



Construction Value Chain Consultations

Consultative workshop on sustainable construction value chain - Follow the investments: How financing shapes the Construction value chain

8th July 2021

WORKSHOP REPORT

Attendees:

Full list of attendees is available in the end of the report.

Workshop objectives:

- Introduce the value-chain approach, as developed by the UNEA requested [Task Group](#) on *Catalysing science-based policy action on Sustainable Consumption and Production*.
 - Share the key findings on the construction sector analysis.
- Understand the role of financing in the construction value chain and the influence it has on various stages of the value chain.
- Understand what financing initiatives/solutions currently exist that address sustainability along the construction value chain to:
 - define the opportunities for their scale-up and replication;
 - identify gaps and challenges to be addressed;
 - identify actions needed by stakeholders at other stages of the construction value chain to support decision-makers in the promotion of initiatives that aim at reducing negative environmental impact while improving the socio-economic contributions of the construction sector.

Full presentation of the meeting is available [here](#).

MAIN MESSAGES

- The application of the 'Value-Chain Approach' to analyse the construction sector showed that the key decisions are made far from where natural resources are used. While the majority of natural resource use and environmental impacts takes place at the material production, construction and operation stages of the value chain, the most influential actors are governments, international organisations, financial institutions and major market players, who are primarily acting at the financing stage and the planning and design stage of the construction value chain. The key decisions made at these stages largely shape the activity along the rest of the value chain.
- As regulators of financial markets, the banking system, and tax systems, governments influence how much and what type of constructions are built, especially for housing, particularly at the financing stage and property market stage of the construction value chain.



- In regard to green building policies and regulations, there has been an increase of action at a national level (based on the actions initiated by the Paris agreement and recent pledges on carbon neutralities). New green policies for investments in construction offer an opportunity to improve resource efficiency of the sector.
 - Integrated ESG (Environment, Social, Governance) investing is being mainstreamed, mostly in pension funds/insurance funds, increasingly happening in bank lending, green bonds, outcome linked bonds and lending, sustainable outcomes tied into borrowing rate, etc. This change is being driven primarily by the asset owners (pensions, savings, etc.) and regulations such as disclosures regulations (TCFD, TNFD etc.) that are obliging organizations to measure and report their impact which causes other actors in the value chain to decide who they want to support and work with. This means there is an increased search for positive sustainability-related impacts.
 - When evaluating an investment opportunity for a construction project, it is important to consider long-term planning and to establish robust environmental and social system framework to implement sustainability from the early stages and throughout the entire construction value chain. Such holistic approach should consist of looking at climate resilience and the environmental impact, the quality of life of the inhabitants, new technologies and design concepts, and establish circular economy and cradle to cradle concepts so that at the end of the life of a building a new life from the components, modularity and building materials can start again.
 - Taxation can be an important instrument for improving the resource efficiency of the construction sector. Possible interventions are primary resource taxes, preferential tax rates for companies' resource management, return-benefits for reused and recycled materials, lower value added tax on retrofit, repair and recycling activities and materials, or introduction of an environmental tax reform aiming to increase the taxes of activities that are harmful to the environment, and then using revenues for activities that improve environmental and socio-economic impacts.
 - It is important to de-risk construction projects in the financial structures. Blending public funds with private, policy levers, creating scale and diversification can all reduce the risk profile of a project enabling capital flow.
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SETTING THE SCENE

- Strengthening the science-policy interface by adopting the value-chain approach is one of the key elements in strengthening multilateral cooperation on Sustainable Consumption and Production (SCP).
- As part of this process, the One Planet network has planned a series of multi-stakeholder consultations to take place in 2021, focused on the high-impact sectors of food, construction and plastics.
- These consultations build on the findings of [the One Planet-International Resources Panel Task Group](#) on catalysing science-policy action on SCP, presented in this [report](#) "Catalysing Science-Based Policy Action on Sustainable Consumption and Production: The Value-Chain Approach and its Application to Food, Construction and Textiles".
- This consultations series is focusing on the construction sector and dedicated to "Innovative business and policy solutions" along the construction value chain. It consists of 3 workshops



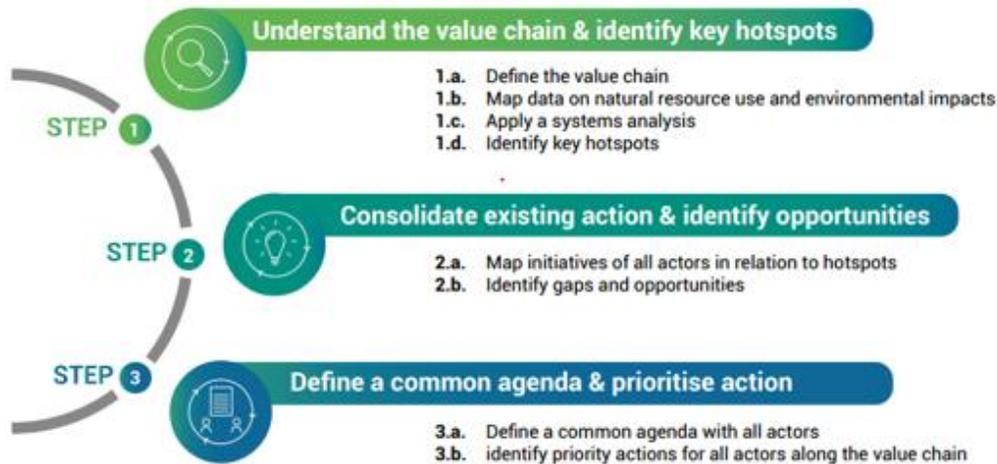
focusing on how public procurement, financing, and planning & design influence the construction value chain.

- The outcome document of these workshops developed jointly with the participants will be the basis for the collaborative development of clear priorities for moving the construction sector towards SCP patterns.
- This was the second workshop of the series dedicated to how financing shapes the construction value chain. Full information on the construction value chain consultations can be found [here](#).
- The work on the value chain approach in high-impact sectors will inform further discussions on a post-2022 strategy on SCP¹ led by the UN Member States.

VALUE-CHAIN APPROACH AND ITS APPLICATION TO THE CONSTRUCTION SECTOR

- The One Planet-International Resources Panel Task Group on catalysing science-policy action on SCP has been established at [the request the Member States at the 4th United Nations Environment Assembly](#).
- The [Task Group](#) aimed to catalyse science-based policy action on SCP, thereby providing actionable insights on the management of natural resources in relation to the 2030 Agenda for Sustainable Development. To achieve this, the task group took a sectoral focus and applied the 'Value-Chain Approach'.
- The '[Value-Chain Approach](#)', as developed by the Task Group, is a methodology for catalysing science-based policy action on SCP which identifies key points of intervention within economic systems to reduce natural-resource use and environmental impacts through a common agenda for action.
- By applying a systems lens, the socio-economic drivers and barriers that influence value chain operations of different sectors are identified, taking into account the complex feedback loops influencing the operations and behaviours of actors along the value chain. This approach shows that the key points of intervention are often not the same as where natural resource use and environmental impacts take place, making systems analysis essential.
- The 'Value-Chain Approach' identifies where the greatest opportunities for a shift to sustainable consumption and production exist, shapes corresponding actions by building on current knowledge and available data and engages the relevant actors.
- The Approach consists of three main steps:

¹ The 10-Year Framework of Programmes on SCP (10YFP) was adopted at Rio+20 for the period 2012-2022. The 10YFP is included in Agenda 2030 under SDG targets 12.1 and 8.4. The One Planet network has formed to implement the 10YFP. The Network supports the global shift to SCP and the achievement of SDG 12. The reflection on the 10YFP post-2022 was initiated by the 10YFP Board in 2020 with other lead countries of the One Planet network as a collective effort to build a post-2022 vision for multilateral cooperation on SCP. These reflections will build on the experience of the 10YFP and its One Planet network from 2012.



- The Task Group has applied various steps of the ‘Value-Chain Approach’ to three high-impact sectors: food, construction and textiles.
- When it comes to the sector of construction, application of Step 1 has demonstrated that²: *“the majority of natural resource use and environmental impacts takes place at the material production stage, the construction stage and the operation stage of the value chain. However, there is limited scope at these stages to make the needed changes for several reasons, including the informality, fragmentation, complexity and availability of options. The most influential actors along the construction value chain are governments, international organisations, financial institutions and major market players, who are primarily acting at the financing stage and the planning and design stage of the construction value chain. The key decisions made at these stages largely shape the activity along the rest of the value chain. Construction is integral to achieving the SDGs, but direction is needed to ensure actual balance between sustainable development and the transition of the sector to resource efficiency, circularity and a smaller environmental footprint. Analysis shows that governments exert significant influence along construction value chain as 1) regulators of financial markets, 2) investors in the construction sector, and 3) urban and territorial planners, and regulators of the construction sector. Governments have a strong opportunity to ensure sustainability of the construction sector through these three key levers.”.*
- The analysis of the construction value chain identified three core challenges:
 - 1) What types of construction is built and used, and where: different types of construction built in different locations and regions contribute in different ways to meeting needs of societies and achieving the Sustainable Development Goals, and can cause different pressures on the use of resources and environmental impacts.
 - 2) How much is being built: the construction market is growing worldwide, which causes pressures on resources and environmental impacts. However, construction does not necessarily follow demand. For example, empty buildings and property speculation is

² Full analysis available [here](#)



- registered in many developed countries, while there is a construction gap in developing countries.
- 3) How they are built: the impacts of construction are associated with: type and amount of construction materials used, consumption of resources in the operation of buildings, and construction and demolition processes. Changing design, construction and use practices is fundamental to use resources more efficiently and reducing environmental impacts.
- More specifically, in relation to financing, application of a systems lens highlighted how financial flows shape the construction value chain:
 - The construction sector is one of the largest and most important economic sectors in the global economy. About US\$ 10 trillion is spent on construction-related goods and services every year³. The construction sector also accounts for around 10% of jobs and 10% of GDP in many countries⁴. This contribution to GDP and employment makes construction a strategic and important sector for many national economies. Particularly during times of economic crisis or downturn, the construction sector is often a focus for governments when planning economic recoveries. This is due to the ‘multiplier effect’ that construction spending can have, increasing activity and incomes that flow on throughout other parts of the economy.
 - Government stimulus to the construction sector can be an opportunity to direct construction activity towards achieving the 2030 Agenda in countries⁵. However, stimulus packages and programmes can sometimes prioritise short-term economic metrics over meeting the longer-term socio-economic needs of countries. For example, it may not include social or environmental criteria to ensure that the housing is affordable, that it is built in the locations where the need is greatest, and that it is built in a way that is resource efficient with as few environmental impacts as possible. This can result in harmful socio-economic consequences such as greater levels of housing unaffordability, increased inequality, and property price inflation which can be associated with economic instability.
 - One of the major influences on the construction sector is financialisation, which sees property, especially housing, as an investment asset rather than an essential service and a human right. Property market speculation sees financial capital invested in housing with a view of making a short-term profit from increasing house prices, or as a safe way to store capital, especially in more stable or higher growth markets abroad. According to the UN Special Rapporteur on the Right to Adequate Housing “through legislative measures, policies and programmes, many States have treated housing as a commodity for trading and speculation, rather than as a social good and a human right” while “international financial institutions and development banks have (...) imposed deregulation, the liberalisation of housing markets and austerity measures, including the selling of social housing, and required mortgage finance programmes that do not assist the lowest-income

³ McKinsey Global Institute, 2017. [Reinventing construction: a route to higher productivity](#). Executive Summary.

⁴ IRP, 2017b. [Resource Efficiency: Potential and Economic Implications](#). A report of the International Resource Panel. Ekins, P., Hughes, N., et al. United Nations Environment Programme. Nairobi, Kenya.

⁵ IISD, 2020. [Guest article: ‘COVID-19 Stimulus Spending for Green Construction Means Building Back Better’](#). International Institute for Sustainable Development, accessed 23 October 2020.



households”⁶. This finding is supported by the International Resource Panel, which states that “governance arrangements at global, national and local levels have, in most countries, tended to facilitate financial instruments and property speculation to drive short-term growth” while “more equitable new wealth creation via innovation and skills development in the manufacturing and agricultural sectors became less important than returns from financialisation and urban property development”⁷.

FOLLOW THE INVESTMENTS: HOW FINANCING SHAPES THE CONSTRUCTION VALUE CHAIN

The discussions of the workshop focused on how financing influences the construction value chain. Through the discussion a number of enablers, challenges and gaps that exist at these stages were identified.

Opportunities & enablers

- In regard to green building policies and regulations, there has been an increase of action at a national level (based on the actions initiated by the Paris agreement and recent pledges on carbon neutralities). New green policies for investments in construction are an opportunity to improve resource efficiency of the sector.
- Strong initiatives that establish green bond guidelines and energy efficient mortgage initiatives that design macro financial tools to scaling private capital can also enable sustainable financing throughout the construction sector.
- Moving local authority actors away from a funding mindset into the one of investment (which can generate income) can enable prioritization of sustainability requirements in the construction.
- The value of co-benefits, such as improvement of health care and alleviating fuel poverty, is increasingly of value to the investment community. Considering the broader positive impacts of projects and finding a way of tracking them can be an enabler to sustainable construction financing.
- It is important to de-risk construction projects in the financial structures. Blending public funds with private, policy levers, creating scale and diversification can all reduce the risk profile of a project enabling capital flow.
- Integrated ESG (Environment, Social, Governance) investing is being mainstreamed, mostly in pension funds/insurance funds, increasingly happening in bank lending, green bonds, outcome linked bonds and lending, sustainable outcomes tied into borrowing rate, etc. This change is being driven primarily by the asset owners (pensions, savings, etc.) and regulations such as disclosures regulations (TCFD, TNFD etc.) that are obliging organizations to measure and report their impact which causes other actors in the value chain to decide who they want to support and work with. This means there is an increased search for positive sustainability-related impacts.
- Insurance companies can enable lower carbon constructions, such as through cheaper insurance for timber constructions.

⁶ UNHCR, 2019. ‘Guidelines for the Implementation of the Right to Adequate Housing: Report of the Special Rapporteur on adequate housing as a component of the right to an adequate standard of living, and on the right to non-discrimination in this context,’ United Nations Human Rights Council. Geneva.

⁷ IRP, 2018b. Resource efficiency for sustainable development: [key messages for the group of G20](#).



- Construction has a great opportunity to drive income streams in the form of energy savings and proving income stocks. These income streams can then be used to provide a new funding model.
- There is an opportunity to implement the polluter pays/resource user principle, where users are priced instead of the general public or future generations. It offers the highest degree of freedom for market participants for their decisions.
- “Tax what you burn, not what you earn” – an opportunity to introduce an environmental tax reform aiming to increase the taxes of activities that are harmful to the environment, and then use revenues for activities that improve environmental and socio-economic impacts.
- Possible economic instruments in the construction value chain that can be applied are, for example, primary resource taxes, preferential tax rates for companies’ resource management, return-benefits for reused and recycled materials, lower value added tax on repair and recycling activities and materials, phase-out subsidies which distort the full-cost-pricing of resources.
- Valorising local know-how, capacity building, technology transfer can lead to investment in locally sourced materials.
- There is an opportunity for the financial (investment) incentives to encourage circularity/cradle to cradle approach (and not cradle to grave) so that at the end of the life of a building a new life from the components, modularity and building materials can start again. This would reduce the carbon footprint, the materials used in the process and increase the value of the industry.
- Sustainable construction is also about better access to capital for real estate.
- Using simplified tools to obtain green mortgages is an important opportunity to attract investors.
- When evaluating an investment opportunity for a construction project, it is important to establish robust environmental and social system framework to implement sustainability from the early stages and throughout the entire construction value chain. Such holistic approach should consist of looking at climate resilience and the environmental impact, the quality of life of the inhabitants, new technologies and design concepts, and if the cost is lower compared to regular projects, establishing circular economy concepts and social inclusion when evaluating projects.
- Robust framework and engagement with all relevant stakeholders can also enable easier access to finance.
- When assessing an investment opportunity, it is important to consider various sustainability aspects such as energy efficiency, intelligence (smart building solutions), health and wellbeing, whole of life carbon (incl. embodied carbon), maintainability, and resilience of a construction.
- A long-term plan makes it easier for the financing ecosystem to come on board. However, the standards need to be maintained to continue to enjoy financial success.
- Financial incentives for building and buying sustainable social housing can be an enabler for reduced environmental impacts.
- Incentives do not always need to depend on the financial incentives or taxations. For example, floor area ratio increases, or lower permitting costs can also help governments encourage sustainable construction investments.
- Governments have an opportunity to help shape criteria of what is considered green or sustainable, which should be based on a holistic view, where impacts on climate, ecosystems and pollution reduction are considered.
- Consistent classification of green and transition activities, guidance on best practices in climate disclosure and technology solutions for easier disclosures, piloting innovative green finance



solutions and facilitation of knowledge transfer can all assist in accelerating green finance in the construction sector.

Challenges & gaps

- Construction companies may often look at construction investments from a short-term perspective, which does not allow to consider sustainability perspective. There is a need for investors to exert pressure to include long-term sustainability criteria. Long-term investors can have risk management and incorporate climate change considerations. There is an increasing trend in the global capital market not to give access to the capital without a sustainability strategy.
- Greenwashing is a big challenge in the construction sector. It can come from weak certifications or energy standards, but also, for example, from companies claiming to be green while using unsustainable materials. There is a need of strong certifications and alignment of financial ESG obligations with corporate non-financial reporting obligations.
- Regarding waste management and recycling, it is important to make the right investment decisions at the beginning of the construction planning due to the demolition/construction waste being very voluminous, to avoid increased costs at the end-of-life stage of the construction value chain.
- There is a need to focus on capacity building, specifically, financial intermediaries such as banks need to be trained to identify a pipeline and make sure they can offer sustainable technical advice and have the ability to create green mortgages.
- In some countries, lack of funding available for a new technology to be implemented in the construction sector continues to be a challenge.
- Public-private collaboration to finance innovation and new construction technologies is an important way forward. However, one of the challenges is the acceptance of new technologies due to lack of track record for the use in particular regions.
- Land is a very important resource, specifically brown fields, as we cannot build on anything else but land. Investment in land is a big issue that the financing stage of the construction value chain should address.
- It is important to reduce barriers within the construction value chain that stop mass action. Varying financial structure can change the incentives to action allowing scaled adoption.
- Retrofit can be an important solution to improve resource efficiency of the construction sector, but unless taxes or regulations do not encourage it, then the tendency is to build new.
- When talking to local authorities about de-carbonizing, there is a need to move away from the idea of technical silos, whether that is a construction itself or even silos within the construction, into systemic neighborhood investment, i.e., thinking about where people live and communities where the construction is one of the elements alongside mobility options, green infrastructure and other things contributing to a community. Construction is a piece that has the greatest opportunity to drive income streams in the form of energy savings by improving resource efficiency of a building stock. This income stream can then be used to create a radically different funding model for doing retrofit of existing buildings and/or can also be applied into newbuild.
- Corruption continues to be a barrier in sustainable construction funding in some countries.



LIST OF INITIATIVES SHARED AT THE WORKSHOP

- [EDGE](#), International Finance Corporation
- [From Linear to Circular - First Global Mapping of Circularity in the Built Environment](#), One Planet Sustainable Buildings & Construction Programme
- [Identifying a Green Taxonomy and Relevant Standards for Singapore and ASEAN](#), Green Finance Industry Taskforce
- [Infrastructure Transparency Initiative](#)
- [Scaling domestic retrofits for green deal success](#), Transformative Innovation Policy Consortium
- [Singapore Green Finance Action Plan](#)
- [The South Africa Buildings Programme](#)

LIST OF ATTENDEES

	Organisation	Expert's name
1	14Trees	Francois Perrot
2	AR CONSTRUCCIONES S.A.S - Colombia	Diego Andres Hernandez Atehortua
3	Arabtech Jardaneh	Razan Rashid
4	ARDOR Architects	Vu Linh Quang
5	Bankers without Boundries	Rufus Grantham
6	BPI RDC, Congo	Anaclet Mutombo
7	Casaideal srl	Javier Via Giglio
8	CEC - China Environmental United Certification Center	Jing Wang
9	CityScape	Ebi Bozimo
10	Climate Policy Initiative India	Dhruba Purkayastha
11	Climate Policy Initiative India	Dhruba Purkayastha
12	Climate Science and Policy Professional	Sandeep Goswami
13	Construction et Développement Durable	Amelie Essesse
14	Construction Site Associate - Nigeria	Osarogie Edo-Osagie
15	Costa Rica - Ministerio de Vivienda y Asentamientos Humanos	Christian Escobar Barquero
16	Deloitte Haskins & Sells, LLP	Amrish Shah
17	Ecosis	Rushdana Doobory
18	Ecuador - Ministerio Ambiente, Agua y Transición Ecológica	Santiago Fernando Salazar Benavides
19	Ecuador - Ministerio Ambiente, Agua y Transición Ecológica	Mayra Herrera Jaramillo
20	Edge Buildings IFC GBCSA	Kemele Moloji
21	Eds Global	Lakshmi
22	Empower Retirement	Sangeetha Arunkumar
23	Envy Restoration + Construction	Dean Young



24	FIR – Fédération Internationale du Recyclage	Geert Cuperus
25	Forum Ökologisch-Soziale Marktwirtschaft	Kai Schlegelmilch
26	GBK Architects	Boineelo Masuku
27	GHL Bank PLC	Efua Ampomah
28	Greater Accra	Maame Efua Brameah Awuni
29	Green Building Council South Africa	Jo Anderson
30	Green Buildings Council Mauritius	Joya Bhandari
31	Green East Master	Ajaye Jogoo
32	Green Edifica	Diana Paes
33	Green Fiscal Policy Network	Himanshu Sharma
34	Green Growth Knowledge Platform	Camille Andre
35	GreenSquareMetre	Shani Eribo
36	IFC - International Finance Corporation	Michelle Marie Farrell
37	IFC - International Finance Corporation	John Anagnostou
38	IFMA - Singapore	Kian Seng Ang
39	India - Ministry of Railway	Sanjay Kumar
40	Infraestructura Tecnológica y Comunicaciones en Consejo Nacional Electoral del Ecuador	Estuardo Jaramillo
41	Kazachstan - National Centre of Sustainable Production and Consumption	Zulfira Zikrina
42	Kings College London	Anthony Graham
43	LEAF S.A.C.	Analu Granda
44	Legend Holdings Ltd and LegendQ Technologies LLC	Jerry Raji
45	Mitre Realty	Caio Perri Lima
46	Newgate Technologies	Robert-Jan Nieuwpoort
47	OECD	Ana Maria Ruiz Rivadeneira
48	OIP	Ward Autumn
49	Puri Constructions Pvt. Ltd.	Devendra Singh
50	Recurso V	Ana María Esquivelzeta Rabell
51	SMEC (Africa Division)	Amani Mchugh
52	South Delhi Polytechnic for Women	Eng Hillary
53	Spectrum Valuation & Asset Solutions Pty Ltd	Valentia Roberts
54	Tamil Nadu Shelter Fund	Vidhyabharathi Balasubramaniam
55	Timber Finance Initiative	Alexander Wiese
56	Trinidad and Tobago - Ministry of Labour and Small and Micro Enterprise Development	Nadine David-Figaro
57	U.S. Green Building Council	Eliana Peralta-Sapienza
58	UNEP	Chengchen Qian
59	UNEP	Jorge Laguna Celis
60	UNEP Finance Initiative	Kai Remco Fischer



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61	Universidad de Antioquia	Sixto Anonio Palacios Quinto
62	Universitat de Lleida	Lidia Rincon
63	University of Bradford	Crina Oltean-Dumbrava
64	Venezuelan Council for Sustainable Construction	Jose Solano
65	World Green Building Council	Yvonne Soh
66	10YFP Secretariat	Emma Stewart
67	10YFP Secretariat	Andrew Schmidt
68	10YFP Secretariat	Charles Arden-Clarke
69	10YFP Secretariat	Branislav Mizenko
70	10YFP Secretariat	Yulia Rubleva
71	10YFP Secretariat	Gina Torregroza