

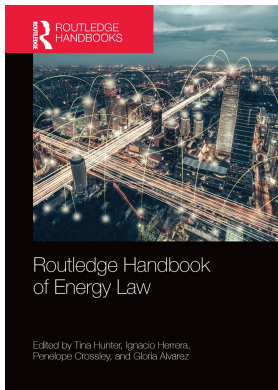
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3

INTERNATIONAL ENERGY LAW IN PERSPECTIVE

The relationship between national and international energy law

Ernst Nordtveit

1 Introduction

1.1 Scope and problems

This chapter focuses on the relationship between international law and national energy law, and on how international and national law interacts in defining the total legal regime for energy activity, on the international and the national level.

Energy law is a relatively new legal discipline which is defined from a functional approach, as the rules and regulations that are relevant for energy activity or energy services throughout the whole life span of energy activity, from the division of energy resources, to production, transport, distribution and finally marketing of energy.¹ International and national or domestic energy law has emerged as an important legal discipline over the last 50 years² and has undergone a remarkable expansion and transition which is still ongoing.

International energy law encompass public international law that regulates issues of relevance for energy production and distribution. Public international law refers to rules and principles that regulate the relationship between states and between international organizations. Public international energy law includes law based on international legal sources, such as treaties or international customary law regulating issues arising from division of the right to energy resources, for example, the United Nations Convention of the Law of the Sea (UNCLOS) to foreign investment, hereunder energy projects and trans-border transportation of energy.

1 A Bradbrook, "Energy Law as an Academic Discipline" *Journal of Energy & Natural Resources* 14 (1996) p. 193–217 defines energy law as "the allocation of rights and duties concerning the exploitation of all energy resources between individuals and the government, between governments and between states". This definition is now seen as too narrow as it is concentrated on the exploitation of energy resources. Raphael J. Heffron and Kim Talus, "The Evolution of Energy Law and Energy Jurisprudence: Insights for Energy Analysts and Researchers", *Energy Research & Social Science* 19 (2016), 1–10, p. 4, define energy law as "the regulation of energy-related rights and duties of various stakeholders over the energy resources over the energy life-cycle".

2 As pointed out by T W Wälde, "International Energy Law: An Introduction to Modern Concepts, Context, Policy and Players" in J P Schneider and C Theobald, *Handbuch zum Recht der Energiewirtschaft* (2003) p. 1129, one would not have talked about international energy law in 1970.

International energy law also encompasses a large body of legal principles and models developed by nation-states, such as licensing contracts and production sharing contracts in the petroleum industry, systems for the trading of natural gas or electricity, access to transport facilities, etc. that are developed in the international and national energy industry. The multinational companies operating in energy activities is also creating models and standardized practices that lead to the international standardization of private energy law, for example joint venture agreements.³ Some have argued that one can speak of a *lex mercatoria* of transnational commercial energy transactions, where principles developed in international energy activity will be applied, not the law of any individual state.⁴

All forms of international energy law will be included in this chapter, but the main focus will be on the role of public international law.

The relationship or interface between international and national energy law is part of the more widely discussed question about the relationship between international law and national law in general. The emergence of international energy law and other new international legal disciplines such as international environmental law,⁵ trade law, law of the sea, human rights law, etc. have however extended and changed international law in a manner that challenges the traditional theories on the relationship between international and national law.

The common conception of public international law is a legal system that regulates the relationship between states, while national law regulates internal relationships in a state such as the organization of the state, the relationship between the state and the citizens and between individuals within the state. There is no institution above the states to create international law or to enforce it. International law is created by the states themselves by treaty or custom, and it is the states that decide to follow the law or not.⁶

It is an internal legal question if national law shall have priority over international law in a case of conflicting rules. There are traditionally two main theories about the relationship between international law and national law. Monism is the theory that international and national law form one unified system and that cases have to be solved based on both systems. Dualism sees international and national law as two different systems and international law has to be implemented in national law by a national legal act.⁷ These theories were developed at a time when there were far fewer political, economic and social interactions between states than today and the existing international law was mainly aimed at solving conflicts between states. The extensive expansion of international law into areas of law which are also regulated by national law such as energy law has led to what Malcolm N. Shaw calls “an increasing interpenetration of international law and domestic law across a number of fields”.⁸

International environmental law, law of the sea, human rights law, international investment law, international trade law, and international energy law are examples of new

3 This is something different from ‘private international law’, which is the rules on selection of the governing law in an individual case where there is a conflict of laws, based on the connection the case has to the countries involved. This question might also occur in energy cases, but the different rules on private international law will not be discussed here. It might, however, be that the development of international rules and principles in private law leads to a situation where traditional private international law will play a less important role in such conflicts.

4 See Wälde, Introduction p. 1131.

5 See P Birnie, A Boyle and C Redgwell, *International Law and the Environment*, Third edition (2009) p. 1–2 on the development of international environmental law.

6 Malcolm N. Shaw, *International Law*, Sixth edition (2008) p. 6.

7 Shaw, *International Law* p. 29–30.

8 Shaw, *International Law*, p. 129–130.

comprehensive regulatory systems aimed at coordinating regulation of important fields in different jurisdictions and to facilitate trans-border cooperation. This creates a new form of interaction or division of functions between national and international law where common policy objectives like protection of the environment, developing of an effective international trading system or securing access to stable energy supply through an international market, are pursued by coordination of national policy and regulation and by facilitating transboundary cooperation by international treaties. International and national law work together in establishing a system for governance of for example the energy sector to establish a transnational and, in some areas, a global system of energy supply. This also includes the establishment of institutions and organizations for developing international law and for dispute resolution.

The traditional divide between monism and dualism appears as unfit or at least inadequate to deal with the relationship between international and national law in this context of dynamic interaction between international and national law. As pointed out by, inter alia, Stephan W. Schill, the theories of dualism and monism are ill-suited to handle the complex relationship and interplay between international and national energy law in the increasingly international and globalized energy market.⁹

The aim of this chapter is not to give a complete or even comprehensive presentation of the complex and extensive international regulation of the energy sector but to analyse the more general character of the relationship between international law and national law in regulating energy activity. A presentation of the development of international energy law will be given in section 1.2 below and some important areas of international energy law in section 2 below, as a background for the discussion of the relationship or the interface between international and national energy law.¹⁰

1.2 Background for development of international energy law

The development of international as well as national energy law is partly a result of the growing need for access to secure and affordable energy as a basis for international or global economic growth and social development and the general globalization of trade and commercial activity. Another driving force for developing international regulation relevant to energy activity and energy services is the impact of energy production, transport and consumption on the natural environment and especially on the climate, due to the emission of CO₂ from the burning of fossil fuels.¹¹ The interdependence of states, due to technological and economic development and the trans-border effect of industrial and other activity, makes it necessary to coordinate the activity in different states and put obligations on all or most states to behave in certain manner in a number of fields, in order to prevent freeriders

⁹ See S W Schill, “The Interface between National and International Energy Law” in K Taulus, *Research Handbook on International Energy Law* (2014) p. 46–47 and more generally J Nijmann and A Nollkaemper (eds.), *New Perspectives on the Divide between National and International Law* (2007).

¹⁰ For more comprehensive presentation and discussion of international energy law see T W Wälde, “International Energy Law: An Introduction to Modern Concepts, Context, Policy and Players” in J P Schneider and C Theobald, *Handbuch zum Recht der Energiewirtschaft* (2003), K Talus (ed.), *Research Handbook on International Energy Law* (2014) and C Redgwell, “International Regulation of Energy Activities” in M Roggenkamp, A Rønne, C Redgwell and I del Guayo, *Energy Law in Europe – National, EU and International Law and Institutions*, Third edition (2016) p. 13–136. See also T Meyer “The Architecture of International Energy Governance”, *Proceedings of the ASIL Annual Meeting, 106* (2012) 389–394. doi:10.5305/procanmeetasil.106.0389, R Leal-Arcas, A Filis and E S Abu Gosh, *International Energy Governance: Selected Legal Issues* (2014).

¹¹ See more on the background for the development of international energy law under section 1.2. below.

not participating in joint efforts aimed, for example, at stopping ecological degradation, mitigating climate change or increasing energy production. International agreements on joint efforts to minimize climate change¹² and to reach the sustainable goals of 2030 are now the main drivers of energy transition that is being implemented in most countries including the European Union (EU).

Energy resources are unevenly distributed around the world, making some countries energy exporters and others importers. The growing dependency on a stable energy supply as a basis for economic growth and a comfortable life has made this a high priority for all countries. Countries are interested in obtaining sovereignty over or at least access to energy resources. The development in international law of the sea, culminating in UNCLOS, led to a strong extension of the coastal state's sovereignty over the offshore area and thereby their exclusive rights to energy resources in the exclusive economic zone (EEZ), and the continental shelf. As a result of this development, many states went from being importers to becoming exporters of energy, and also changed their geopolitical position.¹³ The outer borders of continental shelves are in some cases not yet settled and some areas are disputed.

For countries that are reliant on importing energy, a stable and well-functioning international market for energy and energy products and services are of crucial importance for their economic development and geopolitical position. To achieve this a legal regime for a secure investment in energy production and energy infrastructure is also important. This is the reason for the existence of the Energy Charter Treaty (ECT), the International Energy Agency (IEA) and other multilateral and bilateral treaties aimed at strengthening international cooperation to increase the production of energy and transport and trade with energy.

The internationalization of the energy sector began as a result of the shortage of oil that became visible around 1970, especially after the oil crisis of 1973–1974 following the Israel-Arab War in 1973 and the Arab Oil Embargo and the closing of the Suez Canal¹⁴ and the Iran-Iraq War in the 1980s. Until the early 1970s most oil was traded within vertically integrated oil companies who controlled the whole value-chain from production fields to refineries and petrol stations. After the nationalization of oil companies in many countries and the emergence of state owned companies in even more countries, the international oil companies no longer owned all the oil fields, and gradually an international market for crude oil developed during the 1980s and early 1990s.¹⁵ The IEA was established in 1974 to work for the security of energy supply through cooperation on long-term energy policy, information, research and development, etc.¹⁶

Since the late 1990s transboundary pipeline networks for the transport and distribution of natural gas and oil, and cable networks for the transport of electricity have created large international markets for this type of energy. The development of LNG-technology has also made it possible to establish a global market for natural gas.

To increase international investment in energy projects, transport and trade of energy across borders and even globally, a legal regime that facilitates and defines rights and obligations between states and individuals for these purposes has been developed. Internationalization of law through export and import of legal instruments and patterns to achieve effective

12 The Paris Agreement, 2015.

13 See section 2.1.2 below.

14 L. Maugeri, *The Age of Oil. The Mythology, History and Future of the World's Most Controversial Resource* (2006), p 103–119.

15 D Yergin, *The Quest. Energy, Security, and the Remaking of the Modern World* (2011) p. 165–166.

16 On the early historical development of energy law, see Wälde, “International Energy Law”, p. 1137–1141.

regulation of the energy sector also lead to a stronger harmonization and internationalization of energy law. States that want to attract international investment in energy projects need to offer a national legal regime that is recognizable and trustworthy for foreign or international companies and investors. They will often use international experts as advisers in drafting national legislation and try to benefit from the experiences of other countries. This has led to a strong harmonization of national legislation in many countries, particularly in the petroleum sector, but also in other areas of energy law. The development of international standards for environmental protection, protection of indigenous people, management of international watercourses, etc. also influence the regulation of energy activity.

The internationalization of the energy sector has developed differently, at different times for different energy sources. Coal, and especially oil and oil products have been traded on an international market for a long time. Energy sources that need infrastructures like pipelines for natural gas or electricity grids for the transport and utilization of energy produced from energy sources like nuclear, hydro, thermal, wind and solar energy have only recently been traded over longer distances and across borders. Because of the energy transition that is now taking place and is expected to continue, the internationalization of electricity production and distribution will also increase.

Another important reason for the development of the relevant international regulation of energy production and distribution is the need to manage the possible negative effects on the environment and climate from energy production, transport and consumption. International regulation of the environment, such as protection of ecosystems and biodiversity, protection against pollution, regulation of emission of greenhouse gases, demands for pollution preparedness, etc. will influence energy projects. The international community is facing a great challenge to provide a sufficient supply of affordable energy to a growing world population in a sustainable manner while keeping global warming within manageable levels, avoiding great ecological damage and not causing a severe negative impact on the climate, ecosystems and biodiversity and not depleting natural resources. These challenges are now expressed in the Sustainable Development Goals (SDGs) adopted by the United Nations General Assembly (UNGA) in September 2015, making “clean and affordable energy” one of the goals.¹⁷ Other SDGs are also particular relevance to the development of the energy sector.

The energy transition that is underway as a result of this will change the energy-mix and lead to an increase in the production of electricity based on renewable energy sources such as solar or wind energy. An increase in the energy produced by the consumers themselves from solar cells or windmills, and the development of new technology for the storage of electricity or the use of hydrogen might in the near future lead to further changes in energy production and transportation. Trans-border network for transport of energy in the form of pipelines and cables for the transport of natural gas, oil or electricity is necessary to establish international markets for energy. This raises questions of sovereignty over the infrastructure and also private international law problems. Sovereignty questions over oil and gas pipelines have been solved by international agreements.

International cooperation in energy activity, as well as transboundary activity in the form of petroleum products from petroleum fields which are crossing international borders, pipelines or cables across other countries’ continental shelf will, of course, be governed by international law. Also, activity on the EEZ or the continental shelf has to be in line with international law, even if the activity itself is under coast state jurisdiction. International law

¹⁷ SDG 7.

may also in many cases set standards for the content of national law, for example in the area of protection of ecosystems and biodiversity or for emission of climate gases, etc., and thereby create a framework for the activity carried out by or within a state and for the state's internal regulation of activity.

1.3 International energy law; definition and development

In contrast to, for example, the law of the sea,¹⁸ international trade law and international environmental law, energy law is not regulated by one single treaty or some major treaties with global participation. On the international level as on the national level, energy law is defined based on a functional approach. Energy law includes the rules and regulations that are relevant to energy activity or energy services.¹⁹ The international regulation of energy issues is therefore fragmented and based on the general regulation of different issues. There is no single treaty on energy law containing a holistic energy regulation and no central institution harmonizing international energy law as a whole.

International energy law will include the regulation of access to or division of the sovereignty over and rights to energy resources such as hydrocarbons, coal, watercourses, etc., and the production, transport, distribution and marketing of energy. On some issues, there might not be a full consensus on whether or not some rules should be considered as energy law.²⁰ The regulation of ship transport of crude oil is not usually considered to be part of energy law, but of international maritime law, even if some aspects of maritime law will also apply to energy law. Rules aimed at saving energy, for example, and standards for the insulation of houses or electric equipment are not usually defined as energy law, even if these are increasingly included in the energy strategy of the EU and many other countries.

Both international law and international energy law are derived from legal sources accepted as the basis for international law. The Statute of the International Court of Justice (ICJ Statute), Article 38 lists the sources that the ICJ shall consider when deciding cases and this has widely been seen as a list of sources of international law and is generally seen as a starting point for determining which legal sources international law should be built on. However, this is not an exhaustive list.²¹ International conventions and international customs and general principles of law recognized by civilized nations are the core legal sources listed. Judicial decisions and doctrinal teachings are mentioned as subsidiary sources.

Conventions or treaties are only binding on states that are parties to them, while customary international law applies to all states. Some conventions are wholly or partly regarded as an expression of customary international law, and thus binding also on states that are not a party to the convention.

A rather new development is that resolutions from the UNGA have become a source for international law in some cases. UNGA does not have any power to adopt binding decisions, but there seems to be a development where decisions by UNGA will have an impact on the development of international law.²²

18 The law of the sea is extensively regulated in UNCLOS from 1982, in force from 1995, see section 2.1.2 below.

19 See section 1.1 above.

20 See R J Heffron, A Ronne, J P Tomain, A Bradbrook and K Talus, "A Treatise for Energy Law" in *Journal of World Energy Law and Business* 11 (2018) p. 34–48.

21 See Redgwell (2016) p. 15.

22 Shaw (2008) p. 114–115.

Of great importance concerning energy law is that UNGA in September 2015 unanimously adopted 17 SDGs for the planet,²³ to end poverty, protect the planet and ensure peace and prosperity everywhere. The SDGs came into force 11 January 2016, after having been accepted by all 193 member-countries of the United Nations (UN). Goal 7 is “Affordable and Clean Energy” or more precisely to “Ensure access to affordable, reliable, sustainable, and modern energy for all”. Energy or energy services were not included in the “Millennium Development Goals” declared by the UNGA in the year 2000. This shows that the awareness of the need for energy services and the need to make access to energy services an international priority has increased in the last two decades. Other SDGs might also be relevant to energy projects or activity.

The legal status of the SDGs is not quite clear. It is possible to argue that all states that have voted for the principles in the UNGA are bound by them as if they were an international convention.²⁴ Although the content of the different SDGs is vague and it will be difficult to extract very clear norms for action from them, they might influence the interpretation of other rules and define the direction of international law.²⁵ The states are expected to report to the UN how the SDGs are implemented.

It is more generally difficult to draw a strict line as to which norms are considered as international “law”. The difficulties that exist in developing new international rules by custom or by treaties have been particularly bad within environmental law and led to the widespread use of instruments that are not seen as legally binding, but which still establish standards or norms in the form of guidelines, code of conduct, declaration of principles, etc. Even if these kinds of instruments do not fit the criteria for being considered as sources of law in the meaning of the ICJ Statute Article 38, many of them have had a great impact on the actions of states.²⁶

The EU is a special source of international cooperation with its own political and legal institutions that can adopt and enforce legislation that is binding for the Member States and also to a large extent directly binding within the Member States. In 1963 the European Court of Justice (ECJ) stated that the EU is a new legal order of international law.²⁷ Even if the EU-legislation is not considered to be a part of public international law in the traditional sense, the EU-legislation on energy issues is still of great importance in a study of international energy law. Before 1985 energy activity was not seen as a part of the common policy, but after 1985 the EU has gradually developed extensive energy legislation that has been renewed and extended step by step.²⁸ The EU has become an international forerunner in developing new energy policy and legislation to create an effective internal market for energy and to promote development towards renewable energy and EU law now serves as a model for similar efforts

23 Declared by the UNGA in “Transforming Our World: The 2030 Agenda for Sustainable Development”.

24 See the general discussion above on the legal status of decisions of the UNGA.

25 Redgwell (2009) p. 32–33. See also below on the development related to state sovereignty over natural resources.

26 See generally on the development of “soft-law”-instruments, Redgwell (2009) p. 34–37, concluding that soft law “can make an important contribution to establishing a new legal order in a fast-growing and unsettled field” (p. 37).

27 *Van Gend en Loos v Nederlandse Administratie der Belastingen* (1963) Case 26/62.

28 The first energy package was enacted in 1996/1998, the second package in 2003 and the third in 2009, which consists of directive 2009/72/EC (electricity market), directive 2009/73/EC (natural gas market), regulation (EC) No 714/2009 (condition for access to the networks for cross-border exchanges in electricity), regulation (EC) No 715/2009 (conditions for access to the natural gas transmission networks) and regulation 713/2009 (establishing an Agency for the Cooperation of Energy Regulators (ACER)).

in other parts of the world.²⁹ In 2016 the Commission launched a new initiative, the “Winter Energy Package” which was completed in June 2019. The Winter package should deliver ‘clean energy for all Europeans’. The legislation on the “package” touches on all energy-related sectors, including electricity generation, heating, cooling and transport, but also agriculture and land use, and is intended to clear the way for a cleaner, more competitive and modern energy system. The background for the new package was that the Commission considered that even if the three former legislative packages had mainly fulfilled their objectives, they were not sufficient in a changing electricity market and a new approach was necessary to realize the ‘clean energy transition’ to a low carbon economy by 2050.³⁰

The establishment of the EU Emission Trading Scheme for greenhouse gases (EU-ETS) also has a strong impact on energy development.³¹

Other regional trade organizations like the North American Free Trade Agreement (NAFTA)³² are also relevant to energy activity in the member countries, mainly through free trade and provisions for investor protection and dispute settlement.

2 Overview of international energy law

2.1 Access to energy resources

2.1.1 The principle of national sovereignty over natural resources

The right of a state to exercise jurisdiction over its natural resources is regarded as a fundamental principle of international law.³³ A state has the right to exploit the natural resources and to natural resource governance within its territory, which means the right to manage its natural resources and set the rules for exploration and exploitation of energy resources, and to receive the benefit from the resources.³⁴ This also implies the right to decide if the resources shall be exploited and how and when in such a case this shall take place.

The principle of national sovereignty over natural resources follows from general principles of state sovereignty under the Westphalian system but has in modern times been reiterated

29 See an overview of the development up to 2006, Wälde, “International Energy Law” (2006) p. 1135. He states that the EU “constitutes at present the most developed laboratory for international regulation of energy”.

30 The Winter Energy Package consists of the following legal acts: Regulation (EU) 2019/941 of the European Parliament and of the Council of 5 June 2019 on risk-preparedness in the electricity sector, Regulation (EU) 2019/942 of the European Parliament and of the Council of 5 June 2019 establishing a European Union Agency for the Cooperation of Energy Regulators, Regulation (EU) 2019/943 of the European Parliament and of the Council of 5 June 2019 on the internal market for electricity and Directive (EU) 2019/944 of the European Parliament and of the Council of 5 June 2019 on common rules for the internal market for electricity and amending Directive 2012/27/EU.

31 See on the EU-ETS, S E Weishaar, *Emission Trading Design. A Critical Overview* (2014) and E Nordtveit and S E Schütz, *Agreement on the European Economic Area – A Commentary* (2018) p. 731–733.

32 NAFTA came into force in 1994. In September 2018, the United States, Mexico and Canada reached an agreement to replace NAFTA with the United States–Mexico–Canada Agreement (USMCA). NAFTA will remain in force, pending the ratification of the USMCA.

33 See Sanita van Wyk, *The Impact of Climate Change Law on the Principle of State Sovereignty over Natural Resources* (2017) p. 33–38, with further references.

34 S R Chowdhury “Permanent Sovereignty over Natural Resources: Substratum of the Seoul Declaration” in P De Waart, P Peters and E Denters (eds) *International Law and Development* (1988) p. 59–80; K Hossain “Introduction” in K Hossain and S R Chowdhury (eds) *Permanent Sovereignty over Natural Resources in International Law, Principle and Practice* (1984) p. ix.

and developed in a series of resolutions by the UNGA in the 1950s and 1960s.³⁵ This was a reaction to the fact that international companies controlled the exploration for and production of natural resources, especially oil, in colonial and post-colonial states. The resolutions were adopted to strengthen the position of the new states that emerged as a result of decolonization and to remedy the unequal arrangements between developing and developed states regarding natural resource management.³⁶ The principle is not only of importance to states with energy resources and energy-producing states, it is also considered to apply to energy importing states making energy supply a part of national sovereignty.³⁷ The principle of national sovereignty over energy resources and the general structure of the energy supply is also upheld in the EU.³⁸

The Westphalian principle has been the basis of the international system based on independent states interacting with each other within the international political system. Today, however, this system is challenged by developments in several areas. The increased focus on human rights has raised the question of whether humanitarian intervention is justifiable under international law and how far the principle of non-intervention can be upheld. The question of governance of cyberspace also challenges a territorial sovereignty-based approach, due to the fact that an act committed in one country can have effect in another, and also that the communication might involve other countries. In the management of international watercourses, there has been a shift from strict territorial based sovereignty to cooperation and a “community of interest approach”.³⁹ The climate crisis is also challenging the principle of unlimited state sovereignty.⁴⁰

The principle of sovereignty over natural resources is only a starting point. International treaties, etc. as described above limit the scope of states for action or regulation on the national level. The question of what the state can decide or do in the energy sector is to a large extent dependent on the interpretation of treaties on a wide range of issues, which might be in conflict with the principle of state sovereignty over energy resources and how energy supply is organized.

2.1.2 Sovereignty over offshore energy resources and activity in the offshore area

One important development in international law which has a great impact on energy production is the extension of coast state sovereignty and rights to natural resources in the sea areas outside the sea territory of a states. This took place after the Second World War and led to the adoption of UNCLOS.⁴¹

UNCLOS establishes two forms of contingency zones outside the territorial waters of a coastal state. Article 56 gives the coastal state jurisdiction over and the right to the living and non-living natural resources in the water column and the seabed of the EEZ. Under Article 77 the coastal state also has jurisdiction over and the right to natural resources in

35 See especially UN Resolution 1803 (sovereignty over natural resources) and UN Resolution 3281 XXIX 1974 (Economic right to dispose of resources as see fit). The principle is also part of the Stockholm Declaration (Declaration of the UN Conference on the Human Environment 1972) and the Rio Declaration (Declaration of the UN Conference on the Human Environment 1992) Principle 21.

36 Van Wyk (2017) p. 34–35 and Heffron et al. (2018) p. 39–41.

37 See Heffron et al. (2018) p. 40.

38 Treaty on the Functioning of the EU (TFEU) Article 194, 2.

39 See Julie Howden, “The Community of Interest Approach in International Water Law. A Legal Framework for Common Management of International Watercourses”, PhD-thesis, University of Bergen, 2018.

40 Van Wyk (2018) p. 24–28 and 340–342.

41 See on the history of the law of the sea, D R Rothwell and T Stephens, *The International Law of the Sea* (2010) p. 1–20.

and on the seabed of the continental shelf “throughout the natural prolongation of its land territory to the outer edge of the continental margin” even if that extends further than 200 nautical miles from the baseline.

The sovereignty over the EEZ and the continental shelf is still not as total as overland territory and the territorial waters. The jurisdiction over the EEZ and continental shelf is limited to what is needed for exploration of the natural resources under coast state jurisdiction, see UNCLOS Article 56(1)(a) which states that the coastal state has:

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.

Regarding the continental shelf, UNCLOS Article 77(1) says that the coastal state: “exercises over the continental shelf sovereign rights to explore it and exploit its natural resources”.

In addition to this “positive” limitation, Article 56 (2) and Article 78 (2) emphasize that in exercising the rights and duties under the convention in the EEZ and on the continental shelf, the coastal state shall have due regard to the rights and duties of other states, to navigation and other rights and the freedom of other states under the convention.

Within the limits of the sovereignty over the EEZ and the continental shelf, the coastal state will have the same sovereignty and right to resource governance as over natural resources on the land.⁴²

The development of coastal state sovereignty over the offshore areas has facilitated a big development of offshore production of petroleum. More than a quarter of the oil produced comes from offshore sources and offshore production of natural gas has risen sharply. Also, offshore production of renewable energy, up till now mainly from wind, has increased rapidly, and new projects for offshore wind are being constructed or planned. Offshore energy production is expected to be an important part of the transition to renewable energy, which is necessary to reduce greenhouse gas emissions from fossil fuels.

The international regulation of the activity in the EEZ and on the continental shelf is not adequate as a basis for carrying out the activity. International law tends to express general principles and goal-based regulations, which have to be completed and clarified by detailed national regulation. Detailed national regulation based on the framework of the international regulatory system will, for example, be needed to regulate complex and extensive offshore energy activity in a demanding weather environment involving risk of accidents and environmental damage. States with offshore petroleum activity have adopted comprehensive petroleum legislation involving acts, regulations, guidelines and manuals governing the activity. Legislation on the production of renewable energy in the offshore area is now also being enacted in many states as the development of offshore energy is growing.

2.1.3 Cooperation in exploiting trans-border or disputed resources

Special legal problems occur concerning energy resources that straddle borders between states, either onshore or offshore, or are situated in an area claimed by two or more states.

42 This follows directly from UNCLOS Article 56(1)(a) and Article 77(1) as cited above.

The most common situation is that hydrocarbon deposits or watercourses straddle the borderlines between states or that hydrocarbon or coal deposits are situated completely or partly within disputed areas, over which two or more states claim sovereignty.

In the case of resources that straddle an international border, each state will have sovereignty over the part of the resource situated in the state's territory, EEZ or continental shelf. The exploitation of the resource by one state will, however, influence the possibility of exploiting the resource from the area under the other state's sovereignty and might have other effects on the ecosystem and environment more generally. The extraction of oil and gas will influence the pressure in the structure where the deposit is situated and make oil and gas flow from the other state's area into the area of the producing state. The building of hydropower plants in a watercourse might influence the water level and often the possibility of exploiting the water resources for energy production or other purposes in the area of the other riparian state(s). It might also have environmental effects.

The question is whether this will limit the freedom of one state to exploit the resource as it sees fit and if there is an obligation to cooperate on the management and exploitation of the resource. Natural resources situated in two or more states' territory, EEZ or continental shelf are considered to be "shared resources". The question of whether there is an obligation to cooperate in the management of shared resources is discussed in international law literature. For natural resources in areas with overlapping claims for EEZ or continental shelf, UNCLOS Articles 74(3) and 83(3) respectively give the party an obligation to "make every effort to enter into provisional arrangements of a practical nature and, during this transitional period, not to jeopardize or hamper the reaching of the final agreement". This shall be done "in a spirit of understanding and cooperation". Also for transboundary resources, the principle of cooperation in the UN Charter Articles 1 and 2 and several UNGA resolutions gives support to the obligation to cooperate and settle disputes peacefully. The principles of good faith and good neighbourliness also support this.⁴³

Since 2002 the International Law Commission (ILC) has worked on the topic "Shared Natural Resources of States", considering resources such as oil, gas and groundwater and a draft was submitted to the UNGA in 2008.⁴⁴ The work on aquifers carrying oil and gas was discontinued in 2008, because there was a division between the interested governments as to whether the work should lead to a binding convention or a non-binding set of guidelines.

The principle for the management of international watercourses has developed significantly over the last hundred years from a principle of unlimited sovereignty to an obligation to cooperate to "attain optimal utilization and adequate protection of an international watercourse".⁴⁵ Developing a balance between the interests of the upper riparian states and those of the lower riparian states is however difficult. The principle of shared natural resources involving equitable utilization and cooperation between riparian states has support but has also met

43 See further the extensive discussions of these questions in Natalia E. Ermolina, *The Law of Shared Hydrocarbon Resources and the Question of Shared State Responsibility for Environmental Harm Arising from Their Cooperative Management*. PhD thesis, UiT–The Arctic University of Tromsø, 2019, Chapter 2, 3 and 4.

44 See more on the process *American Society of International Law* 12(18).

45 Convention on the Law of the Non-navigational Uses of International Watercourses, adopted by the UNGA on 21 May 1997, Article 8, cf. Article 5 on "Equitable and Reasonable Utilization and Participation". The convention is, however, an optional framework code or guideline which may be departed from ad hoc by any of the parties, see Article 3(3) and UNGA, 51th Session, Report of the 60th Committee Working Group, GAOR A/51/869 (1997) para 8, in ILM 36 (1997) p. 719 and P. Birnie, A Boyle and C. Redgwell, *International Law & the Environment*, Third edition (2008) p. 546.

with some opposition as the legal implications of the principle is uncertain.⁴⁶ Even if the legal situation is currently unclear regarding the duty to cooperate in developing international watercourses, it seems clear that the old “Harmon doctrine” based on full sovereignty for the riparian states has been abandoned. Most new agreements on the utilization of international watercourses are based on some notion of shared resources involving equity and common management to achieve effective utilization of the watercourse from a social, environmental and economic point of view.

2.2 Trans-border infrastructure for transport of energy

The internationalization of the energy market for electricity and natural gas makes it necessary to establish a transboundary infrastructure in the form of networks of pipelines or electrical grids. The development of the offshore production of natural gas or electricity increases the need for transportation capacity to bring energy from the production site to the market. The development of non-adjustable solar or wind energy also makes diversification of energy supply mandatory in order to be able to supply the market in situations when there is low production of solar and wind energy. This also demands transport capacity from alternative energy sources.

UNCLOS Articles 58(1) and 79(1) give any state the right to lay pipelines and cables over the EEZ or continental shelf respectively of another state. The coastal state has the right to protect other activities such as petroleum exploration, fisheries, etc., but might not “impede” the right to lay cables and pipelines across its EEZ or continental shelf.

These rules seem to give other states a positive right, cf. the formulation “all states are entitled to the laying of cables or pipelines”. A national regulation allowing such a right or permission from the coastal state does not seem to be necessary, but, in reality, the decision of where to place the pipeline or cable will have to be made in consultation with the environmental authorities in the coastal state, and in line with international and national environmental regulations. The pipeline or cable must not conflict with the coastal state’s utilization of the EEZ or continental shelf, but one must assume that the coastal state must accept some nuisance from the cable or pipeline if that is necessary to build them. The coast state must also be entitled to demand that the infrastructure is in line with acceptable safety standards and does not violate environmental regulations in the coastal state. The Russian pipeline Nord Stream and Nordstream 2, for example, needed permission from Finland, Sweden, Denmark and Germany to construct the pipeline. An Environmental Impact Assessment (EIA) was necessary as a basis for the decisions made by the national authorities in these countries and had to be submitted to all countries, including Russia. The same is, of course, the case for other pipelines or cables. The pipelines or cables also have to avoid crossing natural protection areas.

The infrastructure for transport of energy will also include interconnectors in order to make it possible to transport electricity or natural gas in different directions. This will raise new questions of jurisdiction over the cable and pipeline network, which then might be connected to several countries. Infrastructure with connections to two or more states might also

46 P Birnie, A Boyle and C Redgwell p. 541–546. Julie Howden, “The Community of Interest Approach in International Water Law. A Legal Framework for Common Management of International Watercourses”. PhD thesis, University of Bergen, 2018 gives a broad analysis of the problems related to international watercourses and argues that the “Community of Interest Approach” can be derived from principles of solidarity, common management through a joint institution, equity, holism and environmental protection.

lead to private international law issues related to ownership, liability for damages and contracts for transport of petroleum or electricity in the network. There are examples of cables between two countries where the ownership of half of the cable belongs to the semi-public company from State A and the other half to the semi-public company from State B. The cable is crossing the EEZ of two other states. The management of the cable is regulated in an agreement with the two semi-public companies owning the cable. This is a structure that obviously might lead to difficult private international questions in case of a conflict. Also, the question of access to pipelines or cables for the transport of petroleum or electricity may occur. These questions are now mainly regulated in treaties between the countries involved and in EU/EEA (European Economic Area)-law.⁴⁷

2.3 Environmental protection, climate and energy

Both international and national environmental law have developed over more or less the same timespan as energy law, from around 1970, with a large body of global and regional treaties protecting ecosystems and biodiversity⁴⁸ in general and watercourses, ocean areas, etc. against pollution or other forms of interference. Basic principles like the principle of sustainable development, the precautionary principle, the principle of best possible technology, etc. have been developed and permeate all relevant areas of law. Treaties that deal with natural resource management like UNCLOS also contain provisions on the duty to protect the environment.⁴⁹

Energy production involves exploitation of natural resources and infrastructure development that interferes with the natural environment. Environmental regulation will therefore often have a direct impact on energy production projects and energy consumption. Oil production might lead to a discharge of oil into the soil or water, sometimes by accidents like the Macondo accident in the Mexican Gulf in 2010.⁵⁰ Hydroelectric plants lead to interference with the water flow in watercourses, change in groundwater level, etc., and windmills kill birds. Energy production also might lead to pollution from petroleum fields or nuclear plants. Environmental considerations are also included in energy legislation, especially petroleum legislation, and in international treaties regulating, for example, the dumping of petroleum installations in the North East Atlantic.⁵¹ With their direct relevance to energy activity a large part of the international environmental law must also be considered as international energy law.

The most pressing environmental problem of our time is climate change, which, to a large extent, is caused by energy produced by burning fossil fuels (coal, oil and gas) which leads to the outlet of CO₂ which changes the composition of the atmosphere. An extensive

47 An example is “Framework Agreement” concerning “Cross-Boundary Petroleum Cooperation” between the UK and Norway from 2006. Article 1(3)(1) states: “Nothing in this Agreement shall be interpreted as affecting the sovereign rights and the jurisdiction which each State has under international law over the continental shelf which appertains to it”. All installations belonging to each state shall be under the respective state’s jurisdiction. Both states agree to “use their best effort to facilitate Cross-Boundary Projects” and not to “prevent or impede such projects by withholding Authorizations”, see Article 1(4)(1). The contract regulates HMS issues, metering systems and inspection, construction of pipelines and access to infrastructure, joint exploitation of trans-boundary reservoirs, dispute settlement, etc.

48 Convention on Biodiversity, United Nations 1992. In the tenth meeting of the Conference of the Parties in Nagoya 2010, a revised and updated Strategic Plan for Biodiversity was adopted for the 2011–2020 period. In the meeting in 2020 the Parties are expected to update the Convention’s strategic plan and adopt a global biodiversity framework for the next decade.

49 UNCLOS 192.

50 Also called the Deep Water Horizon accident.

51 OSPAR decision 98/3.

change in energy policy and the energy strategy of most countries is already taking place in order to meet this challenge.⁵²

Fulfilment of the Paris Agreement and the goals for reduction of climate gases that the states have committed themselves to under the Paris Agreement and together with the fulfilment of the SDGs will demand a fundamental change in energy production and consumption in the future. The legal instruments to achieve this are only partly in place.

International environmental law will play an important role in future energy development. As a common global effort is needed to meet the ecological and climate crisis, international law is necessary in order to avoid freeriders and to secure the participations of all states in this effort.

2.4 Investment protection

Energy production and transport are capital-intensive operations and are often associated with great financial risk. Energy resources are often located in countries with poorly developed institutions and legal systems that can also be politically unstable. If the host state changes the conditions for concessions or licenses in a way that is detrimental to the investor or expropriated the property of the investor, the investor's only possible remedy is often to call on its home state to try to put pressure on the host state. The national courts are often not expected to be independent and objective in such cases. Since 1965 when the "Convention on the Settlement of Investment Disputes between States and Nationals of other States" was adopted, there has been a movement towards a system with international arbitration as the main form of settlement of disputes between investors and the host state. Through a large number of bilateral and multilateral investment agreements, the protection of foreign investors is regulated and a system of international arbitration is established. The Energy Charter Part V regulates settlements of disputes between an investor and a party to the agreement ("contracting party").⁵³ These agreements are for several reasons more important for international energy investments than for most other investments.⁵⁴

Through the investment agreements a dispute settlement system for foreign investors is established that does not presuppose an agreement between the investor and the host state, or any arbitration clause agreed between the parties. The basis for the decision will be standards established by international law, not the national law of the host state.⁵⁵ The first known bilateral investment treaty to be entered into was in 1959, the number now has risen to 3 300, and around 700 cases are tried or are still pending, creating a large body of jurisprudence on investment protection. This has created a new international system of dispute resolution in cases on foreign investment in energy projects, leaving little room for the national courts.

2.5 Energy justice, human rights protection of minorities and indigenous people

Energy policy and energy law have traditionally been focused on the need to secure energy supply by securing access to energy resources and to promote effective and economic utilization of energy resources. More recently the social and human aspects of energy activity and

52 See section 1.3 above on the development in EU-regulation.

53 ECT Article 26.

54 Wälde, "International Energy Law", p. 1134.

55 C McLachlan, L Shore and M Weiniger, *International Investment Arbitration – Substantive Principles*, Second edition (2017) p. 4–5.

how costs or burdens and benefits of energy activity are distributed between different groups of people has been focused on.⁵⁶ Energy projects might have an impact on people's livelihood by occupying land or fishing fields, flooding homes or by polluting rivers or sea areas. This also raises questions about recognition, information and participation in the process leading to decisions on permits and licensing, and about the distribution of benefits from the activity.

Development of human rights in international law might constitute a legal basis for protection from at least some severe interventions in the environment that are affecting people's living conditions. The Charter of the United Nations, the Universal Declaration of Human Rights, or regional treaties on human rights like the European Convention on Human Rights and international human rights law can give some protection. More than 100 states have also adopted provisions in their constitutions that recognize the human right to a sound and healthy environment and protect the citizen's right to a clean and healthy environment. These provisions have been used to oppose energy projects.⁵⁷

There are special treaties on the protection of the rights of minorities and indigenous people's access to natural resources which are needed to uphold their livelihood, culture and language, and will probably provide stronger protection than that which is found in general treaties of human rights.

The UN Covenant on Civil and Political Rights (ICCPR) from 1966, Article 27 protects the right of "ethnic, religious or linguistic minorities" to "enjoy their own culture, to profess and practise their religion, or to use their language". This has also been interpreted as a right to the natural resources the groups in question needs as a basis for upholding their culture.

Another important treaty is the ILO Convention 169 (C169 – Indigenous and Tribal Peoples Convention, 1989), which contains a far more detailed regulation of the rights of groups of people who fall under this convention. The General Assembly adopted the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) on 13 September 2007, by a majority of 144 states. This is currently the most comprehensive international instrument on the rights of indigenous peoples.

There are cases in Norway where hydropower projects have been limited by an administrative decision because they would interfere too much with the reindeer herding or other activities of the Samii people, who are accepted as an indigenous people. There is, however, no case where the courts have found interference in Samii interests to be a violation of any of the mentioned treaties.

3 Conclusions

For a number of reasons international energy law has developed from being almost non-existent before 1970, to an important legal discipline, and this development is still ongoing. International energy law is, however, fragmented and based on many legal sources from different legal disciplines and concerned with different problems.

56 A philosophical approach to energy justice is found in B K Sovacool and M H Dworkin, *Global Energy Justice: Principles, Problems, and Practices* (2014). See also K. Jenkins, D McCauley, R. Heffron, H Stephan and R Rehner, "Energy Justice: A Conceptual Review", in *Energy Research & Social Science* 11 (2016) p. 174–182.

57 As an example, the litigation raised by several environmental organisations against the Norwegian State, in which it was claimed that the 23rd licensing round for the Norwegian continental shelf, where several licenses were granted in the Barents Sea, was a violation of the Norwegian Constitution Section 112. They lost the case in Oslo City Court 4 January 2018. The case was argued in Borgarting Appeal Court in November 2019 but the Court has not yet made its decision as the book goes into print.

This diversified nature of international energy law makes it difficult to say something definite on the relationship between international and national law as this will vary depending on which field one is speaking about. The methodological challenges will be rather different when applying international regulation to indigenous people's rights to an energy project, from what is the case when applying regulation to the international distribution of electricity. The relationship between international law and national law in a certain field will not only depend on the international regulation, but also on the national regulation.

Many of the relevant legal sources are not solely or even mainly aimed at energy regulation. International law is often vague and confined to determining some main principles, leaving the detailed regulation which is often needed to national law. The international regulation will often leave a certain leeway for the national regulation. If this room has been used to give a comprehensive and detailed national regulation, the national regulation will apply provided it is not in conflict with the international law. The room that international law leaves for national regulation creates a possibility for division of labour between international and national law, where principles and direction are decided in international law, but the more detailed implementation is left to national law. In an increasingly integrated international market for energy, especially electricity, it is, however, necessary to establish increasingly detailed international regulation in order to coordinate the operation of networks.

International energy law influences and limits the content of national law by laying down rules that must be reflected in national law, and also by establishing legal instruments and models for regulation that it is difficult for states to deviate from in a globalized world. The traditional monism–dualism dichotomy is not adequate to capture the relationship between international and national law in the field of energy, as in many other fields.