INVESTMENTS IN SUSTAINABLE SUPPLY CHAINS PAVE THE WAY FOR FOOD SECURITY
DAYS NINE AND TEN – 16 November 2017

Opening Perspectives

Wednesday saw the opening of the high-level segment, in which COP23 President Frank Bainimarama of Fiji stressed the urgency of climate action and reported that Parties had reached agreement on accelerating implementation of pre-2020 commitments. United Nations Secretary-General António Guterres also addressed participants, noting that small island developing states such as Fiji must speak for us all and asserting that if large infrastructure projects are not green in nature, “they should not be given the green light,” which is highly relevant for transport.

Guterres’ message opened discussion on financing, in which donor nations were urged to operationalize the Green Climate Fund, which has yet to approve funding for a single project in the transport sector. A tangible commitment was made as Emmanuel Macron committed to provide funding for the IPCC to compensate for the United States’ withdrawal of support, and France will host a December summit focused on climate finance. The summit will feature the Invest4Climate platform, a joint initiative of the UN and the World Bank; the latter emphasizes freight and logistics targets in the Efficiency pillar of the Sustainable Mobility for All initiative.

The potential role of sustainable food transport systems in achieving food security was explored on Tuesday during SDG 2 Day (Climate Action for Zero Hunger), which addressed the conjunction between hunger, poverty and climate change in thematic roundtables and
demonstrated how the SDG can be addressed through adaptation, resilience and risk-reduction responses that minimise climate change.

Transport that is sustainable, accessible and fit for purpose is a critical ingredient in ensuring food security and achieving climate action. According to a World Resources Institute blog, if food loss and waste were a country, it would be the third largest carbon emitter on the planet. Thus there can be no doubt that efficient, reliable, and resilient transport across the food production chain is essential: from the field to the village to the national road; from the city to the port to the shipping container; and in the last-mile delivery to the final consumer.

Many NDCs do cover the agricultural sector: for example an analysis of the UNFCCC/EOSG shows that more than 90% of NDCs include SDG 2, and an FAO report confirms that agricultural sectors feature prominently in the NDCs. However, SLoCaT research reveals that the role of rural transport in the NDCs has been largely overlooked to date (while urban transport measures are mentioned in nearly three quarters of the plans), and that freight transport (while contributing about 40% of CO2 emissions) is mentioned in only 29% of NDCs proposing transport measures. Moreover, only 14% of Voluntary National Reviews (VNRs) submitted by countries to the 2016 and 2017 High-Level Political Forums to review SDGs include measures on rural transport and access. And international aviation and shipping emissions are not currently included within the scope of the Paris Agreement.

Thus, more work is needed to bring the role of rural and freight transport in achieving sustainable low carbon supply chains more centrally into the UNFCCC and other processes.

Transport and Mitigation

Even though international shipping is not formally part of the Paris Agreement, it has not been absent from COP23, and has particular relevance to SDG 2. The discussion on how to reduce maritime emissions continued in the Fiji Pavilion at an event organized by The Carbon Pricing Coalition, whose partners’ leadership and actions drive momentum on carbon pricing. Here, it was that a tax on maritime transport could be one of the most efficient ways of reducing emissions, because of two market failures: (1) that no shipping emissions are currently taxed, despite their significant externalities; and (2) that maritime transport is not subject to the same kind of fiscal regulations as other business sectors, which reduces incentives for greater efficiencies.

However, for small island states, maritime shipping is a complicated issue. As they are particularly vulnerable to climate change due to rising sea levels, emissions reductions on every level are welcomed. Yet at the same time, the Marshall Islands has the second largest ship registry in the world, making maritime trade a significant component of the national economy. Several integrated solutions are possible: enhancing the efficiency of port operation via improved infrastructure; ensuring stronger competition among shipping companies to reduce prices; and increasing transparency on transport and emissions. Together these solutions could create more efficient supply chains and make food transport more sustainable.

Solutions for reducing emissions in the maritime sector were addressed in another event hosted by Transport & Environment (T&E) and the European Climate Foundation (ECF). Carbon pricing was addressed as a key policy measure that could be beneficial for decarbonization for shipping (although various estimates exist on the height of this price), as
well as reducing the operational speeds of ships, electrifying fleets and reducing port emissions. Other solutions like designing ships more efficiently (according to standards) or using LNG provide no or only small benefits to climate action. The panelists did not agree about the level of optimism applicable for the International Maritime Organization (IMO) to reduce emissions of the sector, but agreed that having targets agreed upon within the IMO will be essential to decarbonize.

In an event on the relationship between trade, transport, and climate change, the focus was on **decarbonizing the relatively neglected freight sector**. Representatives of the Islamic Development Bank (IsDB), United Nations Conference on Trade and Development (UNCTAD), United Nations Development Programme (UNDP), and SLoCaT discussed various initiatives to decrease emissions in this challenging sector, noting SLoCaT research highlighting the lack of attention to freight transport in current NDCs. Ideas were shared on increasing public-private partnerships, setting clear regulations for the business sector, and encouraging context-specific innovation. However, the constraint remains that freight is rarely a priority for governments, and freight growth is not only projected but actively encouraged.

The **momentum of the electrification of transport systems and services** has been a frequent topic at COP23 - although the pace varies across the world. The [ZEV (Zero Emission Vehicle) Alliance](https://www.zev.org/), one of 21 transport initiatives in the [Marrakech Partnership for Global Climate Action (MPGCA)](https://mpgca.org/), organized a well-attended event where influential presenters from member countries, states, and provinces offered their honest reflections on how to promote transport electrification, and the challenges and limitations involved in doing so.

A key point was that swift electrification may be hampered by very different factors, such as spatial dispersion of the population, insufficient in-home electric wiring, or a climate with few sunlight hours. Additionally, it is also important to realize that the whole ZEV ecosystem is low or zero carbon along the entire supply chain, from the production of vehicles and batteries to the supply of power. One way to further electrification may be through consumers demanding that the food products they purchase are delivered sustainably: it was encouraging to learn that in some countries, like the Netherlands and Norway, delivery companies and supermarkets already advertise that consumers are fed through electric supply chains.

A country-level application of mitigation was seen in an event by ONG Dialogo Energetico (Latin American Energy Dialogue), which focused on the **potential of sustainable transport to decarbonize the Chilean economy** and to be extended to other Latin American economies. The event stressed the importance of sound research to build scenarios to better understand political pathways. Director Rodrigo Andrade shared various scenarios for Chile to help to accelerate ambition and develop new business models for a rapid transition to sustainable transport.

---

**Transport and Adaptation**

The launch of the [Global Centre of Excellence on Climate Adaptation (GCECA)](https://www.gcea.org/) highlighted new momentum for the need for climate adaptation. The GCECA aims to mobilise knowledge institutes, businesses, NGOs, local and national governments, international organisations, and the financial sector to share climate adaptation excellence among each other. Especially in the areas where adaptation action is most prominently required, the GCECA will be supporting countries, organisations, and businesses with advice to better prepare them for adapting to the impacts of climate change. This is vital for both SDG 2 as well as the transport sector, as increasing resilience is key for the long term outlook for food...
security and transport infrastructure. The GCECA is hosted by the Netherlands in the cities of Rotterdam and Groningen, combining the power, expertise and networks of these two diverse but complementary regions.

A Fiji Pavilion event focused on resilience in transport for Small Island Developing States (SIDS). Transport systems in SIDS are particularly vulnerable to climate impacts due to their remoteness, small land area, and undiversified economies. Tropical Cyclone Winston in 2016 wiped out one third of Fiji’s GDP with transport accounting for more than 60% of infrastructure damage costs. In response to impacts such as this, said Fiji Minister of Economy, Aiyaz Sayed-Khaiyum: “We need to build infrastructure that is actually focused on the future.”

A World Bank report released yesterday concludes that increasing resilience of transport systems and assets (e.g. through improved standards and maintenance) can reduce well-being losses from climate change impacts in SIDS as much as 25%. The World Bank is supporting the scale-up of best practices to increase transport resilient in various SIDS, as described by participants from Belize, Samoa and Tuvalu. Fiji has recently issued a green bond -- the first emerging economy and southern hemisphere country to do so -- which can help to reduce losses to transport, and in turn can reduce long-term losses to Fiji’s well-being.

Global Climate Action

Until relatively recently, multilateral development banks (MDBs) used to allocate some 90% of their funding to rural roads. This has since shifted to urban mobility projects, as urbanization has dramatically increased in developing countries. Yet, at a roundtable on climate resilient and low-emission food systems, it was emphasized that rural transport networks are essential to rural transformation, as without it the goals of SDG 2 will be impossible to reach.

Roads are key mechanisms by which farmers gain access to markets, but they often lack a temperature-controlled supply chain, which is implicated in some 30% of global food production being lost to waste (in developing countries, 90% of food waste is lost by this means). Thus, a discussion around ending global hunger cannot take place without transport taking a central role in food preservation, storage and distribution.

The Uganda National Roads Authority (UNRA) suggested that instead of talking about rural roads, we should shift the narrative to ‘access routes’ for agricultural and economic development. UNRA cited evidence from the Research for Community Access Partnership (ReCAP) which states that such access does not necessarily have to comprise paved highways, but instead, as noted by Mark Rubarenzya from UNRA, “rural access must be fit for purpose and could be as simple as a motorbike trail, as long as the provision is there and people have been consulted regarding their needs.” Panelists and contributors compared programme successes, feasible funding streams, and workable policy measures.

Can urban mobility innovation flow in two directions? Can developed cities learn from developing ones when it comes to sustainable urban transport measures, solutions and arrangements? These were the stimulating question asked at a session in the German Pavilion called ‘Taking climate action to the streets – transforming urban mobility’.

There are already several well known examples of solutions that have emerged and been scaled up in developing countries and have raised interest in developed countries too. Examples include BRT, electric scooters, and the permanent parklet programs present in
some Brazilian cities. However, other questions such as the logistical systems for managing food distribution and food waste in cities still need to be explored more all around the world.

Cities are experiencing unprecedented changes in transport, which are driven by social, economic and technical trends, and city leaders have a responsibility to shape these changes to ensure that accessible, affordable, safe, and environmentally friendly mobility options are integrated into our existing and future communities. In October 2017, the third EcoMobility World Festival took place in Kaohsiung, Taiwan. These annual festivals offer the opportunity for a ‘live’ demonstration or local experiment of how neighbourhoods are able to transform. One of the outcomes of the Festival were the Kaohsiung Strategies for the Future of Urban Mobility. Launched at COP23, they serve as a call to action to apply the 2030 Sustainable Development Goals and the New Urban Agenda to local mobility policies.

The 12 strategies offer guidance to city leaders and pay particular attention to the interconnectivity between walking, cycling, public transport, and shared mobility. Each strategy links to one or more of the SDGs, and these are indicated in the 12 Strategies document. Amid the best practice guidelines, our attention was drawn to a new concern of cities and city residents: the protection of public city space from drones and the requirement that governments regulate these vehicles and limit their operation in public urban areas. Reflected in these 12 strategies are also the Shared Mobility Principles for Livable Cities, to which SLoCaT contributed, which outline the key principles for future mobility in cities.

Financing and Technology in the Transport Sector

In the session on transport, renewables and climate change, the speakers from IRENA and REN21 set out the main trends and goals for renewable energy in transport. While transport efficiency and electric mobility are highly economically competitive methods to reduce emissions, renewable fuels (largely for aviation, shipping, freight) are less so: advanced biofuels are crucial for these sectors. However, while biofuels production is increasing, it is yet only a small percentage of fuels being used today. Another thing that needs to be achieved is increasing the share of electric vehicles: this needs to move up from 2 million today to 160 million in 2030 and 850 million by 2050 to meet the goals set out in the Paris Agreement.

The German ‘Agora Verkehrswende’, the Mexico City-UC Berkeley big data initiative, and below50 provided examples how to decarbonize the transport sector. Mexico City is using big data to drive climate action by assessing feasibility for electro-mobility based on travel patterns from private sector partners. And below50, one of 21 MPGCA transport initiatives, is a technology-neutral portfolio of sustainable fuels bringing together multiple renewables solutions, urges that we “leave space for innovation, allow companies to come up with the best new technologies.”

A side event on integrating cable cars sustainable urban mobility hosted by Doppelmayr and UN-Habitat introduced a vertical dimension into transport thinking, and launched a joint training program between these organizations. The event reminded delegates that cable cars are able to serve as an alternative mode of urban transport especially in compact cities and areas with landscape obstacles.

Experience with cable car networks in Bolivia show that these modes can be easily adapted to existing, appropriate infrastructure. They improve the use of space in the urban environment, and lower levels of air pollution, making it an attractive and innovative
alternative in cities dealing with urban sprawl and the increased use of motorized transport. Public-private partnerships can be used to help transport decision makers at local, regional and national levels to gain understanding of such sustainable and innovative urban mobility solutions to accelerate these developments.

PPMC’s Global Macro-Roadmap provides key actions for the decarbonization of the transport sector, based on the sustainable transport paradigm of ‘Avoid’, ‘Shift’ and ‘Improve’. The roadmap contains eight components which together form a balanced set of actions to transform the transport sector towards more sustainability. However, as transport is highly interlinked with other sectors, these components not only address transport specifically, but also address a wide-range of other areas, such as for example areas related to SDG 2.

One of these priorities is illustrated under Component 4 (“Shortened supply chains”), which would be beneficial to the environment and would increase global access to markets. Access to food could be enhanced and emissions can be reduced through streamlined distribution circuits or optimizing purchasing purchases. Another priority linked to SDG 2 is Component 6 (“Adapted solutions for a ‘rural’ world”). Unmet demand for mobility holds back economic growth and prevents increased food security; thus, improved mobility in rural areas is essential. Both of these examples show that sustainable transport and food security can be simultaneously addressed by similar actions that provide co-benefits for both sectors.

## Closing Thoughts

**SDG 2** establishes a clear linkage between ending hunger and promoting sustainable agriculture. To achieve this vision, the rural poor must be included in the rural transformation that is needed to adapt to and combat climate change. Yet the need for reliable and sustainable transport at every link of the global food supply chain is often overlooked in discussions on SDG 2.

As noted in events under the SDG 2 day, agriculture and transport are highly interlinked, one cannot reach the goal of zero hunger without providing (rural) roads to access food markets. This is emphasized in SLoCaT’s fact sheet on rural transport and agriculture, which notes that 90% of Africa’s food production is by smallholders, who mostly have limited access to transport infrastructure; that in India, fruit and vegetable post-harvest losses amount to 40% of total production, due in part to a lack of reliable rural transport options; and that increasing road quality has increased agricultural production by 27% in Ethiopia.

Therefore, it is critical that specific measures on low carbon and climate resilient rural transport infrastructure and services be more centrally featured in revised NDCs, UNFCCC long-term emission strategies and in the Voluntary National Reviews of forthcoming High Level Political Forums. We are hopeful that the SDG 2 focus day at COP23 can begin to drive this process forward, which will require expanding dialogue across sectors and bringing together Parties with ambitious national and sub-national commitments in this area.

Low-carbon supply chains should also be reflected in high-level dialogue calling for robust climate finance, clearer channels for transport sector participation in the Green Climate Fund, and additional attention to prioritizing and funding scalable measures on urban, rural, and global freight. Private sector actors are making bold commitments to reducing logistics emissions (such as Deutsche Post DHL Group’s **2050 zero-emissions target**); it’s time now to align ambition, funding and implementation among all links in this chain.
Daily Talk Show on Transport and Climate Change

The SLoCaT Partnership and Movin’On by Michelin are organizing daily talk shows on transport and climate change during COP23.

The topic of the November 14 talk show was Transforming Urban Mobility, featuring experts from BMZ (Dr. Tania Rödiger-Vorwerk), UN-Habitat (Stefanie Holzwarth), ICLEI (Monika Zimmermann) and Global Centre of Excellence Climate Adaptation (Sebastiaan van Herk). You can watch the November 14 talk show via this link.

The key theme of today’s talk show was that local and regional governments are actually the key actors in climate change mitigation, as cities are the main contributors to climate change, which will only increase further with the rapid urbanization worldwide. Strong collaborative cross-sectional efforts are needed to adapt current, and successfully implement new urban transport systems. Tania Rödiger-Vorwerk talked about the Transformative Urban Mobility Initiative (TUMI), which was launched in Quito, during the UN-Habitat III in October 2016. TUMI consists of three pillars; firstly a large fund has been set up by the KfW for the financing side of urban infrastructure to meet the growing demand for new infrastructure. Secondly TUMI does capacity development and wants to educate and train 1,000 urban game changers and make them fit for decision making. Finally TUMI works directly together with mayors of cities, who are willing to do the work! A next step for TUMI in the coming years would be to connect the Initiative with the private sector for more strength and innovation.

Stefanie Holzwarth from UN-Habitat continued to emphasize the key role cities play towards a better and greener future. In Quito in October 2016, the New Urban Agenda (NUA) was released and adopted, which serves as an urban framework until the year 2036. Regarding transportation in the NUA a special focus was given to the concept of universal access, specifically considering vulnerable groups such as women and the urban poor in developing countries to ensure that these groups have access to urban facilities and opportunities. This also gives local governments the big task to reconsider their public spaces.

Monika Zimmermann from ICLEI underlined that sustainable urban mobility is the way to go. She discussed the past EcoMobility World Festival in Kaohsiung last October and how seamless connectivity is crucial for successful transport systems, where people can easily transfer between different modes. Finally, Sebastiaan van Herk (Global Centre of Excellence Climate Adaptation) re-emphasized the importance of bringing together stakeholders from a broad range of sectors, to adapt transport systems to extreme weather conditions. His take away message was that every time we spent money is an opportunity to do it climate proof.

The November 15 talk show session was on Commitments and Progress. The speakers were Dessima Williams (Former Ambassador to Grenada on Climate Change), Kelley Kizzier (UNFCCC), Rodrigo Andrade (Director at Dialogo Energetico) and Thomas Kerr (Principal Climate Policy Officer at International Finance Corporation). You can watch the November 15 talk show via this link.

COP23 is essentially the thrashing out of the technicalities of the Paris Agreement: the agreement, which has treaty status, requires a rulebook for implementation, and this has to be negotiated Article by Article, sentence by sentence. But amid the technicalities, it is good
to be reminded of the overall purpose and direction of both COP and the Paris Agreement. As was eloquently articulated by Dessima Williams: “What we as humans have done in the past is remarkable, but we have to revisit what we have achieved so that we don’t continue that same approach in our future achieving.”

The panel was optimistic that human achievement can and should continue, but with new definitions of growth, and new technologies and approaches to investment. As has been a constant narrative at COP23, electric mobility, particularly when solar-based, is viewed as an immediate and sustainable option. There is no shortage of private investors interested in solar technology and shared mobility options, and it’s a matter of tailoring investment models and public/private financing, said the IFC. SLoCaT left today’s talk show buoyed by the panelists’ examples of successes and resolutions, and their conviction that if countries meet their financial and carbon commitments, a new, low-carbon and growing global economy is indeed possible without increasing our emissions.

The November 16 talk show at 18:00 CET will focus on The Future of Transport and can be viewed via this link.

### MPGCA Transport Initiatives of the Day

Under the Marrakech Partnership for Global Climate Action (MPGCA), [21 transport initiatives](http://www.ppmc-transport.org/urban-electric-mobility-initiative/) were established to represent a broad range of multi-stakeholder coalitions to cover diverse modes of transport through decentralised action to reduce transport greenhouse gas emissions and strengthen the resilience of transport infrastructure. The MPGCA transport initiatives also demonstrate implementation and the considerable co-benefits of climate action on transport (e.g. improved air quality, decreased road deaths, increased access to goods and services).

**Urban Electric Mobility Initiative: Harnessing technological innovations and better urban planning to promote low carbon transport**

The Urban Electric Mobility Initiative (UEMI) was initiated by UN-Habitat and the SOLUTIONS project and launched at the UN Climate Summit in September 2014 in New York. The UEMI aims to contribute significantly to the overall goal of limiting the increase in global mean temperature to two degrees Celsius above pre-industrial levels by decreasing urban CO2 emissions globally.

UEMI committed to boost the share of electric vehicles in individual mobility (2-3 wheelers and light duty vehicles) and integrate electric mobility into a wider concept of sustainable urban transport that achieves a 30 percent reduction of greenhouse gas emissions in urban areas by 2030.

For more information on the initiative, please see: [http://www.ppmc-transport.org/urban-electric-mobility-initiative/](http://www.ppmc-transport.org/urban-electric-mobility-initiative/)

**The UIC Low Carbon Sustainable Rail Transport Challenge: On the low carbon track**

UIC, the International Railway Association, is proposing a transport sector challenge in the framework of the green growth agenda and climate change perspective for 2030 and 2050. This challenge sets out ambitious but achievable targets for improvement of rail sector energy efficiency,
reductions in GHG emissions and a more sustainable balance between transport modes. Energy consumption and carbon intensity As a first step of the challenge, the world railway sector has set itself ambitious 2030 and 2050 targets for energy consumption and CO2 emission.

For more information on the initiative, please see: http://www.ppmc-transport.org/the-uic-low-carbon-sustainable-rail-transport-challenge/

---

**Global Macro Roadmap Component of the Day**

PPMC has developed a [Global Macro Roadmap](#) which identifies a balanced package of actions based on the [Avoid-Shift-Improve](#) Framework. The Roadmap brings together the work accomplished at the technological, modal, national and regional levels into a single vision for the global Transport sector along eight priority areas. These priorities, if being considered and applied by the government, will bring to the pass the policy and institutional capacity required to promote the changes in behavior and the clear market signals necessary for a disruptive transition towards a net-zero emission economy in countries.

**Component 7: Accelerate action on adaptation in Transport sector**

Adaptation in the transport sector is necessary for both developed and developing countries. Crucially, sustainable passenger and freight transport systems must adapt to climate change to maintain reliability and increase market share, in order to achieve their full mitigation potential. Climate change presents a significant risk for global transport infrastructure investments, estimated globally at $1.4 trillion to $2.1 trillion per year.

The adaptation effort today is far from sufficient and a wise strategy calls for:

- Raising the profile of adaptation in discussions on climate change and transport;
- Promoting climate risk screening and vulnerability assessment of existing transport systems, services, and all new projects;
- Adopting industry relevant technical standards to ensure transport infrastructures are climate resilient, with appropriate adaptive capacities to minimize future risk;
Leveraging additional climate finance to shift public and private investments towards resilient transport systems;
Integrating adaptation into project design, including through enhanced emergency preparedness;
Strengthening coordination across agencies (including funding, implementing, and operating agencies);
Building capacity at local, national and international levels on transport adaptation;
Co-operating with the broader adaptation community to integrate transport into adaptation programs and activities.

Decisions on adaptation must be made today, especially with respect to long-lived transport infrastructure assets that have the potential to lock-in development patterns many decades.


---

**Upcoming Transport Events**

**November 16, 2017**

- **Live Streamed Daily Talk Show on Transport and Climate Change**
  Organized by the PPMC
  Nov 16, 18:00 – 19:00, DHL Post Tower (next to COP23 venue), Platz der Deutschen Post, Bonn

Please visit the PPMC [Sustainable Transport Events at COP23](http://www.ppmc-transport.org) website for a full listing of upcoming transport events.

This report is brought to you by

with support of

Twitter: @SLOCATCornie #COP23
Facebook: @SLoCaTOfficial #WeAreTransport

[www.ppmc-transport.org](http://www.ppmc-transport.org)