Energy Sovereignty in Marine Spaces

Richard Barnes

Introduction

Significant deposits of oil and gas are known to exist under the world's oceans. New deposits are still being discovered or rendered accessible through new or more efficient technologies. More recently, the oceans have become the principal focus for developments in the field of renewable energy with the growth in offshore wind farms. Invariably, energy resources will be shipped by sea, or transmitted through undersea pipelines and cables. The exploration, production and supply of energy from the sea impacts on all other oceans activities. This means that marine spaces are at the heart of debates about meeting the world's energy demands, and that international law of the sea is at the heart of debates about how such demands are met and balanced against other ocean uses. Much of his debate is being framed in terms of energy sovereignty, which raises questions about the extent to which States, individually and collectively, can and should be able to secure the energy supply needs, and how this will operate in practice. This paper explores some of the preliminary issues that arise from claims about energy sovereignty in respect of marine resources. This is important because as calls for energy sovereignty grow in frequency and force, they must be reconciled with well-established rules and values concerning the way in which sovereignty operates, as well adapt to the particular physical conditions in which marine energy resources are located.

The paper begins by outlining how debates about energy sovereignty have developed, with specific reference to marine spaces, and points out that international legal instruments do not appear to say much, at least directly, about energy sovereignty. Accordingly it is necessary to try and construct some sense of what energy sovereignty means from a legal perspective. Part three of the paper considers the meaning of 'energy sovereignty', breaking it down into its component parts: energy and sovereignty. It argues that if we are to regulate energy, then this must accord with the physical properties of energy, and in particular adapt to a more nuanced understanding of the distinction between energy resources and energy use. A proper understanding of energy provides opens up opportunities to re-imagine the way we regulate energy, or at least properly conceptualise the way in which we regulate energy. This is particularly important in the context of

marine renewables (wind/tidal energy), where the resource is not exclusive, spatially located and subject to uncontrolled natural variables, and which present challenges for existing legal approaches. Turning to sovereignty, the paper considers how sovereignty is conceptualised. It suggests that relative accounts of sovereignty are more consistent with the realities of energy use, and the practice of States. Accordingly, it becomes difficult to sustain claims to energy sovereignty based purely upon securing national interests. However, more nuanced accounts of energy sovereignty based may require further analysis. Typical justifications of sovereignty over natural resources tend to be couched in terms of good order or as calls for the redistribution of wealth. This compares poorly to justifications of property. Since energy sovereignty is essentially concerned with questions of who can control energy resources and supplies, the extent of such authority and any limits on this, i.e. exclusive control, then looking at the justifications framed in terms of property might better inform debates about the meaning of energy sovereignty. Some of the implications of this approach are highlight with the use of an example drawn from natural rights-based approaches to property. The questions that even one such approach might generate suggests that much more research is needed to develop a meaningful understanding of 'energy sovereignty'.

Energy Sovereignty in Context

Any consideration of energy sovereignty cannot take place in a vacuum. It must acknowledge how policies, laws and debates have evolved, the meaning and relationship of core terms and concepts, and the place of law in shaping any debates. This part puts the following discussion of energy sovereignty into a law of the sea context. The term energy sovereignty is preferred since this accommodates a wider range of perspectives than the more commonly used term 'energy security.'

Use of the term 'energy sovereignty' is growing, although its precise meaning is not clear, especially when viewed from a legal perspective. Friends of the Earth define the term as a principle whereby "the right of people to have access to energy and to choose sustainable energy sources and consumption patterns that will lead them towards truly sustainable societies."[1] The idea is firmly located in the discourse of rights and associated with similar movements/concepts such as "food

[1] Friends of the Earth International. *Annual Report 2013*, at 3, available at http://www.foei.org/wp-content/uploads/2014/06/FoEI-Annual-Report-2013.pdf

sovereignty".[2] It is thus about empowering individuals and ensuring that resources are available to meet needs. In contrast, Böhme uses the phrase to describe the approach of energy producing countries to secure control over natural resources, especially to resist exploitation of these under free market regimes.[3] This approach is also known as "energy nationalism",[4] and it is closely linked to the more frequently used term "energy security". This seeks to ensure that States control access to energy resources.[5] The International Energy Agency defines energy security as the "uninterrupted availability of energy sources at an affordable price."[6] Similarly, Barton *et al* define it as "a condition in which a nation and all, or most, of its citizens and businesses have access to sufficient energy resources at reasonable prices for the foreseeable future free from serious risk of major disruption of service".[7] Whilst these approaches do not deny the interests of individuals, they place the State at the centre of debates about ensuring energy security. For present purposes it is not necessary to synthesise a common meaning of energy sovereignty, but merely to note that nuances in any definition of the core concept reflect different views on how to address fundamental questions about who controls energy, and how best to structure such control in order to meet the needs or interests of energy users. It may also be observed that different views of energy sovereignty are susceptible to different accounts of sovereignty, as explored below.[8]

Energy sovereignty is not a new concern. Control of energy resources has been the object of both national/international policy and academic study for much of the twentieth century.[9] This has mainly focused upon the supply of oil as the means of sustaining military machines and industrial development. International lawyers will be familiar with how the desire to secure access to oil

---

[2] N. Bellinger and M. Fakhri, 'The Intersection Between Food Sovereignty and Law' (2013) 28 *Natural Resources and Environment* 45; M. Windfuhr and J. Jonsén, *Food Sovereignty: Towards Democracy in Localized Food Systems* (IDTG, Working Paper, 2005) 21.

[3] D. Böhme, *EU-Russia Energy Relations: What Chance for Solutions? A Focus on the Natural Gas Sector* (Universitätswerlag, Potsdam, 2011) 46-8.

[4] D. Bochkarev and G. Austin, *Energy Sovereignty and Security: Restoring Confidence in a Cooperative International System*. East West Institute Policy Paper 01/2007, at 2, available at http://www.ewi.info/idea/energy-sovereignty-and-security-restoring-confidence-cooperative-international-system

[5] G Kaft and A Korin (eds.), *Energy Security Challenges for the 21st* Century (Greenwood, Santa Barbara, 2009); R. Youngs, *Energy Security. Europe's New Foreign Policy Challenge* (Routledge, London, 2009); G Bahgat, *Energy Security and Interdisciplinary Approach* (Wiley, 2011).

[6] See http://www.iea.org/topics/energysecurity/subtopics/whatisenergysecurity/

[7] B. Barton, C. Redgwell, A. Rønne, and D. N. Zillman, 'Introduction' in *Energy Security. Managing Risk in a Dynamic Legal and Regulatory Environment* (Oxford University Press, Oxford, 2004) at 5.

[8] See part III.

[9] D.R. Bohi and M.A. Toman, *The Economics of Energy Security* (Kluwer, Dordrecht, 1996); D. Yergin, *The Quest: Energy, Security, and the Remaking of the Modern World* (Penguin, London, 2011).

supplies provoked the Truman Proclamation of 1945,[10] influenced the development and regulation of oil concession from the 1950's,[11] and came to the fore of debates about international peace and security with the emergence of OPEC in the 1970s.[12] The post-World War II process of decolonisation generated considerable literature on questions of sovereignty over natural resources.[13] It also highlighted the importance of international cooperation in meeting energy supplies given the dislocation of many energy resources from the main consumers of energy. To a large extent, it is oil (and gas), which has shaped discussions about the regulation of energy supply, and in particular exploration, production and supply lines, as well as the regulation of oil and gas markets. However, in recent decades the regulation of energy has come under increased scrutiny from an environmental perspective with the realisation of the impacts of global warming and the move towards renewable energy supplies. This has begun to generate a distinct legal literature, or at least seek to place energy issues within the broader paradigm of sustainable development.[14] Whilst this has not lessened the importance of traditional concerns about the control of energy resources and supplies, it has demonstrated the increasing complexity of factors that need to be accounted for in energy regulation.

The regulation of energy is undoubtedly complex. Typically this is done through technical rules of domestic law, which focus on discreet aspects of energy production systems: exploration, exploitation, production and supply. These are overlaid by rules on planning, health and safety, environmental protection, finance and investment, taxation and so on. In part the complexity is a product of the way the domestic law has developed. Thus, it has been observed that energy law has evolved incrementally, instrumentally, and in a disjointed fashion.[15] And that it focuses on adequate supply, rather than efficient or equitable use or environmental consequence. At the risk

---

[10] A. Hollick, 'US Oceans Policy. The Truman Proclamation' (1976) 17 *Virginia Journal of International Law* 23.
[11] M.A. Mughraby, *Permanent Sovereignty over Oil Resources: a study of Middle East oil concessions and change* (Middle East Research and Publications Centre, Beirut, 1966).
[12] J.J. Paust and A. Blaustein 'The Arab Oil Weapon. A Threat to International Peace' (1974) 68 *American Journal of International Law (AJIL)* 410.
[13] See, for example, G. Elian, *The Principle of Sovereignty over Natural Resources* (Sijthoff & Noordhoff, Alphen an den Rijn 1979); K. Hossein and S.R. Chowdry, *Permanent Sovereignty over Natural Resources: Principles and Practice* (Pinter, London, 1984); G. Abi-Saab, 'Permanent Sovereignty over Natural Resources and Economic Activities' in M. Bedjaoui (ed.) *International Law: Achievements and Prospects* (Martinus Nijhoff, Dordrecht 1991) 597-618; N. Schrijver, *Sovereignty over Natural Resources. Balancing Rights and Duties* (Cambridge University Press, 1997).
[14] A.J. Bradbrook and R.L. Ottinger (eds.) *Energy Law and Sustainable Development* (IUCN, Gland, 2003); R. Lyster and A. Bradbrook, *Energy, Law and the Environment* (Cambridge University Press, Cambridge, 2006); H.T. Anker, B.E. Olsen and A. Rønne (eds.) *Legal Systems and Wind Energy. A Comparative Perspective* (Kluwer Law International, Alphen aan den Reijn, 2009); R.L. Ottinger, *Renewable Energy Law and Development. Case Study Analysis* (Edward Elgar, Cheltenham, 2013).
[15] N.A. Robinson, 'Foreword' in Bradbrook and Ottinger, *ibid*., at vii.

of over-simplifying trends in regulation, approaches have evolved (or perhaps revolved) under domestic law from regimes focused upon State centred control to deregulated market based approaches, with more recent efforts that seek to blend public and private regulatory approaches.[16] Domestic regimes and regulatory approaches are dynamic systems, continuously evolving novel and differentiated tools to regulate energy activities.

Leaving aside the complex relationship between domestic and international law, it remains necessary for international law to provide a sufficiently coherent and certain basis for operation of domestic regulatory regimes, whilst also ensuring that such regimes respect necessary limits dictated by international law.[17] More specifically international law has a central role to play in six aspects of energy regulation. Firstly, it determines, or provides the framework for, how transboundary or common resources are to be utilised. At root these are essentially questions about who controls a non-exclusive resource. Commentators have long been concerned with how international law should deal with common deposits of oil and gas reserves.[18] However, renewable resources may present even more complex problems of international coordination and cooperation. For example, wind and tidal energy are the product of common pool resources and which results from complex natural processes that reach beyond the exclusive control of any State.[19] As such they require coordinated regulation between States in accordance with the natural patterns of the energy system, as well as the consequences of its capture. This is particularly important in the marine environment where the interplay of States rights and duties is more complex. Secondly, it may constrain the ability of States to control or interfere in energy production activities, particular through the law on protecting foreign investment.[20] Thirdly, international law facilitates access to and supply of energy resources. Many energy resources are dislocated from the users of energy and so international networks of supply (pipelines, cables and transport routes) are

---

[16] B. Barton *et al*, 'Introduction' in B. Barton *et al* (eds) *Regulating Energy and Natural Resources* (Oxford University Press, Oxford, 2006) at 3.

[17] See further S.W. Schill, 'The interface between international and national energy law' in K. Talus (ed.) *Research Handbook on International Energy Law* (Edward Elgar, Cheltenham, 2014) at 44.

[18] W.T. Onorato, 'Apportionment of an International Common Petroleum Deposit' (1967) 17 *International and Comparative Law Quarterly* (*ICLQ)* 85, and 'Apportionment of an International Common Petroleum Deposit' (1977) 26 *ICLQ* 324; D. Ong, 'Joint Development of Common Offshore Oil and Gas Deposits: "Mere" State Practice or Customary International Law?' (1999) 93 *AJIL* 771.

[19] On the domestic aspects of this see: Y. Lifshitz-Goldberg, 'Gone with the Wind? The Potential Tragedy f the Common Wind' (2010) 28 *UCLA Journal of Environmental Law and Policy* at 435. On the international law aspects of common pool resources, see R. Barnes, *Property Rights and Natural Resources* (Hart, Oxford, 2006).

[20] See generally R. Dolzer and C. Schreuer, *Principles of International Investment Law* (Oxford University Press, Oxford, 2012); M. Sornaraja, *The International Law on Foreign Investment* 3rd ed. (Cambridge University Press, Cambridge, 2010); S.L. Escarcena, *Indirect Expropriation in International Law* (Edward Elgar, Cheltenham, 2014).

required to support the transfer of energy and raw materials. Again, this is important in a marine context where the oceans provide a medium for such networks. Thirdly, international law provides the basic framework for controlling the transboundary consequences of energy use – i.e. transboundary pollution. Fourthly, international law coordinates responses to global challenges, and in particular climate change. Fifthly, it may facilitate the coordination of domestic energy law regimes and policies, including finance, technological support and training for the developing countries.

International law has much to say on some aspects of energy sovereignty, particularly transboundary pollution,[21] and protection of investments from expropriation.[22] However, it has surprisingly little to say, at least directly, on the meaning of energy sovereignty or sovereignty over energy resources in the marine environment. For the most part this appears to have been subsumed within existing doctrines of territorial sovereignty.

Three law of the sea instruments refer to energy in the context of pollution.[23] Of these, only the United Nations Law of the Sea Convention (LOSC)[24] directly addresses the issue of sovereignty over energy. Article 56(1)(a), provides that coastal States have: "sovereign rights for the purpose of exploring and exploiting, conserving and managing the natural resources, whether living or non-living, of the waters superjacent to the seabed and of the seabed and its subsoil, and with regard to other activities for the economic exploitation and exploration of the zone, such as the production of energy from the water, currents and winds". This is however qualified under Article 56(2), which requires coastal States to exercise such rights with due regard to the rights and interests of other States, and in a manner compatible with the LOSC. This places a balancing of interests at the core heart of any questions about energy sovereignty.[25] Although not dealing with the question of sovereignty, Article 60(1) is important since it provides the basis for regulating structures used to access marine energy resources in the exclusive economic zone (EEZ). Coastal States are allocated

[21] See P. Birnie, A. Boyle and C. Redgwell, *International Law and the Environment* 3rd ed. (Oxford University Press, Oxford, 2009).
[22] See for example the authors cited in n 20 above.
[23] Energy is included within the definition of pollution in three instruments. See Article 2(a) of the Convention for the Protection of the Marine Environment and Coastal Region of the Mediterranean, as amended (1996) 31 LOSB 65; Article 2(1) of the Convention on the Protection of the Marine Environment of the Baltic Sea Area 1992, 2099 UNTS 197; Article 1(1)(4) of the United Nations Convention on the Law of the Sea 1982, 1834 UNTS 397 (Hereafter, LOSC).
[24] United Nations Convention on the Law of the Sea (adopted 10 December 1982, in force 16 November 1994); (1982) 21(6) *International Legal Materials (ILM)* 1261–1354
[25] Regard may also be had to Article 59 which requires that conflicts about unattributed rights are resolved on the basis of equity in light of relevant circumstances and the interests of the parties and the international community.

exclusive rights to construct, operate and use such structures.[26] Decisions concerning the placement and operation of such structures must take into account navigational concerns, whilst their removal must have due regard to fishing and protection of the marine environment.[27] Energy supply is not directly mentioned, but is covered by Article 79, which provides that '*All* States are entitled to lay submarine cables and pipelines on the continental shelf'. As with the above provisions, this also includes a 'balancing of interests', which permits the coastal State to take reasonable measures to ensure the enjoyment of its resource related rights.[28] Under Article 87, the rights to establish installations, which would include energy generation devices, is listed as one of the freedoms of the high seas, and is to be exercised with due regard to the interests of other States. Under the law of the sea, sovereign rights over energy resources are allocated to coastal States within the EEZ or continental shelf, and to all States on the high seas. In each case, however, the exercise of such rights in inherently subject to a balancing of interests in light of other States interests and potentially competing sues of sea space. Beyond this, little guidance is provided as to the way in which such rights are to be exercised.

The second main reference to energy sovereignty in a multilateral instrument occurs in the Energy Charter Treaty (ECT).[29] The ECT aims to promote the cooperation in the energy field and the development of an efficient energy market throughout Europe.[30] Its remit is generally limited to investment protection, rather than the regulation of sovereignty or the wider range of energy-use activities.[31] The ECT applies to contracting States territories, including territorial waters and sea and seabed areas where the State exercises sovereign rights and jurisdiction.[32] Article 18 of the Energy Charter Treaty declares States "sovereignty and sovereign rights over energy resources". This is to be exercised in accordance with and subject to the rules of international law. Although the ECT is committed to the development of energy markets, this does not limit State's authority and discretion as to how they structure the ownership of energy resources. Although the treaty 'promotes access to resources', this hortatory requirement does not trump sovereignty and leaves the ownership of resources unaffected.[33] This is reaffirmed by Article 18(3), which provides that

[26] Article 60(1). These provisions extend to the continental shelf according to Article 80.
[27] Article 60(7) and (3) respectively.
[28] Article 70(2) and (3).
[29] Reproduced in (1995) 33 *ILM* 360.
[30] Article 2 of the ECT, and Title I of the Concluding Document of the Hague Conference on the European Energy Charter.
[31] See generally, T. Wälde (ed.) *The Energy Charter Treaty. An East-West Gateway for Investment and Trade* (Kluwer Law International, London, 1996).
[32] Article 1(10).
[33] Article 18(2).

"[e]ach state continues to hold in particular the rights to decide the geographical areas within its Area to be made available for exploration and development of its energy resources, the optimalization of their recovery and the rate at which they may be depleted or otherwise exploited, to specify and enjoy any taxes, royalties or other financial payments payable by virtue of such exploration and exploitation, and to regulate the environmental and safety aspects of such exploration, development and reclamation within its Area, and to participate in such exploration and exploitation, inter alia, through direct participation by the government or through state enterprises." The ECT pays lip service to environmental concerns with a sweeping list of factors to be taken into account. Article 19 comprises a list of eleven hortatory action points that request parties to "promote", "have regard to" or "take into account" certain environmental matters. For the most part objectives like public participation, the polluter pays principle, the use of environmentally sound technologies, and environmental impact assessment, are addressed in greater detail in other instruments.[34]

The term "energy sovereignty" as indicated at the outset might best be understood as a policy assertion, rather than legal principle; its broad objectives sit uncomfortably with how we understand legal principles to function. However, to downplay the relevance of law is dangerous since assertions of energy sovereignty draw upon legal concepts and may generate normative consequences. As such it remains important that we try to map out how such assertions can and should fit into legal discourse. This enquiry forms the basis of the next part.

Defining Energy and Sovereignty

What is Energy?

If we are to talk meaningfully about energy sovereignty then it is necessary to understand the object of sovereignty. What is energy? This is not an easy question to answer, especially for a non-scientist. It can be regarded as an abstract scientific construct used to interpret aspects of reality. Yet it may also be observed and measured. In either case, there are aspects of energy that are not fully understood or explicable. As a noted physicist has observed: "It is import to realize that in physics today, we have no knowledge of what energy *is*."[35] A provocative remark, it should signal

[34] See further C. Shine, 'Environmental Protection under the Energy Charter Treaty' in Wälde (n 31) 520-45.
[35] R.P. Feynman, R.B. Leighton and M. Sands, *The Feynman Lectures on Physics* (Basic Books, New York, 2011), vol. I, sections 4-1–4-8.

the fact that knowledge is contingent and changeable, and this needs to be factored into regulatory regimes.

To help frame the present discussion, energy can be defined as the power derived from the utilisation of physical or chemical resources. It is a property that a system possesses and can be used to do work. This is done by transferring energy from one object or system to another, for example, by burning fuel to produce heat, or converting kinetic energy from water into electricity. Scientists tell us that energy may take a variety of forms: electrical, light, elastic, kinetic, sound, thermal, chemical, gravitational and nuclear energy. These are generally reduced to potential or kinetic forms of energy. Each of these forms of energy may be stored, accessed and used in different ways depending upon its physical properties, location and the state of technology. Since energy has properties that determine how it can be used, these factors must be taken into account in the design of any regulatory regime. This applies to both specific rules and broad principles such as sovereignty. Thus is a particular resource or form of energy is not exclusively located within a State, then it is generally not susceptible to claims of sovereignty.

The physical properties of an energy resource determine the how it may be regulated. For example, sunlight is ubiquitous and results in approximately 170,000 terrawatts of energy being delivered to the earth each day.[36] Much is reflected back into space, but the residual energy is estimated to be one hundred times more than the current energy supplies.[37] It is fungible, non-exclusive and intangible. It warms the earth to levels that are conducive to life. It is essential to the sustenance of life through photosynthesis. It provides a source of renewable energy. As a general category or source of energy, these factors render it a common resource; it cannot be possessed or rendered excludable, either by way of sovereign claims or individual ownership. This would be physically impossible, but also morally objectionable because it would deprive non-owners or persons without access of the means to an essential good. Of course this general proposition admits qualifications since some limited absence of light may result from other factors, such as building shade.[38] Another example is wind energy. Wind is the movement of air across the surface of the earth as denser cool air moves to fill space in low pressure area or warm air. This movement is the product by differences or changes in air pressure, which are in turn the result of thermal

---

[36] D.J. Rose, *Learning About Energy* (Plenum Press, New York, 1986) at 71.
[37] J.G. Ingersoll, 'Solar Thermal Energy' in R. Howes and A. Fainburg (eds.) *The Energy Sourcebook: A Guide to Resources, Technology and Policy* (American Institute of Physicists, New York, 1990) at 207.
[38] Most legal systems have developed localized rules concerning rights to light in this context. See the Law Commission, *Rights to Light.* Law Commission Consultation Paper 210 (2013), available at http://lawcommission.justice.gov.uk/docs/cp210_rights_to_light_version-web.pdf

changes and the rotation of the Earth. Wind stores kinetic energy, which may be capture through wind turbines, which convert the energy into electrical or mechanical energy. Global potential for wind energy is estimated to be around 72 terawatts.[39] Wind performs a critical function in natural weather systems. It provides a renewable source of energy. It is also intangible, fungible and non-exclusive, so like sunlight is a common resource. This indicates that at least some aspect of energy regulation of solar or wind energy requires international cooperation. In the case of sunlight and wind, the energy may be captured at fixed points and this takes energy out of the natural system. This may allow for regulation under the 'law of capture' within individual States.[40] However, this may fail to account for important externalities. In the case of wind energy, capture subtracts from downstream users.[41] Wind flow is distorted or reduced when passing through a turbine, leaving less kinetic energy for capture by other users.[42] Accordingly, some element of collective or cooperation regulation between States will be required. The examples of renewable energy may be contrasted with spatial fixed, tangible, finite sources of energy like coal or oil. These are excludable and frequently reduced to State or private ownership, at least when located exclusively within a single State. However, even in these cases, the use of such resources will produce externalities (e.g. transboundary pollution) that entail some degree of collective regulation.

The physical attributes of energy may also impact upon the way in which it is regulated in less obvious, but equally important way. It is a fundamental law of physics that energy cannot be created from nothing or destroyed. Energy can only be transformed from one state to another. This is known as the law of the conservation of energy and it raises some interesting questions about the nature of energy. In particular, one should question whether or not it is meaningful to talk in terms of 'energy sovereignty'. It is a fact of nature that we cannot control energy absolutely, but merely its potential at certain points in time or space. And even this is technologically contingent. If energy is not consumed but merely changes state then is it possible to exert sovereignty over energy *per se*? Rather it seems more useful to talk about control not of energy, but of control over the opportunities to change its state. At the very least, this attribute of energy suggests that its use will generate consequences beyond the scope of an individual agent's ability to

---

[39] C.L. Archer and M.Z. Jacobsen, 'Evaluation of Global Wind Power' (2005) 110 *Journal of Geophysical Research* Atmospheres D12110, 1-20.

[40] See T. Daintith 'The Rule of Capture. The Least Worst Property Rule for Oil and Gas' in A. McHarg, B. Barton, A. Bradbrook and L. Godden (eds.), *Property and the Law in Energy and Natural Resources* (Oxford University Press, Oxford, 2010) at140.

[41] See Lifshitz-Goldberg (n 19) 455-61.

[42] This has already been the subject of litigation in Norway. See Norsk Retstidenda 2011, at 780. Norwegian Supreme Court decision of 27 May 2011. Reported in K. Lilleholt, 'Wind Power, Ownership, and Neighbours' (2012) 20 *European Review of Private Law* 1159.

control. Such externalities might include the uncontrolled dissipation of energy from industrial power generation, or the creation of by-products, which the State is unable to handle, or pecuniary costs by others that are pay for the consequences an energy use activity. If this is true, then sovereignty, narrowly construed in terms of exclusive power over a resource seems to be a limited framework for control. Instead we ought to consider control over energy being defined in much more nuanced way terms that reflect its natural qualities and consequences of its use.

A second factor – the location of an energy resource - may determine aspects of its regulation. For example, fossil fuels are physically located in fixed positions in the ground or seabed. Their fixed location determines the spatial parameters for extraction activities and may determine which States(s) can control extraction. On land such resources are normally subsumed within the doctrine of territorial sovereignty and are at the host State's disposal, at least when they are located wholly within that State's territory. As indicated above, transboundary deposits of oil and gas require cooperative arrangements in order to facilitate exploitation since they cannot be exploited without impacting upon other State's territorial rights.[43] Deposits of oil or gas within marine areas are subject to a degree of exclusive control when located in the EEZ or continental shelf. However, such spaces are subject to additional restrictions that protect the interests of other States or the international community.[44] Location is important to questions of energy supply and transmission. Since energy resources are unevenly distributed and frequently dislocated from places where the resources are needed, energy or raw materials must be transported around the world. Raw materials for energy production (coals and oil) must be transported to centres of industry. Gas must be piped from production facilities to storage sites and end users. Electricity must be transmitted from generators to users. This requires the creation of resilient energy systems or networks that can ensure supplies of energy. Such networks cannot be created by individual States but require the cooperation of supply-States, user-States and States of transit. This factor reinforces the point that more nuanced versions of sovereignty or control are required to adapt to the essential attributes of energy resources.

The third factor influencing energy regulation is the state of technology. Technology impacts on our ability to access and use certain resources. For example, offshore oil and gas exploration only emerged in the 20th century with the development of technology that allowed oil and gas to be captured. Prior to this international law had limited concern for the question of

[43] See n 18 above.
[44] See the discussion at 00.

control over offshore mineral resources. However, as the capacity to engage in offshore oil and gas activities pushed out to sea and could occur at greater depths, so the law had to adapt to this new reality. Accordingly, the regime of the continental shelf emerged. This function of technology was explicitly acknowledged in the reference to exploitability in determining the outer limits of the legal continental shelf.[45] The outward reach of energy activities will continue, with the recent interest in the vast potential of methane hydrate deposits on the deep seabed likely to generate new regulatory challenges in the Area.[46] In the context of wind energy, limitations in energy storage technology present the most significant challenges to renewable energy development. Electricity generated can be directed into electricity grids but cannot readily be conserved for use on demand. It must either be rejected or diverted. More sophisticated networks may allow for the diversion of surplus energy between States, but will require cooperation between States to manage fluctuations in supply and demand.[47]

There is some recognition of the different aspects of energy in law. The Energy Charter Treaty deals with the regulation of energy throughout the "energy cycle", meaning from prospecting, though production and consumption, to conversion and supply, and ultimately disposal.[48] However, as noted above, this provision is framed in hortatory terms. If we are to realise a meaningful account of energy sovereignty, then this must reflect a broader understanding of the whole energy cycle and the complexities this involves. To some extend this already happens, and it is reflected in the broader range of environmental and liability laws that govern human activities. In this sense authority to govern energy is already diffused across the system of international law. This conclusion might not be novel, but it serves to reinforce the interconnectedness of regulatory matters. Energy law cannot be viewed apart from wider and related legal regimes.

In summary, if we are concerned with the regulation of energy, then we should be concerned with both the control of the sources of energy and processes whereby energy is transformed from one state to another. We also need to be aware of the way in which the nature of energy resources and use shape regulation. As will be demonstrated in the next section, a narrow view of sovereignty, drawn in terms of exclusive control over energy resources, does appear to be

---

[45] Article 1 of the 1958 Convention on the Continental Shelf. 499 *UNTS* 311.
[46] See in R.S. Santos, T. Morato and F.J.A.S. Barriga, 'Increasing Pressure at the Bottom of the Ocean' in A. Mendonca, A. Cunha and R. Chakrabarti (eds.), *Natural Resources, Sustainability and Humanity. A Comprehensive View* (Springer, Dordrecht, 2012) 69.
[47] See T. Ackermann (ed.) *Wind Power in Power Systems* (Wiley, 2012), chapters 21 and 22.
[48] Article 19.

suited to these essential considerations. This suggests that questions of energy resource control and use to more nuanced accounts of sovereignty. Or in other words it supports a functional approach to sovereignty.[49]

Observations on Sovereignty

It is trite but nonetheless true to observe that sovereignty is a controversial and contested principle. It is an intellectual construct that may be analysed from a variety of perspectives: historical, economic, political, legal and so on. Each perspective permeates the others. Even within the more limited field of international law, discussions of sovereignty diverge considerably and generate fierce debate.[50] It is not possible to survey and unpack part, never mind all, of this material, but some lineaments of it may be remarked upon in order to help us understand how the notion of sovereignty might apply to energy resources. Two approaches to sovereignty (focusing on its territory or natural resources) are provided in order to illustrate the way in which narrow and broad conceptions of sovereignty might accommodate questions about control over energy. This reaffirms the position advanced that only more nuanced constructions of sovereignty can be used to deal with energy resources.

In perhaps the most general terms sovereignty refers to the locus of authority within a system. For international law, as a decentralised system of states, that locus is normally considered to be the State. This is reflected in positive international legal doctrine. Thus Judge Huber described sovereignty as independence: "Independence in regard to a portion of the globe is the right to exercise therein, to the exclusion of any other State, the functions of a State".[51] Authority in this view is framed spatially, sometimes referred to as "territorial sovereignty". Here sovereignty is exclusionary within the spatial limits of the State. Within this sphere of authority the State may exercise absolute control. This view of territorial sovereignty is often associated with an absolutist view of sovereignty: the state is either sovereign or it is not.[52] Here we can see a basis for the second view of energy sovereignty associated with Böhme. It has some force since this approach to the allocation of authority to States in this way is often regarded as fundamental to the structure of

[49] This echoes Gavouneli's view of jurisdiction in the law of the sea. M. Gavouneli, *Functional Jurisdiction in the Law of the Sea* (Martinus Nijhoff, Leiden, 2007).
[50] See J. Bartleson, *A Genealogy of Sovereignty* (Cambridge University Press, 1995); S.D. Krasner, *Sovereignty: Organised Hypocrisy* (Princeton University Press, Princeton, 1999); N. Walker, *Sovereignty in Transition* (Hart, 2003); M. Koskenniemi, *From Apology to Utopia* (2005), chapter 4; J. Bartelson, 'The Concept of Sovereignty Revisited' (2006) 17 *European Journal of International Law (EJIL)* 463; R. Jackson, *Sovereignty: Evolution of an Idea* (Polity Press, Cambridge, 2007).
[51] *Island of Palmas* case (1928) 2 RIAA 829, 838.
[52] G. Elian, *The Principle of Sovereignty over Natural Resources* (Sijthoff and Noordhoff, 1979) 1-10; K.J. Holsti, *Taming the Sovereigns* (CUP, 2004) 114.

international law.[53] There is a general view that sovereignty over natural resources entitles the State to freely determine how such resources are dealt with under domestic property and regulatory regimes.[54] As an intellectual construct, sovereignty does not demand a particular definition or content. Understood thus, the absolute view is in no way necessary, although it may be regarded as desirable as a means of facilitating good order. It provides a simplified, yet compelling account of a complex world, by carving up the world into non-overlapping territorial units with authority to regulate internal matters, subject to a duty not to harm or interfere in the authority of other States.[55] The actions of other actors, such as individuals, corporations and NGOs, are then linked to these centres of authority. International law rules of attribution and accountability structure the legal relationships outwards from the central hub of sovereignty. This view is reflected in certain rules of international law that retain strong normative influence. Thus Article 2(4) on the United Nations Charter requires States to refrain from the threat or use of force against the territorial integrity or political independence of other States, and Article 2(7) provides that "[n]othing contained in the present Charter shall authorize the United Nations to intervene in matters which are essentially within the domestic jurisdiction of any state or shall require the Members to submit such matters to settlement under the present Charter..."

Despite the existence of specific rules, which echo an absolutist approach to sovereignty, this approach is considered by the most commentators to bear little resemblance to reality. For example Slaughter notes two deficiencies with this view of sovereignty: the ineffectiveness challenge, which highlights that States cannot pursue their objectives without some degree of political or economic support from other States, and the interference challenge, which recognises that the exclusive domestic jurisdiction of States is frequently infringed in practice.[56] These arguments challenge the exclusionary idea of sovereignty. Even those holding to the classical positivist position accept sovereignty as the "fullest rights over territory known to the law".[57] Thus law delimits the scope of sovereignty, and the door is open for relative accounts of sovereignty. Indeed, absolute sovereignty is under increasing challenge from those that regard sovereignty as a

---

[53] J.L. Brierly, *The Law of Nations* 6th ed. (OUP, 1963), 162; M. Shaw, 'Territorial Administration by Non-territorial Sovereigns' in T. Broude and Y. Shany (eds.) *The Shifting Allocation of Authority in International Law* (Hart, 2008) 369-370.

[54] Y. Omorogbe and P. Oniemola, 'Property Rights in Oil and Gas under Domanial Regimes' in A. McHarg, B. Barton, A. Bradbrook and L. Godden (eds.), *Property and the Law in Energy and Natural Resources* (Oxford University Press, 2010) 115.

[55] B. Kingsbury, 'Sovereignty and Inequality' (1998) 9 *EJIL* 599 at 610-11.

[56] A.M. Slaughter, 'Sovereignty and Power in a Networked World Order" (2004) 40 *Stanford Journal of International Law* 283 at 284-5.

[57] J. Brierly, *The Law of Nations* 5th ed. (1955) 150.

variable or relative concept. Or who advocate a view of sovereignty as a status realised through participation in the international system.[58] Here sovereignty is regarded as contingent on the existence of a society and it is from this society that authority or power is drawn. Relative accounts are in the ascendancy.[59]

In contrast to the traditional view of sovereignty, within accounts of relative sovereignty power is diffuse and manifested through various interactions. Accordingly, it is possible to view the application of sovereignty to natural resources as a series of jural relations concerned with, *inter alia*, the right to possess, use, manage, and enjoy the benefits derived from territory and natural resources therein. And sovereignty is not just about rights; it entails duties. In order to protect the interests of other actors, State are subject to certain duties of non-harmful use or cooperation in respect of territory and natural resources. Sovereignty is meted out and dealt with not in absolute terms, but by way of variable, individual transactions. Territory and the resources therein may be leased to other States, subject to trusteeship regimes, covered to 'use-rights' in favour of other States.[60] Foreign investment may be secured by exclusive rights to natural resources, and guaranteed against expropriation.[61] These dealings may limit how authority is exercised temporarily. They may result in the same resource being subject to multiple uses and degrees of control by various actors. A good example of this is the treatment of fisheries under international, EU law and domestic law.[62] Although commenting upon how international law deals with property rights in respect of natural resources, Redgwell's brief survey of international instruments and cases demonstrates how international law structures and limits control of resources in terms analogous to property.[63] This reaffirms the above point that sovereignty over resources is constructed in terms of discreet jural relations. An important element of this is the role played by international human rights law and the protection of property as a human right.[64] Here enjoyment of certain rights is directly opposed to the State, indicating a direct concern with needs and interests of individuals, rather than States. This view of sovereignty permits more calibrated

---

[58] A. Hayes and A.H. Hayes, *The New Sovereignty. Compliance with International Regulatory Agreements* (Harvard UP, 1998) 27.
[59] See the discussion by G. Simpson, *Great Powers and Outlaw States. Unequal Sovereigns in the International Legal Order* (Cambridge University Press, Cambridge, 2004), chapter 2.
[60] See further R. Barnes, *Property Rights and Natural Resources* (Hart, Oxford, 2009), 222-8.
[61] See Sornaraja (n 20) chapter 10.
[62] See generally, R. Churchill and D. Owen, *The EC Common Fisheries Policy* (Oxford University Press, Oxford, 2010).
[63] C. Redgwell, 'Property Law Sources and Analogies in International Law' in A. McHarg, B. Barton, A. Bradbrook and L. Godden (eds.), *Property and the Law in Energy and Natural Resources* (Oxford University Press, 2010) at 100.
[64] Ibid, 105-6.

understanding of the ways in which States act, and more closely resembles how natural resources or energy is regulated. Furthermore, whilst it does not necessarily support the type of conceptualization of energy sovereignty as advanced by Friends of the Earth above, it is at least consistent with its goal of securing individual access to essential energy needs.

Traditional conceptions of sovereignty, as essentially exclusive control over a portion of the globe, are simply irreconcilable with the way the world works today. Many energy resources are fluid, and part of complex networks. This is particularly the case for marine renewable energy resources which draw upon components of global systems, and whose use cannot be confined to the territory of single States. This means that more nuanced notions of sovereignty are required to support and sustain energy use. However, more recent accounts of sovereign tend to either contest the nature of sovereignty or atomise it, examining it as a series of localised jural relations as manifest in particular contexts. The sophistry of such approaches may be better aligned to reality, but this renders it difficult to apprise ourselves of how effectively and fairly access to and use of energy is determined at the global level. The main problem with an account of energy sovereignty drawn in terms of relative sovereignty is that it may lack coherence. It collapses into highly localised relationships. It is then exposed to criticism for being descriptive rather than normative. International law, like any other social system is a system of informed and patterned behaviour. This indicates the need to principles or points of reference to determine the legitimacy of specific rules that transcend the individual rules. In short it requires sovereignty to be justified.

Justifications of Sovereignty over Energy and Natural Resources

The main justification associated with sovereignty is that of order and stability of the system.[65] In the context of resources, much of the literature on the justification of sovereignty over natural resources is lacks in depth, focusing on thin justifications based upon redistribution of wealth during and post-decolonisation.[66] This can be contrasted with the depth of the literature on the justification of property and property rights over natural resources.[67] The most important questions concerning energy are questions related to control. Who controls energy? How do they control energy? What are they entitled to do with the energy? Are there any limits on the use of energy? It is suggested that the above justification of sovereignty as is not especially helpful in

[65] See Jackson (n 50) at 111.
[66] Above n 13, at 20-5.
[67] J.W. Hamilton and N. Bankes, 'Different Views of the Cathedral: The Literature on Property Law' in A. McHarg, B. Barton, A. Bradbrook and L. Godden (eds.), *Property and the Law in Energy and Natural Resources* (Oxford University Press, Oxford, 2010), 19 at 46-52; Barnes (n 60) 29-61

presenting an analytical framework for considering these questions. As a way forward, we should consider alternative justifications of energy sovereignty. If we return to the kinds of question we wish to answer, then it is clear that they are the same sort of questions that we ask about control, or ownership, of any resource. These questions are at root justification questions, questions about the consequences of allocating control of things to certain agencies. These kinds of justificatory questions are quite well established in the context of property rights.[68] If this is the correct way to look at questions of sovereignty, then it is possible to examine sovereignty in these terms and see how this provides alternative perspectives on the way in which we determine the scope of sovereignty of energy. By way of provoking thoughts on the matter, some initial observations on how one typical justification of property, as applied to sovereignty, is offered up: sovereignty as a natural right.

In short, the justification of sovereignty as a natural right runs thus, States by virtue of their existence as moral agents enjoy exclusive authority over the physical space that constitutes the State. The existence of this authority precedes the existence of any conventional rules governing the status of the state, and entails certain rights and duties that must be recognised within subsequent conventional rules.

Natural rights are those rights inherent in certain agent by virtue of their existence, and which are not contingent on the laws or custom or some other form of positive authority. The idea that certainty rights are naturally inherent to States naturally has a long tradition. Vattel notes the rights of states are "naturally the same as those of any other state".[69] Later, the "general and fundamental rule of our duties towards ourselves is, that every moral being ought to live in a manner comfortable to his nature… A nation is a being determined by its essential attributes, that has its own nature, and can act in conformity with it… The Law of Nature prescribes it certain duties."[70] Natural rights view of territorial sovereignty is dismissed by Shaw, who explicitly sees it as confusing concepts of property and sovereignty.[71] However, it is not without its adherents. The idea of the State are deriving authority and being limited by natural law is later evident in the work of Martens,[72] and resonates in modern approaches to international law including the writings of

---

[68] Barnes*, ibid.*, 29ff.
[69] E. de Vattel, *The Law of Nations*, Book I, Chapter I, s. 4.
[70] *Ibid.*, s. 13.
[71] M. Shaw, *Title to Territory* (Ashgate, Aldershot, 2005) at 17.
[72] Nussbaum indicates that early scholars such as Martens viewed states as possessing certain natural rights: territorial sovereignty, independence, equality of treatment. A. Nussbaum, *A Concise History of the Law of Nations* (MacMillan, New York, 1953) at 183.

Lauterpacht[73] and Henkin.[74] Natural law based approaches retain some currency in explaining the way in which international law works.[75] At the very least they provide useful modes of analysis.

What consequences does this justification of sovereignty entail? As noted, a starting point is to regard the physical space of the state as an essential component of its agency. Thus territory, and the resources therein, comprise part of the State and should not be separated from it. This at first glance seems to support the claim of energy sovereignty linked to energy nationalism. The analogy is the agency of individual persons and their body, of which they cannot be deprived. Of course, the analogy is not complete, since States do not necessarily require a particular amount of 'physical form' to exist, and notion of territory as a fundamental requirement of statehood is notorious fluid. This belies a significance attaching to the physical component of the State, and suggests that territory and resources are not to be detached from the State without good reason. This may entail limits on the treatment of resources that States cannot disregard.[76]

An extension of the natural rights approach is that when States vest their efforts in a something, then this by extension of their effort into a thing reduces it to sovereignty. The analogy is the labour-based justification of property by individuals.[77] The simple of form of this applies to territorial sovereignty generates undesirable consequences, since it essentially justifies a first occupation view of sovereignty (possibly conquest or annexation). This is somewhat discredited now. The labour-based approach is potentially corrected by requiring the labour to be socially productive labour. This provides an interesting avenue to explore since most productive activities concerning energy extract and use are conducted by a multiplicity of actors, public and private, who may have their actions attributed to a range of States. This may provide a counterpoint to simplistic accounts of 'State directed' labour and reward for energy production.

This approach is gaining traction in some recent work by political scientists who advocate the attachment based theories of territoriality.[78] This appears to be derived from natural rights-based approaches. Locke asserted that if one has property in one's body and labour, then one has

---

[73] E. Lauterpacht (ed.), *International Law, Being the Collected Papers of Hersch Lauterpacht*, vol. 1 (Cambridge University Press, Cambridge, 1970) at 76.
[74] L. Henkin, *International Law, Politics and Values* (Martinus Nijhoff, Dordrecht, 1995) at 40.
[75] S. Hall, 'The Persistent Spectre: Natural Law, International Order and the Limits of Legal Positivism' (2001) 12 *EJIL* 269-307.
[76] Perhaps consider the importance of states as communities of people who require physical space ands resources to exist. These basic individual needs are then extrapolated to the level of the States as an organisational body.
[77] See the discussion of Locke's approach in Barnes (n 60) at 30ff.
[78] See for example, C Nine, *Global Justice and Territory* (Oxford: Oxford University Press, 2012).

property in the product of one's labour.[79] Productive labour generates ownership. If society was formed to protect such rights, then it holds that society at large is governed by the same rule. As Armstrong notes: "national communities may have invested a good deal of care and work in a territory or its resources, and as such earned rights over that land or those resources".[80] If this argument is to be sustained, then one needs to show that the improvement is not simply the aggregate of individual improvements because this only justifies the individual's claims. It can be argued that States may engage in collective improvements through national development programmes (clearing land, mining resources and so on).

There are some limits to this approach. Firstly, it is not clear why such improvements justify extensive claims to sovereignty, rather than the localised improvements. Secondly, it is not clear that improvements can be attributed to the State membership of a community. Here the use of foreign direct investment may pose problems, since in most cases the extraction and use of energy resources is the domain of multinational corporations and such are not attributed to the host State. Secondly, a threshold for improvement is required. Discovery, extraction, regulation, use, transport, transfer of technology are all potential variables. It is also important not to forget the nature of the resource. Many resources simply occur or flow into the state (sunlight, rainwater, rivers), so it is not clear what the State had done to entitle it to them. In many cases the value of the improvement is external to the efforts of the State. In order to avoid these issues, it can be argued that the State sustains indirect improvements to the resources. This may be done in two ways. Firstly, the State simply establishes the conditions for supporting the means of rewarding improvements at the individual level. Here the argument collapses into one based on propriety or order (see below). Secondly, States can act discreetly in generating improvements, for example by legislating laws in respect of land use or in respect of control of resources. However, such indirect improvements are not limited to the State, since at another step removed, international law plays a role in directing the use of resources. This might justify some international stake in the improvements.

This brief outline indicates the relevance of typical justifications of property to questions of energy sovereignty and control of natural resources. It does not explore the full implications of this approach. For example, one might ask how might the Lockean proviso that requires enough and as

---

[79] J Locke, *Second Treatise of Government*, reproduced in P Laslett, *Two Treatises of Government: A Critical Edition with an Introduction and Apparatus Criticus* (Cambridge, Cambridge University Press, 1964)at §27 and 40.

[80] C. Armstrong, 'Against "Permanent Sovereignty" Over Natural Resources' (2014) *Politics, Philosophy & Economic* 1, at 5.

good be left for others be applied to claims by some States to exclusive control over globally important energy reserves. Neither does this paper consider other important justifications, such liberty, identity, utility or efficiency, good order. Such approaches open up many more questions about how we should allocate control over energy resources and in what forms to States (or indeed other actors). It is clear that if we are to take claims about energy sovereignty seriously, and to consider how these can and should be advanced, much more work is required to frame the terms of the debate.