Part one: How to analyze environmental states

Chapter 1: The crucial role of problem-framing

The conceptual framework behind environmental states

Environmental states that seek to justify their interventions use a number of rhetorical techniques to describe what they deem to be "problems." They selectively emphasize particular aspects of environmental issues while also downplaying their complexity. We need to understand the forces at work during this framing process. We also need to remember that states will not take action on depleting resources or pollution, or implement particular solutions, just because the problems manifest themselves. Environmental states become inverted not because their interventions are too pushy, but because they wield ingenious forms of logic to trick societies into accepting their proposed solutions.

1. Who destroyed Malaysia's forests?

In the summer of 1987, a ten-year-old British boy wrote the following letter to Malaysian prime minister Mahathir bin Mohamad:

I am ten years old and when I am older I hope to study animals in the tropical rainforests. But if you let the lumber companies carry on there will not be any left. And millions of animals will die. Do you think that is right just so one rich man gets another million pounds or more. I think it is disgraceful.

Mahathir replied:

It is disgraceful that you should be used by adults for the purpose of trying to shame us because of our extraction of timber from our forests. (...) it is not a question of one rich man making a million pounds. Every tree that is extracted creates jobs for at least ten poor men who support probably ten wives and thirty children. In addition the rich man pays 40% in income tax. Without this rich man not only will the Government get no tax but there will be no logging and numerous people will be jobless. (...)

The prime minister continued:

The timber industry helps hundreds of thousands of poor people in Malaysia. Are they supposed to remain poor because you want to study tropical animals? Is your study more important than filling the empty stomachs of poor people? Are Malaysians expected to lose millions of pounds so that you can study animals? (Institut Analisa Sosial 1989)

Here we see participants in a debate about the same phenomenon, deforestation in Malaysia, present an assortment of arguments to support opposing positions. The boy and Mahathir both present valid arguments, and there is no scientific way to determine which of them is "right." Rhetorically, however, they pass right by each other without establishing genuine dialogue. The boy raises the unequal distribution of wealth in Malaysia, among other issues. Mahathir counters by legitimizing his country's forest policy, highlighting inequality between developed and developing countries. He also brings up Malaysia's struggle with overpopulation.

This is what we call "framing": taking a complex situation and selectively positioning one aspect of it as central. Whether done consciously or unconsciously, framing is a powerful technique that can determine what information matters in defining and solving a problem, and what is discarded as irrelevant.

As the debate about Malaysia’s forests shows, environmental issues are inherently multifaceted. It is both the social context and the state that determine which facets are essential and which can be safely ignored. The social context and the state also determine which information is worthy of attention. Situations that involve a range of ostensibly valid facts leave a great deal of room for interpretation. In such cases, it is impossible to pinpoint one scientifically correct interpretation. Just as important, giving the participants in such a debate more information on which to base their arguments will not bring their positions closer together. After all, they are not necessarily contesting the objective facts of the case. Their argument is really about the underlying situation: who profits, and who stands to gain or lose if things change. Unsurprisingly, each stakeholder takes advantage of any ambiguities to interpret the situation in a way that suits them. "Framing" is what stakeholders do in an attempt to win this tug-of-war. Policy debates about the legitimacy of state interventions are invariably maelstroms of contesting discourses made up of framings.

Environmental problems lend themselves particularly well to interpretation, making them prime candidates for framing. Why are environmental issues so easily interpreted in different ways? Because the issues themselves are vague and complex. According to geographer Piers Blaikie, there are three major sources of uncertainty in debates on environmental deterioration (Blaikie 1985). Firstly, it is difficult to obtain data that accurately represents environmental degradation over a long period. Before we can talk about deforestation, for example, we have to agree on a definition of "forest" so we can measure how fast woodlands are disappearing. The second source of uncertainty is the importance of human factors. We can try to analyze how interactions between people and nature cause environmental degradation, but it is tough to trace anything back to human action conclusively. Thirdly, even experts tend to disagree about whether particular changes in the environment call for intervention.

Most environmental conundrums come loaded with uncertainties. We have to understand that just gathering more data will not bring us closer to solutions. What we need is to change the way people view the existing data. We should also keep in mind that ongoing uncertainty increases the authority of governments, who have the means to call upon a range of experts to bolster their positions. Uncertainty is a fertile breeding ground for environmental states.

We will see in chapter 9 that governments can also use scientific uncertainty to justify doing nothing at all. For some, the uncertainties and ambiguities inherent in environmental problems are useful political tools. Conventional research approaches to environmental degradation celebrate both hard evidence and policymaking based on vast amounts of data and a thorough understanding of issues. Knowing that uncertainty plays such an active role in policy development should prompt us to reconsider such approaches.

2. How uncertainties lurk in Himalayan forests

How do societies change when environmental issues become less uncertain? Michael Thompson's work provides us with important clues. In the Himalaya mountain range, which covers most of Nepal and Bhutan, deforestation has been an increasingly acute problem since the late 19th century. For a long time, conventional theories held that as the population of Nepal expanded, farmers were driven from the valleys onto formerly pristine mountain slopes. As they cleared the forests there, landslides and floods became common. The effects of these disasters on Nepal’s rivers caused mounting damage downstream, as far away as countries like Bangladesh.

Most experts agreed that the natural environment of the Himalayas was in a downward spiral. However, there was a complication: no one knew how severe the deterioration actually was. Another point of agreement in the research community was the root causes of the deterioration of Himalayan forests—population growth, and the deforestation required to support this increasing number of people. There was particularly intense debate on the question of whether local people were taking firewood from forests at a rate that exceeded the forests' ability to recover. Researchers and consultants came up with a wide range of estimates. In the mid-1980s, the United Nations Environment Programme (UNEP) finally tasked anthropologist Michael Thompson and his colleagues with synthesizing all existing information about the threats to Himalayan forest ecosystems and pinpointing a definitive path toward solutions.

The results were striking. Thompson found that even researchers who studied the Himalayas did not use uniform definitions of "forest" and "deforestation." Estimates of firewood consumption per local inhabitant ranged from 60 to 4,000 kilograms per year, depending on who was providing the estimate—an astounding 67-fold difference. When Thompson looked at estimates of maximum sustainable harvest (sustainable yield), he found a 150-fold difference between the lower and higher estimates.

Why is it so hard to put a number on firewood consumption? Should this value not be more measurable than, for example, the earth's remaining oil reserves, which we can only estimate? If we do another study on the use of firewood in the Himalayas, we will only add to the pile of existing—and wildly disparate—estimates. Thompson and his colleagues came to an exciting conclusion. "Far from the problem containing some uncertainty—a common enough situation in applied science—it is the uncertainty that contains the problem" (Thompson and Warburton 1985, p. 116).

The traditional academic approach to problem-solving is to add more, and more rigorous, research until uncertain information can be crystallized into one seemingly objective solution. Thompson's team tried something different: they considered the uncertainties and apparent mistakes they found as data. To explain the unusually large number of "errors" they saw in the literature on deforestation in the Himalayas, the researchers decided to look at the institutional sources that had produced the data uncertainties. Thompson and his colleagues looked beyond the Himalayan biosphere and turned their attention to a different kind of environment: the societal "ecosystem" of organizations that have a stake in the Himalayas' environmental troubles, from governments to aid groups and NGOs. The researchers asked the following question: “[QUOTE]” (Thompson and Warburton 1985, p. 116)

The definition of a problem also depends on the situation of whoever is doing the defining. By "situation," I mean not just the physical relationship between an individual and nature, but also that individual’s social and institutional environment. Consider, for a moment, how difficult it is to provide an estimate of firewood consumption. The studies that produce these estimates rely on surveys collected by researchers who ask villagers how much firewood they use.

This question is far less straightforward than it sounds. For one, villagers will give radically different answers depending on the season, their location, their family composition, and what unit is used to measure amounts of wood. A villager's firewood needs are always fluctuating. Moreover, people use more firewood when it is easy to access, but when obtaining firewood becomes onerous, consumption decreases. Most villagers also do not keep close track of how much wood they use. Converting amounts from locally used weights and measures can be difficult as well. That makes "How many kilograms of wood do you gather?" an incredibly challenging question. On top of that, villagers who live near protected state-owned forests may be reluctant to tell researchers that they gather firewood from these woods without permission, as this is an illegal act. In short, when villagers are interviewed by outside researchers, their primary concern is not to be as truthful as possible. The data that villagers provide is dependent on the relationship between these individuals and the person they are addressing.

The villagers may offer up factually incorrect information from time to time, but we can be sure about one thing: the resulting data reflects the situations and positions of the individuals who provide it. In this light, Thompson and his colleagues argue that we have to distinguish between two kinds of data with different meanings—factually accurate data and institutionally accurate data.

Many outside entities, from governments to international organizations, involve themselves in the Himalayas. When they do so, they cherry-pick data that aligns with their purposes, painting and disseminating a specific picture of the seriousness and extent of the region’s environmental problems. Inevitably, this image is one in which the entity in question is an invaluable part of the solution. The research by Thompson et al. shows that even organizations that explicitly present themselves as problem-solvers, like aid groups, can make themselves into an obstacle. The word "problem" can function as something of a distraction, as it immediately draws attention to the local people who are supposedly suffering the effects. This obscures the fact that the "problem-solvers" themselves benefit from an issue’s continuing existence.

Thompson and his colleagues showed us the importance of "studying the studies.” They did not ask, what are the facts? Instead, they asked: What do the stakeholders in the "problem" want the facts to be?

Sometimes, researchers manage to all but eradicate uncertainty and reach a scientific consensus around an issue. Even then, however, individuals will still interpret and give meaning to that issue in different ways depending on their social, geographical, and historical circumstances. In short, the nature of the problem will depend on which definition is chosen or discarded. This is important because any "solution" is bound to create further difficulties for some.

3. Basic patterns of framing: five ways to demarcate a problem

Governments make policies every day, even when the information they have available is encumbered by uncertainties. That means they must have some way of grasping a situation, legitimizing a particular set of "facts," and ensuring debates converge on one particular solution. To explain how this mechanism works, I will analyze five types of "framing" that stakeholders in debates use to create a particular order out of uncertainty and to delineate appropriate ways of looking at reality:

(1) Framing time and progression (when did the problem start?)

(2) Framing scale (where is the problem happening?)

(3) Framing solutions (how should we solve the problem?)

(4) Framing causes (who is to blame for the problem?)

(5) Framing priorities and costs (should we try to solve the problem at all?)

Such framings can be highly seductive precisely because they sound neutral, divorced from questions about who needs to take charge and who will shoulder any burden. Let us take a closer look at the five types of framing.

(1) Framing time and progression

When we have to decide whether some conclusion about current or future events is correct, we often turn to past events for justification. For example, we tend to differentiate, mostly unconsciously, between problems that are new and conundrums that have plagued us for a long time. But sometimes, we frame difficulties that go back decades as issues that have arisen only recently. In other words, it matters where we fix the starting point of a problem and how we interpret the way it has progressed from then until the present day. To define a "beginning" means sweeping under the rug anything that came before.

I heard an excellent example of this when I visited Hawaii. During the glory days of Japan's "bubble economy" in the late 1980s and early 1990s, a number of Japanese investment companies decided to build resorts in Hawaii. To do so, they cut down all trees in the vicinity. When environmental groups mounted a volley of attacks, the tourism industry came up with a fascinating counterargument. They claimed that the areas under development had been deforested long before investment companies arrived on the scene. According to the stories of residents and some old photos, Hawaii in the 1920s and 1930s did look desolate, with mountains almost denuded of their once-lush cover of trees. While the causes behind the devastation of Hawaii's forests make for interesting research in and of themselves, what concerns me here is how the historical fact of this pre-existing deforestation was exploited. We often wield information about the past use of resources to justify or criticize how those resources are used today. In the case of the Hawaiian resorts, developers used the area's recent history as a bare stretch of mountainside to claim that cutting down part of the revitalized forest would not disrupt local ecosystems.

We saw a similar example at the beginning of this chapter, when Malaysian prime minister Mahathir weaponized past environmental destruction in the context of British colonial policies to justify his country's present-day forestry policy. This kind of framing involves delimiting an issue in time, then ignoring everything that came before the cut-off point to focus only on what happened at that moment and after. Framing problems in time is done so often, and so casually, that we rarely think to wonder according to which criteria the "start" of any predicament was identified.

(2) Framing scale

Whether we define a particular problem as a global or local issue determines who is a stakeholder and who is responsible for what. An issue becomes "global" when its impact is global in scope, and any solutions will require the involvement of the international community. At that point, the state and that same international community are expected to take responsibility. By contrast, when we decide a situation is "local," we allocate responsibility to regional authorities and the population of one country. But this process of designating a problem as global or local is hardly automatic.

We have become more inclined to define issues as "global" since the Club of Rome published *Limits to Growth* in 1972 (Meadows et al., 1972). So-called "global helpers" like the United Nations, the World Bank, and international research institutions are playing more and more important roles, especially as we increasingly create global models using information gleaned from computers and satellites. However, when we cast a problem as "global," we increase the risk of overlooking changes on the national or local levels. This can lead us to take an oversimplified and stereotypical approach to local diversity, and enforce approaches that ignore the realities lived by people on the ground. This issue is exemplified by, for example, national demographic statistics. These have their uses, but they also tell us nothing about how individual households decide whether to have children.

The reverse can also happen: a national challenge can be recast as a "local" issue because it happened to emerge in a particular location. When parts of Africa were colonized, colonial governments appropriated the most fertile lands, leaving local farmers with only those plots that were prone to erosion. Today, this naturally occurring soil erosion is presented as a local problem caused by unsuitable farming practices. This framing completely bypasses any political analysis of the land distribution that created the difficulties in the first place (Blaikie 1985).

To spot this type of framing, we need to focus not on where erosion or deforestation occurs, but where it does not. Soil degradation or deforestation are often framed as local issues. In reality, they can often be traced back to outside factors controlled by central governments, from trade in commodities to national tax systems and land ownership. When we ignore these root causes, we end up misconstruing problems by only paying attention to the local level.

(3) Framing solutions

Framing solutions takes place when an organization that would benefit from the implementation of a particular solution tries to steer the debate toward its preferred response. The development of science and technology has fueled an explosive rise in the use of this type of framing. Environmental monitoring methods are a good example. Thanks to scientific and technological progress, technical solutions to air and water pollution are increasingly within the realm of possibility. However, the fact that a particular technology can solve an environmental problem in theory does not mean it can do so in practice. Science and technology should reduce uncertainty, but in some cases, they have had the opposite effect.

Let us look at an example. Table 1-1 shows estimates from various sources about how much forest was destroyed by the massive fires that devastated Indonesia's woodlands between 1997 and 1998 (Harwell 2000). The discrepancies are striking even between estimates that cover the same period. The 96,000 ha proposed by the Ministry of Forestry becomes 263,991 ha when the source is the Ministry of Environment. Meanwhile, an NGO suggested that 1,714,000 ha had been destroyed.

These numbers were not even based on agreed-upon definitions of "forest" and "burned area." Interestingly, however, the very ambiguity they created also gave people an opening to force action on the issue.

Table 1-1. Estimates of amount of burned area

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Organization | Type of organization | Estimate (ha) | Period | Area |
| Ministry of Forestry | National government | 96,000 | July-October 1997 | All of Indonesia |
| Ministry of Environment | National government | 263,991 | July-December 1997 | All of Indonesia |
| Indonesian Forum for Environment | NGO | 1,714,000 | July-October 1997 | All of Indonesia |
| Forest Fire Prevention Project | External aid organization (EU) | 2,300,000 | July-October 1997 | Southern Sumatra |
| Integrated Forest Fire Management Project | External aid organization (Germany) | 4,500,000 | July 1997-May 1998 | Eastern Kalimantan |
| National University of Singapore (CRISP) | Research center | 8,170,000 | July 1997-May 1998 | Kalimantan and Sumatra |

Source: Data sourced and translated by author from Harwell (2000, p. 309).

Geographic Information System (GIS) technology allows for the integrated use of spatial information. By the time of the 1997-1998 fire crisis in Indonesia, GIS was accessible not just to governments and large corporations but also to the general public, including NGOs. This meant that anyone had the means to closely examine the countless forest fires. From this heightened scrutiny, a vital piece of information emerged: most fires seemed to start on government-owned lands and plantations. This discovery made it much harder for the government to blame its usual suspects, namely, slash-and-burn farmers. Notably, as the data in our table indicates, the supposedly objective visual data gleaned from GIS technology did not help everyone agree on a number that expressed the true extent of the problem. However, the disparate estimates did spark a controversy over who was responsible for the fires. It put more of the established "truth" up for debate (Harwell 2000).

The government and landowners had long suppressed the knowledge that the fires originated not in fields tended by villagers, but on plantations. Armed with these new facts, stakeholders could reinterpret the problem and embark on a fresh round of faultfinding. For stakeholders who profited from plantations, any "solution" that would involve a crackdown on these businesses was inconvenient indeed. Hounded by NGOs wielding GIS data, the Indonesian government embarked on a strategy to defang the critiques and divert blame. It manipulated the definitions of "forest" and "burned," emphasized the unreliable nature of GIS technology, and highlighted that most plantation companies were foreign-owned.

Here, technological intervention further increased the range of interpretations instead of pointing stakeholders to a singular truth. The fires may have been purely natural phenomena, but those who observed them do so through glasses tinted by their interests. The eyewitness accounts of farmers who experienced fires could not even be expressed in area estimates (I explore related topics in chapter 8). In situations like these, stakeholders’ top priority is not to use technology to uncover the truth. It is to protect their political positions and create an environment in which they can implement their preferred solutions. For wildfires, potential solutions include afforestation projects, fire prevention training, smoke control, firefighting, regulations on land use, and so on.

Once a technological solution is shown to exist, the political aspects of an issue are neutralized; the solution is implemented as if it is painless and harmless. In this way, technological interventions end up perpetuating and reinforcing the structures that created the difficulties in the first place. The result is superficial "solutions" that paper over problems, making them likely to reoccur. That is the cost of rushing to implement solutions instead of questioning true causes.

(4) Framing causes

Framing the cause of a problem means designating one particular aspect of it as the root cause. This type of framing is inextricably linked to the framing of solutions. As we already discussed, identifying the cause also means assigning responsibility, determining who has to provide a solution, and delimiting the resources required. However, what sets the framing of causes apart from the framing of solutions is that the former does not necessarily advocate for one preferred solution.

Natural disasters, for example, are ripe for cause-framing. Consider the massive flooding that struck southern Thailand in January 1988. Water and mudslides killed over 350 people and destroyed more than 50,000 homes. To quell growing criticism of excessive deforestation in Thailand, the Chatichai government proclaimed a total ban on commercial logging on January 17, 1989. The ban represented a de facto death sentence for almost a century of forestry policy in the country.

The caricature shown here was published shortly after the floods. It shows government officials and timber contractors pointing the finger at each other, over and over, until they assign final blame for the disaster to the small, powerless figure of a villager. This is the most common confrontational framing that occurs after natural disasters: to assign blame primarily to natural causes or to human intervention.

Figure 1-1. Who destroyed the forests?



Source: Daily News, 15 December 1988.

Why is this question so important? If the situation is due to human intervention, responsibility can be transferred to some other person or group. If the problem is natural, however, the only solution can be a different kind of natural phenomenon. Since the late 1990s, stakeholders in global warming have been locked in fierce debates about how human activities affect our changing climate (Fujikura 2011). In 2007, the Intergovernmental Panel on Climate Change (IPCC) stated in its Fourth Assessment Report that it was 90% likely that humans were causing climate change. By the time of the Fifth Assessment Report in 2013, that percentage had risen to 95%. There are reasons why skepticism about the human causes behind climate change persists even as climatologists consolidate their views. Climate change is a complex process that occurs across thousands, even tens of thousands of years. When asked to form an opinion on the causes of something so vast, people tend to make snap judgments based on their own experiences. The general public is more easily swayed by simple, intuitive explanations than complicated science, and this process always favors skepticism (Koerth-Baker 2019).

Rather than debating the rights or wrongs of climate skepticism, I want to take a look at what shapes these discussions. According to political scientist Deborah Stone, attempts to identify the cause of a problem are the cornerstone of any policy debate. Stone identified the basic patterns of these "causal stories" (Table 1 -2). We can adapt Stone's causal theories to analyze environmental issues.

First, "actions" that bring about a specific result can be divided into purposeful and unguided actions. The consequences can be divided into intended and unintended consequences. You can see the interplay of these two factors in Table 1-2. Note that the four types of stories about causality that we see in the table are not mutually exclusive.

Table 1-2. Types of causal theories

|  |  |  |
| --- | --- | --- |
| Actions | Intended consequences | Unintended consequences |
| Unguided | 1. Mechanical cause
 | 1. Accidental cause
 |
| Purposeful | 1. Intentional cause
 | 1. Inadvertent cause
 |

Source: Stone (2002, p. 181)

Let us start with type (2), which is the easiest to understand. Stories that point to "accidental causes" attribute the occurrence of events to accidental factors like nature or divine will. These stories are typically told about natural disasters. If we wanted to explain the Indonesian forest fires in these terms, we would argue that the fires were purely natural phenomena and that nothing could be done to prevent them.

Let us turn to quadrant (3), "intentional causes." In this type of story, an actor who has a purpose in mind deliberately causes an event, expecting a particular outcome. If the event is perceived as unfavorable, the actor will be held responsible for their actions. We will also say that their deeds resulted in "victims." In other words, type (3) represents a kind of framing that presupposes rational behavior on the part of an actor. An example would be to say that forest fires in Indonesia were deliberately set by farmers who were angry at plantation contractors taking their land. In this framing, we are clearly laying blame with the farmers.

Causal stories of type (1) involve intermediaries. The actions of these intermediaries are not imbued with purpose in and of themselves. However, the intermediaries were designed to produce certain consequences. In these stories, the results fall within the realm of expectation. Only the lack of purpose of the intermediary sets these stories apart from those of type (3). Consider how we try to assign liability when a car with structural defects causes an accident. In some such cases, the driver could have predicted that the car's deficiencies would eventually lead to an accident, even though the driver had no actual intent to do so. This is what we call willful negligence.

Finally, we have stories about "inadvertent causes" in quadrant (4). These involve secondary causes: unforeseen results and side effects of purposeful actions, sudden complications caused by carelessness, and so on. It is very common for well-implemented projects to result in unexpected damage, even outside the realm of environmental issues, which are notoriously prone to uncertainty. Stories of type (4) often involve an actor who is unaware. In the case of our Indonesian forest fires, an explanation of type (4) would be that wildfires are the fault of farmers who are ignorant of the environmental damage caused by their "primitive" slash-and-burn methods. This common line of reasoning blames the victims in a roundabout way: if only the farmers were more familiar with modern farming methods, the problem would never have happened. Implicitly, this rhetoric also strengthens the position of "experts."

Stone asserts that policy debates are battles between stakeholders to situate causality somewhere in one of the four types of stories, depending on their interests. Let us look at another example. After the accident at the Fukushima Daiichi nuclear plant that accompanied the 2011 Great East Japan Earthquake, much discussion focused on the human-made aspects of the disaster. One common causal story posited that while the nuclear accident was triggered by a natural phenomenon, namely a tsunami, the impact of the catastrophe was magnified by errors in the early response. The media wrote that this so-called natural disaster was human-made. This framing was a clear attempt to shift causality from quadrant (2) to one of the quadrants that involve more human agency.

Keep in mind that while the expression "natural disaster" sounds like it implies a causal judgment, this is not necessarily the case. When a government ascribes an accident to an act of nature, it effectively limits its involvement to supporting post-disaster recovery. This is a way for governments to stifle any discussion about their own potential liability. A government that successfully attributes a disaster to natural causes will not have to account for damage that occurred as a result of its failure to take proper precautions. Here we see that the way we explain a disaster can even increase the risk of more tragedies in the future. If we never uncover the underlying causes of disasters, we can only repeat our mistakes.

(5) Framing priorities and costs

Framing priorities involves creating different frameworks to explain which of the earth's many challenges should be solved first. When we discuss the wide range of complex global issues that exist, we tend to focus on what "should" be done while ignoring questions about costs. That means we create massive uncertainty about how much time and energy we should invest in any one problem; for example, protecting the environment. There is plenty of room for an array of framings here.

To give one example, environmentalists are increasingly pessimistic about the state of our environment. However, a statistician named Bjorn Lomborg claims that a high number of environmental indicators are actually improving. In his 2001 book *The Skeptical Environmentalist*, Lomborg claimed that humanity is thriving as never before based on all possible indicators, from life expectancy and access to food to risk of hunger. Stating that "urban air pollution in London has decreased by more than 90 percent since 1930" (Lomborg 2001, 11), Lomborg stressed how many lives these improvements have saved and how much they have contributed to population health. He also claimed that water quality is improving overall, and that pessimists make exaggerated claims to the contrary to justify the activities of environmental groups.

Lomborg does not deny that risks and problems do exist. What he argues is that the funds needed to solve these environmental difficulties would be better spent on other issues that we have a better chance of fixing. Lomborg calculates that if countries that ratified the Kyoto Protocol redirected their annual budgets for treaty compliance elsewhere, they could, for example, save two million lives that are lost each year to the effects of unsanitary water. Unsurprisingly, these claims sparked an outcry. Environmental scientists, in particular, lambasted the factual inaccuracies in Lomborg's book.

What this example shows is that the importance of environmental problems depends on how important we think other issues are. This is why central governments, who have almost total control over a host of areas from welfare and security to diplomacy and defense, have such outsized power to frame a country's priorities. Within governments, much of that power lies with offices affiliated with the Ministry of Finance. It is these offices that decide which policies take precedence and allocate budgets accordingly.

That is why central governments, which should be able to see the big picture, often drag their feet when it comes to solving environmental issues, thereby increasing the damage done in the process. Governments argue that while they understand the severity of this or that crisis, there are still more urgent issues that need attention first. In developing countries, this often happens when people from politically insignificant rural areas complain about "local" struggles like soil degradation or health problems brought on by chemical fertilizers.

In other words, governments do not prioritize challenges based on clear-cut, scientifically sound calculations. Even issues that come with quantifiable costs will only be prioritized if doing so aligns with the framing used by officials—a framing that, in turn, is influenced by the values of the government. This is why the broader public needs to take a keen interest in who gets to decide which issues are more important and what standards they use. Merely relying on experts to do their work is not enough.

We have taken a closer look at five ways of framing environmental problems. Ostensibly, the adversary we face in this realm is nature, not other people. This leads us to assume that we can apply solutions from the natural sciences, and that this reliance on “objective” science will keep political concerns from seeping into policymaking. However, areas that appear to be "natural" are, in fact, particularly likely to invite political intervention and become the site of fierce battles between interests. Notably, the private sector is as likely as the state to engage in framing to assert the legitimacy of its actions. It plays a decisive role in determining which of the myriad difficulties any country is facing at any time even become topics for political discussion.

4. Framing and environmental states

How do we distribute attention?

In the previous section, we took a closer look at how one issue—here, logging in tropical forests—can be framed in a range of ways. Now, we take one more step back to grasp how phenomena that become the target of "framing" become problematized or not.

Political scientist Anthony Downs wrote the seminal article on how public attention for problems, including ecological issues, ebbs and flows: “Up and Down with Ecology: The Issue-Attention Cycle” (Downs 1972). Downs argues that we tend to go through an "issue-attention cycle" comprising five stages: (1) the pre-problem stage, (2) alarmed discovery and euphoric enthusiasm, (3) realizing the cost of significant progress, (4) gradual decline of intense public interest, and (5) the post-problem stage. Many social issues pass through this cycle only to disappear from public interest.

There are, in fact, two stages in which the topic is off the table: the pre-problem stage and the post-problem stage. However, these stages are qualitatively different. Once an issue is in the glare of the spotlights, a range of civil and governmental organizations may be set up to tackle it. These organizations, which did not exist in the pre-problem stage, generally survive throughout the post-problem stage. Once set up, such environmental agencies can occasionally remind the public that whatever problem the agency is in charge of is still ongoing. One effect of this is that a problem may receive more attention than its present-day severity really warrants. Issues that are in the post-problem stage, even when they are clearly less acute than they used to be, are more likely to come to public attention again than situations that never received any attention in the first place. This phenomenon is one example of how environmental states tend to keep expanding.

On the other end of the scale, we find challenges that fall within the purview of more than one ministry, that are difficult to squeeze into an administrative framework, or that could not be solved by forming a dedicated organization. Such issues will struggle to hold public attention and are unlikely to reach the policymaking stage.

Not every social problem passes through this cycle in the same way. According to Downs, difficulties that go through the cycle of attention quickly—in other words, issues that quickly fizzle out of public consciousness—tend to share three characteristics. One, the problem primarily affects only a minority of people. Most of the populace do not suffer direct harm, and there are not enough victims to keep up a sustained effort at awareness-raising. Two, either most of the populace or a small number of influential people derive benefit from the damage caused by the issue. To them, any solution looks like a threat, because eliminating the root causes of the situation would require redistributing power to do away with inequality. Third, the challenge is not intrinsically exciting enough to hold public attention. A problem needs to stay in the news cycle to enjoy public awareness. However, the media cannot afford to bore readers or audiences with tedious topics for a long time.

Stakeholders frame problems in a range of ways to get the right support from the right people at the right time. Governments that intervene in citizens' lives with subsidies, propaganda, regulation, and taxes need to make skillful use of framing to justify their policies. But people lead busy lives, and their interests are fickle. Keeping the public focused on a particular topic is hard. To keep its environmental policies sustainable, the government needs to ensure it catches and holds public attention.

How experts translate problems into framings

How does the public distribute its attention when it is unclear what the problem even is? This is where "experts" come in. These are people whom the state employs as members of investigative committees. These experts are perceived by the public as having advanced knowledge on the subject at hand. Most of them are scholars who work at universities and research institutions. For environmental difficulties, a high degree of technical knowledge is often required to understand the issues and to be able to formulate solutions. That is why experts play a particularly important role when it comes to the environment. Issues like climate change and radioactive contamination are so hard to fathom that the public cannot even understand that these are "environmental problems" unless experts explain it to them. Essentially, experts function as translators who interpret otherwise esoteric science.

This translation work can help make complex global challenges such as climate change feel like local concerns. Without such translations, people cannot understand what global warming and climate change mean for them as individuals living in particular countries. Sometimes, we also need "translators" to explain local problems in terms that clarify their global context. In the late 1980s, conflict erupted in the Malaysian state of Sarawak between local hunter-gatherers and logging companies that were encroaching on forests. Members of the Penan tribe set up blockades in an attempt to keep loggers from taking over their lands. The Penan, their lifestyle, and their relationship with nature have undergone extensive study by cultural anthropologists and other scholars. During the conflict, however, prominent environmental activists cast the Penan as mysterious people who exist in harmony with nature. Thanks to this "translation" of reality into a palatable fantasy, the Penan gained the sympathy of people around the globe, injecting new life into their struggle. This "translation" included claims that the Penan's knowledge of traditional medicinal plants was also essential to people in the West, and that this knowledge was fast disappearing under waves of modernization. Today, even the Penan themselves cite medicinal plants as a reason to protect their forests. The global framing of the problem is being reproduced on a local level (Brosius 1997).

The researchers who play such a key role as translators also have their own unique biases. They are influenced by their socio-cultural circumstances, from trends in the academic community to expectations about behavior and research outcomes on the part of organizations that fund scholarship.

Sometimes, experts insert bias into framings while trying to translate sophisticated expert knowledge into simple explanations. Experts are liable to come across as unappealing in the eyes of the general public unless they pare down the complex edges of issues and present their arguments in a simplified way. In his seminal work *An Essay on the Principle of Population*, Robert Malthus (1766-1834) proposed that population growth is exponential while growth in food production always remains linear. This argument has been massively influential throughout centuries of analysis into human societies and resources. Why? Because it is so simple. We need to express complex phenomena in uncomplicated ways if we want people to understand them. However, this also means sacrificing anything that does not straightforwardly align with our main argument.

Political scientist Murray Edelman pointed out that "[QUOTE]" (Edelman 1991). People tend to agree without question to anything that is easy to understand and aligns with their values. Edelman's point becomes even more salient when people are asked to debate environmental problems in faraway countries. This is why we have to pay special attention to the role experts play in "translating" environmental issues for the consumption of the general public, and the role that states play in using these experts.

To summarize, there are four factors that can make a particular framing more convincing: (1) the framing relies on a simple and accessible argument; (2) the framing aligns with the dominant social climate of the time; (3) the framing does not require major behavioral changes from most people, including the social elite; and (4) the framing is both difficult to scrutinize and difficult to disprove. Any framing that satisfies these conditions will seep into people's consciousness without them being aware of it, all while being imbued with a political direction. This is how framings play a key role in helping environmental states expand.

Why do environmental states prefer to focus on certain problems?

When people see a specific environmental issue, it is natural for them to immediately start thinking about what should be done to fix it.

Especially in times of disaster, pressing environmental crises must be tackled with all urgency, leaving little time for careful scientific observation of the changes that are happening. This is precisely why we should not be hung up on gathering more and newer data. We need to focus on situating the problem correctly, reconsidering what has been said or left unsaid, what could have been done but was not, and so on. What we think we should do always depends on our understanding of the situation. The more complex and multifaceted a situation is, the more different ways of looking at it will emerge. When people rush to pinpoint a solution to implement, they tend to forget about that complexity. They become vulnerable to uncritical acceptance of particular framings.

What can we do to avoid being swept up in a particular framing? We need to stop settling for the familiar question of how an issue can be explained. Instead, we need to ask ourselves why a particular topic is on the table now, and what forces are working to keep it there. A "problem" is really no more than people in different positions discovering that they have different perceptions of and interests in an issue. In this chapter, we have seen how crucial it is not only to question the reliability and validity of any data we have, but also to consider the perspectives and dynamics involved in the collection of that data. Framings both legitimize states' involvement in resources and the environment and set the stage for more of the same. In democratic countries, governments need to use effective framings to justify allocating budgets and personnel.

Invisible ideologies underlie many chronic and recurring social issues. Some of these are allowed to become part and parcel of everyday life until they cease to feel like problems at all. Once created, images are further reinforced by explanations that sound both reasonable and soothing, until everyone settles on an established interpretation of an issue. Such common understandings are very difficult to undermine. Anyone trying to do so should start not by increasing the amount of information available, but by situating the problem in different ways until people begin to accept that multiple perspectives on the topic can exist.

We have to be aware that different people experience and interpret "nature" in different ways, and that any "solutions" also have to take place within particular national and social contexts. Environmental states become inverted when they push too firmly for a particular policy option that they present as the only way forward. The influence of environmental states is only set to grow. It is up to all of us to pay close attention to how states frame problems, and expand the range of possible solutions we can imagine.