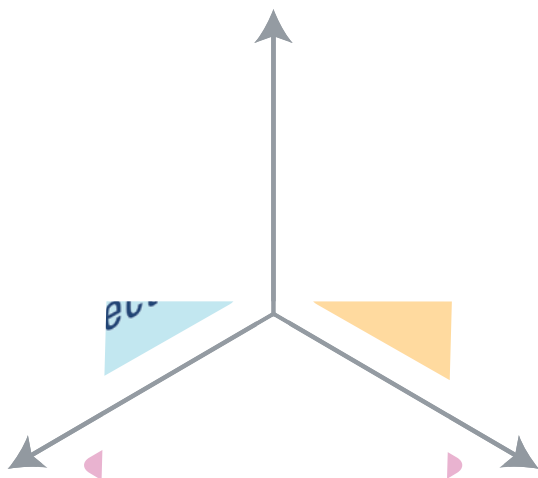


2.1 Ways of looking at challenges



A challenge can be looked at by the level at which it is typically addressed, by the reason to label it a problem worth paying attention to,⁽¹⁾ or by the complexity of the underlying problem. Additional dimensions of a challenge can include the time horizon (e.g., effects of health and social services on experiences and outcomes can often be evaluated over weeks and months, whereas the effects of climate action are modeled over decades and centuries) and stakeholder complexity (e.g., some challenges can be discussed with a well-organized peak association of stakeholders, while others require engaging with a large number of differently sized and resourced groups, including civil-society groups).

A challenge can also be expressed negatively (as a problem) or positively (as a goal or strength to be built upon). The Sustainable Development Goals and the strengths-based approaches often advocated by Indigenous peoples are examples of the latter.

The label used to describe a challenge can appear neutral to some and politicized by others. For example, words like ‘sustainable’ have been used in countries like Brazil both by those seeking to preserve the Amazon rainforest and by those seeking to open it up for logging (under the label of ‘sustainable forestry’).

Level (and sector) at which a challenge is typically addressed	Domestic sectoral	<ul style="list-style-type: none"> Health systems failing to improve health outcomes and care experiences Schools struggling with virtual instruction Declining living standards
	Domestic cross-sectoral	<ul style="list-style-type: none"> Antimicrobial resistance Gender-based violence Growing levels of inequality Lack of trust in institutions Missed targets for the Sustainable Development Goals
	Global (or regional) coordination	<ul style="list-style-type: none"> Inequitable patterns in COVID-19 vaccination Climate change

Reason to label a challenge a problem worth paying attention to	Values	“This problem does not reflect who we are as a society”
	Past	“This problem is getting much worse”
	Other groups within jurisdiction	“This group is doing much worse than any other”
	Other jurisdictions	“This country is doing much worse than others like it”
	Other framing	“This is not an issue of insufficient numbers or an inequitable distribution of workers, but a problem of mis-aligned financial incentives”

Complexity of the underlying problem	Simple	Cause and effect can be easily identified and the solution can involve a single action
	Complicated	Causes can be identified and the solution can involve rules and processes
	Complex	Some causes can be identified, others are hidden, and some may be consequences of other causes, and the solution is multifaceted and may need to be adjusted as it is implemented
	'Complexity cubed' (or wicked)*	Causes are even more complex because symptoms can become causes and because feedback loops operate, so solutions are highly context specific, and wrong or mistimed solutions can make the problem worse

* Some commissioners questioned the value of distinguishing degrees of complexity and using the label 'wicked' that has sometimes been attached to problems of significant complexity. Here we use the term 'complexity cubed' to capture the greater degree of complexity and note that some refer to such problems as wicked. One commissioner observed that complexity often manifests itself as a balancing of trade-offs in outcomes across sectors (e.g., an intervention may improve educational outcomes and worsen health outcomes) and a need for appropriate sequencing of interventions. A second commissioner observed that others have called such challenges 'chaotic,' and that the chaotic nature of these challenges can mean that what you learned from solutions tried yesterday may not work today.(2)

Government policymaker, Soledad Quiroz Valenzuela

Government science advisor contributing her national experiences to regional and global efforts to improve the quality of government scientific advice

Some of my fellow commissioners are focused on improving on what's already in place, but in many countries in Latin America, we don't yet have the key building blocks in place to use evidence to address societal challenges. Some governments don't have advisory bodies, so we need to start by setting them up. Most governments don't have staff who've been trained in how to use evidence routinely in their work. I don't think Latin America is alone in this regard. In my role as the vice-president for policy with the International Network for Government Science Advice (INGSA), I hear similar descriptions from colleagues in other regions. Networks like INGSA can play a key role in showing the relevance of an evidence-support system that works for their context.

