33	9
Water Withdrawal	Cubic Meters	69943	66738	62245	94060
Water Withdrawal Reduction from 2018 (Target 25% by 2025)	%	17	21%	26%	-11%
Waste Landfilled / Incinerated	Metric Tons	30.6	39	No data	116
Waste Recycled	Metric Tons	2.84	1.3	No data	3.5
Waste Composted	Metric Tons	0	0	0	<1
Waste Generated per Student	kg / student	0.018	0.023		0.065
Compost and Recycling Rates	%	12	11	No data	4

Footnotes:

1.) Direct emissions means emissions that are in our direct control. This includes the natural gas we burn in our boilers, the diesel in our buses, and the refrigerants released from our chillers.

2.) Best practice is to report the emissions from electricity in two ways. The first is based on who you buy your electricity from, which could be from a wind or solar farm, resulting in no emissions; this is called the market method. The second is based on where you are and the average emission impact of the electricity in the region; this is called the location method. The intent of showing both is to understand the impact of your electricity purchasing decisions.

3.) Fuel- and Energy Related Activities refers to the emissions associated with extracting, processing, and transporting the energy consumed, whether it be coal, natural gas, or oil.

 $MTCO_2 e = metric tons of carbon dioxide equivalents. All greenhouse gases have different global warming potentials; to determine the carbon dioxide equivalent of methane (CH4) for example, you would multiple the emissions by its global warming potential of 28.$