Hard Cases

Indigenous Sovereignty in the Low-Carbon Transition: Reflections on the *Osage Wind* Judgement

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Abstract

In *United States and Osage Minerals Council* v *Osage Wind et al*, the federal judges of the United States (US) ordered a wind developer to remove its turbines and pay damages to the Osage Nation. This dispute arose from the peculiar legal regime of the mineral estate established in federal Indian law. Its outcome has broader implications for the low-carbon transition. Indigenous opposition to renewable plants is widespread both in the US and elsewhere. This means that, in pluralistic legal orders, the management of the interplay between state and non-state law is a key factor for the success of climate policies. This comment describes the facts of the case and discusses the meanings of the Indian canon of interpretation, its implications for federal, tribal, and state sovereignty, as well as the global debate about the integration of Indigenous knowledge into climate policies.

I. Introduction: Managing Collisions Between Legal Pluralism and Decarbonization

News about a federal court ordering a wind farm in Oklahoma to dismantle its turbines and pay damages to the Osage Nation made headlines.[1] This judgement is the latest episode of a long legal battle that started in the early 2010s and is still far from its conclusion. The outcome of this dispute has broad implications beyond the parties directly involved. The interactions among the three distinct sovereignties of the United States' (hereinafter, US) legal system – the federal, the state and the tribal – are at work here. During the whole of US history, such interactions have been contentious, tragic, and brutal. In recent years, high-profile cases before the US Supreme Court and claims advanced by Indian grassroots movements signalled that the interactions among the three sovereignties had entered a new stage and were searching for a new balance. Echoes of this debate can be seen in the *Osage Wind* case.

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[1] *United States of America and Osage Minerals Council* v *Osage Wind et al*.2023 U.S. Dist. LEXIS 226386 (N.D. Okla. 20 December 2023). See eg N.H. Farah, 'Tribal Sovereignty Trumps Windin Oklahoma' (4 January 2024), available at https://tinyurl.com/2swkbvwh (last visited 30 September 2024); J.R. Porter, 'The Osage Nation of Killers of the Flower Moon Fame Had a Big Win in Federal Court This Week' (22 December 2023), available at https://tinyurl.com/y4akdxbt (last visited 30 September 2024).

This dispute also has broad implications for the energy sector: if Native Americans are allowed to oppose low-carbon technologies, should we conclude that strong versions of legal pluralism in any legal system are a barrier to the fast and effective decarbonisation of our societies? In light of the significant role played by a plurality of legal orders both within and outside the Western world, such a conclusion would be particularly worrisome. In my view, this question should be answered in the negative. Though, the answer is conditional on the implementation of legal strategies that support the low-carbon transition without interfering with the self-determination of Indigenous Peoples. Most legal systems, including in the US, are still struggling with pluralistic understandings of decarbonisation policies.

This comment is structured as follows. Section II describes the facts of the dispute, the property regime it arose from, and the judgment of the District Court. Section III discusses the unstable relationships among the three sovereignties and the role of the so-called Indian canon of interpretation. Section IV deals with the low-carbon transition on Indian lands. Section V turns to the global debate about Indigenous knowledge and climate change policies. Section VI summarizes the main arguments.

II. The dispute on the Osage Wind farm

The roots of the dispute on the Osage Wind farm can be traced back to the peculiar legal regime for land created by federal Indian policy since the nineteenth century. Before European colonization, the Osage tribes resided in the territory that is now included in the states of Oklahoma, Kansas, Arkansas, Missouri, and Illinois. In 1870, they were forced to move to a reservation in North-Central Oklahoma. The Osage were among the few Indian nations able to buy the land of the reservation, extending for about 1.470.000 acres (5900 km^2). Land ownership did not spare the Osage Nation from the federal government's allotment policy that, by the end of the nineteenth century, led to the division of reservations into parcels assigned to individual members of Indian nations. Though, land ownership did help the Osage Nation negotiate a different allotment regime. The Osage Allotment Act of 1906 only divided surface land. The subsurface mineral estate was held in trust by the federal government and Osage members enjoyed a share of the mineral royalties. The oil boom of the early twentieth century turned Osage members into millionaires. At the same time, this legal regime was at the origin of the many criminal plots against Osage members. Corrupted white guardians defrauded them of their rights. Many Osage members were murdered to steal their mineral rights.[2]

[2] One of these criminal plots was the subject of Martin Scorsese's *Killers of the Flower Moon*, Paramount Pictures, 2023. See D. Grann, *Killers of the Flower Moon: The Osage Murders and the Birth of the FBI* (New York, NY: Doubleday, 2017); M.L.M. Fletcher, 'Failed Protectors: The Indian Trust and *Killers of the Flower Moon*' 117 *Michigan Law Review*, 1253 (2019); E.D. Bernick, 'We the Killers: The Law of Settler Violence and Native Persistence Beyond 'Flower Moon'' *Northern Illinois University College of Law Legal Studies Research Paper*, 27 December 2023, available at https://tinyurl.com/y6wkhcch (last visited 30 September 2024).

Furthermore, the federal government failed to protect the interests of the Osage for many decades and didn't pay appropriate royalties.[3]

This situation of 'split estates' persists to this day. The Osage Nation is still able to benefit from the mineral estate, but over time it lost control of the surface land. By 2016, the latter was prevalently held by non-Indians within the Osage reservation.[4] When the territory of Oklahoma started to attract the attention of investors in renewable energy, the land ownership regime molded by the colonial past proved unsuitable to an ordered transition to low-carbon solutions. As of 2022, Oklahoma ranked third among US states for installed wind capacity and fourth for in-state wind generation.[5] Untapped potential for wind development is significant.[6] Not surprisingly, Enel Green Power North America, from 2014 owner of the Osage Windfarm, has a large fleet of 13 wind farms in Oklahoma worth $3 billion of investments. Note, however, that the oil and gas industry is no less relevant in Oklahoma: it represents more than one quarter of the state's gross domestic product (GDP). Only Alaska and Wyoming have higher shares.[7] Hence, without an adequate land planning and siting regime, the renewable industry and the fossil fuels industry are likely to clash.

Litigation about the Osage Wind farm already started before its construction. The Osage Minerals Council (OMC), created in 1906 to manage the mineral estate, argued that the wind farm, to be built on an area of about 8.400 acres leased from non-Indians, would interfere with the oil and gas leases for the mineral estate. The District Court disagreed, holding that the interference between the two activities was not supported by evidence and that the permanent injunction sought by the plaintiffs would deprive the surface owners of the payments they expected from the leases.[8]

A new suit was filed a few years later, this time to argue that the excavation works required to build the wind turbines had to be qualified as mining and called for a mining lease issued by the OMC and authorized by the US Secretary

[3] Only in 2011 did the Osage Nation receive partial compensation through a settlement with the federal government. See S.L. Carmack, 'Loyalties and Royalties: The Osage Nation's Energy Sovereignty Plan and Wind Farm Opposition' 40(1) *Public Land & Resources Law Review* 145, 151-154 (2019).

[4] The Osage Nation is striving to regain control of the reservation land as a way to establish an autonomous space for its lifestyle choices. See J. Dennison, *Vital Relations: How the Osage Nation Moves Indigenous Nationhood into the Future* (Chapel Hill: University of North Carolina Press, 2024). This search for autonomy clearly influences the opposition to the Osage Wind farm.

[5] United States Department of Energy, *Land-Based Wind Market Report: 2023 Edition*.

[6] See A. Milbrandt et al, Techno-Economic Renewable Energy Potential on Tribal Lands, NREL Technical Report, July 2018. More recent data are available at https://windexchange.energy.gov/.

[7] American Petroleum Institute, *Impacts of the Oil and Natural Gas Industry on the US Economy in 2021*, PricewaterhouseCoopers, April 2023.

[8] *Osage Nation ex rel. Osage Minerals Council* v *Wind Capital Group, LLC* U.S. Dist. LEXIS 146407 (N.D. Okla. Dec. 20, 2011). See S.L. Carmack, n 3 above, 158-160; W.R. Norman and Z.T. Stuart, 'United States v. Osage Wind: An Example of How an Indian Tribe's Unique Status Governs Appeal Rights and Statutory Construction' 90(9) *Oklahoma Bar Journal*, 28 (2019).

of Interior. The District Court gave a restrictive interpretation of mining activities, holding that only the commercialization of minerals required a lease.[9] The Circuit Judges reversed the lower court's interpretation.[10] Although the text of the Department of Interior's regulations did not provide guidance on the qualification of mining activities without commercial purposes, the Circuit Court held that a narrow interpretation would conflict with the Indian canon of interpretation. The latter requires that, in case of ambiguity, rules designed to favour the Indians are to be liberally construed in Indians' favour.[11] Clearly, this canon forces the three sovereignties to search for an agreement on the development of renewable energy. The Circuit Court's decision prompted mixed reactions. Fears of reduced investments on Indian lands were widely voiced. We shall come back to the impact of the Indian canon in the next section. In the meanwhile, the Supreme Court declined to hear the case, apparently unpersuaded by the wind developer's claim that the Indian canon could not be used to thwart its property rights.[12]

On remand from the 10th Circuit's decision, the District Court had to decide which remedies to grant the OMC. Here again, the Indian canon played a decisive role. There was no doubt that building the wind farm without the mining lease amounted to trespass and conversion, as defined by Oklahoma state law. The court held that damages had to be awarded, but remanded their quantification to a trial. The amount required by the OMC exceeds $25 million, while Osage Wind contended that only the much lower total value of the extracted minerals should be considered. Disgorgement of profits was excluded on procedural grounds. The OMC also claimed to be entitled to the equitable remedy of injunctive relief, in the form of ejection of the wind turbines from Indian land. Such a remedy could only be granted for continuous trespass. The wind developer argued against such a qualification, maintaining that no excavation works had taken place since the farm had been built. The District Court countered that the crushed rocks still provided support for the wind turbines. Hence, a broad reading in favour of the Indians was warranted.

Even though continuous trespass could justify equitable relief, three requirements had to be verified: an irreparable injury that could not be compensated with monetary damages, the balance of harms between the parties,

[9] *United States* v *Osage Wind, LLC* 2015 WL 5775378 (N.D. Okla. 2015).

[10] *United States* v *Osage Wind, LLC* 871 F.3d 1078 (10th Cir. 2017), *cert. denied*, 139 S. Ct. 784 (2019). See S.L. Carmack, n 3 above, 162-164; W.R. Norman and Z.T. Stuart, n 8 above, 31-32; M. Potts, 'United States v. Osage Wind, LLC: Wind Energy Being Blown Away by New Rules?' 4 *Oil & Gas, Natural Resources &Energy Journal* 63, 72-77 (2018); C.J. Gnaedig, '"Mining" on Indian Lands: It's Not What You Think' 39 *Energy Law Journal*, 547 (2018); A.B. Christian, 'Digging Deeper to Protect Tribal Property Interests: United States v. Osage Wind, LLC' 43 *American Indian Law Review*, 411 (2019); W.M. Bowman, 'Dust in the Wind: Regulation as an Essential Component of a Sustainable and Robust Wind Program' 69 *Kansas Law Review* 45, 70-73 (2020).

[11] See secs 6 and 8 *Restatement of the Law of American Indians* (American Law Institute, 2022).

[12] S.L. Carmack, n 3 above, 167-170.

and the impact on the public interest.[13] The District Court fully endorsed the OMC's arguments about the need to protect Indian sovereignty and self-determination against unauthorized activities. More specifically, refusal by the wind developer to obtain a lease constituted an interference with the sovereignty of the Osage Nation that could not be compensated with monetary damages. In the same vein, the District Court concluded that the economic losses from ejection did not outweigh the interest in protecting Indian self-governance. Nor could such economic losses overshadow the public interest in preserving the Osage Nation's tribal sovereignty.

Both the prospect for a damages award and injunctive relief place the OMC in the best position to settle the dispute on favourable terms.[14] But the District Court's decision prompts two broader questions, to be discussed in the next two sections: first, does the application of the Indian canon of interpretation in this dispute conform to the most recent developments in the relationships among the three sovereignties? Second, is the approach adopted in this dispute able to support US climate policies?

III. The Indian canon of interpretation and tribal sovereignty

Both the Circuit Court in 2017 and the District Court in 2023 linked the application of the Indian canon of interpretation to the enhancement of Indian sovereignty. These judgments are in line with the broader trends of federal Indian policy that, at least from the seventies, allowed Native Americans to develop their own self-governance structures in a wide range of areas, including the management of natural resources.[15] Tribal constitutions adopted by many federally recognized Native Nations led to the introduction of civil and criminal codes, the establishment of judiciary and administrative branches, the implementation of federal schemes and agreements with local and state governments.[16]

[13] These requirements for permanent injunctions were established by federal case law to ensure uniform, nationwide solutions and avoid the inconsistencies that could stem from the application of state remedies. See *Davilla* v *Enable Midstream Partners, L.P.* 913 F.3d 959 (10th Cir. 2019).

[14] This is not to say that negotiation between the parties will be easy. In early 2024, Enel argued that removal of the wind turbines would cost $258 million and take 18 months. As an alternative option, Enel proposed to replace the rocks providing the foundation for each turbine with alternative backfill. Such a replacement would end the continuous trespass (A. Herrera, 'Wind Companies Float Options to Keep Turbines Operable' 27 February 2024, available at https://osagenews.org/). The OMC rejected the proposal and asked for a bond during delay in submitting a removal plant, as well as to shut down the wind farm immediately (E. Bryan, 'Legal Battle Over Wind Farm in Osage Nation Continues' 12 March 2024, available at https://www.newson6.com/). As of October 2024, the parties were unable to settle damages issues and a judicial award became possible: see L. Red Corn, *Enel Refuses to Settle or Negotiate Damages with Osage Minerals Council*, 24 October 2024, available at https://osagenews.org/.

[15] J.V. Royster et al, *Native American Natural Resources Law: Cases and Materials* (Durham, NC: Carolina Academic Press, 5th ed, 2023).

[16] For a broad overview of tribal law, to be understood as the body of rules enacted by the Indian self-governance structures and distinct from US federal Indian law, see M.L.M. Fletcher, *American Indian Tribal Law* (New York, NY: Aspen, 3rd ed, 2024). Also see M. Blackhawk, 'Legislative

Litigation about tribal sovereignty before federal and state courts tells another story. Judicial developments in the early twenty-first century suggest that the relationships among the three sovereignties are much less stable than the outcome of the *Osage Wind* dispute would suggest. Swinging majorities in the Supreme Court lead to inconsistent interpretations of those relationships. The Indian canon of interpretation itself is openly cast into doubt, or at least it does not provide reliable guidance in all cases. One major issue is how and by whom economic activities taking place on Indian lands should be regulated. Two high-profile cases, both related to Oklahoma, showed that more principled answers to the situations calling into question federal, state and tribal law are badly needed. Although both cases originated from criminal proceedings, they have broader implications for regulatory regimes related to land use.

In *McGirt* v *Oklahoma*, the Supreme Court held by a 5 to 4 decision, authored by Justice Gorsuch, that the Muscogee (Creek) Nation' reservation, as defined in its 1866 Treaty with the United States, still exists.[17] For decades, Oklahoma state authorities had denied the legal status of Indian lands.[18] Following *McGirt*, Oklahoma state courts recognized reservations for other four Indian nations (Cherokee, Choctaw, Seminole and Chickashaw) and five smaller reservations. These decisions radically changed the jurisdictional borders: now 43% of the state (19 million acres) is included in what US federal law defines as 'Indian Country'.[19] 1.8 million Oklahomans, about 90% of whom are non-Indians, live in reservations. The most direct legal implication is that, within Indian lands, tribal law, and in some cases federal law, exclude the application of state law. To be sure, the latter still applies in some cases. For example, non-Indians can own land within a reservation, and in Indian Country more generally. In this case, state courts maintain civil jurisdiction. Tribal law can only apply when there are agreements between a tribal government or members of a tribe and a non-Indian owner within Indian lands. Tribal law also applies when the activities of non-Indian owners interfere with the political integrity, economic security, health or welfare of the tribe.[20] This peculiar

Constitutionalism and Federal Indian Law' 132 *Yale Law Journal* 2205, 2242-2246 (2023) ('semi-sovereign enclaves within the territorial borders of the United States').

[17] *McGirt* v *Oklahoma* 140 S. Ct 2452 (2020). See R.J. Miller and R. Ethridge, *A Promise Kept: The Muscogee (Creek) Nation and McGirt v. Oklahoma* (Norman, OK: University of Oklahoma Press, 2023), 157-184.

[18] C.P. Cleary, 'The Rediscovery of Indian Country in Eastern Oklahoma' 94(5) *Oklahoma Bar Journal* 18 (2023).

[19] The definition of 'Indian Country' includes all land within Indian reservations, dependent Indian communities and Indian allotments. It was codified in 1948 at 18 USC sec. 1151(a) for criminal law, but it is held to apply to civil cases as well. See sec 3 *Restatement of the Law of American Indians* (American Law Institute, 2022).

[20] These exceptions stem from *Montana* v *United States* 450 S. Ct. 544 (1981). See Miller and Ethridge, n 17 above, 197-200. Over the years, the Supreme Court narrowed these exceptions to state jurisdiction on non-Indians. See B.R. Berger, 'McGirt v. Oklahoma and the Past, Present, and Future of Reservation Boundaries' 169 *University of Pennsylvania Law Review Online*, 250, 282-284 (2021); K. Florey, 'Tribal Land, Tribal Sovereignty' 56 *Georgia Law Review*, 967, 999-1014 (2022).

disconnection between tribal sovereignty and land ownership is the outcome of century-old developments in Indian federal policy and case law. Like other sovereigns, Indian Nations should be entrusted with regulatory powers over both public and private land within their territory. This is not so in Indian Country. The regulatory powers of tribal authorities could not only be excluded or limited on lands within Indian Country not owned by Indians, but also on Indian lands when the activities of non-Indians are involved.[21]

The *McGirt* decision could also have implications for the Osage Nation. In 2010, a circuit court held that the Osage reservation no longer existed after the adoption of the allotment policy.[22] This decision seriously downplays textual arguments rejecting the contention that the Osage reservation had been disestablished. After *McGirt*, the Osage Nation has been trying to use criminal cases to argue that the existence of the reservation should be reassessed. So far, federal courts have been unreceptive.[23] Without the recognition of the reservation status, the whole tribal governance arrangements of the Osage Nation could become inapplicable.

The interpretative criteria followed by the *McGirt* majority were originalist and textualist. The Indian canon of interpretation is a substantive one and was not explicitly relied upon.[24] Though, *McGirt* does explicitly acknowledge tribal sovereignty and restricts state sovereignty. From this point of view, the decision can be said to endorse the connection between tribal sovereignty and interpretation in favour of Native Americans. This view drove other important decisions of the Supreme Court, but has never been unanimously accepted. Both the Rehnquist Court and the Roberts Court disregarded tribal interests in many instances and did not support the federal Indian policies aimed at enhancing Indian self-determination. In the current Court, several Justices express doubts about the soundness of the Indian canon.[25] A striking signal of the Court's unwillingness to

[21] K. Florey, n 20 above, 1033-1037.

[22] *Osage Nation* v *Irby* 597 F.3d 1117 (10th Cir. 2010), *cert. denied* 564 U.S. 1046 (2011).

[23] P.H. Tinker, 'Is Oklahoma Still Indian Country – "Justifiable Expectations" and Reservation Disestablishment in *Murphy v. Sirmons* and *Osage Nation v. Irby*' 9(3) *Dartmouth Law Journal*, 121 (2011); B. Moschovidis, '*Osage Nation v. Irby*: The Tenth Circuit Disregards Legal Precedent and to Strip Osage County of its Reservation Status' 36 *American Indian Law Review*, 189 (2011); E.D. Bernick, n 2 above, 27-32. In *Mccauley* v *State of Oklahoma*, 2024 OK CR 8, Case No F-2022-208, 4 April 2024, the Oklahoma Court of Criminal Appeals held that only federal courts can reverse the *Irby* precedent.

[24] On the incompatibility between textualism and substantive canons see W.N. Eskridge et al, 'Textualism's Defining Moment' 123 *Columbia Law Review*, 1611, 1681-1687 (2023).

[25] D.R. Hedden-Nicely and S.L. Needs, 'A Familiar Crossroads: *McGirt v. Oklahoma* and the Future of Federal Indian Law Canon' 51 *New Mexico Law Review*,300 (2021); A.T. Skibine, 'Textualism and the Indian Canons of Statutory Construction' 55 *University of Michigan Journal of Law Reform*, 267 (2022); E.D. Bernick, 'Canon Against Conquest' forthcoming *Illinois Law Review* (2024), available at https://tinyurl.com/55jpj3mb (last visited 30 September 2024). Perhaps it is not by chance that, while some Justices voice their doubts about the Indian canon, the Biden administration requires federal agencies to follow it (Working Group of the Memorandum of Understanding Regarding Interagency Coordination and Collaboration for the Protection of Tribal

work out a mature and anti-colonial vision of the three sovereignties can be seen in the *Castro-Huerta* decision.[26] After Oklahoma mounted a media and litigation campaign to push the Supreme Court to overrule *McGirt*, certiorari was granted on another criminal case. This case gave a new majority, led by Justice Kavanaugh, the chance to reintroduce concurring state jurisdiction in Indian reservations when a non-Indian commits a crime against an Indian in Indian reservations. Aside from its impact on criminal law, *Castro-Huerta* was heavily criticized for broad, and unsupported, statements about extending state sovereignty to the detriment of tribal sovereignty. The Court did not officially overrule, but openly rejected the concept of tribal sovereignty affirmed since the early nineteenth century. According to that concept, states should be presumed not to exercise their powers in Indian Country.[27] Neither was the precedent of *McGirt* overruled. However, the principle of concurrent state jurisdiction on non-Indians in Indian Country can be expected to lead to heightened uncertainty in a variety of fields.

In the current landscape of US federalism, issues related to sovereignty are intertwined with issues related to property rights. To some extent, the *Osage Wind* dispute is a glaring example of the unsolved problems left by the era of settler colonialism. If the sovereignty of the Osage Nation had already been fully recognized within its reservation territory, the wind developer would have had no choice but to negotiate a lease with the OMC. More generally, tribal governance has been shown to represent an effective way to promote economic development for both Natives and non-Natives. A strong concept of tribal sovereignty can be expected to increase cooperation with state and local governments. Conversely, cooperation could decrease if, following the *Castro-Huerta* decision, states try to affirm their concurrent jurisdiction beyond criminal law.[28] Moreover, no alternative to tribal-state cooperation is feasible. The physical and legal separation of tribal and state territories would not only be politically unacceptable: it would also prove ineffective in managing problems common to those territories.[29]

Treaty and Reserved Rights, *Best Practices for Identifying and Protecting Tribal Treaty Rights, Reserved Rights, and Other Similar Rights in Federal Regulatory Actions and Federal Decision-Making*, 30 November 2022, 17). An addendum to these best practices on Indian canons of interpretation was announced by White House, *2023 Progress Report for Tribal Nations*, 22.

[26] *Oklahoma* v *Castro-Huerta* 142 S. Ct. 2486 (2022).

[27] G. Ablavsky, 'Too Much History: *Castro-Huerta* and the Problem of Change in Indian Law' *Supreme Court Review*, 293 (2022); D.R. Hedden-Nicely, 'The Terms of their Deal: Revitalizing the Treaty Right to Limit State Jurisdiction in Indian Country' 27(2) *Lewis & Clark Law Review*, 457 (2023); W. Tanner Allread, 'The Specter of Indian Removal: The Persistence of State Supremacy Arguments in Federal Indian Law' 123(6) *Columbia Law Review*, 1533 (2023).

[28] K.M. Carlson, 'Dividing Authority Three Ways: Federal-Tribal-State Relations after *Oklahoma v. Castro-Huerta*' 53(3) *Publius*, 405 (2023).

[29] M.D.O. Rusco, '*Oklahoma v. Castro-Huerta*, Jurisdictional Overlap, Competitive Sovereign Erosion, and the Fundamental Freedom of Native Nations' 106 *Marquette Law Review*, 889 (2023). Separation would clearly be ineffective in a state like Oklahoma, with 38 federally recognized Native Nations. Only Alaska and California have a higher number of federally recognized Native Nations. See M.A. Schwartz, 'The 574 Federally Recognized Indian Tribes in the United States'

In the next section, we discuss how the interactions among the three sovereignties could play out in the energy sector.

IV. US climate policies in Indian Country

Does the opposition of the OMC to a wind farm mean that strong tribal sovereignty puts the low-carbon transition at risk? Actually, opposition to renewable plants is widespread in the USA and could prevent the achievement of the climate targets. No less contentious are other investments related to the low-carbon transition, from mining of critical raw materials (eg lithium) to long-distance electricity transmission networks. This is not a new phenomenon, but the growing number of utility-scale solar and wind plants led to the increase in the number of projects delayed or stopped by opponents.[30] 11 US states and about 15% of US counties adopted restrictions to renewable plants.[31] Opposition may depend on several factors, from land value to environmental concerns to health and safety concerns to lack of public participation. In most cases, more factors at the same time drive opposition. This is also true when opposition comes from tribal governments. Furthermore, it must be acknowledged that Native Americans are not just another group of stakeholders to be consulted. Energy choices directly involve tribal sovereignty.[32] Hence, traditional consultation is not enough. More specific solutions are needed to promote the development of renewable energy in Indian Country. Three different issues wait for satisfactory answers.

To begin with, benefits from renewable energy projects should be channelled toward Native Americans. Data on opposition to solar and wind plants shows that protests are more likely in areas with a larger number of White people and a higher income.[33] This means that the negative impacts of renewable plants are

Congressional Research Service (18 January 2024).

[30] See eg M. Eisenson, 'Opposition to Renewable Energy Facilities in the United States', Columbia Law School, Sabin Center for Climate Change Law, May 2023 (stating that 293 renewable energy projects encountering significant opposition in 45 states); R. Nilson et al, 'Survey of Utility-Scale Solar and Wind Developers Report', US Department of Energy, Lawrence Berkeley National Laboratory, January 2024 (stating that almost 50% of wind projects are delayed and about 30% are cancelled).

[31] A. Lopez et al, 'Impact of Siting Ordinances on Land Availability for Wind and Solar Development' 8 *Nature Energy*, 1034 (2023); E. Weise and S. Bhat, 'Across America, Clean Energy Plants are Being Banned Faster than they're being built' (4 February 2024), available athttps://tinyurl.com/2apb8ve9 (last visited 30 September 2024).

[32] L. Susskind et al, 'Sources of Opposition to Renewable Energy Projects in the United States' 165 *Energy Policy*, 112922 (2022); C. Grosse and B. Mark, 'Does Renewable Electricity Promote Indigenous Sovereignty? Reviewing Support, Barriers, and Recommendations for Solar and Wind Energy Development on Native Lands in the United States' 104 *Energy Research & Social Science*, 103243 (2023) (discussing renewable energy as a tool to achieve sovereignty).

[33] I. Ko et al, 'Wind Turbines as New Smokestacks: Preserving Ruralness and Restrictive Land-use Ordinances Across U.S. Counties' 18(12) *PloS One* e0294563, (2023); E. O'Shaughnessy et al, 'Drivers and Energy Justice Implications of Renewable Energy Project Siting in the United

often shifted to low-income areas. Given that Native Americans have a lower average income compared to other ethnic groups, they are more likely to experience those impacts. To be sure, renewable energy can generate economic benefits for local communities.[34] But such benefits are directly dependent on the possibility to control the renewable projects. If control is entirely left to non-Indians, benefits are much more uncertain. Federal legislation already started to support tribal governments' investments in renewable energy from the 1990s. Over the years, several schemes were introduced to promote tribal self-determination in energy matters. They mostly failed to prompt renewable investments on Indian lands. Tribal lands could potentially generate more than 7% of total US wind energy consumption, but actual generation is far below 1%.[35] The reasons for such a failure are manifolds: bureaucratic inefficiencies, complex authorization procedures, lack of infrastructures, and unavailability of federal subsidies.[36] The latter problem was particularly daunting. Tribes could not receive federal subsidies due to their status as non-taxable entities. Therefore, any renewable investments involving them were much more costly. Only with the Inflation Reduction Act of 2022 were tribes granted the right to receive direct payments equivalent to tax credits. Under the new regime, a variety of options have become available. Tribal governments do not have to lease land to non-Indian investors. They can partner with them through corporate entities. For example, the Tribal Energy Developed Organization (TEDO), introduced in 2018, includes at least one tribe that holds a majority interest and is regulated according to the laws of the tribe. Federal tax credits can now be split with non-Indian investors that join a TEDO.[37]

Secondly, renewable energy projects face a difficult trade-off between accelerating

States' 25(3) *Journal of Environmental Policy & Planning*, 258(2023); L.C. Stokes et al, 'Prevalence and Predictors of Wind Energy Opposition in North America' 120(40) *PNAS* e2302313120, (2023).

[34] D. Parker et al, 'Renewable Energy on American Indian Land', Working Paper September 2023, available at https://tinyurl.com/y2nmj3eb (last visited 30 September 2024) argue that earnings from leasing reservations land for renewable projects could be in the range of $7-19 billion by 2050.

[35] L.E. Evans et al, 'Do Windy Areas Have More Wind Turbines: An Empirical Analysis of Wind Installed Capacity in Native Tribal Nations' 17(2) *PloS One* e0261752, (2022).

[36] M. Maruca, 'From Exploitation to Equity: Building Native-Owned Renewable Energy Generation in Indian Country' 43 *William and Mary Environmental Law and Policy Review*, 391 (2019); E.A. Kronk Warner, 'Renewable Energy Depends on Tribal Sovereignty' 69 *Kansas Law Review*, 809 (2021); M.G. Zimmerman and T.G. Reames, 'Where the Wind Blows: Exploring Barriers and Opportunities to Renewable Energy Development on United States Tribal Lands' 72 *Energy Research & Social Science*, 101874 (2021); C. Grosse and B. Mark, n 32 above, 6-9 (describing social, material, and legal barriers).

[37] B. Reiter, 'Expanding Renewable Energy Tax Credits to Tribal Governments: How Current Legislative Proposals Will Benefit Tribes and Their Members in their Continued Efforts to Address Climate Change' 46(3) *William and Mary Environmental Law and Policy Review*, 687 (2022). The Biden administration provided dedicated tribal funding for clean energy investments never seen before: see White House, *Bipartisan Infrastructure Law Tribal Playbook* May 2022; White House, *Guidebook to the Inflation Reduction Act's Clean Energy and Climate Investments in Indian Country* April 2023; US Department of Energy, *Tribal Nations and Native Communities Resource Guide* February 2024.

the low-carbon transition and complying with principles of environmental, climate and energy justice. Native Americans could oppose renewable projects because of significant environmental impacts, as well as because they entail the destruction of sacred sites.[38] Justice issues are framed in different ways. For the land back movement, the goal is to restore the historical injustices of US settler colonialism.[39] For the rights of nature movement, the goal is to change the traditional Western approach to the exploitation of natural resources.[40] A broader theme common to these debates is the role that Indigenous knowledge systems should play in the low-carbon transition. If those alternative knowledge systems are taken seriously, the planning of green infrastructures should radically change.[41] The Biden administration made some steps in this direction by mandating the inclusion of Indigenous knowledge in federal decision-making. An attempt should be made to use Indigenous knowledge together with other knowledge systems. If conflicts arise, federal agencies should strive to consider multiple ways of knowing or lines of evidence. Indigenous knowledge should also influence federal rulemaking and be referred in order to explain why a rule is necessary, why an approach has been selected, or why alternative approaches have been rejected. Within regulatory impact analyses, Indigenous knowledge should be relied upon to assess the impact of a rule on different communities or on culturally and ecologically significant lands.[42]

[38] Native Americans also opposed several fossil fuels projects. According to Indigenous Environmental Network and Oil Change International, *Indigenous Resistance Against Carbon* August 2021, Indigenous campaigns could stop or delay projects emitting at least one-quarter of US and Canada annual greenhouse gases.

[39] W.Y. Chin, '"We Want Our Land Back": Returning Land to First Peoples in the Land Return Era Using the Native Land Claims Commission to Reverse Centuries of Dispossession' 24 *Scholar* 335 (2023); V. Racehorse and A. Hohag, 'Achieving Climate Justice through Land Back: An Overview of Tribal Dispossession, Land Return Efforts, and Practical Mechanisms for #LandBack' 34(2) *Colorado Environmental Law Journal* 175 (2023).

[40] E. Macpherson, 'The (Human) Rights of Nature: A Comparative Study of Emerging Legal Rights for Rivers and Lakes in the United States of America and Mexico' 31 *Duke Environmental Law & Policy Forum* 327 (2021); A. Huneeus, 'The Legal Struggle for Rights of Nature in the United States' 2022 *Wisconsin Law Review* 133; K. Bradshaw, 'Identifying Contemporary Rights of Nature in the United States' 95 *Southern California Law Review* 1437 (2022); H. Loury, '*Pachamama* over People and Profit: A Case for Indigenous Ecology and Environmental Personhood' 47 *American Indian Law Review*, 229 (2023).

[41] On the need to consider the vision of Indigenous Peoples for the transition to renewable energy see K. Whyte, 'Indigenous Environmental Justice, Renewable Energy Transition, and the Infrastructure of Sovereignty' in P.C. Rosier ed, *Environmental Justice in North America* (New York, NY and London: Routledge, 2024), 307-330.

[42] Office of Science and Technology Policy and Council on Environmental Quality, *Indigenous Traditional Ecological Knowledge and Federal Decision Making*, Memorandum for the Heads of Departments and Agencies, 15 November 2021; Id, *Guidance for Federal Departments and Agencies on Indigenous Knowledge*, Memorandum for the Heads of Departments and Agencies, 30 November 2022. The link between environmental justice and Indigenous knowledge was explicitly acknowledged in Executive Order 14096 of 21 April 2023. See also Institute for Tribal Environmental Professionals, *Status of Tribes and Climate Change Report* (Flagstaff, AZ: Northern Arizona University, 2021); H. Tanana, 'Protecting Tribal Health from Climate Change' 15(1) *Northeastern*

Whether these initiatives will help address all the trade-offs is unclear. In some cases, they are dealt with through voluntary transfers of land to tribal governments[43] or co-management solutions.[44] On a larger scale, the huge footprint of green infrastructures (eg, renewable plants, transmission lines, and critical materials mines) risks foreclosing Native Americans' access to areas tightly linked to their cultural and religious beliefs. In the *Osage Wind* dispute, religious concerns were related to the need for an unobstructed view of the horizon, a significant spiritual element for the Osage.[45] In many cases, sacred sites are located on federal public lands or federal sea waters. Consultation rights are usually available, but they can lead to two, equally undesirable, outcomes: the opposition by Native Americans stops a renewable project or the religious beliefs of Native Americans are devalued in order to complete the project.[46] Litigation about the protection of Native Americans' religious beliefs has not provided satisfactory solutions. The prevailing view is that religious claims cannot prevail on other parties' land.[47] The Biden administration tried to improve the protection

University Law Review 89, 154-158 (2023).

[43] Voluntary transfers took place between 2012 and 2022 through the Land Buy-Back Program for Tribal Nations. About three million equivalent acres were returned to Tribal trust ownership, but high levels of fractionated lands still exist and could further increase. See US Department of Interior, *Ten Years of Restoring Land and Building Trust2012-2022*, December 2023. With the fee-to-trust process, a program established in 1980, the Department of Interior was able to acquire over one million acres intro trust for the benefit of Tribes or individual Indians. See US Department of Interior – Bureau of Indian Affairs, *Land Acquisitions* 88 *Federal Register* 86222 (December 12, 2023).

[44] Several co-stewardship and co-management agreements for federal lands and waters were signed with tribal governments: see US Department of Interior and US Department of Agriculture, *Joint Secretarial Order No. 3403 on Fulfilling the Trust Responsibility to Indian Tribes in the Stewardship of Federal Lands and Waters*, 15 November 2021; White House, n 25 above, 17-19; US Department of Agriculture, *Annual Report on Tribal Co-Stewardship*, December 2023;K.K. Washburn, 'Facilitating Tribal Co-Management of Federal Public Lands' *Wisconsin Law Review*,263 (2022); V. Racehorse and A. Hohag, n 39 above, 196-200.

[45] S.L. Carmack, n 3 above, 155; S.A. Husk, 'Scattered to the Winds?: Strengthening the National Historic Preservation Act's Tribal Consultation Mandate to Protect Native American Sacred Sites in the Renewable Energy Development Era' 34 *Tulane Environmental Law Journal* 273, 299-301 (2021). These religious concerns were not explicitly debated.

[46] A good example of such dynamics is represented by the two offshore projects of Cape Wind and Vineyard Wind. The first one was stopped in 2017 after many years of opposition by Indigenous communities. The second one was approved in 2021, although with some conditions related to the preservation of cultural resources. See A.M. Dussias, 'Room for a (Sacred) View? American Indian Tribes Confront Visual Desecration Caused by Wind Energy Projects' 38 *American Indian Law Review*,333 (2014); W.J. Furlong, 'The Other Non-Renewable Resource: Cultural Resource Protection in a Changing Energy Future' 42 *Public Land & Resources Law Review*, 1 (2020);S.A. Husk, n 45 above, 282-287; E. Bacchiocchi et al, 'Energy Justice and the Co-Opting of Indigenous Narratives in U.S. Offshore Wind Development' 41 *Renewable Energy Focus*, 133 (2022); Bureau of Ocean Energy Management, *Vineyard Wind Construction and Operation Plan Approval Letter*, July 15, 2021.

[47] See generally the high-profile case *Apache Stronghold* v *United States* U.S. App. LEXIS 5007 (9th Cir. 2024) (en banc), holding that the transfer of a site of great spiritual value to the Western Apache Indians from the federal government to a private company planning to start mining operations did not infringe the religious rights granted by the Free Exercise Clause of the

of and access to sacred sites on federal lands, though mainly through procedural measures.[48] Even with regard to mining activities, the most impactful for Native Americans, the federal government is required to mitigate adverse effects, not to refuse permission if tribal governments withhold consent.[49] A significant advancement would be the recognition of the direct applicability of the provisions that many tribal codes devote to the protection of sacred sites. So far, such a development is difficult to foresee.[50]

Thirdly, clashes between renewable investments and fossil fuels investments should be avoided. If the concept of tribal sovereignty is taken seriously, the phase out of fossil fuels cannot be imposed on Native Americans. For many tribes, coal and natural gas are the main sources of revenues. Divergent views about energy sovereignty can be expected within each tribe and across tribes.[51] However, with the low-carbon transition in full swing, coal plants on reservations closed and prompted the search for alternative energy sources. At the same time, Indian environmental organizations contributed to change prevailing worldviews that linked fossil fuels to development.[52] Following *McGirt*, oil and gas state law could be replaced by tribal law on Indian lands. This development could be exploited by tribal governments to enact a regulatory regime that reduces conflicts between the subsurface and surface energy investments. In both state common law and state legislation, attempts at identifying the rights of wind developers and the priorities among different land uses have left significant margins of uncertainty.[53] The goal should be to manage the phase out of fossil fuels

First Amendment to the US Constitution and by the Religious Freedom Restoration Act of 1993. See T.A. Rule, 'Preserving Sacred Sites and Property Law' forthcoming 2024 *Wisconsin Law Review*; A.R. Riley, 'Before *Mine!*: Indigenous Property Rights for Jagenagenon' 136 *Harvard Law Review* 2074, 2094-2096 (2023).

[48] 'Memorandum of Understanding Regarding Interagency Coordination and Collaboration for the Protection of Indigenous Sacred Sites', November 2021; 'Best Practices Guide for Federal Agencies Regarding Tribal and Native Hawaiian Sacred Sites', December 2023. On the use of Indigenous knowledge to avoid or minimize adverse effects to historic properties of religious and cultural significance to Indian Tribes and Native Hawaiian Organizations see the recommendations by the Advisory Council on Historic Preservation, 'Policy Statement on Indigenous Knowledge and Historic Preservation', 21 March 2024.

[49] *Biden-Harris Administration Fundamental Principles for Domestic Mining Reform*, February 2022; Interagency Working Group on Mining Laws, Regulations, and Permitting, *Recommendations to Improve Mining on Public Lands*, September 2023.

[50] A.R. Riley, 'The Ascension of Indigenous Cultural Property Law' 121 *Michigan Law Review* 75 (2022); Id, n 47 above.

[51] D. Raimi and A. Davicino, 'Securing Energy Sovereignty: A Review of Key Barriers and Opportunities for Energy-Producing Native Nations in the United States' 107 *Energy Research & Social Science* 103324 (2024).

[52] A. Curley, *Carbon Sovereignty: Coal, Development, and Energy Transition in the Navajo Nation* (Tucson: University of Arizona Press, 2023). Movement toward the incorporation of environmental principles into state oil and gas law is visible in many US states: see T.K. Righetti et al, 'The New Oil and Gas Governance' *The Yale Law Journal Forum*, 29 June 2020, 51.

[53] W. Swinford, 'Lessons Learned: Avoiding the Hardships of Tribal Mineral Leasing in the Development of Oklahoma Tribal Wind Energy' 40 *American Indian Law Review* 99 (2016);

with a proprietary and regulatory regime fully aligned with Indigenous knowledge. This outcome becomes viable only if the differences between Western and tribal value systems with regard to natural and cultural resources are duly acknowledged.[54]

Putting the *Osage Wind* dispute in the larger landscape of climate policies for Native Americans helps understand its deepest roots. Enel assumed that there was just one sovereign instead of three. No consultation with the Osage Nation was attempted. This strategy is in stark contrast with the sustainability principles by which Enel itself claims to abide.[55] An additional shortcoming of Enel's strategy was to plan for a wind farm that only considered standard economic and engineering factors. No attention was paid to alternative design options that could be deemed more compatible with the needs of the Osage Nation, its religious beliefs, or its environmental ethics.

If these issues are addressed, alternative ways to settle the dispute could emerge. The OMC argued that, to avoid removal of the turbines, Enel shall enter a mineral lease. The ongoing debate on the low-carbon transition suggests another option: Enel could enter into some form of co-management agreement with the Osage Nation. Clearly, the agreement would involve sharing of profits between the parties. At the same time, it could be a solution that allows them to discuss how future technological choices about the wind farm should take into account the needs and cultural views of the Osage Nation.[56]

V. Indigenous knowledge for the low-carbon transition

The *Osage Wind* dispute reflects the specific features of US legal pluralism. But many other Indigenous Peoples around the world are equally affected by the low-carbon transition. Like Native Americans, other Indigenous Peoples face a double risk: on one hand, they live in places where the impacts of climate change could be significant and adaptation strategies are more difficult to implement;[57]

T.A. Rule, *Renewable Energy: Law Policy and Practice* (St. Paul, MN: West Academic Publishing, 2nd ed, 2021), 177-196; M. Lockman, 'Fencing the Wind: Property Rights in Renewable Energy' 125 *West Virginia Law Review*, 27 (2022).

[54] On the search for shared understandings of resource management see S. Oh et al, 'Uncovering Implicit Western Science and Indigenous Values Embedded in Climate Change and Cultural Resource Adaptation Policy and Guidance' 15(1) *The Historic Environment: Policy & Practice*, 53 (2024).

[55] Enel, 'Human Rights Policy', first published in 2013 and amended in 2021, states at sec. 2.2.4 that 'In developing our projects, we commit to engage all relevant stakeholders, including indigenous and tribal communities as we believe active community engagement throughout the process is essential.' Stakeholders engagement is also referred to in Enel, 'Sustainability Report 2022',254.

[56] Several options are available to reduce the landscape impact of wind farms: see D. Harrison-Atlas et al, 'Dynamic Land Use Implications of Rapidly Expanding and Evolving Wind Power Development' 17 *Environmental Research Letters*, 044064 (2022).

[57] The vulnerability of Indigenous Peoples to climate change is heightened both by their dependence on land-based activities and the historical factors that led to structural conditions of inequality and poverty. See Intergovernmental Panel on Climate Change, *Climate Change 2022:*

on the other hand, they have to bear the burden of the activities required by the decarbonization process.[58] Mismanagement of these risks has led to countless conflicts between investors in clean technologies and Indigenous Peoples. Of course, Indigenous Peoples acknowledged the benefits of clean technologies in many cases. Most often than not, conflicts can be avoided if enough space is left for Indigenous sovereignty. How to carve out such a space cannot be stated too generally. Much depends on the kind of technology to be deployed and the peculiar features of legal pluralism in each country or region. Only two preliminary observations are possible here. They can represent the starting points for a broader analysis that considers all the relevant contextual elements.

The first observation relates to the meaning of Indigenous sovereignty. For both mitigation and adaptation strategies, it is not possible to interpret sovereignty as complete independence from other legal orders. The main issue is how to ensure that the interplay between these orders does not systematically endanger Indigenous needs. Perhaps the most significant requirement is the adoption of decision-making procedures that fully incorporate Indigenous knowledge and draw on it to design mitigation and adaptation strategies. Some progress in this direction can be seen in international fora. Until recently, Indigenous knowledge was perceived as a repository of information to be integrated into Western scientific approaches. This narrow perspective has largely been supplanted by approaches that rely on Indigenous knowledge to frame climate problems and search for solutions.[59] The main open issue is how to ensure that legal decision-making

Impacts, Adaptation and Vulnerability (Cambridge and New York, NY: Cambridge University Press, 2023), 1054-1058, 1191-1193; V. Reyes-García et al, 'Indigenous Peoples and Local Communities Report Ongoing and Widespread Climate Change Impacts on Local Socio-Ecological Systems' (2024) 5:29 *Communications Earth & Environment*; V. Reyes-García et al eds, *Routledge Handbook of Climate Change Impacts on Indigenous Peoples and Local Communities* (London and New York, NY: Routledge, 2024).

[58] See eg A.M. Levenda et al, 'Renewable Energy for Whom? A Global Systematic Review of the Environmental Justice Implications of Renewable Energy Technologies' 71 *Energy Research & Social Science*, 101837 (2021); T. Kramarz et al, 'Governing the Dark Side of Renewable Energy: A Typology of Global Displacements' 74 *Energy Research & Social Science* 101902 (2021); B.K. Sovacool, 'Who Are the Victims of Low-Carbon Transitions? Towards a Political Ecology of Climate Change Mitigation' 73 *Energy Research & Social Science*, 101916 (2021); A. Scheidel et al, 'Renewable Land Grabbing: Land and Resource Appropriations in the Global Energy Transition', in A. Neef et al eds, *Routledge Handbook of Global Land and Resource Grabbing* (London and New York, NY: Routledge, 2023),189-204; A. Scheidel et al, 'Global Impacts of Extractive and Industrial Development Projects on Indigenous Peoples' Lifeways, Lands, and Rights' 9 *Science Advances*, eade9557 (2023). Also see G. Bellantuono, 'The Case for Hydrogen in the Global South: Enhancing Legal Pluralism', in C.M. Cascione et al eds, *Public and Private in Contemporary Societies* (Rome: RomaTre Press, 2024), 521-544. for a discussion of Indigenous opposition to hydrogen infrastructures.

[59] This change of perspective is already visible in IPCC, *Climate Change 2022* n 57 above, 2713-2716. However, even the IPCC falls short of adopting truly transformative visions grounded on Indigenous knowledge. See E.S. Brondízio et al, 'Locally Based, Regionally Manifested, and Globally Relevant: Indigenous and Local Knowledge, Values, and Practices for Nature' 46 *Annual Review of Environment and Resources*, 481 (2021); M. Zurba and A. Papadopoulos,

adequately considers Indigenous knowledge. This is one of the aspects on which legal systems may significantly differ, depending on the concept of legal pluralism they endorse. As shown in sections III and IV, the US legal system has mainly relied on interventions by the executive power to make room for Indigenous knowledge, but its impact is often hampered by lack of support in the legislative and judicial branches. This is a version of 'asymmetric legal pluralism', in which recognition of Indigenous sovereignty is contingent on a combination of factors. Clearly, this approach does not ensure that legal pluralism can support the low-carbon transition.

Other legal systems face similar problems. United Nations (UN) reports suggest that national climate legislation rarely provides a broad recognition of the procedural rights of Indigenous Peoples.[60] In the European Polar region, the traditional lifestyles and agricultural activities of several Indigenous Peoples residing in Sweden, Finland and Norway are already heavily affected by climate change.[61] Conflicts about the footprint of renewable plants and mining activities abound, too.[62] So far, European Union (EU) law has done little to integrate Indigenous knowledge in its climate policies.[63] Even though consultation procedures are required for renewable plants, there is no assurance that Indigenous Peoples' point of view is granted priority. Promising changes can be expected from two new legislative interventions, however. Firstly, the Critical Raw Materials Act[64]

'Indigenous Participation and the Incorporation of Indigenous Knowledge and Perspectives in Global Environmental Forums: A Systematic Review' 72 *Environmental Management*, 84 (2023); B. Van Bavel et al, 'Indigenous Knowledge Systems' in K. De Pryck and M. Hulme eds, *A Critical Assessment of the Intergovernmental Panel on Climate Change* (Cambridge: Cambridge University Press, 2023), 116-125; R. Carmona et al, 'Analysing Engagement with Indigenous Peoples in the Intergovernmental Panel on Climate Change's Sixth Assessment Report' 2 *npj | Climate Action* 29 (2023); B. Orlove et al, 'Placing Diverse Knowledge Systems at the Core of Transformative Climate Research' 52 *Ambio* 1431 (2023).

[60] See eg Permanent Forum on Indigenous Issues, *State of the World's Indigenous Peoples: Rights to Lands, Territories, and Resources* (Geneva: United Nations, 2021), V; United Nations, *Exploring Approaches to Enhance Climate Change Legislation, Supporting Climate Change Litigation and Advancing the Principle of Intergenerational Justice*, Report of the Special Rapporteur on the promotion and protection of human rights in the context of climate change, A/78/255, 23 July 2023.

[61] IPCC, *Climate Change 2022*, n 57 above, 1867-1870.

[62] M. Tennberg et al eds, *Indigenous Peoples, Natural Resources and Governance: Agencies and Interactions* (London and New York, NY: Routledge, 2022); R. Kuokkanen, 'Are Reindeer the New Buffalo? Climate Change, the Green Shift, and Manifest Destiny in Sápmi' 22(1) *Meridiens*, 11 (2023); D. Cambou and O. Ravna eds, *The Significance of Sámi Rights: Law, Justice, and Sustainability for the Indigenous Sámi in the Nordic Countries* (London and New York, NY: Routledge, 2024); L. Mósesdóttir, 'Energy (In)justice in the Green Energy Transition. The Case of Fosen Wind Farms in Norway' Working paper 5 December 2023, available at https://tinyurl.com/3x3bhxya (last visited 30 September 2024).

[63] M. Hesselman, 'Human Rights and EU Climate Law' in E. Woerdman et al eds, *Essential EU Climate* Law (Cheltenham: Elgar Publishing, 2nd ed, 2022), 259-292.

[64] European Parliament and Council Regulation 2024/1252 of 11 April 2024 establishing a framework for ensuring a secure and sustainable supply of critical raw materials [2024] OJ L 2024/1252. For a critical assessment see S. Bogojević, 'The European Green Deal, the Rush for Critical Raw Materials, and Colonialism' *Transnational Legal Theory Online*, 16 September 2024.

requires promoters of strategic projects related to the extraction, processing, or recycling of critical raw materials, within the EU or in third countries, to submit a plan containing measures for the consultation of Indigenous Peoples, the prevention and minimization of adverse impacts and, where appropriate, fair compensation (Arts 6(c) and 7(e), Annex III). These requirements can also be fulfilled with certification schemes recognized by the Commission (Art 30 and Annex IV). Secondly, the Corporate Sustainability Due Diligence Directive requires compliance with human rights international instruments, including ones on the protection of Indigenous rights.[65] These provisions could change the way green infrastructures are planned. At the same time, these provisions could also fuel litigation whenever green infrastructures interfere with Indigenous rights.[66] Hence, despite the additional stability these legislative interventions could provide, the EU legal pluralism risks being no less 'asymmetric' than the US one.

The second observation goes beyond procedural rights and focuses on substantive rules: what kind of legal regimes do become feasible with the integration of Indigenous knowledge into climate policies? The integral replacement of state law with Indigenous law may sound appealing because it would entail a radically different approach to the management of natural resources. Integral replacement may also be a strategy to pursue the decolonization of legal systems. However, wholesale rejection of ideas, concepts and rules from the Western world leaves itself open to the criticism that Indigenous law is often an amalgam of ancient and modern approaches. Instead of searching for the 'purest' version of Indigenous law, it is more fruitful to assemble ideas and concepts from both Indigenous and state law in order to build the most suitable legal regime. The property regime for renewable plants is a case in point. An Indigenous perspective favours communitarian approaches, which ensures that technological choices are made according to Indigenous worldviews. At the same time, renewable plants shall be integrated into the regulatory framework of energy markets. Even though different types of energy markets may be preferred in the Global North and the Global South, both small and large renewable plants need to be embedded into the existing energy systems. This means that communitarian management

[65] Directive (EU) 2024/1760 of the European Parliament and of the Council of 13 June 2024 on corporate sustainability due diligence. Indigenous rights shall also be taken into account in the risk assessments and due diligence obligations required by European Parliament and Council Directive 2023/1115 of 31 May 2023 on the making available on the Union market and the export from the Union of certain commodities and products associated with deforestation and forest degradation [2023] OJ L150/206.

[66] On climate litigation trends related to Indigenous rights see F. Dehbi and O. Martin-Ortega, 'An Integrated Approach to Corporate Due Diligence from a Human Rights, Environmental, and TWAIL Perspective' 17 *Regulation & Governance*, 927 (2023); E. Aba, 'A Fast and Fair Energy Transition: How Community Legal Action and New Legislation Are Shaping the Global Shift to Renewable Energy' 8 *Business and Human Rights Journal*, 252 (2023); A. Savaresi and M. Wewerinke-Singh, 'A Just Transition? Investigating the Role of Human Rights in the Transition towards Net Zero Societies' EUI Academy of European Law Working Paper 2024/09.

should be adapted to the financial requirements of a competitive environment.

The ultimate goal of a pluralistic approach to the low-carbon transition should be the development of a cooperative vision of the relationships among legal orders.[67] That most legal systems are still far from such a vision might turn out to be one of the most significant hurdles to a fast and fair transition.

VI. Conclusions

The *Osage Wind* dispute was triggered by the complexity of the property regime on Indian lands and the uncertain boundaries among the federal, state, and tribal sovereignties. More fundamentally, the dispute signals that the impact of legal pluralism on the low-carbon transition is largely overlooked. The large-scale transformations required by the transition cannot take place without considering the role of each legal order. Both the US experience and other disputes involving Indigenous Peoples around the world teach the same lesson: the adoption of clean technologies is directly dependent on their compatibility with institutional frameworks that give space to cultural diversity.

[67] See G. Swenson, *Contending Orders: Legal Pluralism and the Rule of Law* (Oxford: Oxford University Press, 2022), 62-63, for a definition of cooperative legal pluralism in which non-state actors retain significant autonomy but work together with state actors toward shared goals.