Measuring incommensurability: compensations in judicial processes of oil spills in Northern Peruvian Amazon

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Abstract
The increasing number of claims filed by Indigenous peoples against pollution caused by extractive industries makes the challenge of factualizing and measuring the damage caused in their territories necessary. In Peru, the Kukama Kukamiria people are among the most affected by the various spills from the North Peruvian Pipeline since its construction, one of the most well-known occurred in the lower Marañón River in 2014. This paper is about the efforts and limitations involved in aligning the Kukama Kukamiria’s experiences with the criteria and frameworks for measuring damage and compensation amid the toxic environment and the complicated time and space of late capitalism. Based on ethnographic research and considering the judicial processes, the analysis found that compensation became a tool of dispute in which incommensurable Indigenous worlds emerged to claim for their incommensurability to exist. But in the Peruvian neoliberal and extractive context, compensation also became a technique for governing Indigenous lives and natures in a way that excludes those worlds.

Keywords
Incommensurability; compensation; toxicity; Kukama Kukamiria; Amazon

Palavras-chave
Incomensurabilidade; compensações; toxicidade; Kukama Kukamiria; Amazonia

Palabras clave
Inconmensurabilidad; compensaciones; toxicidad; Kukama Kukamiria; Amazonía

Resumo
O crescente número de reclamações dos povos indígenas contra a poluição causada pelas indústrias extrativistas impõe o desafio de factualizar e mensurar os danos causados em seus territórios. No Peru, o povo Kukama Kukamiria está entre os mais afetados pelos diversos vazamentos do Oleoduto Norte Peruano desde sua construção, um dos mais conhecidos dos quais ocorreu no baixo rio Marañón em 2014. Este artigo trata dos esforços e limitações envolvidas no alinhamento das experiências da Kukama Kukamiria com os critérios e marcos de mensuração de danos e indenizações em meio ao ambiente tóxico e ao complicado tempo e espaço do capitalismo tardio. Com base em pesquisa...
etnográfica e considerando os processos judiciais, a análise constatou que a compensação tornou-se uma ferramenta de disputa em que mundos indígenas incomensuráveis emergiram para reivindicar sua incomensurabilidade. Mas no contexto neoliberal e extrativista peruano, a compensação também se tornou uma técnica para governar as vidas e naturezas indígenas de uma forma que exclui esses mundos.

**Medir lo inconmensurable: compensaciones en procesos judiciales por derrames de petróleo en la Amazonía peruana norteña**

**RESUMEN**

El creciente número de reclamos presentados por los pueblos indígenas contra la contaminación causada por las industrias extractivas hace necesario el desafío de objetivar y medir los daños causados en sus territorios. En Perú, el pueblo Kukama Kukamiria se encuentra entre los más afectados por los diversos derrames del Oleoducto Norperuano desde su construcción, uno de los más notorios ocurrió en el bajo río Marañón en el 2014. Este artículo trata sobre los esfuerzos y limitaciones que implica alinear las experiencias de Kukama Kukamiria con los criterios y marcos de medición de daños y compensación en medio del ambiente tóxico y el tiempo y espacio complicados del capitalismo tardío. Con base en la investigación etnográfica y considerando los procesos judiciales, el análisis encontró que la compensación se convirtió en una herramienta de disputa en la que surgieron mundos indígenas inconmensurables para reclamar la existencia de su incomensurabilidad. Pero en el contexto neoliberal y extractivista peruano, la compensación también se convirtió en una técnica para gobernar las vidas y naturalezas indígenas de manera que excluye esos mundos.

Flor de María Paraná is the Madre Indígena¹ of Cuninico, a native Kukama Kukamiria community by the lower Marañón River. Cuninico is located close to Pacaya Samiria National Reserve, one of the most diverse ecosystems in the northern Peruvian Amazonia, and the North Peruvian Oil Pipeline cuts across it. In an interview conducted in 2020 for the podcast series *Nuestras historias desde Cuninico,*² Flor de María told us the story of the latest – and one of the worst ever – oil spills to affect her community:

In 2014 there was a large [oil] spill that had harmed us in every way. It harmed us in terms of our diet, illness, our people, the land, the air, the water we drink … we are all contaminated with heavy metals in the blood. Before the oil spills we didn’t have the illnesses that nowadays we have.

Flor de María went on to describe that the small health centers, the collective and few water pipes, the unfinished ecological bathrooms, and the pending financial compensation in Cuninico and the other nearby communities were upgraded as part of the compensations awarded following negotiations and lawsuits against the state-owned oil

¹The role of the Madre Indígena, or Indigenous Mother, was created to protect life and identity in the lower Marañón River after the oil spills and the compensation processes (Vergara 2022).

²*Nuestras historias desde Cuninico* is a series of podcasts that Roxana Vergara, Vanesa Romo, and María Eugenia Ulfe created in collaboration with Cuninico women and men so that their voices could be heard with regard to the COVID-19 pandemic and the oil spills (Ulfe and Vergara 2021).
company, Petroperú, and the Regional Health Directorate of Loreto over the oil spills. The harm and the claims were much greater than the compensations.

As Flor de María’s words reveal, even when Indigenous populations are invited to negotiate with the state, and when they take recourse to sue the state-owned oil company – as the Kukama Kukamiria people have done – still their claims are not fully recognized by the government. The problem is that these battles entail strategies of governance and domination of Indigenous bodies and nature by the state. As Povinelli (2011) states, in late liberal politics, some social groups are apparently taken into account – through, for instance, multicultural politics or programs – but they find themselves in between the policing of the state and politics that are never entirely in their favor. They are “the parts that have no part” in the words of Povinelli, who also explains how government police places some social groups in a visible space of control by forcing them to prove their differences. The governance of difference is at stake in late liberalism.

This paper is about the struggles of Cuninico’s people for compensation following a series of oil spills, especially the one in 2014, as well as the possibilities and limitations of attaining compensation in the form of state health measures and economic reparation, through judicial processes. But we move beyond demands for social programs, basic services, and development projects. We dialogue with De la Cadena’s (2010) idea of “excess” (“more than one and less than two”) and Povinelli’s (2001) concept of “radical alterity” regarding how compensation takes place when it also involves natures as well as relations between humans and other-than-human lives, and worlds, and how these are intentionally objectified and yet impossible to commensurate.

We also follow Guzmán Gallegos’s characterization of consultation practices and compensation politics as political technologies and techniques of governance and domination. “Such political technologies have the potential to both reconfigure political terrains and re-establish hegemonies,” she writes (2017, 1111). In the experiences of the Kukama Kukamiria, Indigenous populations are invited to participate in lawsuits to seek compensation for damage, defined by legal and political parameters, but with no decision-making power over relevant issues for them, for instance, the changes in the constitution of their bodies, the loss of their identity, the alteration of their everyday activities practiced since “ancestral times,” or their cosmological losses. Based on ethno-graphic work with Kukama Kukamiria people and the revision of the judicial processes, we seek to answer the following questions: What was lost with the thousands of gallons of oil that flooded the Cuninico Creek? How do we grasp incommensurable damage in compensation trials? What kinds of equivalences and translations can be achieved to reach compensation? What is in excess that cannot be commensurate?

1. Compensations in neoliberal governance

In recent decades, Indigenous struggles against hydrocarbon pollution caused by oil extraction in their territories have become more visible in South American countries. Legal and political disputes are part of Indigenous claims for environmental justice, especially those related to extractive industries, infrastructure projects (Uribe 2013), and the protection of their cultural identity, health, and livelihoods (Fraser and Robins 2020). The emergence of Indigenous organizations as we know them today is related to their struggle against oil companies and neoliberal policies (Sawyer 2004).
In their pursuit of environmental justice through legal processes, Indigenous groups challenge and bring about significant changes in the categories to determine the harm caused by oil spills and the measures and protocols to repair them. Sawyer (2012, 131) describes rulings by Ecuadorian judges that compelled the mega oil company Chevron to make amends for environmental damage despite difficulties with measuring the extent of the damage due to a failure to determine the toxicity of crude oil. Moreover, some Indigenous groups have made environmental litigation possible based on claims of damage to nonhuman life in their terms, and consequent damage to a person via non-human landscapes or resources (Yusoff 2017). Previous unimaginable possibilities have emerged via political and legal disputes.

However, both avenues can become techniques for governing differences, such as ethnic differences, with stark disparities. This is the case of compensation processes, especially when they involve Indigenous peoples versus the state or mega oil companies over hydrocarbon pollution (Guzmán Gallegos 2017; Cepek 2018; Kroijner 2019; Sawyer 2022). There is the risk of perpetuating environmental injustice in demanding that Indigenous people speak the language of the state. There is a tendency to exclude things that cannot be apprehended in objective, quantifiable, and legal terms to give an account of toxic damage and adequate reparation in the judicial process. Yusoff states that

> [e]nvironmental (in)justice exhibits a classic post/neocolonial dilemma of how to account for power relations without reinstating their descriptive and ordering logics that further restrict the possibilities of generating a language that is not tethered to the continued production of that power. (2017, 15–16)

Compensation requires measurement and translation. During trials, facts are established, discussed, and presented. Sawyer (2022, 9) states that “experiential facts” in trials were both produced and subsequently argued as “evidence” to prove and disprove environmental, health, and contractual liability. Lawsuits are about the construction of truths, and thus “they generate entire worlds and those worlds enfold and recompose a plethora of entities and beings in coalescing truths” (Sawyer 2022, 12). She uses the term “valence” in her approach to describe “a relationally constitutive reality in which entities are never singular or fixed but rather always emergences of collective composition” (2022, 13). We follow this relational approach, paying special attention to the idea of “partial connections” (Strathern 2004), in the sense that we will delve into compensation practices and intentions for equivalences in order to follow their relationships and also their excesses: the nodal black holes that are not commensurable. That is, these connections are partial and yet committed.

In general, reparation processes involve, as Castrillejo (2015) argues, commissioning the truth. They entail the collection of information, including testimonies and evidence about the damage that should be compensated. However, between the violent act, the subject’s experience, and the administration of truth is the state, its procedures, and people’s experiences. There is a confluence of different and concrete epistemologies and information related to the case, but also what is not said. This is something that is politically and epistemologically an excess, and involves relationships that are not fully connected.
Compensation is a form of reparation based on commensuration. Harvey (2005) and Escalante (2016) describe neoliberalism, or late liberalism in the terms of Povinelli, as the triumph of measurement practices – especially statistics that vindicate efficiency, efficacy, and evidence as part of the successful performance of the public subject. Espe-land and Stevens also argue that “commensuration transforms qualities into quantities, difference into magnitude. It is a way to reduce and simplify disparate information into numbers that can easily be compared” (1998, 316). This involves measurement, standard-ization, and comparison of two or more things as well as characterization and factualization of those things. Sometimes these comparisons are made in terms of value and money, but sometimes they also entail a different intangible value or meaning. However, these mathematical values are not translated in equal ways, and are often mis- understood. Thus, the question proposed by Fourcade (2011, 1721) resonates with Kukama Kukamiria’s experience: “How do we measure what things are worth?”

In political and legal disputes that involve Indigenous people, compensation requires the measurement of damage that involves the devastation of nature. In our case study, oil pollution makes it possible to grasp the connection between damage and the river, since the river unfolds into a diverse ecosystem of flora and fauna that is also part of the compensation. But the river is also a place where the Kukama Kukamiria people carry out their everyday activities, as well as where other-than-human beings live – such as the mythical Karwara (people who live under the water) and the Amazon river dolphin (Inia Geoffrensis) – and the basis of the Kukama Kukamiria identity revitalization project. Those connections are partial in terms of compensation and become a necessary excess to continue governing and exploiting people and nature in the Kukama Kukamiria territories.

2. The Kukama Kukamiria people and oil pollution

Running across Kukama Kukamiria territories in the basin of the Marañón River, the North Peruvian Oil Pipeline is one of the biggest hydrocarbon infrastructure projects in Peruvian Amazonia. It spans more than one thousand kilometers in length and carries thousands of barrels of oil per day from Station 1 – located in San José de Saramuro in Urarinas district – to the port of Bayóvar in the region of Piura on the northern Peruvian coast. Built between 1972 and 1978, the monumental pipeline has come to symbolize different things from different perspectives: the exploitation of people and nature in the eyes of Indigenous peoples, and a “vital lever of national progress” for the state.4

The North Peruvian Pipeline was perceived as placing Peru in the group of countries that showed interest in and the capacity to move towards economic progress. Oil exploitation came as yet another economic opportunity for Amazonia after the rubber boom transformed the region into a market economy (Chirif 2017). Yet that itinerary did not build equal relations: some were designers and planners; others did the work; and others still saw their territories invaded for the nation’s benefit. For more than 50 years, development meant infrastructure macro-projects, large-scale development projects, indebtedness, and, often, marginalization of the local population (Escobar 2007) or

4 The construction of the North Peruvian Pipeline began during the Revolutionary Government of the Armed Forces under General Juan Velasco Alvarado (1968–1975). The Velasco Alvarado government issued Decree Law 19435 for the project in 1972, construction ended in 1977, and the pipeline began operations in 1978. The pipeline has a length of 854 km from station 1 to 5, in addition to another 252 km (the “north branch”) running from there to the northern port of Piura.
their use as “human infrastructure” (Graeter 2020). Ideologically, Truman’s concept of progress through technology, capital, and science (Escobar 2007, 20) manifested itself in Peruvian Amazonia in the form of large ships, oil platforms, heliports, and a thousand kilometers of an oil pipeline.

In our last visit to the lower Marañón, Diómedes Salinas, a Cuninico elder, recalled one Friday many years earlier when his schoolteacher brought him and his classmate to see a drilling operation. He told us that “three large boats, like yachts, came in. They went up to the castle [platform] and when they shot [drilled into the ground], it came out black. Two gringos got dirty. They were negritos [very black].” Diómedes continues, “Cuninico was polluted years ago. Tons of fish came out dead: eels, long boas. The last spill was given as yapa [a Peruvianism referring to an addition given as a bonus or gift].” This is the context described by Diómedes: The community was mere spectator to what was happening on their territories, and he and his friend, as curious children, went along to gaze. More than 7800 workers came from the city of Iquitos, capital of Loreto, to work in the construction of the pipeline (Delgado Pugley 2021, 230–231).

Diómedes’s account also describes a broader historical context: although the most recent spills caused the most devastating damage, pollution is inextricable from hydrocarbon exploration and exploitation, and from the construction of the North Peruvian Pipeline. From then on, the present Indigenous peoples have seen nature and their lives transformed through the construction of major infrastructure (such as platforms, storage wells, and pipelines), the migration of mestizos looking to work for the companies, and land concessions. But their bodies and territories have also suffered from the pollution caused by wastewater dumping, spillage into ponds, and pipeline ruptures. The Kukama Kukamiria people living in the Marañón River riversides are among the most severely affected by pollution.

Oil spills have happened periodically in Loreto over recent decades, but one of the most well-known both nationally and internationally took place in June 2014. The spill, caused by a rupture in Section I (Kilometer 41 + 833) of the North Peruvian Pipeline, was discharged into the Cuninico stream, which is an affluent of the Marañón River (see Figure 1). The native communities of Cuninico, San Francisco, Nueva Santa Rosa, and Nueva Esperanza, all of which are members of the local Kukama Kukamiria organization (Federación de Pueblos Cocamas Unidos del Marañón, FEDEPCUM), were deeply affected by the spill.

But something was different about 2014; the Kukama Kukamiria people were no longer only spectators. Authorities and moradores (as the inhabitants of the lower Marañón riverbank call themselves) of Cuninico went to the site of the spill to see what had happened. The oil spill covered a large portion of the creek, throwing up thousands of dead fish and sick birds, reptiles, and small mammals in its wake. Then, under the guidance of Petroperú officials, they submerged themselves in the dense black tide to find the pipeline rupture. This time it was the Kukama Kukamiria men who ended up negritos. Lacking any protective equipment, the oil’s toxicity penetrated their bodies, causing discomfort in some cases and skin conditions in others.

Following the disaster, men, women, and children reported on social media and in state and international commissions the consequences of the toxicity in their bodies, rivers, and territories, that bathing in the river caused itching, hives, and hair loss; many women had problems during their pregnancies (Amnistía Internacional 2017). The quantity and quality of fish, animals, fruit, and vegetables declined (Urteaga, Segura, and Sánchez 2019), and so too did everyday life suffer (Delgado and Martínez
Studies on Cuninico and other Kukama Kukamiria communities along the Marañón river who have been affected by oil spills also draw attention to the changes in people’s relationships with their families and communities (Berjón and Cadenas 2011; Grados and Pacheco 2016), cosmological relations with nature (Aquituari 2017), and their political subjectivity (Vergara 2022).

The riverside communities created FEDEPCUM as a vehicle through which to begin their struggles and lawsuits against Petroperú, Peru’s state-owned oil company and the pipeline operator, as well as the state institutions responsible for the health system, demanding compensation for the damage caused to their lives and territories, and improvement of basic services such as drinking water and healthcare. A few years later, judicial decisions related to compensation found Petroperú liable for the damage and its repair. In this paper, we focus on the compliance process. The purpose of the compliance process is to force any authority or official who is reluctant to comply with a legal norm or an administrative act guaranteed in the Political Constitution of Perú (article 200, paragraph 6). Compliance is related to the struggle for fulfillment of healthcare and economic compensation for those affected by oil spills.5

5The FEDEPCUM also initiated a civil process to force Petroperú to pay oil easement, given that the pipeline runs through their territory.
The application of the judicial resolutions in the compliance process requires the definition of a value based on the damage caused to people. But as we will discuss in the coming sections, some of these things entailed fewer consumables in terms of the damage and the possibility of achieving reparation. In this paper, we focus on these forms of damage that are impossible to factualize and objectify, as well as the challenges involved in determining reparation in accordance with the state wide-ranging parameters and categories.

After the decision of the Peruvian Constitutional Court in 2021 that ordered the parties (FEDEPCUM and Petroperú) to propose a definition of the damage and the compensation, the FEDEPCUM communities started to work with lawyers, social scientists, and economists in support of their struggle to this end. We met some of those responsible for the appraisal of the damage and the compensation. They explained to us that fixed market prices guide the measurement of damage and consequent reparations and their appraisal; but valuations are different because they include things with non-monetary value that cannot necessarily be compared in the market. This is a concept related to wellbeing and knowledge, and is understood in sociocultural rather than economic terms. However, the question of how to quantify the damages caused by toxicity – destruction of livelihoods, changes to human bodies and territories, and the breakup and transformation of kinship, communal, and cosmological ties and customs – was very much disputed.

With the concept of “elusive toxicity,” Nading (2020) challenges legal categories, economic measures, and environmental sciences in legal disputes. Damage caused by toxicity is difficult to factualize. People perceive its consequences in their bodies, but “[t]he effects of inorganic chemicals, metals, or gasses on organisms vary depending on dosage, the presence of other organic and inorganic substances, and generic and nutritional factors” (Nading 2020, 210). Toxicity emerges in situated biologies and ecologies of particular bodies and places in a context related to global environmental harm, racism, colonialism, and economic exploitation (Lock 2017).

3. Factualizing damage in compensation: perceptions, affections, and objectifications

Amid the sanitary and economic problems caused by the oil spills, in January 2015, FEDEPCUM’s communities initiated a compliance process in the Mixed Court of Nauta against Petroperú and other public offices for having failed to fulfill their obligations during and after the oil spills. Objective and subjective proof was complementary and divergent, and showed the difficulties in measuring how cumulative damage becomes permanent.

There was a concerted effort by FEDEPCUM’s allies (lawyers, mostly) to prove, by objective/quantitative means, the risks of damage and the impact of toxins on people’s bodies and lives. Reports issued by the state agencies responsible for health assessment and oversight found that the water in the Cunicinco Stream and the Marañón River did not

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6Conversation by ZOOM, Lima, March 18, 2021.
7Nauta is a river-port and the capital of the district of the same name, and it is located an hour and a half by road from Iquitos.
meet the standards for human consumption (DIRESA 2015), and that the blood of Cuninico’s residents contained high levels of heavy metals such as mercury, cadmium, and lead (CENSO-PAS 2016; INS 2016). Thus, samples, percentages, and standards were used to determine the level and persistence of toxins in people’s bodies, rivers, and communities.

But there were also other qualitative reports by social sciences specialists that describe the impacts of toxicity and infrastructures (MINCUL 2015; Delgado et al. 2016; Urteaga, Segura, and Sánchez 2017). These reports emphasize the damage to the relationships between the rivers and the Kukama Kukamiria people, citing the cosmological relations between the Kukama Kukamiria and the beings that live in the water: the boa, the mermaids, and the Amazon river dolphins. One of the reports concluded the other-than-human that live in the river “could move away or get irritated by the pollution” (Delgado et al. 2016, 81). And this affects their livelihoods; for instance, if the boa who is the mother of the qocha (pond) moves away, then the pond dries, and if she gets annoyed, then people would not get fish.

Several ethnographic studies support the findings of these reports. The Kukama Kukamiria consider the boa to be the “mother” of fish who cares for aquatic animals, while the mermaids and dolphins have periodic encounters with humans (Rivas 2011; Campanera 2018; Ramírez Colombier 2021). There are also other beings such as the Karuara (or “people of the river”) who live in an underwater city and some of whom are relatives of the Kukamas (Ramírez Colombier 2018). On land, the chuyachaki (“owner”) of the forest protects plants and animals against excessive predation (Rivas 2011; Campanera 2018). Everything that is the land for the Kukama Kukamiria exists in relation to the sky above and the water below (Rivas 2011). Earth, sky, and the water are inhabited by human and nonhuman beings who live in tension and constant relations of predation (Rivas 2011), care (Campanera 2018), and also affection (Fernandes Moreira and Ramírez Colombier 2019).

Once considered “great fishermen” in recognition of their expertise and techniques (Stocks 1981; Rivas 2004), the Kukama Kukamiria now see their identities as being at stake. At the markets of Yurimaguas, the Cuninico community used to be popular for its variety of fish. But now sellers had to pretend that they were not from Cuninico or else buyers would say: “That fish isn’t worth it” (Delgado et al. 2016, 82). Moreover, fishers had to sail for longer hours and venture deeper into the creek to catch fish, and people discontinued the traditional practice of giving fish to relatives as a gift to

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8A report by the General Directorate of Environmental Health (DIGESA) found in 2014 that the factor of total petroleum hydrocarbons (THP) on the banks exceeded the environmental quality standards (ECA) for water for human consumption.

9The report “Informe Determinación de Metales Pesados en las Comunidades de Cuninico y San Pedro – Cuenca del Marañón del Departamento de Loreto” by the National Center for Occupational Health and Environmental Protection for Health (CENSO-PAS) detected the presence of high percentages of heavy metals in the blood of Cuninico residents in 2016. Of the 129 people included in the sample, 1 child had values outside the reference range for lead, 73 (67%) people for mercury, and 71 (65%) people for cadmium. Finally, the report by the National Institute of Health (INS) also recorded the presence of mercury in 600 people (67%) of the sample. Ministerio de salud – MINSA; Instituto Nacional de Salud – INS; Centro Nacional de Salud Ocupacional y Protección del Ambiente para la Salud – CENSOAPAS. Informe: Niveles de riesgo de exposición a metales pesados e hidrocarburos en los habitantes de las comunidades de las cuencas de los ríos Pastaza, Tigre, Corrientes y Marañón del departamento de Loreto. 2016. Available at https://observatoriopetrolero.org/wp-content/uploads/2019/08/Informe-Toxicol%C3%B3gico-y-Epidemiol%C3%B3gico-del-MINSA-para-Cuatro-Cuencas.pdf. Last accessed August 1, 2020.

10The Kukama Kukamiria live in várzea ecosystems along the Marañón, Ucayali, Amazonas, and Nanay rivers (Rivas 2004; Stocks 1981).

11The cosmological world is composed of the earth (tuyuka), as well as the spaces parallel to the sky (kuarachikuara) and the water (uni) (Rivas 2011).
instead sell this increasingly precious commodity at high prices, which affected the Kukama Kukamiria identity, always linked to fishing (Vergara 2022).

The impacts caused serious emotional afflictions: “fear and uncertainty,” “resignation and doom,” and “indignation” (Delgado et al. 2016, 83–91). These feelings have settled over time. In Cuninico, the residents were informed of the possible consequences of oil pollution on their bodies by the state health institutions, non-governmental organizations, and the Church, but none suggested potential options for dealing with these effects. In 2019, during a long conversation with women in the local communal, Marlita Salinas, sister of Diómedes Salinas and vice president of the Asociación de Mujeres Indígenas de Cuninico (ADMIC), said that

there is no future for us [adults] since we have the heavy metals in our bodies, we are polluted. Maybe we will die in a few years. But we fight for the future of the children, maybe they can live well, but we don’t know.

These experiences also serve as complementary evidence of damage and appear in women’s and men’s narratives in reports, testimonial documents, and judiciary hearings. Toxicity also affects emotions, which is visible in the accounts of lost worlds.

After more than two years of disputes, the Court in Nauta issued a judicial resolution with precautionary measures. It ordered the Ministry of Health and the General Directorate of Epidemiology to design and implement an emergency public health strategy. This strategy calls for a medical care program, as well as epidemiological, environmental, and sanitary surveillance that includes monitoring of water safety standards and health programs to identify individuals who may have been affected. The judge placed pregnant women, the elderly, and children at the forefront when it came to receiving special attention. But Cuninico, FEDEPCUM, other Indigenous organizations, and other allies also requested that the Inter-American Commission on Human Rights (IACHR) introduce precautionary measures to protect the rights of life, health, and personal wellbeing of people affected by the oil spills. Here, the cumulative damage was one issue of conflict.

Holding up a half-liter bottle filled with cloudy water at the IACHR hearing, Flor de María Paraná, the madre indígena of Cuninico exclaimed, in the direction of the judges: “Here I bring you a bottle of water with oil, with polluted water […] that we drink […] so that you believe me.” But the bottle contained more than the result of the 2014 oil spill; FEDEPCUM and their allies pointed out that such discharges were not an isolated practice, with several having taken place between 1996 and 2017 as they themselves and the state environmental and hydrocarbon oversight agencies had documented.

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12Some of the testimonies used in the legal proceedings can be heard at: Servindi. “They gather the most complete material on oil spills,” November 20, 2016. https://www.servindi.org/actualidad/19/11/2016/material-sobre-derrames-de-petroleo-en-la-amazonia.

13Mixed Court of Nauta. Resolution 1. Precautionary measures. Judicial file 00001-2015-0-1901-JM-CI-01. Compliance action. February 22, 2017.

14The Regional Government and the Provincial Municipality of Loreto Nauta must participate in coordination with the district municipalities in actions that allow the protection of the health of the affected communities.

15Based on the WHO, the judicial decision stressed that heavy metals “mainly affect the immune [and] digestive systems, skin, lungs, kidneys, and eyes and that children are the most vulnerable to these exposures, generating in the case of lead, a decrease in the intelligence quotient [that] also affects the learning process and there is behavioral alteration,” and that “exposure to lead can present behavioral problems, altering short-term memory and emotional appearance” in adults.

16IACHR. 158 Extraordinary Period of Sessions. Santiago de Chile. June 6–10, 2016.

17People from the four communities of FEDEPCUM and human rights institutions documented several oil spills before and after 2014 in Urarinas district and in the Amazon region (León and Zuñiga 2020).
The state acknowledges the “environmental contingency situations” caused by the oil spills, insisting that its operator, Petroperú, hired specialized companies for the clean-up and remediation while ensuring that “the problem of exposure to hydrocarbons by the neighboring population was specific and is under control since the fluvial bodies have a dynamic and changing character.”\textsuperscript{18} That is, according to the state there could be no cumulative damage because the water runs continuously. As Nading (2020, 210) writes, “the toxic world is defined by vexing patchiness.” The state also argued that healthcare had been provided continually. But people in the communities replied that there had been no special provision for hydrocarbon health-related problems. In addition, no assurances were made that the spills would stop occurring. Instead, perceptions and numbers swirled around the debate over measuring and determining the ever-elusive toxicity.

When the IACHR visited Cuninico in July 2017, the state recognized that “the damage caused cannot be fully repaired, and that assessments are being carried out to complete the works.”\textsuperscript{19} Every time the river rises due to the winter rains, water removes the topsoils around the spill site. Locals describe oil slicks floating down the Cuninico Stream to the Marañón River. In 2018, after a long conversation with Cuninico’s environmental monitor, Pervis Huanio, he said:

I worked in the remediation and the company poured orange\textsuperscript{20} into the land to dissolve the oil and the rest was covered with dirt. It will surely be forever because it is not known how many meters the oil has deepened.

People have no faith that all the oil will ever be cleaned up. The toxicity and damage never end.

The IACHR granted precautionary measures given that people’s rights to life and personal wellbeing in Cuninico were at risk, which amounts to irreparable harm.\textsuperscript{21} The IACHR’s resolution stated that “even with the passage of time, there would be continuous effects of the alleged verifiable contamination.” The pathologies or conditions presented by local people are consistent with the effects of prolonged exposure to heavy metals.\textsuperscript{22} Medical treatment and provision of food and water are not enough; the effects continue, as people say. The resolution also stipulated that the state must provide medical diagnoses so they can receive adequate medical care, access to clean drinking water, and appropriate food in nutritional and cultural terms.\textsuperscript{23}

4. Measuring incommensurable damage and compensation

In 2018, the Mixed Court of Nauta also issued a judgment on the merits of the compliance action of FEDEPCUM, later partially confirmed by the Superior Court of

\textsuperscript{18}Resolution 52/2017 of the IACHR. Paragraphs 10–15.
\textsuperscript{19}Resolution 52/2017 of the IACHR. Paragraphs 21.
\textsuperscript{20}Orange Tough 90 is a dispersant used during the remediation process for cleaning up the crude from vegetation and soil in Cuninico.
\textsuperscript{21}Resolution 52/2017 of the IACHR, Precautionary measure N° 120-16. Residents of the Community of Cuninico and another regarding Peru. December 2, 2017. For the IACHR, “irreparable harm consists of the affectation of rights that by their very nature, are not susceptible of repair, restoration or adequate compensation” (Paragraph 23).
\textsuperscript{22}Resolution 52/2017 of the IACHR. Paragraph 32.
\textsuperscript{23}Such as the standard of the WHO and the Pan American Health Organization (PAHO).
Justice of Loreto. The latter declared the state institutions liable for failing to discharge their healthcare duties and ordered them to do so. But it rejected the communities’ request to define the economic compensation, according to Petroperú, arguing that the compliance process did not aim for that. In response, the communities appealed to the Constitutional Court (constitutional grievance appeal) ordering the company to comply with the legislation (Pipeline Hydrocarbon Transportation Regulation). As a result, the court ordered that Petroperú must identify those affected; identify and inventory the damages caused to third parties, properties, and the environment, and value the damage that must be compensated. Finally, compensation had to be agreed upon with those affected. This agreement became the main challenge and concern for the communities, considering the past debates about damage, nature, and those affected by oil spills. This is the task assigned to the team of economists mentioned above.

The team proposes to use economic valuation to value the impact of the oil spills by examining the changes in the uses of biodiversity by the population. There is a fragmentation of direct and indirect use. This is linked to the fragmentation of biodiversity and territories caused by negative variations in natural resources (reduction of environmental goods and services), impacts of the oil spill, and clearing for remediation actions (oil cleaning). When natural resources cease to exist or are altered, there is a need to look for a substitute resource causing a sense of loss of wellbeing and conflict to express it. So economic valuation is a way of making the loss of wellbeing visible; it is “a methodological tool that links the physical and biological indicators with the social ones in terms of use-values,” said one of the economists. The concrete purpose is to make the assessment of the company impacts comparable with those of the community by identifying the impacts on the use and non-use values.

Some application experiences have proven to be useful to highlight the limitations in valuations of the damage from the company’s perspective. This is considered a methodology of empowerment and information for the communities. But the total area of an affected basin river is not considered. Companies tend to be unaware of ancestral territories and limit themselves to identifying the productive and extractive use on the smaller titled communal territory. The temporal criteria are also not justified and the period of recovery of flora, fauna, water, and soils is shorter for the company. The result is the sub-valuation of the impacts.

However, those experiences also show some limitations in economic valuation methodology. It can not include all the cultural losses but some “quantitatively verifiable requirements” based on valuation schemes developed with the community (Alfaro Montoya 2015). The indirect and direct use-value, and the legacy value linked to the use of reserve zones for future generations, such as the frequently mentioned future of young people in Cuninico, could be calculated according to the market prices and

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24Civil Chamber of the Superior Court of Justice of Loreto. Second Instance Sentence. Resolution 45. Judicial file 00049-2017-0-1903-SP-CI-01. Compliance Action. January 24, 2018. The rule also declared that the lawsuit against Indeci and the Ministry of the Environment was not applicable.

25Supreme Decree 081-2007-MINEM. The Pipeline Hydrocarbon Transportation Regulation through Pipelines is approved. El Peruano, November 22, 2007. The Regulation states that the operator of the transport of hydrocarbons must give compensation for the damages caused.

26Pipeline Hydrocarbon Transportation Regulation. Annex 4. Issue 4.

27Direct uses refer for example to timber extraction, gathering of fruits for food, leaves for construction or plants for medicine, and indirect uses are, for instance, the animal refuge area, which is important for hunting.
profit transfers. The population growth, the generation of future consumption scenarios on time scales, and the additional times for activities are some of the criteria used. But cultural values referring to recreation zones, and persistence of cultural practices, “are mentioned, but not considered monetarily,” explained the economist.

In a meeting of the consultant team in March 2021, the FEDEPCUM president, Galo Vásquez, said: “People feel depressed, and sad, because of the changes. There’s a lot of conflict in the communities. How can we access reparation?” And a member of the team of economists answered with concern: “I don’t know how to measure that. I don’t think I have the tools.” As in the previous administrative and judicial process, some “things” continue to be difficult to understand through economic values and quantification. In one of our visits to Cuninico in 2019, Violett Sime, the little daughter of Marielita Salinas, member of ADMIC, drew a dolphin that died in the river’s black tide and explained that the community felt worried and sad about the plight of the dolphins and fish. One year earlier, her brother, Gian Carlo Sime, said that the chuyachaki was upset and went to the cemetery to scare them. Even though we do not ask about cosmologies, the drawings and words of the children reveal feelings of loss. There was no use or non-use value to identify, or equivalences to make: only links between beings.

Even when economic valuation allows the incorporation of values that are not included in appraisals and are instruments for Indigenous peoples, it still functions under the neoliberal numerical rationale. These logics rest on the possibilities of promoting growth through an exchange in which the surpluses are reinvested and not wasted. The problem is that “[t]he promise of trade based on exchangeability and equivalence are increasingly applied to nonhuman worlds and informs the modes of subject-objectification (...) where one entity – site, organism or ecology – becomes substitutable for another” (Yusoff 2017, 16). The Kukama Kukamiria people question those equivalences and exchanges and compel academics and activists to think about other ways of defining damage and reparations.

5. Possibilities and impossibilities of commensuration

Commensuration and factualization emerge as a possibility of repairing all that has been damaged of something. The damage to Indigenous bodies and territories due to global toxicity is simply the perpetuation of the colonial violence (Murphy 2017) expressed in several years of oil exploration and exploitation. By standing up for their rights to compensation through legal disputes, Indigenous peoples become interlocutors and question their historical relation of inequality and exploitation with the state and extractive companies. By speaking the language of objectification and measurement required by the state, they question the consideration as toxic infrastructures and remains as vestiges of extractive activities. This is also a way to claim recognition and, in a way, even citizenship.

In this paper, we have explored how compensation in the judicial process works in terms of a technology of domination and control of power – the false impression that something changes without really bringing changes as much as perpetuating hegemony in terms of facts. Other forms of being in and relating to the world are not really in the picture – such as, damage accumulated over the years. Going back to the introduction section, we could argue that these judicial processes seem to follow intercultural proceedings, but as Povinelli we have shown how the part does not really take part.
In compensation battles, damage and commensuration build relationships of comparison and translation of what has changed, has been damaged, or no longer exists. Sometimes these comparisons can be between equal entities; the problem is not only Karwara but the relationships lost or changed between humans and Karwara. Karwara exist and yet are not visible or evident in the compensation measures. César Mozombite, the vice-apu of Cuninico, expressed his concerns about the “spirits who live under the river.” Children feel sad as they can no longer play in the river as before. Others continued playing there but their mothers said that skin allergies came and went on their children’s bodies. People also worry because they cannot fish by the riverside but have to travel by boat for long hours to do so. There is a moral obligation for compensation but an impossibility to commensurate all aspects of human experience, referring not only to economic and livelihood dimensions but also to these other lives and relationships.

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