



The Solutions Lab

Scaling for Sustainable Infrastructure

Oaxaca Sounding Board – Summary Report

24 February 2020, Oaxaca City, Mexico

I. Context - About “The Solutions Lab: Scaling for Sustainable Infrastructure”

The Solutions Lab is jointly organized by the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH and the Global Solutions Initiative (GSI) to analyze what hinders uptake of existing sustainable infrastructure solutions and to identify approaches that can be scaled across regions. It brings together 25 experts from academia, policy, finance and infrastructure development in a multi-stakeholder format that entails 3 face-to-face meetings, a virtual dialogue process and various outreach events along the way.

The organizers proposed two challenges to stand at the heart of the Lab: First, how can we systematically integrate sustainability throughout the entire project cycle? Second, how can we make the business case for sustainable infrastructure? Since the first meeting in Berlin (November 2019), the Lab community has established several distinct work streams, in which these and other questions are addressed: (1) Narrative & Vision; (2) T20 Policy Briefs; (3) Upstream Policy Considerations; (4) Ensuring Sustainability at Project and Pipeline Levels; (5) Gender & Infrastructure and (6) Innovation Space.

To regularly test and adjust the ideas developed in the Solutions Lab, so-called “sounding board” events are organized with various stakeholder groups. This report summarizes key results from such an outreach event that was held with local authorities in the Mexican State of Oaxaca in February 2020.

Oaxaca Sounding Board

Oaxaca is one of the 32 states of Mexico. It is characterized by its enormous geographic, cultural, natural, economic, social, and political complexity. It is divided into 570 municipalities, 418 of which are governed under the system of uses and customs, with recognized local forms of self-government. The state is mainly known for its indigenous peoples, represented by more than 16 ethnic groups. Under this context, GIZ Mexico is working with Oaxaca’s government to incorporate the 2030 Development Agenda at the sub-national level. In particular, the collaboration focuses on the strengthening of capacities of municipalities on sustainable planning which includes the areas of monitoring and financing of sustainable infrastructure.



Against this backdrop, GIZ and GSI organized a sounding board event with Oaxacan counterparts to better understand the local barriers to sustainable infrastructure planning, to share preliminary Lab results and to generate a discussion around the relevance and scalability of these ideas for the Oaxacan context. Three participants of the Solutions Lab and two representatives of GIZ participated in this event with local authorities of the Mexican State of Oaxaca. First, a morning session was held with mayors and municipal public servants. Second, the Solutions Lab representatives met with the Oaxaca state government planning office [COPLADE](#).

Solutions Lab: Cristina Contreras (Harvard University, Research Associate), Sergio Forte (Banobras, Deputy CEO Investment Banking), Ryan Bartlett (WWF, Director Climate Risk Management & Resilience)

Hosting Team: Mario Bernal and Vanessa Bauer, Emerging Markets Sustainability Dialogues, GIZ GmbH

II. Main Results

Morning Session with Mayors and Municipal Public Servants

This meeting took place as part of a larger GIZ workshop on sustainable finance for infrastructure projects in the city of Oaxaca. Following an introduction on goals and vision of the Solutions Lab, Cristina Contreras asked the local stakeholders to share their understanding of sustainable infrastructure. While opinions in the room somewhat diverged, most participants highlighted the relevance of long-term vision and planning as well as the prioritization of projects to promote both environmental conservation and climate change adaptation. In addition, participants shared key challenges to sustainable infrastructure development they face in their communities, including river pollution and water management, access to services and markets, deforestation as well as waste management.

Subsequently, Cristina Contreras delivered a presentation on the Solutions Lab's definition of sustainable infrastructure, including the proposed framework and steps required to ensure integration of all sustainability dimensions (economic and financial, social, environmental and institutional) across the entire infrastructure life cycle. To facilitate understanding of these concepts, Sergio Forte provided concrete examples of Mexican projects that had failed due to a lack thereof, for instance due to inadequate inclusion of local communities at an early stage. He stressed that a lack of purposeful planning constitutes the main reason for project delays and increases in costs. Sergio Forte also pointed out that the exclusion of women during decision making processes for infrastructure assets generates an important loss for the national economy. Hence, authorities and communities must consider a change in mentality to foster gender equality in the infrastructure sector, and to achieve inclusive and sustainable development.

Next, Ryan Bartlett introduced insights from the Lab's Upstream Planning work stream, emphasizing that evidence-based decisions and participative, cross-sectoral processes during the upstream phase are critical to achieve sustainable outcomes and to increase local ownership. Against this backdrop, Ryan Bartlett presented an international case study on successful waste management and community inclusion in Accra (Ghana), as well as a project opportunity from



Sunrise, which aims at developing integrated small-scale sustainable infrastructure projects (focusing on the use of solar energy) in different parts of Mexico.

Furthermore, Sergio Forte shared good practice examples of integrated infrastructure planning in Mexico. Drawing upon common problems in Oaxacan municipalities, he urged local stakeholders to consider the creation of intermunicipal bodies to collectively solve problems such as waste collection or river pollution. He drew parallels to a FONADIN project in Chihuahua: while lasting over five years due to social and institutional complexities, collective efforts of various municipalities ultimately led to major successes in the integration of local waste management infrastructures. All this served to strengthen the argument that sustainability provides significant opportunities for growth and development at municipal, regional and national levels while reducing social, environmental and economic risks.

Finally, Cristina Contreras provided insights into an ongoing research project on the alignment of sustainable infrastructure indicators with the SDGs, which illustrates that the success or failure of reaching 81% of SDG objectives is directly linked to sustainable infrastructure development.

What stood out in the mayors' feedback is that they mostly considered the group's findings on integrated planning and its benefits in terms of saving both money and time to be of direct relevance to their work. At the same time, many participants expressed concerns about social, financial and technical aspects: While planning is important, its necessity is not always obvious to local communities and the lack of trust in public authorities due to the failure of previous projects adds further complexity to local consultation processes. The Oaxacan stakeholders variously underlined the difficulties in operating comprehensive and inclusive stakeholder consultations that include all voices within Oaxaca's diverse population, address resentment and move from dialogue to actual implementation. In addition, some participants mentioned that a lack of knowledge on sustainable infrastructure prevents mayors to cooperate with other municipalities. Consequently, they recommended that the Solutions Lab place stronger emphasis on awareness raising about tools, strategies and long-term benefits of sustainable infrastructure development to promote a mentality change amongst the citizenry and local leadership (*cambiar el chip*).

Another key point of the discussion evolved around the limited resources at the disposal of local mayors. Accordingly, most of their budget is allocated to those assets directly requested by the community (often projects that lack sustainability aspects). Adding to ongoing legal conflicts around local regulations, these financial shortfalls hamper the prospect of sustainable infrastructure development at the municipal level. At the same time, the local participants recognized a lack of capacity in terms of planning, implementation and monitoring on their end. As a concrete example, the participants mentioned a series of water treatment plants that were installed across the state of Oaxaca. Out of 150 plants, 95 are currently inoperable due to high operations and maintenance costs which had not been accounted for by the federal government. Similarly, a lack of purposeful planning is evident in spatial/territorial planning, which often focuses primarily on economic factors. Rapid population growth paired with limited land availability and complex land allocation processes (e.g. *ejidos* which grant usufruct rights for community land) further underline the urgency of addressing these shortcomings both at the municipal and at the state-level.



Key Lessons Learned

- The importance of **managing multiple environmental crises** simultaneously through integrated planning - e.g. biodiversity, climate, soils, water supplies – was underlined.
- **Major local challenges** included river pollution and water management, access to services and markets, deforestation, as well as waste management.
- The need to ***cambiar el chip*** or to raise awareness among local stakeholders on the importance and long-term benefits of sustainable infrastructure development was highlighted.
- **Inclusive and comprehensive stakeholder engagement** needs to start at the early stages of infrastructure planning.
- **Concrete follow-up action plans are needed after consultation with local stakeholders.** The lack thereof in the past contributed to a lack of trust in the leadership at the municipal level.
- The challenges of **coordination among municipalities** around larger problems (e.g. river pollutions, waste management) are a major hurdle to integrated planning.
- Examples of **unsuccessful planning underline need for sustainability at every level of project cycle**: 95/150 inoperable water treatment plants in Oaxaca are not operable due to high operations and maintenance costs that were not planned for by the federal government.
- The **legal conflicts** that emerge around local regulations often hamper progress.

Afternoon Session with the Oaxaca State Government Planning Office (COPLADE)

The second meeting brought together authorities with a wide-ranging expertise on infrastructure planning, implementation, projects approval and monitoring processes. They underlined the assessment of the earlier session in that environmental issues like wastewater and solid waste are their biggest challenges. COPLADE experts outlined several challenges that hinder the broad uptake of sustainability solutions in these sectors, including the fact that since these services have traditionally been provided for free, there is a limited acceptance of user fees to ensure a quality service. Accordingly, the situation is different in the energy and transportation sector, where fees are the norm and regulated.

In responding to the Solutions Lab's proposals on upstream planning, participants identified the lack of finance, low municipal capacity, insufficient tax collection systems and missing legal frameworks as the key challenges to successfully integrated approaches. In the case of Oaxaca, for instance, 98% of the budget for infrastructure projects derives from federal sources. However, these funds are normally only available once projects are ready to start and allocated before they reach the state planning offices, which severely limits COPLADE's ability to integrate sustainability considerations at the pre-project level. Consequently, local authorities are often forced to sign-off projects without comprehensive sustainability analyses that cover the entire project life cycle, including maintenance and decommissioning. Further complicating the process are a lack of



coordination among ministries, the lack of capacity for upstream planning and the fact that sustainable, cost-efficient construction materials are often not locally available.

Lastly, COPLADE experts spotlighted socio-political issues between communities and the state government, explaining the complexity of project coordination mechanisms due to frequent government changes, resettlements of local populations and the insufficient understanding of infrastructure projects within local communities. Some of the attendees made concrete references to the need of creating stricter regulations and implementation mechanisms to ensure that people follow the rules.

Key Lessons Learned

- The **over-dependence on federal funding (98%)** pre-allocated to investments at project level severely limits COPADE's capacity and resources for integrated planning studies.
- There is a **lack of legal frameworks** to support integrated planning in spite of low budgets.
- The **diversity of municipalities** presents an additional challenge for federal planning efforts. Example of CONAGUA with 95+ waste treatment plants no longer operating due to high costs not accounted for in planning. Universal designs also proved ineffective for some municipalities didn't need the scale and lack capacity to maintain and operate these facilities.
- Extremely **limited planning capacity within municipalities**. There is a need to reinforce the liability studies conducted as well as the oversight of the project in later phases.
- The **need to raise awareness** around the importance of investments in sustainable infrastructure; on this see also need to *cambiar el chip* at the municipal level.
- Lack of capacity to charge user fees for services such as water and sanitation "which have traditionally been free".

