DEVELOPMENT FUTURES SERIES

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Identifying Key Priorities and Regional Development Gaps at the Local Level:

The Case of the State of Mexico

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The 2030 Agenda calls for the collection of data at the local level to contextualize sustainable development challenges and monitor the progress of the SDGs. While local governments in fact use data, the level of analytics that are used to construct regional agendas is not homogenous. We propose a systematic approach for the creation of local agendas that identify development gaps, while fostering the multidimensionality and interconnectivity of public problems that become systemic development bottlenecks at the local level. We systematically identify local priorities in terms of how much the existence of such problems aggravate other issues. Our approach builds on the acceleration and MAPS framework and includes community participation to appropriate priorities. While further analysis is required to assist policy analysis and recommendations, this first step for identifying local priorities is easily replicable and promising for harnessing data and fostering deeper analytical projects for the creation of local agendas.

Motivation: Construction of Regional Agendas

Many advocacy efforts have been made in recent years to increase information and data availability to inform policies at the local level. In the case of UNDP and the 2030 Agenda, these efforts are part of a more general strategy to 'localize' Sustainable Development Goals (SDGs). The call for the 2030 Agenda localization has made country and regional offices assist local governments in building institutional capacities that lead to the implementation and acceleration of the Agenda, and yet, the use of data and evidence at the local level to inform policy decisions has been limited.

In Mexico, production and access to disaggregated data has been made increasingly available for local governments (UNDP Mexico, 2023)[2]; hence, the natural subsequent question to ask is if the level of analytics (information usage) at the local

levels grows at the same pace as the production and access to the amount of data available. The evidence suggests that even when data are generated, collected and compiled, local authorities do not often engage in advanced analytics projects (Purón-Cid & Gil-García, 2013)[3].

This brief presents and exemplifies an exhaustive and replicable way to conduct more advanced analytical projects in the form of regional diagnostics at the local level so that local authorities can make evidence-based policy decisions that lead to development. The brief goes beyond the description of identified priorities in a particular region and builds upon the proposal for systematic and robust drivers and bottleneck identification. These priorities are identified in terms of finding the systemic problem for which a solution is the most likely to create catalytic effects to attend to other problems and/or other

areas of development in accordance with the SDG acceleration framework[4].

The study presented in this brief relies on mixed methods for data collection. We conducted a thorough collection and systematization of all available local level development data in Mexico, considering every available disaggregation. After the data analysis was carried out, regional roundtables with local actors were organized to present the main findings, which were then prioritized and shortlisted. The shortlist of regional priorities was then put into what is called an 'aggravation matrix', collecting data on the observed aggravation that a particular problem has on other listed problems. All possible combinations were rated by the group with the use of a technology app, until we found a network of problems and a final rating of priorities that were then converted to regional bottlenecks and acceleration drivers.

Figure 1: Summary scheme

Regional diagnostics	→	Regional workshops	→	Accelerator identification	→	Priorities and recommendations

Source: Authors' elaboration.

The brief exemplifies an acceleration analysis that can be systematically replicated to gain insights at the regional level. The main contribution of the analysis is the description of a methodology that

provides objective and participatory visions with the capacity to be mainstreamed and adopted for SDG acceleration.

Regional Diagnostics: A Replicable Quantitative Approach

Overview and purpose

The first stage of the regional diagnostic consisted of a deep dive into local-level socio-economic data from a national census in Mexico in 2020[5] and other public information collected from official sources in Mexico[6]. Household and individual information on four sustainable development areas (social, economic, environment and peace) was organized and systematized in a way that could be processed to generate ranks among regions and create flags for each indicator, region and sustainable development area.

Construction of socio-economic indicators

In the case of the State of Mexico, the geographic delimitation consists of 125 municipalities organized into 20 regions; hence, we needed to systematize available public data with representativeness at the municipality level. The information was then transformed into 200 indicators accounting for each available disaggregation group. For example, the information on the completed level of schooling was available within age groups and gender, resulting in 30 indicators. Each indicator had the age/gender/group disaggregation in accordance with the survey sample design[7] and coefficient of variation (equal or smaller than 15%).

Each indicator was then transformed into per capita values. For example, the data on 'women aged 25-40 with unfinished primary school' was then divided by the population size of women in that age range, while indicators on household or business deprivations were divided by the number of households or economic units in that municipality, respectively.

Grouping indicators by dimension

In order to create thematic groups within all the available indicators, four dimensions and eight subdimensions were created:

- Social dimension with four subdimensions: poverty, education, health and housing
- Economic dimension with three subdimensions: income, labour, private sector
- Environment dimension
- Peace dimension

Type of analysis conducted: regional rankings

The main goal for the data analysis was to identify particularities —such as strengths, weaknesses, trends and group inequalities— for each region in each dimension, as compared to other regions. In order to produce regional rankings, each indicator was categorized according to its own nature in ascendent/descendent order, i.e. whether the progress in that particular subject meant increasing or decreasing its value. With this information, we develop an uncomplicated computational programme that created the rankings at the regional level, assigning ordinal rankings (1-20) to indicators according to their category.

In addition to the rankings generation, the computational programme produced regional flags, systematically looking for:

- Strengths within each dimension: What are the highest-ranked indicators in the dimension? Ex: *"Region X has the highest literacy rate among women aged 65+ in the state"*.
- Weaknesses within each dimension: What are the lowest-ranked indicators in the dimension? Ex: *"Region X has the lowest attendance rate in secondary school among people aged 15-24 in the state"*.
- Trend particularities in order to highlight progress or lack thereof. Ex: *"Region X has the slowest growth in the last five years in the indicator of access to the internet in state schools"*.
- Group inequalities within an indicator. Ex: *"The gender inequality in school attendance in secondary school in Region X is the highest in the state"*.

If there was a case in which a region was not scoring low rankings in a particular dimension, a flag was generated for the lowest-ranked indicator for each dimension. Ex: *"The lowest-ranked indicator was the higher education completion rate, ranked in 10th place out of the 20 regions"*.

Lastly, the output flags generated for each of the four dimensions by the computational programme were humanly confirmed and integrated into a regional report. Instead of displaying endless graphics for each region, the data analysis process was systematized in a replicable and upgradable way, searching for data particularities that could highlight strengths, shortcomings, progress over time and group inequalities with respect to the rest of the territory.

Regional Workshops: A Collective Exercise

Purpose and overview

The second data collection (qualitative information) was carried out during a discussion table with over 250 local actors (government, civil society, private sector, academia) in which local agendas were constructed using collective intelligence[8] and the acceleration toolkit. Rather than finding statistical representation with this exercise, the scope of this consultancy was to generate a participatory dialogue with leaders and experts in the community to validate, complement and legitimize the findings from the previous data analysis process. While these findings

were presented and explained to the participants as conversation starters, table discussions were not restrained to data findings, although most of the relevant topics were sustained by them.

In this phase, four key processes can be highlighted:

- **Call for participants**

For our call strategy, we asked our state counterparts and strategic partners from local institutions to develop a list of potential participants. We then

adapted and complemented the list in order to secure balanced representation from municipal governments, private sectors, academia and civil society.

Over 500 local actors (25 per region) received personalized invitations to participate. Although this type of event might be seen as a political opportunity for local officials, the invitation made sure to convey that this was not a political event, and people were not given the floor to speak until an hour or two into the workshop to make sure expectations were managed.

- **Sharing main insights per each dimension**

The first hour of the regional workshops was used to share the main insights drawn from the data findings for the region in question. The facilitator repeated several times that the displayed quantitative data was meant to be a conversation starter and not necessarily the centre of the debate, and that prioritized regional problems were to be constructed by the workshop participants, regardless of whether they were presented in the quantitative diagnostics.

- **Prioritizing the main problems for each dimension: a condensed regional agenda**

Following the data findings presentation, the group was divided into thematic tables, one for each dimension. Each table was to come up with a condensed regional agenda shortlisting three main public problems in each thematic table (12 main public problems at most).

- **Aggravation voting mechanism**

The acceleration framework instructs the identification of bottlenecks for development systems, and the prioritization strategy entails an understanding of the implications that an unresolved problem has on other development areas and other public problems.

Thus, local actors were asked to construct a shortlist of the most urgent unsolved regional public problems affecting the community at the moment (a list of 10 to 12 problems to keep a manageable aggravation matrix). Next, based on their opinions, participants rated the magnitude of the aggravation that an unsolved public problem in the community had on another problem. Rates were collected using an online tool to capture and aggregate votes according to their aggravation rate 1-7, (where 1 = the existence of problem A causes almost no aggravation to problem B; and 7 = the existence of problem A directly and alarmingly aggravates problem B) creating an aggravation matrix for each region (see Figure 2).
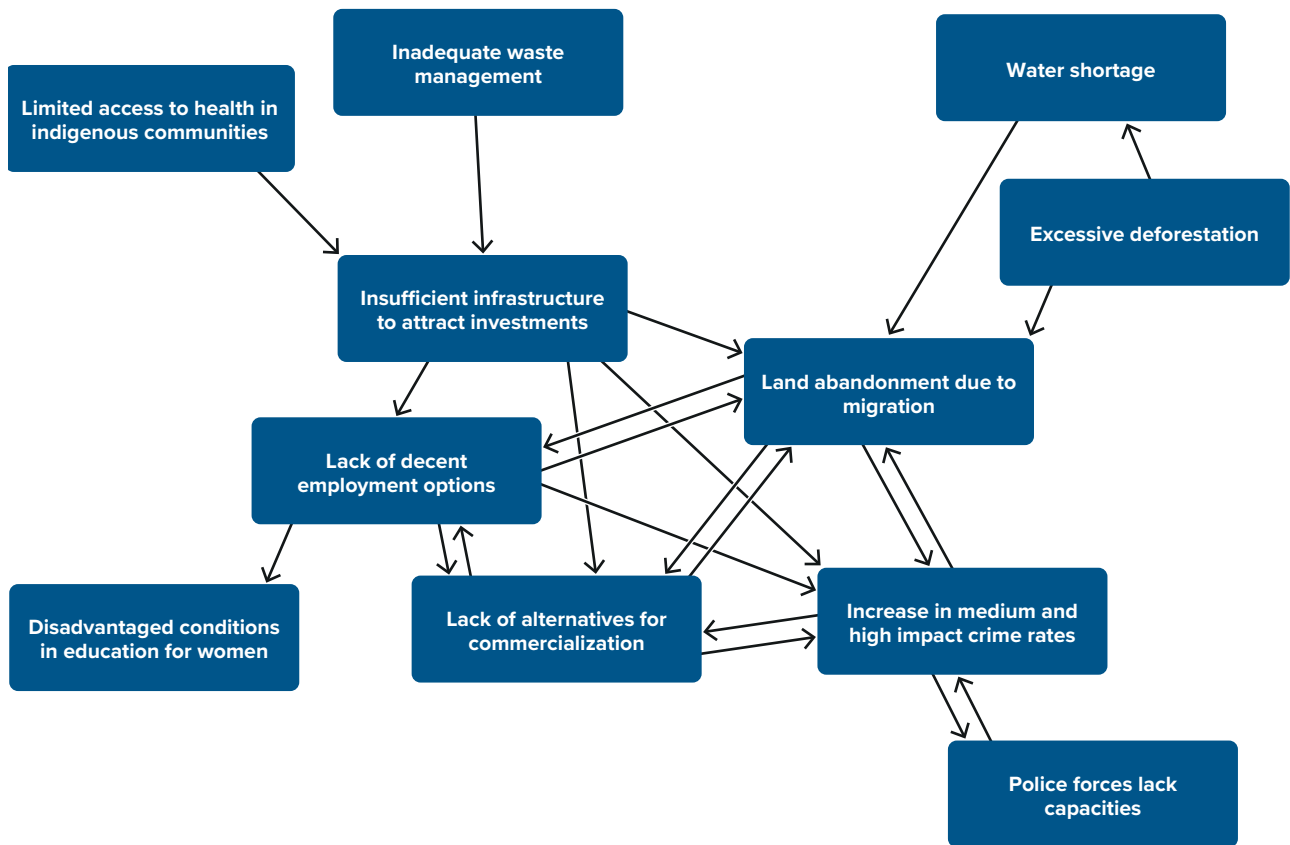
Figure 2. Aggravation matrix

	Problem A	Problem B	Problem C	Problem D	Problem E	...	Average outcome
Problem A		$X_{B,A}$	$X_{C,A}$	$X_{D,A}$	$X_{E,A}$		X_A
Problem B	$X_{A,B}$		$X_{C,B}$	$X_{D,B}$	$X_{E,B}$		X_B
Problem C	$X_{A,C}$	$X_{B,C}$		$X_{D,C}$	$X_{E,C}$		X_C
Problem D	$X_{A,D}$	$X_{B,D}$	$X_{C,D}$		$X_{E,D}$		X_D
Problem E	$X_{A,E}$	$X_{B,E}$	$X_{C,E}$	$X_{D,E}$			X_E
...							

Source: Authors' elaboration. Note: $X \in [1,7]$ and $X_{A,B} \neq X_{B,A}$

Problem combinations becomes unmanageable as the list of problems grew, because problem A could aggravate problem B differently than problem B aggravates problem A (i.e. $X_{A,B} \neq X_{B,A}$ in the aggravation matrix). Hence, we created a voting mechanism that presented the combinations in a random order so participants did not need to vote on every problem combination, but instead averages could be summed up in the matrix (last column of Figure 2).

The ultimate outcome of this exercise was a further shortlist of public problems in the region based on the aggravation voting mechanism average outcome (Figure 2), that is, what issues were the most urgent to solve in terms of how much they caused other problems to worsen. Visually, the results from these aggravation matrices resulted in the network visualization seen in Figure 3.

Figure 3. Network visualization example

Source: Authors' elaboration.

Arrow directions in Figure 3 reflect the direction of the aggravation: arrow points represent the aggravated problem, according to the average value in the matrix. Higher-ranked problems (as per the aggravation matrix) are displayed in the centre of the network visualization, and they constitute the proposed acceleration drivers for the region.

Regional Accelerators: Conclusion

Policy analysis and recommendations

Identifying drivers and bottlenecks per the network representation is not the end of the process, since, in most cases, policies already exist to address those problems in one way or another. In these cases, policy analysis is needed to understand why public actions have not yet resulted in the elimination or neutralization of such public problems. The next natural step consists of analysing existing programmes and policies at the federal, regional, and local levels as well as their compatibilities and synergies to tackle them jointly and individually.

For example, in the region of Texcoco, prioritized public problems in terms of their aggravation potential included urban planning and management of water resources. In this case, existing state-level programmes and actions for both issues were analysed to identify potential multisectoral actions that can address these topics simultaneously and determine how they can create synergies. Recommendations for this region included the call for local governments to make sure that urban planning systems in the region allowed urban growth only wherever sustainable water management - such as sewage treatment - were in place. However, social programmes that provide farmers with irrigation systems must create incentives to avoid land-use change, which creates further unregulated urban growth.

While this further analysis was conducted, the depth of the policy analysis might depend on timing and available resources. However, the purpose of this brief is to display the acceleration framework adopted in the creation of regional agendas in the

UNDP – State of Mexico collaboration to create evidence-based policies that are both 'localized' and legitimized within the community of local actors.

Different approaches can be taken when implementing the SDG acceleration framework, and particularly, for identifying key drivers and bottlenecks. While other approaches can make use of more sophisticated techniques[9], our approach is a comprehensive replicable exercise and a new way to conduct regional diagnostics that move past the display of uncontextualized statistics, while being legitimized by local experts using rigorous techniques as well as a participatory approach that consider the communities' perspectives. From our point of view, one of the main accomplishments of our strategy was the appropriation and understanding of our results in the collective exercises, meaning local actors can take a step forward when constructing agendas to promote regional development.

In Mexico, as well as other parts of the world, efforts to localize SDGs have triggered local governments to align their plans and programmes with the 2030 Agenda, collect data, conduct quantitative analysis and incorporate community-based participatory exercises to create local public agendas. The methodology presented in this brief responds to all of these demands when constructing local agendas, as it allows for the use of all available information in public data, participatory and territorial approaches, as well as the use of the acceleration framework for a systematic priority identification strategy (replicable in as many territories as needed).

Implementation of the study results in local agendas with a high specificity level, not only because they highlight the problem that is particular to each context, but because they are characterized in terms of the intensity of their aggravation and their causes, the way these problems are identified in the available public data, and the groups that are most affected by them. However, the understanding and visibility of the interconnections that exist among local public problems will potentially create integral regional policies and shed light on the collaborative spaces that arise when local actors identify coincident goals, whilst having local authorities benefit from joint ventures and alliances for strategic planning processes, as well as the design of local policies, implementation, monitoring, evaluation and learning at the local level.

Policies that arise from the application of this framework have an interesting potential for efficacy in the use of public funds, as long they are provided with sufficient tools to design integral and focalized interventions, with strong and effective theories of change that account for the interconnectivity of regional public problems that are diverse in nature and particular in each context.

Once these actions take place and institutionalized, higher analytical projects can take place in a customary and easy to communicate way. We present this mixed-methods framework for the creation of local public agendas convinced that they entail great potential for more effective and more informed policymaking, not only locally but also for centralized policies that are responsive to territorial contexts.

Annex: Example case for the region of Zumpango, State of Mexico

Regional Diagnostics: Quantitative Approach

In order to exemplify the approach described in the brief, the results for one of the 20 regions are displayed in this annex. The results of the quantitative analysis across dimensions are synthetized in Table 1.

Table 1. Results of quantitative analysis (rankings)

Dimension	Indicator	Ranking
Social: Education	Percentage of children, aged 6-14, who cannot read or write (progress)	**1/20** Zumpango is the region with the highest growth in the percentage of children who cannot read or write, increasing 2.03 percentage points between 2015 and 2020.
Social: Health	Percentage of women, aged 65 or older without health coverage	**1/20** 29.9% of women aged 65 or older do not have health coverage in Zumpango 21.9% of women aged 65 or older do not have health coverage in the State
	Annual deaths associated with pregnancy, childbirth and puerperium, per 100,000 inhabitants	**3/20** 91 annual deaths associated with pregnancy, childbirth and puerperium per 100,000 inhabitants in Zumpango 58 annual deaths associated with pregnancy, childbirth and puerperium per 100,000 inhabitants in the State
Social: Household conditions	Uninhabited houses	**1/20** 55% of houses are uninhabited in Zumpango 14% of houses are uninhabited in the State
Economic: Employment	Male unemployment rate	**1/20** 2.81% male unemployment rate in Zumpango 2.48% male unemployment rate in the State
Economic: Income	Percentage of people who earn two or more times the minimum wage (gender gap)	**1/20** 63% of working men earn two or more times the minimum wage, but only 39% of working women earn that amount
Environment	Volume of wastewater discharge (into sewage treatment plants)	**18/20** 398 cubic meters treated annually in Zumpango 1,245.20 cubic meters treated annually on average in the State
Peace and public safety	Homicides per 100,000 inhabitants	**1/20** 39.88 homicides per 100,000 inhabitants in Zumpango 18.35 homicides per 100,000 inhabitants in the State

Rankings are used in the computational programme for selecting the indicators that are going to be displayed for each dimension, i.e. indicators that are lagging the most in each dimension in terms of current value, progress, and gender or group gaps. In addition to showing the ranking (1-20) for each indicator, the programme's output displays the indicator value for the region and compares it to the state averages.

In some cases, there are no underperforming indicators for a particular dimension. In such cases, the indicator with the lowest ranking is displayed. For example: *"Although none of the indicators in this dimension is particularly lagging in this region,* *the female unemployment rate is the lowest ranking indicator in the economic dimension"*.

Thus, each region will end up with a systematic and summarized diagnostic that highlights regional particularities in the data for every dimension. As previously described, the results displayed in Table 1 are presented at the beginning of the regional workshops as detonating points for the discussion.

Regional Workshops: Collective Exercise

Regional workshops for the region of Zumpango were conducted virtually with approximately 30 local actors from different sectors (academia, private sector, civil society, local government officials). After the quantitative results were presented, participants were divided into four topical roundtables (social, economic, environmental, and peace and safety). Each group discussed and developed a list of up to three priority local problems in terms of two questions:

- How much does the problem affect all the municipalities in the region?
- How severe are its impacts on people and communities?

A list of 12 problems was then developed (displayed in Table 2). According to the voting mechanism described in the brief, the aggravation matrix resulted in the following:

Table 2. Aggravation matrix results for Zumpango, State of Mexico

	1	2	3	4	5	6	7	8	9	10	11	12	Mean
1. High levels of school dropouts in secondary and higher education		1.2	3.4	4.6	1.4	3	2.8	1.5	0.9	1	1.5	0.7	0.18
2. Health services are insufficient and inadequate	1.4		2	2.5	2.3	1	2.1	1.8	1.1	1.5	1.9	1.8	0.16
3. Educational services are of low quality, particularly those at the basic level	4.9	1.2		3.2	1.8	2.7	1.4	2	0.8	1.3	1.3	1.6	0.18
4. Growing scarcity of water in the region	5.1	2.4	2.8		2.2	3.4	2	1.5	0.8	1	1.2	1.1	**0.20**
5. Impunity and corruption in the justice administration institutions of the region	2.1	1.9	1.8	2.2		2.1	1.2	4.3	1.5	1.4	2.1	2	0.19
6. Shortage of jobs	3.7	1.5	1.7	3.7	2.1		4.5	2.8	1	0.8	1.2	0.5	**0.20**
7. Loss of employment due to the pandemic	4.3	2.9	1.7	3.7	1.6	6.1		2.3	1.1	1	1.1	1.2	**0.22**
8. Corruption in municipal services and procedures (to start and operate a business) in the region	1.5	2	1.7	2	4.1	4.5	2.6		1.4	0.9	1.8	2.2	**0.20**
9. High prevalence of alcoholism and drug addiction among adolescents	1.1	1.5	1.2	0.7	1.5	1.1	1.5	2.2		1.8	2.8	1.9	0.14
10. No separation of solid waste by homes and businesses (formal and informal)	1.1	1.1	1.4	0.7	1.5	1.2	1	1.8	2.7		4	5.7	0.18
11. High levels of environmental contamination related to the open-air channels that bring sewage and garbage from the big cities	1.1	1.7	0.6	0.6	1.5	0.7	1	1.9	3.6	3.8		2.8	0.16
12. High levels of solid waste on the streets and in public spaces, coming from the homes and businesses (formal and informal)	1.3	1.6	1.5	0.8	1.2	0.9	0.9	1.5	2.2	5.4	4.5		0.18

Top rated regional priorities are highlighted in blue in Table 2. These priorities include shortages of jobs in the region, further loss of employment due to the pandemic, scarcity of water in the region for personal, business, and industrial use, and corruption in municipal services and procedures.

As discussed in the brief, these findings are the trigger points for policy recommendations focused towards investments on wastewater treatment and better management of water resources ensuring the creation of jobs in the regions with public investment in infrastructure. Policy implications of these recommendations require the analysis of current government plans and existing policies on those topics and the way in which those policies are integral and interconnected.

Endnotes

1   Jesús Pacheco is a Human and Sustainable Development Specialist at the UNDP Mexico CO, email: jesus.pacheco@undp.org; Cynthia Martínez is the National Officer for Social and Economic Development at the UNDP Mexico CO, email: cynthia.martinez@undp.org.
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6   **Other national data sources:** Economic Census 2019 (INEGI), Inter-census National Survey 2015 (INEGI), Official Poverty Measurement 2020 (CONEVAL), Criminal Incidence Data (SENSP), National Water Commission Open Statistics (CONAGUA).
    Other state-level data sources: Basic Economic Statistics shared by the Institute of Geographical, Statistical and Cadastral Information and Research of the State of Mexico (IGECEM) and the Superior Audit Institution of the State of Mexico

7   Even though most of the data sources were census data, some extended questionnaires were implemented on population samples.

8   Saunders, T. and G. Mulgan (2017). Governing with Collective Intelligence. Nesta Organization. Available in: https://media.nesta.org.uk/documents/governing_with_collective_intelligence.pdf The authors define 'collective intelligence' as the capacity acquired by large groups to think and act in a way in which the outcomes is better than the sum of its parts.

9   For example: Castañeda, G., Chávez-Juárez F. and O. Guerrero (2018). How do governments determine policy priorities? Studying development strategies through spillover networks. *Journal of Economic Behavior & Organization*, Volume 154, 2018.