

White-Golden State: Extracting Futures in Lithium Valley

Introduction

Spencer: Welcome to LENS.cast, the podcast of UCLA's Laboratory for Environmental Narrative Strategies. In this episode, we're going to explore a plan to mine lithium, in California's Imperial Valley, for the sake of fighting climate change. There's an emerging global consensus that says fighting climate change requires building massive new energy infrastructures. And that means, ironically, that decreasing industrial nations' consumption of carbon is very likely to lead to a tremendous increase in demand for other resources. Of course, those resources have to come from somewhere. This episode is about one of the "somewheres."

Lorena: The Imperial Valley is the kind of place where industrial economies predictably turn to extract the resources they depend on. It's a marginalized place, out of sight for wealthy urban elites, and populated mostly by marginalized people: here, Indigenous tribes and Latino communities. Such places will come under tremendous pressure in the coming years as demand increases for the materials with which new, renewable energy infrastructures will be built. Historically, such places rarely benefit when industry turns its attention to them. But in Imperial, local leaders are trying to build policies and power to ensure that their communities benefit from this new investment. If they succeed, Imperial could be a model for how other communities can fight for their place in a new energy economy.

Spencer: I'm Spencer Robins. I'm a PhD student at UCLA, where I study environmental literature: how stories mediate people's relationships with the natural world. I'm also a producer for this show, the podcast of UCLA's Laboratory for Environmental Narratives Strategies.

Lorena: And I am Lorena De la Puente Burlando, I am a sociologist from Peru and currently a PhD student at UCLA's Institute of the Environment and Sustainability. My work focuses on how the energy transition is affecting mining governance in impoverished and racialized communities in mineral-rich areas.

Spencer: In this episode of LENS.cast, we speak with experts, activists, and community members about lithium, energy transition, and the Imperial Valley. We're trying to understand whether lithium in Imperial could be part of what experts call a "just transition": a shift to green energy that undoes the logic of exploitation that's led us into climate crisis, instead of repeating it.

1: Global context

Spencer: Let's start with the big picture. One of them, anyway. The Imperial Valley is being asked to play a role in an emerging global story about the climate crisis. The basic idea behind this story is that, to fight climate change, we're going to have to build things.

Lorena: To avoid catastrophic warming, industrial nations will have to drastically reduce our economy's greenhouse gas emissions. Experts have laid out how factories, cars, ships, the heating systems in our homes, even our stoves will need to be replaced by electrified alternatives. We'll need to build solar panels, wind farms, and geothermal plants; electric cars, electric buses, and electric homes; transmission lines and storage facilities. Basically, we need a whole new economy and a whole new energy infrastructure, built around renewable energy sources.

Spencer: As a step in that direction, Democrats in Congress recently passed the largest piece of climate legislation in US history: the Inflation Reduction Act, or IRA. Through the IRA the US federal government will invest billions in clean energy technology and infrastructure and will provide tax credits and other incentives for companies and consumers to adopt new energy sources.

Lorena: This energy transition—or maybe it's better to call it a new industrial revolution—would reduce carbon emissions, but it will create a tremendous demand for other resources. Because of the key role batteries will play in storing and moving energy, it will especially require what are often called “critical minerals,” like copper, cobalt, rare earths, and lithium. Thus, the demand for green energy is also driving a huge increase in demand for these materials.

Spencer: In fact, lithium and other critical minerals are now becoming matters of national concern. Politicians increasingly frame mining as a national security issue and ground for competition between superpowers.

President Biden: And when it comes to clean energy, China has spent years cornering the market on many of the materials that power the technologies that we rely on. That's why I committed us to build a clean energy supply chain stamped “Made in America...” ([3:00-4:55, official white house script](#))

Lorena: US leaders use this nationalistic approach to justify the expansion of mineral extraction within its borders, despite environmental and social risks. The goal is what's sometimes called “onshoring”: bringing mining and industry back into the US after decades spent outsourcing them to China and to mines in the Global South.

Spencer: The interesting thing is that advocates for US-based mining also make their case on environmental grounds. Thea Riofrancos, a Professor of Political Science at Providence College, calls this pair of arguments the “security-sustainability nexus”:

Thea: What I mean by the security sustainability nexus is a set of policies, but also ideological justifications, that promote bringing lithium mining or expanding lithium mining in the global north... Governments in the global north are very interested in quote-unquote ‘dominating’ these supply chains, right? ...They've been trying to encourage those companies to expand their operations within their borders... with this idea that... in terms of a kind of national interest argument that it's more secure for the US.

The sustainability argument is a little bit different, but they're often paired together. So, the sustainability argument is, it is more sustainable or ethical or responsible—I'm sort of putting quotes around these words, because I think we should probably think critically about them—but anyway, it's more sustainable, ethical and responsible for mining, for these energy transition technologies, again like lithium batteries, but also solar panels or wind turbines for the, for the mining aspects of those production networks to occur within the global north.

Spencer: The recently-passed Inflation Reduction Act illustrates her point. The law includes incentives for consumers to buy electric cars, for example, but only if the car’s battery uses lithium mined in the US or a quote “allied country.”

Lorena: So the hunt is on for extractible deposits of critical minerals like lithium, especially in the Global North. And it turns out that one of the largest potential deposits of lithium is in California, in the Imperial Valley.

Spencer: If you look at it through the security-sustainability lens, this is, arguably, a dream deposit. This lithium sits dissolved in a huge deposit of underground, superheated brine—salt water, basically—underneath the Salton Sea, at the northern end of the Imperial Valley. And these brines are already being brought to the surface by several geothermal energy plants, to produce steam and generate electricity. Several companies that operate the plants have proposed ways of pulling the lithium out before the water is pumped back down into the earth. The process would be a somewhat closed loop, and it wouldn't involve blasting open rock or evaporating huge amounts of water, like other forms of lithium extraction. The idea is that this could be a way of producing huge amounts of lithium while doing relatively little damage to the surrounding environment. Michael McKibben, a professor of geology at UC Riverside who has studied the area’s energy potential for years, explains:

Michael: So the advantage of the Salton Sea brines is you don't have to do any of the blasting or sulfuric acid digestion, and you don't have to lose a lot of brine to evaporation. The brine's already coming to the surface in the geothermal wells. It's already been processed at the surface to take the steam off, to make electricity. And then that spent steam is condensed and recombined with the brine that it came out of, and then re-injected back into the reservoir. So it's almost a closed loop system... I don't want to imply there are no environmental impacts at all, but... it's certainly the cleanest way of producing lithium that exists in the world today.

2: Local stories

Lorena: That's part of the argument advocates have made for a lithium industry at the Salton Sea: that it would help the US take over a supply chain critical for transitioning to green energy, with minimal environmental impact. But these advocates have also argued that Imperial itself stands to benefit from the new industry. Because Imperial County is, by most measures, one of the most socially and economically marginalized places in California. The county faces an 18% poverty and 16% unemployment rate, far above the national and state averages. The people here are mostly Latino, and depend on precarious work in services and, especially, agriculture. Many are undocumented and vulnerable to labor exploitation.

Spencer: It's also the site of one of the worst environmental health disasters in California. For decades the Salton Sea has been used as a sink for the Valley's agriculture industry. Runoff from the Valley's fields, filled with toxic pesticides and other chemicals, is diverted into the Sea. It's been used that way almost since it was formed: during the construction of the system of irrigation canals—1,400 miles worth—that supply Imperial's agricultural industry with water from the Colorado River. In 1905, a flood burst through one of those canals, refiling a lakebed that had been dry since the 17th century.

Traci: It did not take very long for a sense that the body of water that was now in the desert could go immediately from being a disaster of settler agriculture to actually a perfect boon for settlers... because the Salton sea was there to be used as what some folks at the time called a natural dumping basin for irrigation water.

That's Traci Brynne Voyles, Professor of Women's and Gender Studies at the University of Oklahoma. She explained how the Sea's formation ended up benefiting the white settlers working to transform the valley into farmland, even as it flooded reservation land of the Torres Martinez Desert Cahuilla Indians.

Lorena: Now the Colorado River is intensely managed to support the industrial and urban economies of the seven US states it flows through; besides that toxic runoff, little water now flows into the Salton Sea. Combine that with years of drought and increasing temperatures due to climate change, and the Salton Sea is drying up fast. As it evaporates, its poisonous bed is exposed to the Valley's winds, which carry toxic dust into nearby communities—the same people who work the agricultural industry's fields. Today, Imperial has some of the State's highest rates for hospital visits due to asthma.

Spencer: For years the state has promised to address the Salton Sea crisis. Progress is finally being made—for instance, the federal government recently announced that \$250 million of drought-relief money included in the IRA will go to restoration projects at the Sea. And the state is planning to use tax revenue from the lithium projects for the same purpose. So the possibility that this marginalized, underinvested place could be the center of a new green energy economy—that's been greeted with a lot of excitement.

3: Historical patterns

Lorena: So lithium projects in Imperial have been pitched as solutions to both global and local problems. Maybe Imperial can be a place where the US extracts what it needs to build a new climate-friendly economy *and* bring investment to a historically disinvested set of communities. That's the hope.

Spencer: Here's the problem: this idea, that areas targeted for resource extraction can benefit from it, is not new. What's new is the idea that this has to happen for environmentalist reasons: that to undo the damage done by previous cycles of extraction, we need to accelerate a new cycle of extraction. But mining is not new. Even with new technologies, the lithium projects being proposed are still, fundamentally, about extracting resources for profit. It's still mining. And mining has a clear and problematic track record in terms of its impacts on local people, in the Global South and in the developed world.

Lorena: We have a lot of information about what happens when companies or states make promises about the jobs and development that will supposedly accompany mining. In fact, that's the subject of my research in Peru.

What we know is that certain kinds of places are, predictably, made into extraction sites. These places are clearly defined by a type of landscape: they are usually remote and rural. And they are even more defined by race and class: extraction sites are usually located near Indigenous communities and communities of color. In fact, Voyles argues that colonial economies don't view certain places as pollutable because of the kind of place they are—because the Imperial

Valley is a desert, for example. They see them as pollutable because they are inhabited by people who have been racialized as expendable.

Extractive projects are often justified using similar kinds of promises as those being made in Imperial: that they will bring jobs and economic growth. And locals are often hopeful that they will see these benefits. I spoke with Yolanda Flores, an indigenous activist from Puno, a region in Peru where a new lithium deposit has also recently been found. She told us:

Yolanda (translated): People think that the company's presence means development. They hope that it'll improve their lives. But they worry about when the mine will offer job opportunities, about when they can start working. People want it to be quick so that they can benefit. And so their children can benefit. But they don't see the consequences that mining will bring to the area.

It's true that mining can benefit whole national economies, though the effects are volatile. In the past 30 years, for instance, mining has transformed Peru's economy. For a time, skyrocketing global demand for raw materials allowed Peru to generate unprecedented revenues in exchange for exporting commodities. The country managed to drastically reduce poverty on a national level and sustain several years of economic growth. But in the last decade, shifts in demand from major industrial powers like China along with the COVID-19 pandemic drove Peru into a severe economic recession.

Despite the risks of relying on mining, the national government continues to expand the mining frontier—as with the new lithium deposit found in Puno. So Peru, like California, could face the effects of this cycle again.

Spencer: Meanwhile at the local scale, the promises of extraction very rarely pan out. In fact mining can be enormously destructive to local economies and lifeways. Nate Edenhofer studies the politics of mining with the Extractivism and Society Research Cluster at UC Santa Cruz. He explains why promises of widespread economic benefits often don't materialize.

Nate: The mining sector just doesn't create that many jobs anymore. Right? It's not like coal miners in the day, where you had a huge workforce that was able to exercise, you know, their power as a labor force. Now it's like a lot more highly technical, a lot more engineers, a lot fewer people, a lot more capital intensive... and then just generally speaking, the jobs in the extractive sector, and the long term development that comes from the extractive sector, is of course notoriously poor, and in fact, reversed: often it devalues and depresses regions, especially once the boom is over. It's just well documented that extractive enclaves undermine development in the long term.

Lorena: Mining frequently also requires large amounts of land and water. So it can crowd out smaller-scale agricultural economies and indigenous communities who depend on them. The promises made on mining's behalf aren't necessarily lies, but in many cases they are, at least, wishful thinking.

Spencer: For all these reasons extractive sites are often called “sacrifice zones”: places where marginalized people are exposed to the environmental harms of processes that benefit others. There's a growing fear that the push toward green technologies in rich, industrial countries of the Global North will mean the creation of more sacrifice zones in mineral rich-areas, both in the Global South and in vulnerable places like Imperial. An especially destructive part of this process is that, when a place has been made poor and vulnerable, its perceived need for new investment is greater. So places that have been subjected to the logic of the sacrifice zone are even more susceptible to promises of future development. And so sacrifice zones lead to what Edenhofer calls “savior narratives.”

Nate: There's a discourse around, like, there's no alternative to extraction, right? And this has emerged largely because of the conditions passed down from past environmental injustice. So the problems of environmental injustice and the Salton Sea have created this new opportunity for the lithium industry to say, “we are the savior.”

Lorena: And the new importance of “critical minerals” for fighting climate change provides another grand, justifying narrative for the production of sacrifice zones. We spoke with Carlos Monge about this issue. Monge is a Peruvian mining expert and consultant who shared his concern that governments, companies, and other organizations pushing for new extraction can now point to the climate crisis as justification:

Carlos: Now the narrative is, “we're doing this for the good of humanity. I mean, this is to save humanity from global warming.”

Monge's concern is that companies can say to impacted communities:

Carlos: “You guys cannot come in the way you cannot be so selfish as to say, okay, because you little river, your pod, your life, your culture, whatever. Now, uh, you have to understand that you have make a sacrifice. You have to sacrifice yourself for humanity's—not the good of companies or is not the need of populist and corrupt governments. It's humanity at stake here.”

Therefore, states and corporations ask communities to make this leap of faith—to accept extraction in exchange for jobs—and when people push back, these stories can be deployed to silence their concerns.

Spencer: And that *might* be the pattern emerging in Imperial. To a significant extent the Valley functions as a sacrifice zone already. People here are exposed to the brutal conditions, and the toxic legacy, of industrial agriculture. As a direct result, this is exactly the kind of place easily targeted for further extraction. Imperial needs investment to lift its people out of poverty and money to remediate the disaster of the Salton Sea. Lithium seems to promise both.

4: A model for a just transition?

Lorena: So the question is: Can the rush to pull lithium from beneath the Salton Sea uplift Imperial at the same time? Can California break the cycle of dispossession that extraction so often sets off? There are reasons to hope that mining for a green energy transition could go differently, if community organizing and public pressure and state actors *make* it go differently. That's certainly the promise politicians are making.

Biden: “As we build the economy, we’re going to build it around working Americans. That means making sure that labor is at the table, that Tribes and the people from the community are at the table from day one, and that environmental protections are paramount. We have to ensure that these resources actually benefit folks in the communities where they live... so we can avoid the historical injustices that too many mining operations left behind in American towns.” ([7:05-7:47](#))

Spencer: Of course, political promises are one thing. The question is whether the US, and California, are as serious about their stated commitments to environmental justice as they are about driving investment toward new energy sources. In Imperial, local leaders have been pushing new policies to make good on those promises.

Lorena: And the key moment is now. Once permits are approved and mining actually starts, it will be much more difficult for Imperial communities to insist on their share of benefits. Riofrancos explains that communities have the most leverage *before* extraction begins.

Thea: At that point in time, they're... able to shape outcomes more, whether that means preventing the mine from happening altogether or whether that means forcing the company to the table or the government to the table to deeply renegotiate the terms of the mine... Whatever the goal is... there is more leverage for communities and activists and their allies early in the process... When a mining project, when the intent to mine has been announced... that is a very critical moment to begin protest, before mining has actually occurred.

Spencer: Much of that work so far has been done through the Lithium Valley Commission. The Commission is a volunteer board, created by the California state legislature, that's tasked with recommending policies around the new lithium industry that the state will then decide whether to adopt. Its members represent a mix of people concerned with how the lithium industry will develop. There are state officials and representatives of the lithium and electric vehicle industries, but also the directors of two nonprofits focused on health, development, and environmental justice. And two native tribes have representatives on the Commission as well: the Torres Martinez Desert Cahuilla Indians and the Quechan Indian Tribe.

Lorena: The Commission represents a partial, imperfect attempt to make good on a crucial principle for just extraction, which is that decisions be made through ongoing, participatory processes that include the voices of marginalized people who will be impacted. This includes Indigenous people who hold claims to the land where extraction is happening.

After almost two years of work, the Commission published a report, which it submitted to the California Energy Commission, and which lays out recommendations for policies the state should put in place to manage lithium extraction. The report is a tentative example of how policy could be made through broad-based civic engagement. It includes dozens of recommendations for how the state might start building a just and inclusive energy economy in Imperial. The report contains two big ideas for how to manage a just transition. The first is revenue sharing.

Spencer: Revenue sharing is the most significant lithium policy that California has actually passed into law already. Earlier this year, the state passed a law that imposes a flat tax of several hundred dollars per ton on all extracted lithium. The money raised is meant to benefit Imperial: 80% goes to Imperial County, to be spent by the county government. Of the 80% that goes to Imperial, about a third will be directed to specific communities that are “most directly and indirectly impacted by the lithium extraction activities.” The remaining 20% of the tax money is placed into a state fund for restoring the Salton Sea.

Lorena: Luis Olmedo is the director of Comite Civico del Valle, an organization working for economic and environmental justice in Imperial, and a member of the Commission. He gives credit for the tax to political leaders who are focused on questions of justice.

Luis: Our legislators—assemblymember Garcia for one, the governor's office and his team, I think they really stepped up and they really understood the need for equity and justice... and making sure that these dollars actually went to making sure that the fence-line disadvantaged community was taken care of. Because after all, it's a state tax and, and it didn't just—it wasn't just the tax, the slush fund, do whatever you want. No, it was prescribed that there needed to be equity built into it.

Lorena: The second big idea that the Commission has pushed for is ambitious, big-picture planning. One of their major proposals is to establish an “economic development zone” including Imperial County and several adjacent areas. The new body would advocate for state and federal investment, not just in lithium *extraction*, but in industries responsible for subsequent steps in the battery supply chain, like making batteries and ultimately recycling them.

Spencer: Some advocates argue that planning should encompass more than economic goals. Many community members are especially concerned about health: about the possible health impacts of extraction, and the role any new industry might play in the enormous project of mitigating the Salton Sea disaster. And in fact, by earmarking 20% of the tax money for Salton Sea restoration, the state has taken a small step toward recognizing how energy, economy, environment, and health are all intertwined.

Lorena: Taken further, this kind of approach cuts against the separation of ecological from economic concerns, which characterizes so much state and corporate decision making.

Spencer: Michael McKibben argues that jobs, habitat, and especially health should all be part of one comprehensive planning process.

Michael: And so the issue I've been raising with the companies and the lithium valley commission is, you need to solve this health issue at the same time that you propose to bring in this industry. Because if we're gonna bring in all these job opportunities and we wanna hire a local, it's not to the local's advantage to put them in a job that puts their lungs in danger. And so, you know, the health and asthma issue has to be solved in concert with any consideration of the development of this lithium industry... Here's the opportunity to coordinate and synergize, you know, restoring habitat, suppressing dust, and at the same time, looking for opportunities to promote development and jobs for the local community. Where you're coordinating the solving of these environmental problems with the development of clean energy and clean battery technology, and why not do that all at once, to maximize the benefit for the community.

Lorana: The Commission's ideas include steps toward recognizing these interconnections. So, they've recommended that the usual environmental impact reports be supplemented by reports on whether extraction might affect people's health. They also recommend empowering state and local agencies to consider impacts the industry as a whole will have on water supplies. That's a key question, and an example of interconnection—the brine-extraction method is supposed to be less water intensive than other ways of mining lithium, but it still uses water, and so could exacerbate the region's struggles with drought and with the drying Sea.

Spencer: These are small steps toward holistic planning for Imperial’s lithium future. And so far they’re just recommendations. The state has passed its lithium tax, and has devoted its funds to towns in Imperial and to restoring the Salton Sea. But whether the state will ultimately conceive of its push toward green energy as part of a larger effort to unmake sacrifice zones and build a more equitable economy—that’s a question that Lithium Valley is asking, but has not answered.

Lorena: So what happens next? Well, the Commission has sent its report to the state. Now state officials and legislators decide which recommendations to adopt. Of course, it’s easy for a document like this to basically get shelved. So some of its really important recommendations are about making sure that the decision-making process remains open and participatory.

Spencer: For example, the Commission recommended that the state form a “community advisory panel” that would keep track of the industry as it develops. They also suggested that the panel include, specifically, environmental justice advocates and tribal representatives.

Lorena: Long-term engagement like that is helpful. But it’s very, very difficult for people to take part in meaningful decision-making around complex technical questions, especially for people without technical training or for working people with limited time and resources. States need to make active efforts to communicate with different groups in culturally appropriate ways. If they don’t, there’s always a risk that formal processes of so-called “participation” can be used to justify decisions the state already intended to make. As Luis Olmedo told us,

Luis: It's possible to do it right, but yet that's the steps that are coming next. And that's why the community needs to be highly involved in making sure that these things really do happen... because we've seen already what happens when you just continue to extract and take and take and take. I think our community is not gonna stand for these shortsighted solutions.

Spencer: This is an issue the Commission confronted, too. The Torres Martinez Desert Cahuilla Indians have repeatedly asked the Commission for, quote, “qualified technical and engineering resources to assist us in evaluating the potential lithium resource from our submerged Salton Sea lands.” Without such assistance, they argue, quote “the Commission is unlikely to be able to meet its important inclusion goals and full participation from under-resourced areas including Torres Martinez is unlikely to occur.”

Lorena: This is a major issue the state must confront going forward: will it actively ensure that people dispossessed by Imperial’s past and present have a voice in shaping its future.

Spencer: If the global response to the climate crisis is about building things—power plants and transmission lines and electrified communities—then it will also be about pulling things out of

the ground: the metals and minerals through which power will flow from its point of origin to its point of use.

Lorena: This is what the energy transition is going to look like on the ground: increased mining in remote, marginalized places like Imperial. Policy experiments in such places are needed if the new green extraction is to break the usual patterns of capital accumulation. Over and over, in places like Imperial, companies will pursue the investment opportunities afforded by energy transition. It will take public attention, and state involvement, and political commitment to ensure that the resulting benefits are distributed at all equitably.

Spencer: Imperial is an early experiment in what the process will look like as developed nations like the US bring extraction onshore. Although it's already one of many—there are already over 100 lithium mines in the works in the Western US, including 10 in California.

Lorena: Experiments in such places can be models for elsewhere. If California gets it right, the framework it establishes could support other efforts for a just transition—one that accounts for the “sustainability,” meaning the survival, of communities living where the future is being made. In the Imperial Valley, California has a chance to prove that it can build its green energy future on a foundation of real justice.

Conclusion

Spencer: We hope this episode has helped you think about the places where the so-called “energy transition” might drive new extraction.

Lorena: In the course of the episode, we've talked about some of the stories that people tell—to themselves or to others—to justify extraction projects. In fact, we started with one. You could think of it as a version of the “Green New Deal” story: the idea that we need to build our way out of the climate crisis.

Spencer: That's a compelling story, and one that has led to real progress toward the US taking action on climate change. There's probably some truth to it. But that's a story that needs critical attention, too. Right now, the rush to extract is being driven, in part, by the idea that we need to build as much as possible, as fast as possible. The “build stuff” story can obscure the question of how much new mining is really necessary. In a future episode, we'll discuss new research that asks how policy and cultural change might provide alternatives to extraction. We hope you'll join us then.