

China • Hong Kong: A Whole School Sustainability Audit spearheading a whole school commitment to change

Special thanks to Sean Lynch, Victoria Astle, Sasha Manu, Anthony Dixon and Caitlin Shem for this contribution

China, and Hong Kong S.A.R in particular, place a high priority on sustainable development and pursue a range of governmental, corporate, education and civil society initiatives. [The Hong Kong Education Bureau](#)¹⁰² and [the Hong Kong Environment Bureau](#)¹⁰³ offer site visits, teacher education programmes, territory-wide green activities, and learning and teaching resources. The Environmental Protection Department¹⁰⁴ also helps local institutions to minimise waste and reduce carbon, among other green initiatives. There are also numerous NGOs working on sustainability in Hong Kong.

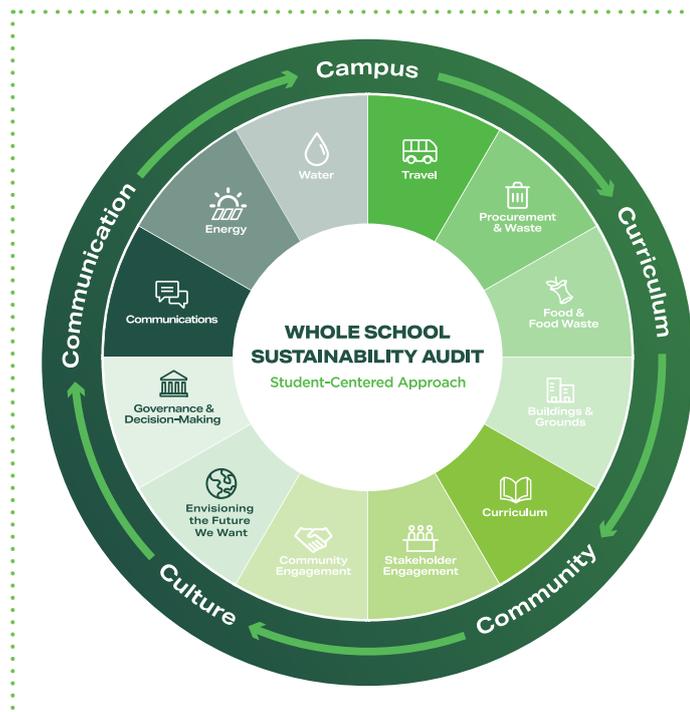
This case study is of the Chinese International School, an independent private non-profit school in Hong Kong. The school has had a focus on sustainability for many years, with student-led initiatives dating back over the last decade. In 2019 the school decided to take a more systematic, comprehensive and strategic whole-school approach to sustainability and sustainability-oriented education.

As the first major step in that direction, [Metanoia](#)¹⁰⁵ (a sustainability consultancy specialising in schools) were engaged to work with students and the school to conduct a whole-school sustainability audit. Metanoia’s expertise is broad and includes energy efficiency (of lighting, air-conditioning, buildings), building-integrated solar energy - design and installation, food and food waste, sustainable school uniforms, sustainability communication, biodiesel-from-waste, carbon auditing, offsetting, education for sustainability, and governance for sustainability.

Anthony Dixon, Metanoia’s founder explains: “Metanoia is a Greek word meaning ‘a transformation of heart and mind leading to a change in behaviour.’ It describes what happens when students are effectively engaged in the rich sustainability learning opportunities their school campuses offer. We believe this kind of educational experience is essential for a sustainable future.” Metanoia’s free online [School Sustainability Assessment Tool](#)¹⁰⁶ which schools can complete easily in a few minutes, encapsulates their view of what it means to be a sustainable school community using the 5Cs shown in the audit illustration (see right).

The Chinese International School (CIS) is a non-profit independent school located in Hong Kong, with approximately 1,500 students from Reception to Year 13. All students study Chinese from reception through to graduation, while completing the International Baccalaureate (IB) Middle Years Program (MYP) and the IB Diploma Program (DP). There are over 450 staff at the school including leadership, administration, teachers, teaching assistants, and operational staff.

The Chinese International School’s example offers insight into what can be achieved with strong vision and leadership. Moreover, it shows that collaborations with external actors, can support a school in their journey to become sustainable. While some of what this school has done has required a significant financial commitment, their story also provides us with numerous examples of low-cost entry points and ideas for utilising a whole-school approach as a framework for sustainability-oriented education and the development of a sustainable school community.



Metanoia’s Whole School Sustainability Audit

This contribution is by the Chinese International School¹⁰⁷ (CIS) Head of School, Sean Lynch, and the school's sustainability coordinators - Victoria Astle and Sasha Manu (both of whom are also full-time teachers):

Student groups have launched and championed environmental change within our school and local communities for many years. One of these groups is called 'Drop in the Ocean (DITO)', was founded over 10 years ago. This student group concentrates on environmental issues, aiming to advance sustainability at CIS and in Hong Kong. The Primary School has also started a 'Green Team' which engages our youngest students through different projects. Many individual student-led initiatives also happen throughout CIS; students have been and remain our most impactful agents of progress. In 2019, CIS sought external expertise through environmental consultancy Metanoia to support and compliment our efforts and work with our students, as well as our staff, parents and alumni, to undertake a comprehensive Whole School Sustainability Audit. This was a major project which we completed over the course of 2019-20. The findings and recommendations

from that far-seeing process are the basis on which CIS has since continued to structure its approach towards sustainability education and action.

In 2020 CIS's Sustainability Council (SCO) was created. The SCO is a consultative body with broad stakeholder representation that supports the CIS Head of School (HOS) and Leadership Team (LT) in their direction and oversight of our school's sustainability commitments. The SCO is made up of 23 members including 9 students from all areas of the school - secondary and primary. The SCO offers formal recommendations to the LT and serves as a sounding board for all matters related to sustainability including recommending short-, medium-, and long-term targets for carbon reduction, waste reduction, green operations, and eco-literacy. This year, it has also launched a thorough review of our curriculum, from Reception through Year 13, with a view to further deepening the ways in which we educate for sustainability. We have just developed a new strategic framework for the decade that lies ahead which places sustainability at its core, beginning with the embedding of environmental stewardship into our new

Key WSA Principles in action at *Chinese International School*

Vision, Ethos, Leadership & Coordination

- Top-down support – fully invested in supporting sustainability projects
- Investment (both time and money) into creating a sustainability audit as an intentional first step towards whole-school engagement
- Commitment to address unsustainable practices
- Students involved in sustainability measures and the sustainability vision of the school
- Paid positions for sustainability coordinators

Institutional Practices

- Student involvement in solar BIPV design
- Sustainability procurement and waste policies in place created by bottom-up participatory process involving all stakeholders in the school
- School farm, producing food for school and local food bank. Farm also engages parents and other local community members

Community Connections

- Parent-teacher sustainability representatives support ongoing community-school connections
- Student-led 'urban farmers' initiative donates produce to local food bank
- School hosts community events such as REDRESS to promote sustainable fashion
- Public space clean-ups - for example on local nature paths, beaches, and in the ocean on kayaks

Capacity building

- Workshops organised for staff and students with local sustainability-oriented Charities and NGO's
- Professional development courses and meetings to increase knowledge in sustainability, for example - a solar energy design course and a course on carbon literacy and decarbonisation run by Metanoia.
- Annual student-led school sustainability summits and a whole school Green Week where all staff and students get involved

Curriculum

- Curriculum mapping underway with a view to proactive integration of sustainability in a whole-school scope and sequence

Pedagogy & Learning

- New strategic focus on project-based learning; viewed as ideal context for developing interdisciplinary, real-world, community-based sustainability initiatives
- Experiential learning through multi-day experiences is deeply transformative
- More work is needed to develop sustainability-oriented pedagogy competencies; once a common framework for this is established teacher professional development will be a focus

Mission Statement and first-ever whole-school Values Charter. One of our strategic goals as part of this “Vision ‘33” is a sustainability pledge to become zero carbon and zero waste.

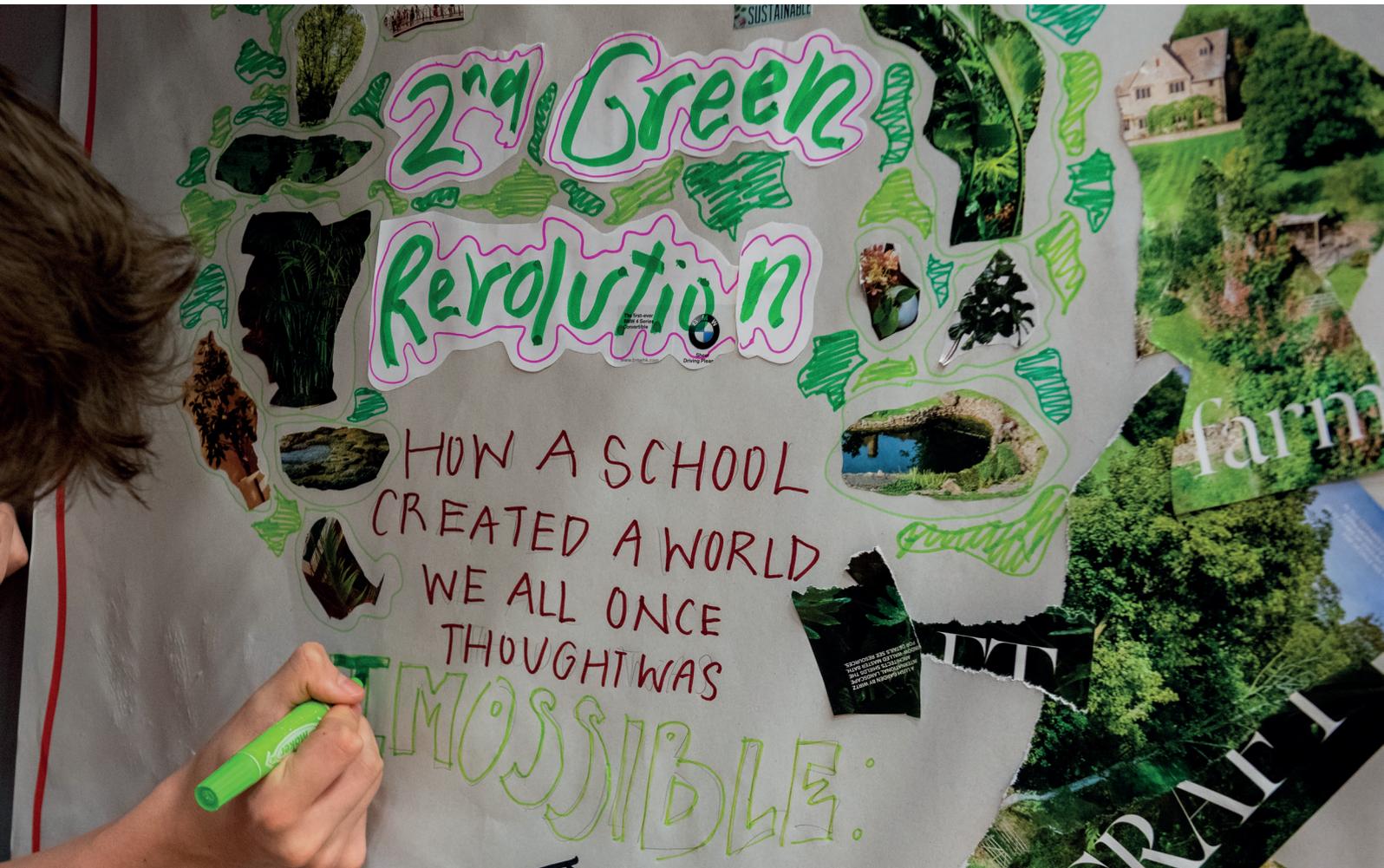
Participation has dramatically increased over the past three years. Previously, sustainability efforts were predominantly student-driven (by a relatively small group of students); now, more students are involved, including primary school students, and with prioritisation from the leadership team, more staff have also become involved and invested in the school’s sustainable future.

Vision, Ethos, Leadership and Coordination • It has been a significant but highly beneficial ‘environmental investment’ to engage with outside expertise (Metanoia). It enabled CIS to undertake a full sustainability audit of the whole school, while also empowering students to help in leading that work, in keeping with our focus on student agency. Six main themes emerged from the interviews with stakeholders conducted as part of the audit: The importance of student leadership; the need for a whole

school sustainability strategy; connection to nature; how to catalyse behaviour change; sustainability in the curriculum; and greater collaboration on sustainability between primary and secondary schools. Our ongoing partnership with Metanoia has provided decisive support on this pathbreaking trajectory. Working with Metanoia, our students are taking charge of ongoing data collection, working to provide benchmarking that can be supported by Key Performance Indicators (KPIs), and driving behavioural change. Decarbonisation and sustainability education are thus becoming more and more of a reality for our community.

Capacity Building • One of the recommendations from the Whole School Sustainability Audit was to create a **multi-stakeholder Sustainability Council (SCO)**. In 2020-21, the Sustainability Council worked on creating focused procurement policies for the school, which were put into practice at the start of this academic year 2021-22. The focus of the SCO this year has continued to be to implement the 100+ recommendations from the Sustainability Audit.

CIS students envisioning the sustainable future





CIS students speaking at the launch of the school's whole school sustainability audit in September 2019

Other low-cost measures included setting up student groups across the whole school. These have had a tremendous impact by engaging and harnessing interested students to make a difference to their school and local community. Having some staff volunteer to help some of the logistics of these groups, especially in Primary, is also key to its success.

Institutional Practices • Our school has engaged in numerous local partnerships with different environmental NGOs, such as: Encompass HK which have helped students to organise CIS community ecotours; Redress, a textile and fashion NGO; Ecodrive, to help community recycling efforts; Plastic Free Seas to engage students in responsible disposal and consumer choices; and St Barnabas Shelter and Home where students donate crops they have grown on our school farm.

The **CIS farm** is run by the school with help from our parent community. However, this year, our Urban Farming strand of DITO has taken the reins. When we have in-person campus learning, these students meet at the garden once a week to plant crops, harvest, weed and

water. We have engaged local farmers for their expertise working with the students regarding which crops are best to plant depending on the season. We are also lucky to have community and parent volunteers, which is greatly appreciated when the school campus is closed to students.

The farm has benefits for the whole school community. Parent representatives hold monthly family workshops. Primary students grow plants in the garden, create artwork and make science observations of plants and wildlife. Some of our older primary students were recently given a 'Live from the farm' virtual tour by some of the secondary 'urban farming' students. Outdoor education has many benefits, especially for students who live in a very urban environment like Hong Kong.

Pedagogy and Learning • Project Based Learning (PBL) is new in the Secondary School but in the school's new strategic plan it will be expanded, not only throughout Secondary but also starting from the earliest years. The primary school is currently embarking on its own journey of staff training and creating pilot PBL projects. These PBL projects will dovetail with our focus on developing education for sustainability. This emphasis is something that the school is looking to develop with staff training and dedicated time for implementation.

Experiential Learning • The following examples represent multi-day experiences that students undertake, many of which are often deeply transformative. Some have a sustainability focus: China Experience Week, Project Weeks e.g. Mindful Adventure (students spent the week on Lantau island engaging in Yoga, Meditation, and daily hiking and water-based activities), Hong Kong Experience Week, Experiential learning in Primary through the Integrated Studies side of the curriculum.

Opportunities • As detailed above, the culture at CIS is very much focused on problem-solving. Addressing some of these challenges has created opportunities to become a more sustainable school and drive change in the right direction.

- For example, the challenge of heavy traffic-on the roads near the school has led us to implement mandatory bussing for students.
- With the approach of the school's 50-year anniversary in 2033, the leadership team and board of governors established 'Vision '33'. This was an opportunity to reset our focus and priorities, putting sustainability at the forefront as one of the school's key priorities moving forwards.
- The Sustainability Council is currently working on auditing the primary and secondary curriculum and this will lead to partnering with Education for Sustainability experts and Project-Based-Learning experts, to embed

- a whole-school approach to sustainability education
- The challenge of pandemic travel restrictions means that further work can be undertaken by secondary students through a carbon literacy course.
 - The current renovations to the school building are an opportunity to emphasize sustainability by installing BIPV and green walls.
 - Working with the other schools in our neighbourhood is an opportunity to further sustainability initiatives and engender inter-school collaboration. This permeates through the whole community, not just faculty and leadership.
 - Primary and Secondary school sustainability curriculum mission statements are being developed internally and will be rolled out in the latter half of 2022.

Threats • During the pandemic in Hong Kong, school has been conducted in person, online, or via a hybrid approach for over two years. Since January 2020, this changing platform has illustrated that we need a very flexible schedule that can be managed both online and in person. This can be a challenge for some sustainability practises; for example, ensuring maintenance of the school farm when students and staff are not allowed onto campus. However, CIS has tried to mitigate the impact of these by getting advice from local farmers; before the complete recent shutdown of school in January 2022, food was harvested by a socially distanced group of teachers and then donated. Longer growing and lower maintenance crops have recently been planted, in the hope that they will mature by the time the students can come back onto campus.

Stronger together - a community of practise for sustainable schools • Chinese International School is also one of the founding members of [The Alliance for Sustainable Schools](#)¹⁰⁸ (TASS). The Alliance is a non-profit network of schools working together to help accelerate the transition to a sustainable future through their shared commitment to the principles of the Sustainable Schools Charter.

As a community of practise, The Alliance connects, aligns and amplifies the efforts and know-how of sustainability practitioners - including students - in schools around the region.

The Alliance leverages its collective influence and partners with innovators to catalyse systems change in four key areas: sustainable school food, sustainable school uniforms, sustainable school buses and sustainable school buildings. These issues can be addressed more effectively by schools working together rather than individually.

The Alliance is also beginning to lobby organisations like the [International Baccalaureate](#)¹⁰⁹ (IBO) and other

school accreditation and certification bodies (such as the Council of International Schools) to consider introducing sustainability as an accreditation requirement, as well as examination and curriculum bodies (IBO, Cambridge) to incorporate education for sustainability and sustainability literacy in their standards and curricula.

Strengths/prospects

- Strong leadership and vision
- Sustainability coordinators
- Ability to invest in sustainable solutions
- Seek External expertise where needed e.g. the Sustainability Audit (partnering with experts in relevant Sustainable Development fields – consultants, but in other countries this could also be universities)
- The challenges get turned into opportunities!

Challenges

- Logistics – making the interconnections, both with curriculum and extra curricula but also between the primary and secondary schools
- The IB subject choices provide fewer sustainability-related learning connections than the school would wish but it is considering an IB course focussed on environmental science and systems
- Pandemic – delays in projects, audits and increased online learning led to difficulties, for example, running the school farm - but solutions were found!
- Harnessing and developing the sustainability expertise of school staff
- Complexities of mobilising a highly pluricultural community with different languages and perspectives all of which has now been thoughtfully addressed through the schools new guiding statements and strategic plan, thus prioritising sustainability through whole-school value and commitments
- Financial challenges. Decarbonisation is a costly exercise. CIS is a well-resourced school, however funding still a constraint for large scale projects

Metanoia's Insights on Chinese International School's (CIS) Whole School Sustainability Journey

From Anthony Dixon, founder of Metanoia: We began working with CIS in August 2019 with our student-centred whole school sustainability audit. The audit is a year-long review of every aspect of the school's operations and daily life through a sustainability lens, one outcome of which is a 300-page final audit report with 100+ recommendations. We have been re-engaged each year since then to provide support in implementing the audit recommendations, and in institutional capacity-building around sustainability. Among other things, we sit on the schools' Sustainability Council which meets 5x per year, and we participate in all of the Council's working groups which meet an additional 4-5 times per year. We also meet once every two weeks with the school's sustainability coordinators, once every two weeks with the student environmental leaders, and quarterly with the Head of School.

Prior to the audit, CIS had been active in sustainability for at least a decade and had an active student environmental group. Since the conclusion of the audit, the school has established a broadly participative Sustainability Council (co-chaired by the Head of School and a student), researched and developed several sustainability policies, created a designated staff sustainability coordinator role, installed solar energy on campus, reviewed its mission statement with sustainability in mind, embarked on a coordinated approach to the integration of sustainability in the curriculum, conducted an in-depth review of the sustainability of its school uniform, held regular stakeholder dialogues about sustainability in the life of the school, and committed to becoming zero carbon and zero waste – goals that would have been unimaginable three years ago. Sustainability at CIS is no longer principally the preserve of a few committed students, teachers and parents; the breadth of engagement is exponentially greater and the level of student engagement, in particular, is exceptional. Sustainability permeates many more aspects of the school's life and decision-making. The Head of School initially sought the Whole School Sustainability Audit as a lever for whole-school sustainability reform and commitment and he regularly attests that, thanks to the partnership with Metanoia, that is exactly the role the audit has played and continues to play. To this we would add that the ensuing transformation would not have been successful without the visible commitment to, and active leadership of the process from him and his leadership team.

Among the key factors that have contributed to this transformation in our view are:

- 1. Top-down and bottom-up approach.** High levels of student engagement as well as the visible commitment and active participation of the school leadership – both necessary conditions for a whole school approach to take root and flourish.
- 2. Designated sustainability coordinator role.** A designated sustainability coordinator (whether voluntary or paid, part time or full time) provides an essential focal point for coordination of the school's sustainability initiatives, helping to build and make use of institutional knowledge, and ensuring continuity when staff and students inevitably move on.
- 3. Partnership model with external technical experts.** School communities contain a wealth of expertise in everything from facilities management to ICT, procurement, project management and pedagogical principles, as well as the gamut of academic disciplines. But this in-house expertise is rarely harnessed effectively in the service of making the school community more sustainable. Even when there is a full-time sustainability professional on staff, because sustainability is such a broad inter-disciplinary subject, it is likely there will be still be gaps in expertise. These are strong grounds for engaging external advisors like metanoia who bring multi- and trans-disciplinary sustainability expertise, experience of working in school communities, and experience in leveraging the engagement to provide authentic learning opportunities. Whereas schools typically seek external expertise on an as-needed, transactional basis; in the case of sustainability, a long-term partnership like the one we have with CIS has proven to be a far more fruitful approach.

Some generalised challenges and areas for further work:

- 1. Integration of the whole school approach (WSA) and the curriculum.** In our experience most schools are a long way from making the most of the rich learning potential of the whole-school approach to sustainability. The already-full curriculum is an oft-cited but too-easy target of blame, but what is really called for is the ability to

reframe the core curriculum through the lens of sustainability rather than finding ways to squeeze in additional content. We recommend the work of the Cloud Institute in this area.

2. **Envisioning the future sustainable school.** Yogi Berra's koan-like observation :“If you don't know where you're going you'll end up some place else” reminds us of the importance of engaging our imaginative capacities in the transition to a sustainable future. We find most students and staff struggle to imagine a sustainable future version of their school. Herein lies great potential.
3. **The role of school culture.** School culture is undoubtedly a key determinant of the success of the whole-school approach and not all cultures are fertile grounds for it. It would be interesting to investigate what characteristics of school cultures are most conducive to it
4. **Communication and tracking progress.** Communicating the school's sustainability journey is an under-valued element of a successful whole school approach. Few schools communicate their sustainability story well .Even those who are committed to sustainability and have implemented thoughtful programs, often fail to document how far they've come or establish and targets for future progress.
5. **Economic cost.** Measures associated with a whole-school approach to sustainability range from no-cost to high- cost.. While not all schools have the means to implement capital improvements in the name of reducing their carbon footprint, all schools should try to find ways to allocate more meaningful budgets for sustainability measures.

