

Strategies for managing sustainable cities from an environmental education perspective

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SDG11 - Sustainable Cities and Communities

The focus of this SDG is making “cities and human settlements inclusive, safe, resilient and sustainable.”

Q. What can EE contribute to strategies for managing sustainable cities?

A. EE is implicated in all the targets for <https://sdgs.un.org/goals/goal11>

Keynote overview – 3 parts

Part 1. What might educators ask of SDG11 in determining its 'educative potential'?

Part 2. What might those in ESE have to say about ensuring quality educational approaches in SDG11 strategies?

Part 3. Which EE questions, topics, resources and examples can we draw on or develop to enrich SDG11 strategies?

SDG11 - What every citizen has a right to know

11.1 - What is adequate, safe and affordable housing?

11.2 - Who determines if transport systems are sustainable and inclusive?

11.3 - What is possible as a direct participation structure in civil society for urban planning and management?

11.4 - Who can/must/does protect and safeguard heritage?

SDG11 - What every citizen has a right to know

11.5 - Is our disaster education adequate?

11.6 - Who understands the environmental impact of cities, waste, air quality, etc?

11.7 - How green, safe, inclusive and accessible are the city's public spaces?

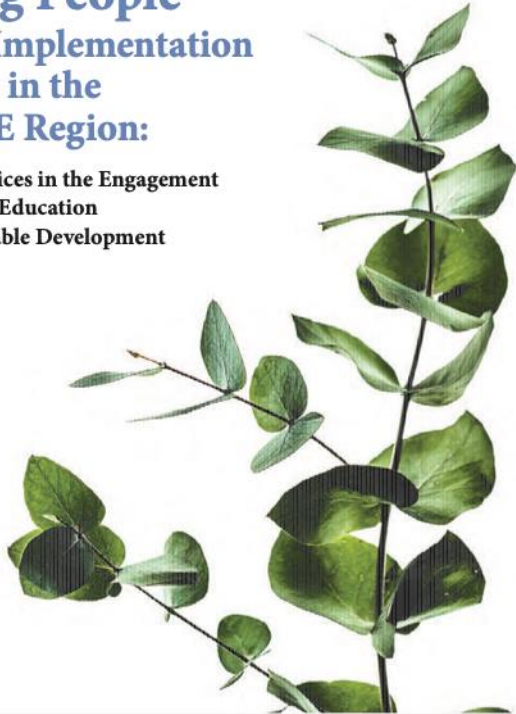
11.a - Who creates city policies and plans?

11.b - How integrated are plans locally?

11.c - Who assists who to build resilience?

Engaging Young People in the Implementation of ESD in the UNECE Region:

Good Practices in the Engagement of Youth in Education for Sustainable Development



ESD perspective - I

A Sense of Urgency: The Case for Emphasizing Non-Formal ESD, Serafin Groebner, pp.1-6 (Figure 1.1, p.3)

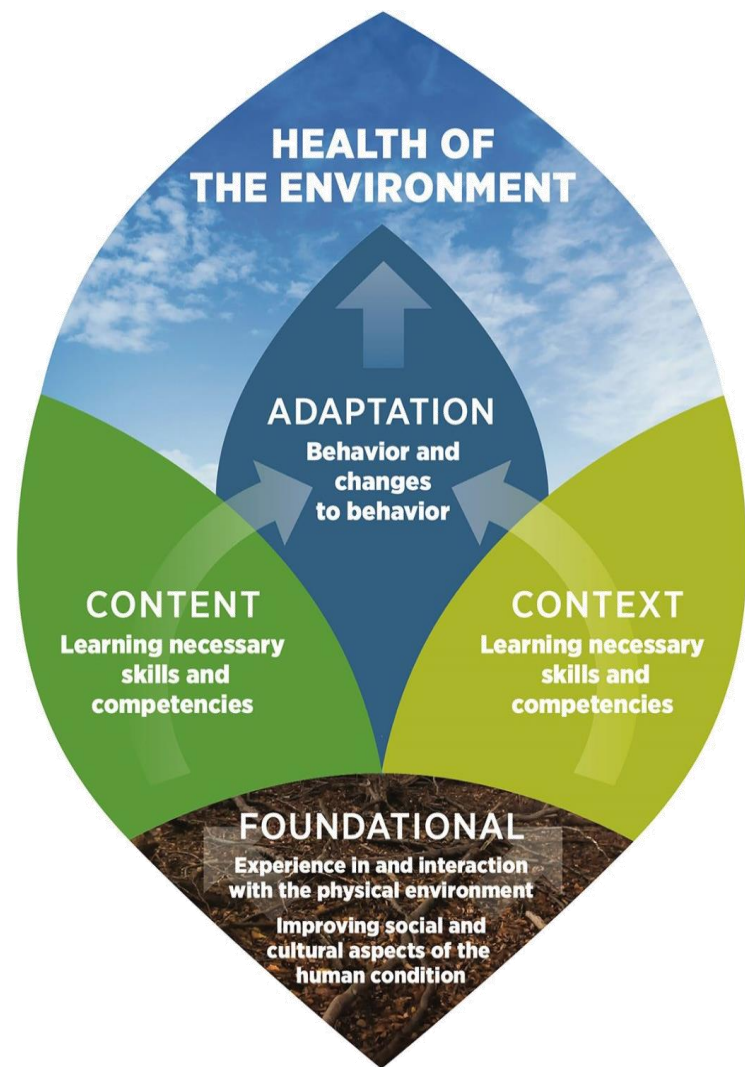
UNECE. 2022. *Engaging Young People in the Implementation of ESD in the UNECE Region: Good Practices in the Engagement of Youth in Education for Sustainable Development*.

[https://unece.org/sites/default/files/2022-09/2213555 E Engaging young people publication for web.pdf](https://unece.org/sites/default/files/2022-09/2213555_E_Engaging_young_people_publication_for_web.pdf)

EE perspectives

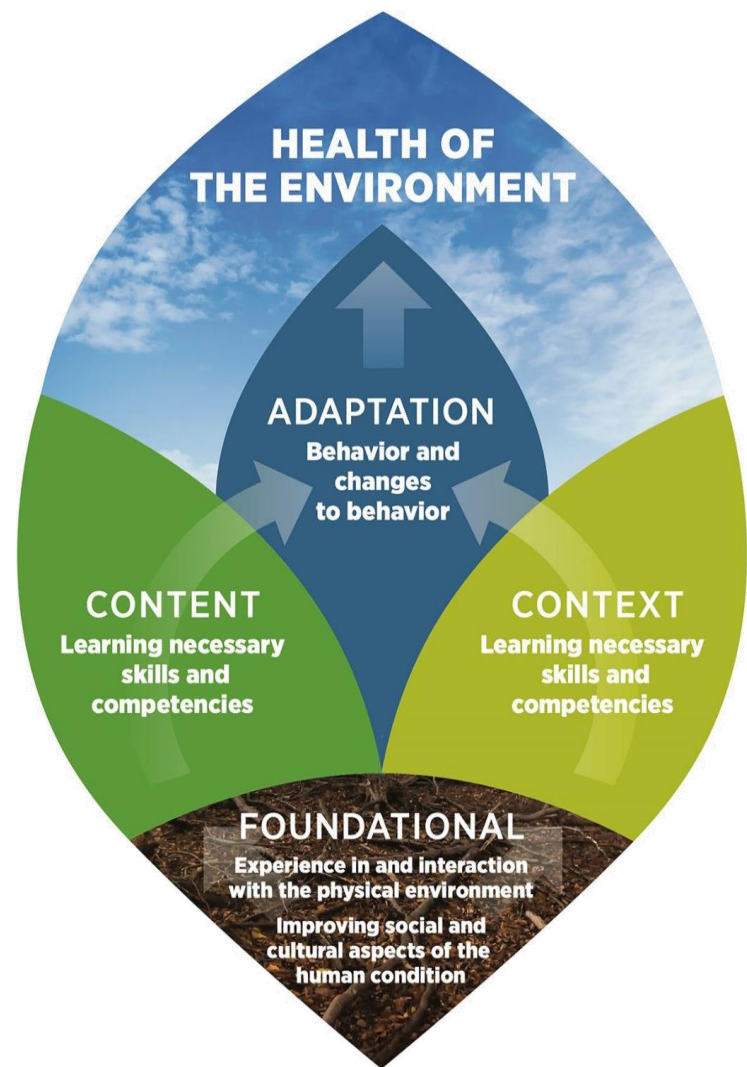
Environmental education is widely seen as a cornerstone of social change in solving environmental problems and ensuring the health of the environment. (p.381)

Clark, C. R., J. E. Heimlich, N. M. Ardoin, and J. Braus. 2020. Using a Delphi Study to Clarify the Landscape and Core Outcomes in Environmental Education. *Environmental Education Research* 26 (3): 381–399. doi:10.1080/13504622.2020.1727859.



5 EE core outcomes

- (1) environmentally related action and behavior change
- (2) connecting people to nature **Sense of (urban) place?**
- (3) improving environmental outcomes
- (4) improving social/cultural outcomes, and
- (5) learning environmentally relevant skills and competencies.



EE core outcomes

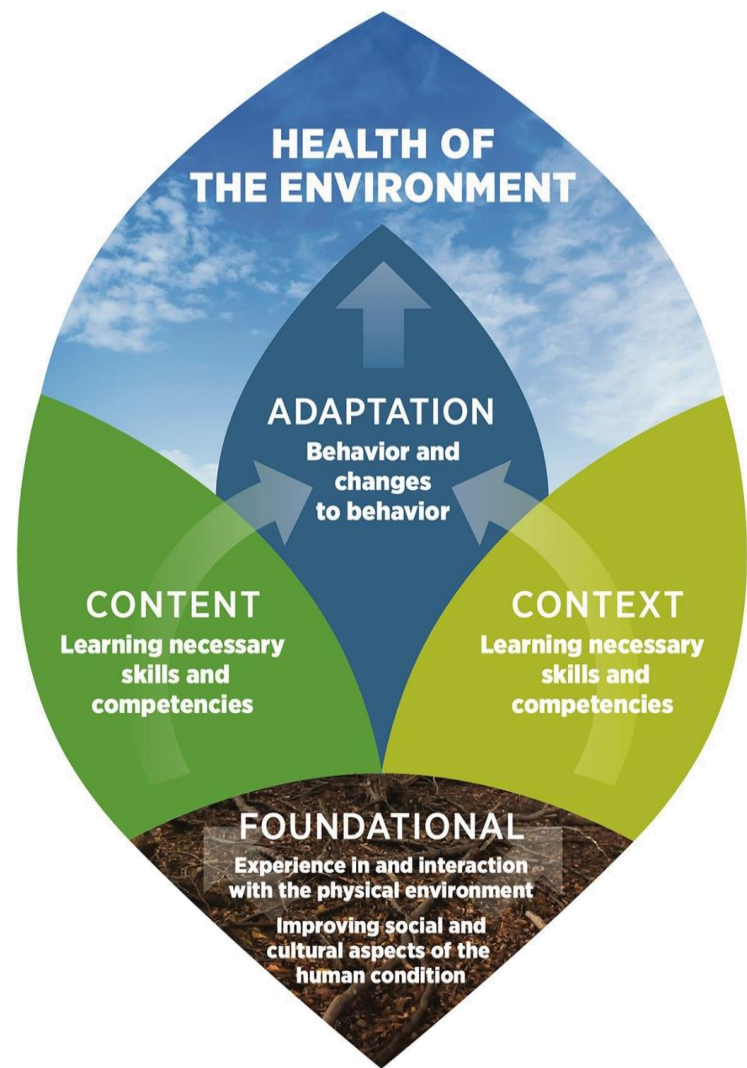
Reflecting those commonalities, we propose the following encapsulating statement to describe the field's core outcomes:

Environmental education works to move people to action for the tangible benefit of the environment and humanity. To realize these benefits, people must connect experientially with the environment, learn needed skills, and understand the complicated social and cultural connections between humanity and the natural environment.
(p.381)

! Urban
too
!



[http://
bit.do
/ardoin](http://bit.do/ardoin)





ESD perspective - II

Berlin Declaration (UNESCO, 2021, paragraph 3) supports this position in stating:

We are confident that education is a powerful enabler of positive change of mindsets and worldviews and that it can support the integration of all dimensions of sustainable development, of economy, society and the environment, ensuring that development trajectories are not exclusively orientated towards economic growth to the detriment of the planet, but towards the well-being of all within planetary boundaries.

UNESCO. 2021. *Learn for Our Planet. Act for Responsibility. Berlin Declaration on Education for Sustainable Development.*

<https://en.unesco.org/sites/default/files/esdfor2030-berlin-declaration-en.pdf>

Formal education as a frame of reference?

The cover of the report features the logos of the United Nations Educational, Scientific and Cultural Organization (UNESCO) and the Sustainable Development Goals (SDG) at the top left. The title 'Education for Sustainable Development Goals' is displayed in a blue bar, with 'Learning Objectives' in a red bar below it. A central graphic shows a globe surrounded by the 17 SDG icons. The 'Education 2030' logo is at the bottom right.

1.2.11

communities

that are *inclusive*,

learning, anticipatory, strategic,
developed over time through

5.

but have to be developed by the
actors required during action, on the basis of

This is a smaller version of the report cover shown on the left, featuring the same logos, title, and central SDG globe graphic.

Education for SDGs

Ensuring the following are addressed:

- the *needs of the learner group* (e.g. based on age, prior knowledge, interests, abilities);
- the *context in which the learning takes place* (e.g. space in or beyond the curriculum, pedagogical climate, cultural traditions); and
- the *resources and support available* (e.g. educator competencies, teaching/learning materials, technology, money).

For SDG11, this means the 'offering' is learner-centred, action-oriented and transformative *whoever they may be*, and in this case, seeks to maximise the livability of urban environments.

Unesco. 2017. *Education for Sustainable Development Goals: learning objectives*. Unesco.

<https://unesdoc.unesco.org/ark:/48223/pf0000247444>

Key methods for 'learning for the SDGs' (Box 2.4.4, 55)

Education for SDGs

- *Collaborative real-world projects*, such as service-learning projects and campaigns for different SDGs
- *Vision-building exercises* such as future workshops, scenario analyses, utopian/dystopian story-telling, science-fiction thinking, and forecasting and backcasting
- *Analyses of complex systems* through community-based research projects, case studies, stakeholder analysis, actors' analysis, modelling, systems games, etc.
- *Critical and reflective thinking* through fish-bowl discussions, reflective journals, etc.

Unesco. 2017. *Education for Sustainable Development Goals: learning objectives*. Unesco.

<https://unesdoc.unesco.org/ark:/48223/pf0000247444>

? geography, history, civics and citizenship ?

Cognitive learning objectives

1. The learner understands basic physical, social and psychological human needs and is able to identify how these needs are currently addressed in their own physical urban, peri-urban and rural settlements.
2. The learner is able to evaluate and compare the sustainability of their and other settlements' systems in meeting their needs particularly in the areas of food, energy, transport, water, safety, waste treatment, inclusion and accessibility, education, integration of green spaces and disaster risk reduction.
3. The learner understands the historical reasons for settlement patterns and while respecting cultural heritage, understands the need to find compromises to develop improved sustainable systems.
4. The learner knows the basic principles of sustainable planning and building, and can identify opportunities for making their own area more sustainable and inclusive.
5. The learner understands the role of local decision-makers and participatory governance and the importance of representing a sustainable voice in planning and policy for their area.

?... civic action competences, service learning, community / citizen science ?

Socio-emotional learning objectives

1. The learner is able to use their voice, to identify and use entry points for the public in the local planning systems, to call for the investment in sustainable infrastructure, buildings and parks in their area and to debate the merits of long-term planning.
2. The learner is able to connect with and help community groups locally and online in developing a sustainable future vision of their community.
3. The learner is able to reflect on their region in the development of their own identity, understanding the roles that the natural, social and technical environments have had in building their identity and culture.
4. The learner is able to contextualize their needs within the needs of the greater surrounding ecosystems, both locally and globally, for more sustainable human settlements.
5. The learner is able to feel responsible for the environmental and social impacts of their own individual lifestyle.

?... lifeworld, livelihood, lifestyle ?

Behavioural learning objectives

1. The learner is able to plan, implement and evaluate community-based sustainability projects.
2. The learner is able to participate in and influence decision processes about their community.
3. The learner is able to speak against/for and to organize their voice against/for decisions made for their community.
4. The learner is able to co-create an inclusive, safe, resilient and sustainable community.
5. The learner is able to promote low carbon approaches at the local level.

Examples of learning approaches and methods

Box 1.2.11b. Examples of learning approaches and methods for SDG 11 “Sustainable Cities and Communities”

Excursions to ecovillages and other “living laboratories”, to waste water treatment plants and other service centres to show current and best practice

Develop and run a (youth) action project on sustainable cities and communities

Invite older generations in to talk about how the settlement has changed over time. Ask them about their connection to the bioregion. Use art, literature and history to explore the settlement area and its changes

Build a community garden

Mapping projects: map the area to note where there is good use of public open space, human scale planning, areas where the needs of the community are addressed, green spaces, etc. This can also map the areas that need to be improved, such as areas most exposed to natural hazards

Develop a two-minute video clip on an example of a sustainable urban community

Develop an enquiry-based project: “Would it be more sustainable if we all lived in cities?”

Suggested topics (cf. SDG 11 Targets)

Box 1.2.11a. Suggested topics for SDG 11 “Sustainable Cities and Communities”

The need for shelter, safety and inclusiveness (human needs, contextualizing our different individual and collective wants and needs according to gender, age, income and ability)

Management and use of natural resources (renewables and non-renewables)

Sustainable energy (residential energy use, renewable energies, community energy schemes) and transportation

Sustainable food (agriculture, organic agriculture and permaculture, community supported agriculture, foodshed⁸, food processing, dietary choices and habits, waste generation)

Urban ecology and how wildlife is adapting to humanity’s settlements

Sustainable resilient buildings and spatial planning (building materials, energy saving, planning processes)

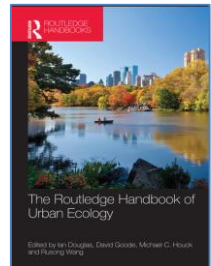
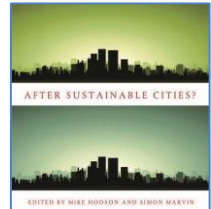
Waste generation and management (prevention, reduction, recycling, reuse)

Communities and their dynamics (decision-making, governance, planning, conflict resolution, alternative communities, healthy communities, inclusive communities, ecovillages, transition towns)

Water cycle and restoring ground water through urban design (Green Roofs, rainwater harvesting, daylighting old river beds, sustainable urban drainage)

Disaster preparedness and resilience, resilience to weather problems and in the future and a culture of prevention and preparedness

11.1 self-sufficient communities in cities



The nature of infrastructure?

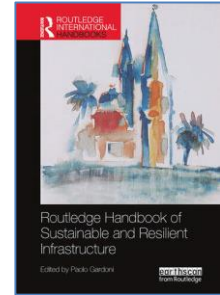
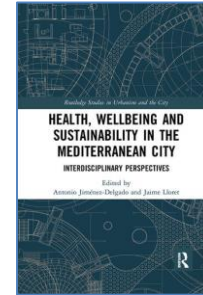
Place-based pedagogical opportunities

Is our environmental management strategy discourse focused on biodiversity, intergenerational equity, social justice, and/or global responsibility?

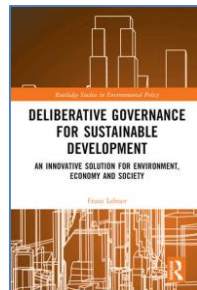
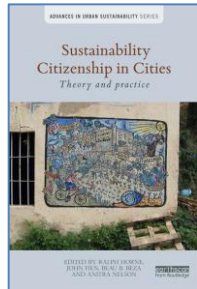
e.g. green growth, smart growth, resilience, vulnerability, ecological security, disaster resilience, complexity, urban nature, 'wild cities' ...

e.g. green new deals, low-carbon infrastructure, enclaves, peri-urban/metroscapes

e.g. pandemics, ecosystems services, transition analysis?



11.3 urban sustainability citizenship



The co-design of social/urban learning?

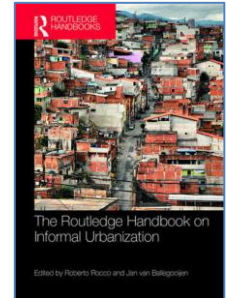
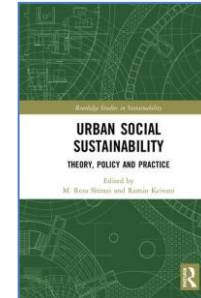
Local citizenship opportunities

Can environmental management strategy engage urban food security, green housing, co-working communities, social innovation, and 'learning cities'?

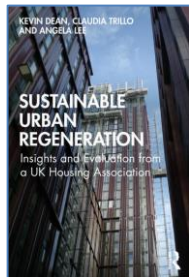
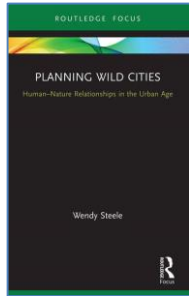
e.g. collaborative and disruptive social learning, autonomy and law ...

e.g. deliberative democracy and governance about livability and resilience

e.g. conflict resolution on benefits, costs and risks of sustainable development?



11.4 heritage - urban and nature



How deep are city places?

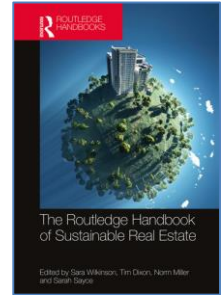
Stewardship/stakeholder opportunities

*Does our environmental management strategy engage **eco-ethical imagination, planetary limits, human and more-than-human worlds, and backcasting?***

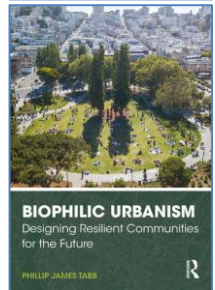
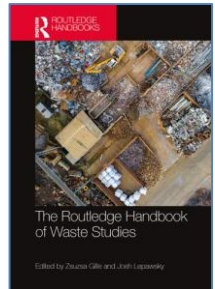
e.g. what does it mean to be 'Homo Urbanis' here - to who, when and why?

e.g. what are ROI parameters in urban regeneration?

e.g. are 'Social Return on Investment' and 'Sustainable Return on Environment' the same for 'the **vulnerable**' in a city, and 'the **leaders**' and '**stewards**' of a city?



11.6 cities and waste



What waste flows in environmental management?

Circular economy opportunities

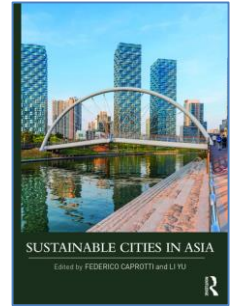
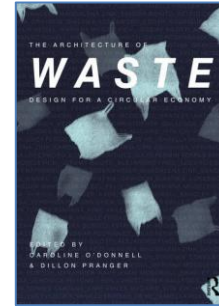
Where and when does (air, liquid, solid)

waste/pollutants/etc emerge and how does it go?

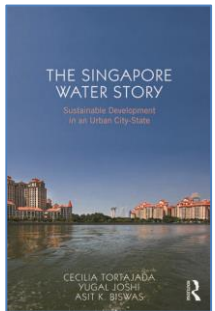
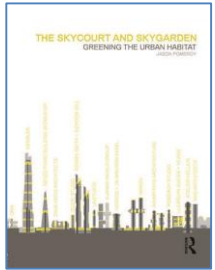
e.g. who is impacted most by wastes and their (in)formal governance?

e.g. is waste in this city primarily treated as a 'labour, livelihood, landfill' cluster?

e.g. are Social Return on Investment and Sustainable Return on Environment the same for 'the vulnerable' in a city, and 'the stewards' of a city (cf. Taipei model)?



11.7 green social spaces

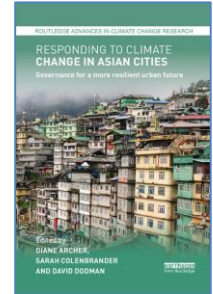


The advent of skycourts and skygardens?

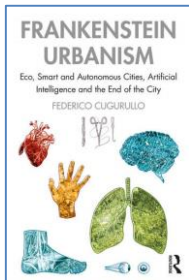
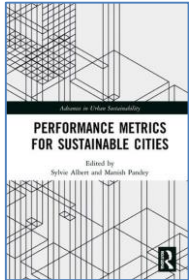
Citizen science opportunities

Does environmental management consider urban habitats as ones to preserve, create or interrogate?

e.g. hybrid public domains and communal spaces, or privatised? - the Shard (London), Marina Bay Sands (Singapore), the Shanghai Tower (China) and the Lotte Tower (South Korea), urban farming (Melbourne CBD)
e.g. open spaces, civility, semi-public realms, verticality
e.g. biodiversity enhancer, psycho- and physiological wellbeing, intergenerational presents and pasts?



11.b compassionate cities



Who assesses city livability?

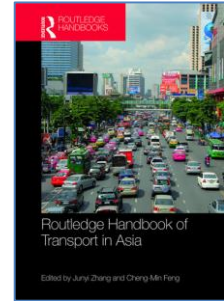
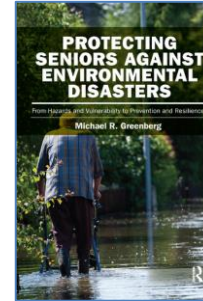
Awareness and visualisation opportunities

Is environmental management making use of multiple intelligences – Indigenous, Collective, Artificial, more-than-human (biological)?

e.g. Masdar City, Hong Kong, Tianjin Eco-City, Toyko-Yokohama, Lima, Seattle, Helsinki, ... Songdo?

e.g. circular business models in Seoul, Suzhou, Shanghai ... (political economies of investment, e.g. HSRs)

e.g. values, pathways, levers, dynamics, 'common good', biophilic urbanism, narratives, media and social media?



Habitat III New Urban Agenda

Are participatory, promote civic engagement, engender a sense of belonging and ownership among all their inhabitants, prioritize safe, inclusive, accessible, green and quality public spaces that are friendly for families, enhance social and intergenerational interactions, cultural expressions and political participation, as appropriate, and foster social cohesion, inclusion and safety in peaceful and pluralistic societies, where the needs of all inhabitants are met, recognizing the specific needs of those in vulnerable situations.

United Nations. 2017. *Habitat-III, The New Urban Agenda*.
<http://habitat3.org/the-new-urban-agenda>

Education for SDGs

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