



Changing Conceptions of Rights to Water?—An Eco-Socio-Legal Perspective

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ABSTRACT

This article inquires into the meaning of a ‘right’ to water. It examines how the nature and content of such a right may be changing in the context of greater emphasis in environmental regulation on water stewardship which seeks to tackle risks of water scarcity. In the UK, for instance, water abstractions have been further regulated through the Water Act 2003 and additional reforms are proposed by the draft Water Bill HC (2013–4). The article locates its analysis in literature on the qualification of private property rights through natural resource management, and in the developing socio-legal literature on the intersection between rights and regulation. We critically engage with this literature on the basis of qualitative empirical research about how farmers in England think about a right to water. Our pilot project confirms some accounts in the literature, but questions others. We find empirical support for thinking about rights that is qualified by stewardship practices, but we suggest that conceptions of rights need to be broadened to include administrative concepts, including collective rights to water. On the basis of our data we develop an eco-socio-legal perspective that foregrounds three interpretive frames for understanding how conceptions of rights to water are generated. These are the institutional–legal framework of abstraction licensing in England and Wales, perceptions of the natural space which is governed by this legal framework, and, the economic context in which rights to water are exercised.

KEYWORDS: water stewardship, natural resource management, economic right to water, abstraction licensing, farmers, water scarcity, environmental regulation

1. THREE DIFFERENT WAYS OF THINKING ABOUT THE INTERSECTION BETWEEN PRIVATE PROPERTY RIGHTS AND STEWARDSHIP

The purpose of this article is to identify and critically interrogate different ways of thinking about 'rights' to water. We focus on rights in the context of water use for primary production because more research has already been carried out into the civil–political right to water for individual domestic consumers.¹ Moreover, the nature and content of a 'right' to water for primary production is now becoming a key issue in debates about natural resource, including water management.² For instance, can private property rights to water be reconciled with stewardship obligations³ that seek to protect the availability of natural resources in a wider public interest?⁴

A wide range of both academic and grey literature addresses this question. We begin by setting out a typology of key contributions to the literature on private property rights and natural resource management, in order to provide a critical foil for the discussion of our own empirical data about conceptions of a right to water. Three, in practice not necessarily mutually exclusive, ways of thinking about the intersection between private property rights and stewardship can be identified.

First, and most radically some literature suggests that stewardship should *replace* private property in natural resources.⁵ From this angle property is a conceptual category mistake when applied to natural resources, and therefore a new legal concept of stewardship should define the rights and obligations of those who have control over natural resources. In contrast to property right holders, stewards have only limited rights to exclude, control and alienate natural resources. Stewardship focuses on the steward's duties to conserve the natural resource rather than his/her rights over it. It has been compared to a 'trust', with the steward, akin to a trustee, having to consider not just his/her own interests but also those of a wider range of beneficiaries of the natural resource.⁶ The source of the stewardship duties, however, remains unclear.

1 See eg Karen Bakker, 'Commons Versus Commodities: Debating the Human Right to Water' in Farhana Sultana and Alex Loftus (eds), *The Right to Water* (Earthscan Routledge 2012) 19. Anna Russell, 'Incorporating Social Rights in Development: Transnational Corporations and the Right to Water' (2011) 7 Intl J L Context 1; Jernej Letnar Čerňič, 'Corporate Obligations under the Human Right to Water' (2011) 39 Denver J Intl Law Pol 303.

2 Fikret Berkes (ed), *Common Property Resources: Ecology and Community Based Sustainable Development* (John Wiley 1989).

3 We define water stewardship as a set of social practices concerned with the protection of water resources from depletion, also for future generations. We use the term 'social practices' to capture that water use on the farm is shaped by culturally entrenched, often long-standing traditions that rely on tacit rather than explicit knowledge (interview with farmer 3, 20 July 2012). Farm environmental policies entrench and sometimes change such traditional practices. At larger farms water use practices were codified in written farm environmental policies (interview with farmer 1, 5 July 2012; interview with farmer 2, 6 July 2012; interview with farmer 3, 20 July 2012).

4 Garrett Hardin, 'The Tragedy of the Commons' (1968) 162 Science 1243, 1244, 1245; Elinor Ostrom, Roy Gardner and James Walker, *Rules, Games and Common Pool Resources* (Reprinted 2006, Michigan UP 1994) 19; Richard Worrell and Michael Appleby, 'Stewardship of Natural Resources: Definitions, Ethical and Practical Aspects' (2000) 12 J Agri Environ Ethic 268.

5 William Lucy and Catherine Mitchell, 'Replacing Private Property: The Case for Stewardship' (1996) 55 CLJ 566, 566–67.

6 *ibid* 584.

A second key way of thinking about the relationship between private property rights and stewardship involves modifying rather than discarding the idea of property by replacing private property with public (collective), common or 'new' property.⁷ Public or collective property refers to property rights exercised by the state on behalf of its citizens. Access to the resource is not available to all citizens, but decisions about the use of property, for example economic development or nature conservation, are made by a collective of citizens or an institution representing their will.⁸ In contrast to this, a system of common property involves governing resources in such a way that each resource, at least in principle, can be accessed and used by every member of a polity.⁹ But access to, and exploitation of, property for personal use is limited by obligations to consider wider societal interests. 'New' property captures the idea that entitlements provided by the modern administrative state to citizens, for instance social security payments, are just as important as private property was for supporting the livelihoods of merchants before the rise of welfare and regulatory states in Europe and the USA in the 19th and 20th centuries. Applied to water resource management (WRM) this means that abstraction licences granted by a state regulator can be considered as 'new property' 'owned' by those to whom they have been granted. From this second perspective consideration of a public interest in the maintenance of both quantity and quality of water resources requires to abandon the idea of a *private* individual property interest in the resource. Instead property ownership in water becomes widened to a collective of stakeholders who all have an interest in the preservation of the resource.

A third key way of thinking about the relationship between private property rights and stewardship suggests that private property rights can be qualified through stewardship practices. This is one of the most pervasive perspectives discussed in the literature, reflects current legal practice in a number of jurisdictions, and captures a significant element of views expressed by our interview respondents. In the following sections we, therefore, focus on a further discussion of this perspective. To begin with, different degrees of qualifying 'rights to water' through stewardship are discussed in the literature. On the one hand, there may be simply tinkering with the idea of private property rights through stewardship practices, such as water conservation. For instance, farmers may simply adopt more efficient spray irrigation technology. On the other hand, some water stewardship practices may significantly qualify a private property 'right' to water. For instance, administrative law regulation, for example through catchment abstraction management strategies, may curtail access to water in order to maintain other users' rights to water. In this case one of the key features of private property, the right to exclude others from the use of the thing,¹⁰ is no longer a defining feature of the private property right.

In particular, in the grey literature the idea that private property rights can and should be qualified through stewardship is informed by an understanding of

7 Charles Reich, 'The New Property' (1964) 73 Yale LJ 733, 733–83.

8 Jeremy Waldron, 'Property Law' in Dennis Patterson (ed), *A Companion to Philosophy of Law and Legal Theory* (John Wiley 2010) 11–12.

9 Lucy and Mitchell (n 5) 580; also referring to *ibid*.

10 Waldron (n 8) 1

stewardship as a 'value, attitude or ethic'.¹¹ In some accounts, stewardship practices are considered as conceptually distinct from law,¹² also because they are perceived as going further than legal regulation.¹³ Other accounts assume a fundamental tension between private property rights and stewardship practices. While private property rights to land and water are considered as commodifying the environment and as inextricably linked with economic growth, stewardship practices are associated with a focus on 'the needs of the environment',¹⁴ with the protection of the environment ranked higher than the pursuit of various human activities, because the environment is understood as a pre-condition for human life.¹⁵ Different degrees and types of this focus on the protection of the environment can be distinguished. In custodial forms of stewardship, a general duty to protect natural resources for present and future generations is implied,¹⁶ while managerial stewardship implies that those with access or control over the natural resource actively care for it.¹⁷ Proprietary stewardship applies this idea specifically to those who own land,¹⁸ while ethical and spiritual stewardship most clearly and explicitly defines stewardship as a duty imposed upon a wide range of citizens to protect natural resources for their own sake.¹⁹

Given this assumption of a tension between private property rights and stewardship, how is the case made for qualifying private property rights through stewardship? A key strategy involves lessening the conceptual gap between private property and stewardship. This is done, first, by identifying various facets of property rights, some of which can be made to chime with stewardship. Examples of this approach are references to the distinction in Roman property law between the right to exercise dominion over the resource and the right to merely use it.²⁰ Similarly, some accounts invoke the more contemporary distinction between property, on the one hand, as a 'liberty right' that provides freedom to take certain actions²¹ and thus entitlements to the resource, and, on the other, the idea that property use is associated

11 Neil Grigg, *Total Water Management: Practices for a Sustainable Future* (American Water Works Association 2008) 253, 255; James Davis, Mathew Allen and David Hayes, 'Is Blood Thicker than Water? A Study of Stewardship Perceptions in Family Business' (2010) 34 *Entrepreneur Theor Pract* 1093, 1096. But see also Emily Barritt, 'Conceptualising Stewardship in Environmental Law' (2014) 26 *JEL* 1, 4.

12 Melanie Wiber 'The Spatial and Temporal Role of Law in Natural Resource Management: The Impact of State Regulation on Fishing Space' in Franz von Benda-Beckmann, Keebet von Benda-Beckmann and Anne Griffiths (eds), *Spatializing Law, An Anthropological Geography of Law in Society* (Ashgate 2009) 83, 89, 90; Tom Graham and Noah Idechong, 'Reconciling Customary and Constitutional Law: Managing Marine Resources in Palau, Micronesia' (1998) 40 *Ocean Coast Manage* 143.

13 Grigg (n 11) 262.

14 Bruce Peachey, 'Environmental Stewardship-What Does it Mean?' (2008) 86 *Proc Safe Environ Protect* 227.

15 Klaus Bosselmann, 'Property Rights and Sustainability: Can They Be Reconciled?' in David Grinlinton and Prue Taylor (eds), *Property Rights and Sustainability* (Brill Publishing 2011) 28.

16 Barritt (n 11) 15.

17 *ibid* 17.

18 *ibid* 20.

19 *ibid* 22.

20 Francis Philbrick, 'Changing Conceptions of Property in Law' (1938) 86 *Univ Pennsylvania LR* 691, 699.

21 Dan Leftwich, 'Evolving from Dominion to Communion: How Legal Rights for Nature Can Exist in Balance with Individual Property Rights in a Global Commons' (2011) 1 *Earth Jurisprud Environ Just J* 11.

with obligations.²² Some facets of property, such as use rights or associated obligations provide then a conceptual conduit through which private property can accommodate water stewardship practices. Private property thus changes from an absolute to a qualified right. A variant of this strategy involves identifying sociological and not just legal facets of private property rights. For instance, rights can also be understood as a 'meme',²³ a particular way of thinking about the relationship between resource owners and other resource users as well as the natural resource itself. From this perspective private property is a cultural construct,²⁴ the meaning and content of which can change. For example, within the context of an explicit 'post-growth' economic agenda private property rights can be defined as entailing an inherent duty to conserve natural resources for the present and future generations.

A second strategy for bridging the conceptual gap between private property as a legal concept and stewardship as sustainability practices consists in reformulating stewardship as a legal concept that can speak to and transform the meaning of private property. For example, some accounts conceptualise stewardship as a legal 'duty of care'²⁵ or as a 'duty to protect'²⁶ natural resources. The scope and nature of such duties, however, is not entirely clear. They borrow from the tort of negligence, but have also been linked to statutory standards of reasonable water and land use,²⁷ and to soft law standards, such as catchment management plans or codes of practice.²⁸ Attributing rights to the un-owned environment is another example of reformulating stewardship as a legal concept that can engage with and limit the scope of private property.²⁹ For instance, public law standing rights for trees³⁰ can be a vehicle for protecting water resources supporting habitats and thus counter-balance private property rights.

These various strategies for transforming private property through stewardship share an understanding of stewardship as a regulatory tool, though there is no agreement as to what type of regulatory tool it may be. Some consider stewardship as an example of regulation through social norms, because irrigators or industrial abstractors may have to adopt water stewardship in order to maintain a social licence to operate.³¹ Others understand water stewardship as economic incentive-type

22 Bosselmann (n 15) 37, for instance, discusses German constitutional court jurisprudence which limits private property rights in land through the duty to consider the rights and interests of the general public, including access to essential assets, such as water.

23 Leftwich (n 21) 10; Prue Taylor and David Grinlinton, 'Property Rights and Sustainability: Toward a New Vision of Property' in David Grinlinton and Prue Taylor (eds), *Property Rights and Sustainability* (Brill Publishing 2011) 6.

24 Bosselmann (n 15) 24.

25 Mark Shephard and Paul Martin, 'The Political Discourse of Land Stewardship Reframed as a Statutory Duty' in Brad Jessup and Kim Rubinstein (eds), *Environmental Discourses in Public and International Law* (CUP 2012) 71.

26 Taylor and Grinlinton (n 23) 17.

27 Mike Young, Tian Shi and Jim Crosthwaite, 'Duty of Care: An Instrument for Increasing the Effectiveness of Catchment Management' (Department of Sustainability and Environment 2003) 3, 10.

28 *ibid* 5.

29 Leftwich (n 21) 5.

30 Christopher Stone, 'Should Trees Have Standing?, Law, Morality and the Environment' (OUP 2010).

31 Brian Richter, 'Eco Logic...from the Nature Conservancy - Water Stewardship Certification: Promoting Social Responsibility and Environmental Sustainability' (2008) 100 *Am Water Work Assoc J* 30.

regulation, and on this basis argue that landholders who adopt the most advanced water stewardship practices should be paid for this. Stewardship thus acknowledges and renders transparent the value of ecosystem services that water resources provide.³² Hence, we suggest that further insights into the relationship between private property rights and stewardship can be developed by linking the literature on natural resource management and property rights to the evolving socio-legal literature on the intersection between rights and regulation.³³

Socio-legal accounts of the intersection between rights and regulation argue that the social practices that underpin rights and regulation should not be understood as two distinct regulatory approaches but that they share key features and thus can also complement each other.³⁴ Traditionally, rights granted to individuals and state regulations are considered to be informed by inherently different legal forms, logics, and values.³⁵ Rights are usually understood to generate a regulatory effect through ‘naming, blaming and claiming’, while collectivist state regulatory activity consists mainly of ‘rule making, monitoring and enforcement’.³⁶ But also rights have to be interpreted and thus involve rule making. Moreover, monitoring for compliance with rights matters also in the context of individual rights, even though it is mainly carried out by individual rights holders, and enforcement of state regulatory measures can in practice, contribute to the protection of individual rights.³⁷ For instance, the regulatory system for WRM under the EU Water Framework Directive (WFD) (see below), including the development and implementation of river basin management plans, can contribute to the protection of rights in water. Hence, both rights and regulation can involve all six steps of ‘rule making, monitoring and enforcement’, as well as ‘naming, blaming and claiming’. Thus, rights and regulation can be one ‘hybrid’ form of regulation, shaped by specific organisational and institutional frameworks. Moreover, contemporary politics have often lessened a distinction between rights and regulation through a pragmatic focus on simply ‘what works’.³⁸ Hence, linking the literature on the qualification of private property rights through resource management with accounts of hybrid rights–regulation regimes provides further support for the idea that rights can be qualified through stewardship practices as a regulatory tool. More importantly, socio-legal accounts of the intersection of rights and regulation prompt us to develop methodological tools for analysing the social practices that inform ‘hybridity’ and to develop classifications of various types of hybridity. We therefore suggest that the normative and conceptual debates in the literature need to be complemented by accounts of how key stakeholders themselves think about intersections between private property and stewardship. What do *they* actually

32 Young, Shi and Crosthwaite (n 27) 16.

33 Bronwen Morgan, ‘The Intersection of Rights and Regulation: New Directions in Socio-Legal Scholarship’ in Bronwen Morgan (ed), *The Intersection of Rights and Regulation: New Directions in Socio-Legal Scholarship* (Ashgate 2007); Bronwen Morgan, *Water on Tap: Rights and Regulation in the Transnational Governance of Urban Water Services* (CUP 2011) 17, ch 1; Eve Darian-Smith and Colin Scott, ‘Regulation and Human Rights in Socio-Legal Scholarship’ (2009) 31 L Pol 271.

34 Morgan (2007), *ibid* 15.

35 *ibid* 2.

36 *ibid* 2.

37 *ibid* 3–4.

38 *ibid* 15.

mean by 'private property', 'rights to water' or 'stewardship'? How are these social phenomena linked for them?

2. THE PILOT STUDY

In a pilot study, we asked whether and how English farmers' understanding of a right to water is currently changing in the light of greater emphasis on stewardship in the formal legal regulatory framework. We focused on a specific aspect of water stewardship: measures intended to prevent or mitigate water scarcity. In comparison to water pollution, this is a more recent and less researched challenge for WRM in Europe.³⁹ Notable here is, for instance, the 2011–12 drought in England, which depleted groundwater resources for a long time,⁴⁰ and affected especially the South East. The purpose of the interviews was, therefore, to critically reflect upon the idea that 'rights' to water can become qualified through stewardship practices on the basis of qualitative empirical data. We were particularly interested in farmers' perspectives because they are already familiar with stewardship regulation through Natural England's voluntary environmental stewardship programmes.⁴¹ These programmes provide financial compensation for farmers who choose to adopt farming practices that contribute to nature conservation and the prevention of water pollution. Moreover, farmers are a key target group of regulatory measures for preventing and managing water scarcity, also because they hold the greatest number of abstraction licences in the UK.⁴²

Our pilot study draws on three main sources of data. First, we analysed relevant public policy documents generated by the Department for the Environment, Food and Rural Affairs (DEFRA), the Environment Agency for England (EA), the Water Services Regulation Authority (OFWAT) and Natural England, as well as farming industry publications.⁴³ Secondly, we examined relevant provisions of the Water Resources Act 1991 (WRA), the Water Industry Act 1991 (WIA), the Water Act (WA) 2003, the draft Water Bill 2013–14, and nature conservation legislation. Thirdly, and most importantly, we generated qualitative empirical data through 12 semi-structured interviews with key stakeholders⁴⁴ in two exploratory case study

39 'Climate Change Risks Outpacing Flood Investment' (2012) 450 ENDS Rep 8.

40 Jamie Hannaford, 'Water Availability and Drought Trends in the UK and Europe', Basins Under Pressure Seminar Series, University of Oxford, 13 February 2013 <<http://www.water.ox.ac.uk/wordpress/wp-content/uploads/2013/02/hannaford.pdf>> accessed 11 April 2014.

41 <<http://www.naturalengland.org.uk/ourwork/farming/funding/es/default.aspx>> accessed 15 April 2014.

42 Agriculture holds approximately 62% of the 21,500 water abstraction licences in England and Wales, though farmers and growers use less than 1% of available water resources (written evidence submitted by National Farmers' Union, for Water White Paper (WWP40) para 5 <<http://www.parliament.uk/documents/commons-committees/environment-food-rural-affairs/WaterWhitePaperconsolidatedwrittenevidence.pdf>> accessed 7 April 2014.

43 In total, 27 documents, consisting of public policy documents issued by DEFRA, the EA, OFWAT, Natural England, the Country Land and Business Association Limited (CLA) and the National Farmers Union (NFU), as well as supermarkets' and other organisations' farming standards.

44 Four interviews with farmers (two in each case study region), two interviews with farming lobbyists, four interviews with regulators and policy makers and two interviews with river lobbyists (one in each case study region). Interviewees were selected according to their willingness to participate. The farmers who agreed to be interviewed had thought about, developed or participated in initiatives for tackling water scarcity. Interviews were audio-recorded, transcribed and then coded for key themes in relation to the

regions: Anglia and the North East of England. The objective was to obtain a nuanced empirical perspective⁴⁵ on how farmers, their representatives, regulators and civil society organisations, such as river trusts, think about the qualification of a right to water through stewardship. By conducting two, rather than a single case study, we broadened the basis of our empirical analysis and introduced variation in the factors that may shape how farmers think about a qualification of a right to water.⁴⁶ Anglia is characterised by water scarcity coupled with high demand for agricultural abstraction⁴⁷ and pressure on maintaining sites protected under the EU WFD⁴⁸ and Habitats Directive.⁴⁹ Fifty-nine percentage of catchments in Anglia are either over-licensed or over-abstracted at low flows, which exacerbates water scarcity during low flow, often summer, periods, when demand for irrigation is at its greatest.⁵⁰ Within the Anglia region there has therefore been significant regulatory intervention, in particular through 70 EA 'Restoring Sustainable Abstraction' (RSA) initiatives, designed to tackle water scarcity through a review of licences. This may, in turn, have shaped how farmers in this area think about a 'right' to water.

In contrast to Anglia, the North East is characterised by water abundance⁵¹ and lower abstraction demand for agriculture. There is some concern over habitats protection in the Northumberland National Park and the Pennine Area of Outstanding Natural Beauty.⁵² In the North East and Yorkshire, an area covered by 12 Catchment Management Strategies, only eight WRM units (WRMUs) are over-licensed, three groundwater WRMUs are over-licensed and one WRMU is over-abstracted at low flows.⁵³ Hence, there has been less regulatory intervention here with only approximately six RSA schemes having been set up in the North East and Yorkshire Region.⁵⁴

3. KEY FINDINGS

Three key findings emerge from our pilot study. First, in order to understand inter-sections between rights and regulation in the context of natural resource management a focus on the qualification of *private* property rights through stewardship is too narrow. In practice, administrative rights to water are also important in shaping key stakeholders' conception of a 'right to water', though private property remains, sometimes surprisingly, an important lens through which farmers understand rights to access and use water. Secondly, our data chime with a key perspective from the

research question.

45 Joachim Blatter and Markus Haverland, *Designing Case Studies* (Palgrave MacMillan 2012) 8.

46 Robert Yin, *Case Study Research Design and Methods* (5th edn, Sage 2014) 56.

47 EA, *River Basin Management Plan: Anglian River Basin District* (2009) 8.

48 Council Directive (EC) 2000/60 of 23 October 2000 establishing a framework for Community action in the field of water policy [2000] OJ L327/1.

49 Council Directive (EEC) 92/43 on the conservation of natural habitats and of wild fauna and flora [1992] OJ L206/7; EA (n 47) 9.

50 EA, *Water Resources Strategy: Regional Action Plan for Anglian Region* (2009) 4.

51 EA, *Water for People and the Environment, Water Resources Strategy: Regional Action Plan for Yorkshire and North East Region* (2009) 30. For instance, Kielder Reservoir provides a significant source of water in the area.

52 Interview with farmer 3, 20 July 2012.

53 EA, *Water for People and the Environment* (n 51).

54 *ibid* 43.

literature, which is that private property rights can be qualified through stewardship practices. The data also provide some empirical confirmation for the second approach set out above in Section 1, because some farmers think about a right to water in terms of a *collective* property right to water. Thirdly, and most importantly, we develop on the basis of the data an eco-socio-legal perspective that focuses on three inter-linked interpretative frames that we argue shape conceptions of a right to water. The first frame consists of perceptions of the legal framework for WRM. The second frame captures how legal actors understand the natural environment in which they access and use water, and how this, in turn, shapes rights conceptions. The third frame consists of the economic contexts that shape social practices in relation to water use.

4. WHAT TYPES OF RIGHTS INFORM CONCEPTIONS OF A RIGHT TO WATER?

Private property and administrative rights are key. Though the dominant position with reference to the English common law suggests that there is no proprietary right for the landowner in groundwater percolating under his/her plot of land, some academic and Scottish case law authorities suggest that percolating water may be considered as part of the soil, and thus be subject to a proprietary interest.⁵⁵ Rights for the landowner to abstract water percolating under his/her property have been, however, defined widely in some of the case law, authorising, for instance, abstractions that detract from the flow of water available for neighbouring landowners.⁵⁶ Such abstraction rights, however, are now subject to limiting statutory provisions. Private property rights to water can also be human rights, such as those set out in Article 1 of the First Protocol to the European Convention on Human Rights (ECHR).⁵⁷ They can also be created through statutory provisions establishing proprietary interests in water allocations for market participants. These private property rights are mainly understood as individual rights and reflect three essential elements of private property, that is the ability to exclude others from use and enjoyment of the thing, to transfer the title to the property and to invoke state legal provisions in order to enforce these powers.⁵⁸ Private property rights matter, also because their ideology is highly developed and influential. They are considered to fulfil wider social functions by stabilising social relationships, because they can not only generate but also resolve conflicts over the possession of valuable goods. Stable social relationships, in turn, provide the foundation for macro social orders, such as mixed economies. But private

55 Andreas Charalambous, *Transferable Groundwater Rights* (Routledge 2013) 56; Bryan Clark, 'Water Law in Scotland: The Water Environment and Water Services (Scotland) Act 2003 and the European Convention on Human Rights' (2006) 10 Edin LR 62, 62–63.

56 Patrick Dalton, *Land Law* (4th edn, Pitman Publishing 1996) 57.

57 Implemented through the Human Rights Act 1998 (HRA) in the UK. The European Court of Human Rights has not recognised property rights in water per se, but has held administratively allocated fishing rights in national coastal waters to be fishermen's 'possession' for the purposes of art 1 of the First Protocol of the ECHR (*Posti and Rahko v Finland* (2003) 37 EHRR 6). Moreover, national law may grant ownership in water, with a right to fish in waters owned and recognised by the ECHR as engaging the 'property' limb of art 1 of the First Protocol of the ECHR (*Alatulkila v Finland* (2006) 43 EHRR 34).

58 Waldron (n 8) 13; Eric Freyfogle, 'Taking Property Seriously' in David Grinlinton and Prue Taylor (eds), *Property Rights and Sustainability* (Brill Publishing 2011) 50.

property reflects a limited way of thinking about rights because it marginalises normative concerns about distributive justice.⁵⁹

In contemporary water regulation, private property rights play in legal terms a limited role. In a number of countries, ground- and surface water has become, in effect, nationalised. Lawful access and use is regulated through administrative licences granted by a regulatory agency in accordance with statutory provisions. In practice, administrative rights to water are therefore dominant. Their content and scope are usually more limited than private property rights because they are granted subject to stewardship obligations imposed by statutory provisions, specified, for instance, through conditions in a licence. Depending on how onerous these conditions are the scope of administrative rights to water varies. For instance, the WRA 1991 ranks the administrative right of water companies to abstract water higher than that of farmers or industrial abstractors. While the EA can restrict the volume of water to be abstracted by farmers holding spray irrigation licences⁶⁰ in the case of exceptional shortage of rain or other emergency, it has no such power in relation to water companies' abstraction licences. Their abstraction rights are protected also in order to ensure public water supply. Similarly, abstractors, including water companies, owe a duty not to cause damage or loss to other persons through their abstraction.⁶¹ But no injunction for this tort of breach of statutory duty is available if this would jeopardise, for example, public water supply.⁶² Given the relevance of private property and administrative rights to water, how do English farmers actually think about a 'right to water'?

5. FARMERS ASSERT A PRIVATE PROPERTY RIGHT TO WATER QUALIFIED BY STEWARDSHIP PRACTICES

Farmers in both case study regions maintained that they have a private property right to water which is, however, qualified by stewardship. What is this perception based on? Farmer representative organisations and the EA interpret Article 1 of the First Protocol to the ECHR⁶³ as protecting a private property conception of accessing and using water. Farmers also talked about farming as linked to private property interests, such as land ownership or a tenancy, which, in turn, was associated with a wider economic 'right to farm'. They further buttressed the idea that they had rights to water akin to private property rights by deducing such rights from other private property rights. For instance, farmers suggested that investments, and thus property rights, in irrigation equipment, seedlings, pesticides and fertilizers should not be jeopardised through restrictions on water abstractions by regulators.⁶⁴ More generally, farmers and their representative organisations invoked the language

59 Waldron (n 8) 23.

60 s 57 WRA 1991.

61 s 48A WRA 1991.

62 s 48A (4) WRA 1991.

63 'NFU Raises Concerns Over Water Abstraction Licence Plans' *Farmers Weekly* (8 May 2012) <<http://www.fwi.co.uk/articles/08/05/2012/132772/nfu-raises-concerns-over-water-abstraction-licence-plans.htm>> accessed 11 April 2014; 'Agency Baulks at DEFRA's Abstraction Reforms' (2009) 415 ENDS Rep 5.

64 Jerry Knox and others, 'Working Together to Protect Water Rights' UK Irrigation Association, 5 <www.ukia.org> accessed 7 April 2014. Interview with farm lobby 1, 5 July 2012.

of private property by referring to abstraction licences as a farm 'asset'.⁶⁵ In practice, however, actual private property or common law riparian rights are not very important for providing access to water on English farms. Eighty-three % of farms, in particular those who rear livestock, rely on mains water. Other farmers access water through administrative rights. Among irrigators, 52% rely on surface water abstractions and 41% obtain water for irrigation through groundwater abstraction,⁶⁶ with abstraction over 20 cubic metres per day now requiring an EA licence.⁶⁷ But while farmers maintain a conception of a right to water akin to an individual private property right, this right is qualified through stewardship ideas. Water stewardship is perceived in particular by irrigators as an aspect of running the farm business in an efficient manner in order to produce high-value crops, such as salad, onions and potatoes.⁶⁸ Hence, farmers frequently referred to 'efficiency'⁶⁹ in their definitions of water stewardship:

For us it's about utilising it [water] most efficiently, primarily. Not over-watering. Not under-watering, cause that then leads to output problems. Making sure there's an even application for us. That the water we put on is doing its job and that it's not just running down the hill, running over the road and whatever else.... So I suppose you could split it into crop usage requirements, wastage minimisation – it happens, unfortunately – water is a difficult thing to contain. If you've got a split pipe or something else then you are losing water. Obviously, we are only trying to irrigate the target site, not the trees or the roads, or anything around it.⁷⁰

Hence, water stewardship is meant to enhance, not jeopardise the profitability of the farm.⁷¹

But I'm in a situation now where I'm trying to build up food production by improving soil quality, soil moisture retention, how we handle water, how we retain water on the farm, which is a stewardship issue but it's being done for financial reasons.⁷²

65 Interview with farm lobby 1, 5 July 2012, Interview with River Trust like organisation, 28 August 2012.

66 DEFRA, *Water Usage in Agriculture and Horticulture, Results from the Farm Business Survey 2009/10 and the Irrigation Survey 2010*, 1 <http://data.gov.uk/dataset/water_usage_in_agriculture_and_horticulture> accessed 7 April 2014.

67 s 27 WRA 1991. Three out of the four farmer interviewees in our pilot study were abstracting from groundwater boreholes.

68 Three out of the four farmers interviewed were spray-irrigated crop growers; one of the farmers was a livestock farmer.

69 While 'efficient water use' is one of the three criteria that has to be fulfilled for an abstraction licence to be issued or renewed by the EA, there is, however, no further statutory definition or guidance on what constitutes 'efficient water use': EA, 'Abstracting Water: A Guide to Getting Your Licence, Managing All Our Water Needs' (2008) 5 <http://cdn.environment-agency.gov.uk/LIT_3684_47a215.pdf> accessed 7 April 2014.

70 Interview with farmer 1, 5 July 2012. A similar point was made by farmer 2 (interview 6 July 2012).

71 Interview with farmer 1, 5 July 2012; DEFRA (n 66) 1.

72 Interview with farmer 3, 20 July 2012.

Hence, water stewardship is defined as ‘getting the maximum amount of crop out of each drop’ rather than merely reducing the amount of water used for environmental reasons.⁷³ Also DEFRA policy documents recommend efficient use of water, not only for the protection of water resources, but also in order to control the costs of farming.⁷⁴ In fact, agri-environment schemes have established a clear association between farmers’ voluntary water stewardship measures—which so far focus only on pollution—and farm income through payments from Natural England:

If you don’t hit the stewardship standard that you’ve signed up to in Entry Level Stewardship or Higher Level Stewardship⁷⁵ then you lose money. So, environmental stewardship is linked to thinking of the farm as a business.⁷⁶

Some of the farmers and their representative organisations⁷⁷ suggested that payment for water stewardship should be extended to water-saving activities by farmers.⁷⁸ This reflects an individual rights conception of accessing and using water with the existence of such a right affirmed by compensation payments for restrictions on water use. For some farmers this was particularly the case if compensation would not be calculated on the basis of the income foregone due to ceasing agricultural production based on significant water use, the established approach of the Natural England stewardship programmes. Instead compensation should reflect the ecosystem service provided by the restricted water use.⁷⁹ This would mean that restrictions on fully using a ‘right to water’, measured through the extra ecosystem services available, would be paid for, rather than compensation being provided for the actual farming income foregone. This link between business objectives and water stewardship is also affirmed in current EU agricultural policy. The European Commission’s proposal for the Common Agricultural Policy (CAP) rural development policy under Pillar II envisages financial support for improving irrigation efficiency, if a reduction in water use is implemented.⁸⁰

How business objectives were linked to water stewardship varied according to the type of legal interest in land held by farmers. In particular, tenant farmers emphasised that water stewardship should not jeopardise the commercial viability of the farm because they were concerned with maintaining farm income in order to pay rent to the landowner.⁸¹ Moreover, tenancy status could mean less scope for developing a

73 Interview with farmer 2, 6 July 2012.

74 DEFRA, *Protecting our Water, Soil and Air: A Code of Good Agricultural Practice for Farmers, Growers and Land Managers* (2009), [30] <<https://www.gov.uk/government/publications/protecting-our-water-soil-and-air>> accessed 7 April 2014.

75 Entry and Higher Level Stewardship are voluntary programmes offered to farmers by the main nature conservation agency, Natural England. They are contractual agreements through which farmers undertake to adopt farming practices that contribute to nature conservation and the prevention of water pollution for which they receive compensation payments.

76 Interview with River Trust 1, 18 July 2012.

77 Interview with farm lobby 1, 5 July 2012.

78 Interviews with farmer 1, 5 July and farmer 3, 20 July 2012.

79 Interview with farmer 3, 20 July 2012.

80 Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, *A Blueprint to Safeguard Europe’s Water Resources*, COM (2012) 673 final, 20.

81 Interview with farmer 3, 20 July 2012.

stewardship conception of water use if landowners thought that stewardship measures may diminish the value of the land or income derived from farming, thus affecting the level of rent that could be charged.⁸² Tenant farmers also reported difficulties in accessing the capital necessary for building reservoirs through bank loans.⁸³ Short-term tenancies, called ‘quarry farming’ by a member of a river trust, were perceived as especially ill-suited to developing a long-term stewardship conception of water use on the farm.⁸⁴ But how did the institutional–legal framework of abstraction licensing further shape these conceptions of a right to water as qualified by stewardship ideas?

6. HOW DOES THE INSTITUTIONAL–LEGAL FRAMEWORK OF ABSTRACTION LICENSING SHAPE CONCEPTIONS OF A RIGHT TO WATER?

Our research suggests that the institutional–legal framework of abstraction licensing and the associated co-regulatory practices developed by water abstractor groups (WAGs) shape conceptions of rights by creating individual administrative rights to water while at the same time qualifying these through various stewardship obligations, expressed in particular through licence conditions.

6.1. Abstraction Licensing Creates Administrative Rights to Water Limited by Conditions

Individual administrative rights to abstract water in England and Wales were first created under the WRA 1963, now superseded by the provisions of Part II, Chapter 2 of the WRA 1991. But potential abstractors, including farmers, do not have a right to obtain a licence to abstract water. They are only entitled to the lawful exercise of the discretionary power by the EA to either grant or refuse⁸⁵ an application for a licence. Once a licence has been granted, the individual administrative right to water has to be exercised in accordance with the conditions of the licence.⁸⁶ The WA 2003 has further extended the basic requirement to obtain a licence for abstractions over 20 cubic metres per day,⁸⁷ by applying it also to agricultural trickle irrigation and land drainage.⁸⁸

These administrative law rights to water share some features with private property conceptions of thinking about accessing and using water. First, an administrative licence to use water will only be issued if the farmer has rights to occupy or access the land associated with the water use.⁸⁹ Secondly, the notion of a ‘protected’ administrative right⁹⁰ to water reflects an interest that does not seem to be so different from a proprietary interest. Rights to water under a full, rather than temporary licence, and

82 *ibid.*

83 *ibid.*

84 Interview with River Trust 1, 18 July 2012.

85 s 38(2)(a) and (b) WRA. The EA can refuse a licence if it considers this to be necessary or expedient.

86 s 48(1) WRA.

87 s 27 WRA.

88 s 29(5) WRA as amended by the WA.

89 s 35(2) WRA; David Woolley and others (eds), *Environmental Law* (2nd edn, OUP 2009) 416.

90 s 39A(1) WRA.

abstractions below 20 cubic metres that do not require a licence, are considered as 'protected' rights.⁹¹ These are enduring rights that can be defended against interference by other right holders, and their restriction by the state needs to be authorised by statute or secondary legislation. 'Protected' rights are also further defended through the current 'first come, first served'⁹² principle of allocating water through licensing. The EA must refuse a new proposed abstraction if it will interfere with existing abstraction rights, unless the affected abstractor agrees to the potential reduction in water use.⁹³ Thirdly, and most intriguingly, it has been argued that administrative rights are not that different in nature from private property rights to water because they build on and develop early common law conceptions of water stewardship associated with private riparian rights.⁹⁴

But abstraction licensing under the WRA 1991 also provides powers to qualify rights to water through various regulatory requirements that can promote a stewardship approach towards water use. A key tool for the EA is the regulatory requirement that every licence must include conditions.⁹⁵ Such conditions can significantly curtail how farmers use their water and how they can farm. For instance, licence conditions will stipulate the maximum amount of water that a farmer can abstract. They will also specify the purpose for which this water can be utilised, and the EA can specify the land on which the water can be used.⁹⁶ Most importantly the EA has powers to restrict abstraction during, for example, dry summer periods, when river flows are low, through so-called Hands off Flow (HOF) conditions.⁹⁷ The WA 2003 has further extended regulatory powers in relation to licence conditions, by requiring all new licences to be time limited,⁹⁸ though this had been already EA policy since 2001. Existing permanent abstraction licences may also be converted into time-limited ones, as recommended by the EA in the Water Resources Strategy for England and Wales.⁹⁹

But the extent to which these formal regulatory powers will be actually used to promote stewardship conceptions of water use also depends on how the EA and the Secretary of State interpret the scope of their duties and discretionary powers. A key question here is to what extent the EA will use its legal powers to limit water abstraction through licences, in order to protect nature conservation sites designated under

91 Woolley and others (n 89) 416–17.

92 EA, *Water for People and the Environment: Water Resources Strategy for England and Wales* (2009) 60 <<http://www.environment-agency.gov.uk/research/library/publications/40731.aspx>> accessed 7 April 2014.

93 s 39(1) WRA.

94 Sean Coyle and Karen Morrow, *The Philosophical Foundations of Environmental Law: Property, Rights and Nature* (Hart 2004) 7.

95 ss 46(2)–(5) WRA 1991. This can also include conditions that stipulate that abstraction can only occur during night time or specified nights during the week (Interview with farm lobby 1, 5 July 2012).

96 Woolley and others (n 89) 421.

97 s 24 (1) WRA 1991. See eg EA, *Water Abstraction: Getting the Balance Right, The Wear Catchment Abstraction Management Strategy* (2006) 9 document with authors.

98 See above n 96. Currently approximately 80% of abstraction licences issued in the UK are not time-limited, and therefore provide in principle permanent rights to water abstraction: EA (n 92) 37.

99 EA (n 92) 37.

the EU Habitats Directive¹⁰⁰ and the EU Birds Directive.¹⁰¹ Regulation 61(1) of the Conservation of Habitats and Species Regulations 2010, which implements those Directives, imposes a duty upon public bodies, including the EA, to consider the impact of ‘plans or projects’ that are likely to have a significant effect on a European site and to make an appropriate assessment of the implications of that plan or project for the site’s conservation objectives. Regulation 60 in connection with Regulation 99(1)(a) of the Conservation of Habitats and Species Regulations 2010 further specifies that this duty to assess applies also in relation to the granting of abstraction licences under the WRA 1991. Moreover, catchment abstraction management strategies or river basin management plans may be covered by the ‘plans’ limb of the duty under Regulation 61(1).¹⁰² But, in outline, Article 6(4) of the EU Habitats Directive¹⁰³ provides that a plan or project injurious to a protected site can proceed if three tests are met. First, that there is no feasible alternative to the plan or project that is less damaging to the affected European site. Secondly, that there are ‘imperative reasons of overriding public interest’. Thirdly, that compensatory measures are in place that ensure the overall coherence of the network of European sites.¹⁰⁴ Most importantly, the Regulation 61(1) duty only applies once a site has been designated. There are indications in public policy documents that the UK may in future reconsider how it makes designation decisions in order to limit pressure on abstraction licences, and to adapt to climate change.¹⁰⁵

While conditions in abstraction licences are very important, there are three further ways in which the abstraction licensing framework can limit rights to water. We discuss these in the next sections. First, individual administrative abstraction rights are now limited through a developing range of powers for preventing and managing droughts.

6.2. Drought Management Powers Limit Administrative Rights to Water

Farmers’ rights to abstraction can be limited by ordinary and extraordinary drought orders as well as drought permits. The EA or a water company, but not farmers, can request the Secretary of State to issue such drought orders or permits. Ordinary drought orders can be issued if—due to an exceptional shortage of rain—there exists or is a threat of a serious deficiency of water supplies in an area, or a serious deficiency in the flow or level of inland waters, which would pose a serious threat to flora

100 Council Directive (EEC) 92/43 (n 49).

101 Council Directive (EC) 2009/147 of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds [2010] OJ L20/7.

102 reg 19(1)(b) of the Conservation of Habitats and Species (Amendment) Regulations 2012 SI 2012/1927 has broadened the scope of reg 60 of the Conservation of Habitats and Species Regulations 2010, SI 2010/490. The assessment duty imposed upon public bodies now also applies to ‘all other plans and projects not relating to matters specified in Chapters 2 to 9’.

103 Council Directive (EEC) 92/43 (n 49).

104 On this see also DEFRA’s interim guidance Habitats and Wild Birds Directives: Guidance on the application of art 6(4), alternative solutions, imperative reasons of overriding public interest (IROPI) and compensatory measures (2012) <https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/69622/pb13840-habitats-iropi-guide-20121211.pdf> accessed 7 April 2014.

105 Our strategy sets out actions that will ‘protect water-dependent nature conservation sites that are **sustainable in the long term** [emphasis added]’: EA (n 92) 40.

and fauna that depend on these inland waters.¹⁰⁶ Emergency drought orders can be issued if there exists, or is a threat of, a serious deficiency of supply of water because of a shortage of rain and the economic and social well-being of persons in the affected area is likely to be adversely affected.¹⁰⁷ Both ordinary and emergency drought orders may prohibit the use of water, or may involve modifications or restrictions of individual licences. Drought permits, can be applied for by water undertakers, if in the case of an exceptional shortage of rain, there is or is a threat of a serious deficiency in public water supplies. Through a drought permit the EA can increase the amount of water that water undertakers can abstract.¹⁰⁸ But drought orders and permits also affirm a rights-based conception of accessing and using water because compensation becomes payable for the curbing of access to water to those 'injuriously affected, owners, or others interested in the source'.¹⁰⁹ But recent reforms of English water law have started to limit rights to compensation and thereby shift the balance to stewardship, a point further discussed in the next section.

6.3. Limiting a Rights-based Conception of Accessing and Using Water by Restricting Entitlements to Compensation

The EA is keen to restrict compensation claims, which are triggered by limitations on abstractions through licence variations or revocations under section 61 WRA 1991, because compensation may not be 'affordable' and can 'overload the appeals system'.¹¹⁰ Hence, in practice, licence revocations or variations *negotiated* between the abstractor and the EA, under section 52 WRA 1991 are much more common. Reliance on section 52 WRA 1991 does not trigger a compensation duty. 'Ex gratia' payments may be made for licence holders who voluntarily agree to change or revoke their licences to deliver EU Habitats or WFD objectives.¹¹¹

Most importantly, compensation rights in relation to licences which are revoked or varied after the 15 July 2012 by virtue of a direction by the EA, have recently been restricted by the WA 2003. First, where a licence has not been used for four years, the licence can be changed by the EA without any compensation being payable to the licence holder.¹¹² Secondly, and more importantly, where water abstraction under a non-time-limited licence which was granted before 1 April 2006 causes serious damage to the environment or has the potential to do so, the licence can be changed or revoked by the EA upon direction of the Secretary of State without compensation being due.¹¹³ Given its potentially broad scope of application, this provision is controversial and DEFRA has further fleshed out the government's approach to determining what constitutes 'serious environmental damage'.¹¹⁴ But not just the

106 s 73(1) WRA.

107 s 73(2) WRA.

108 s 79(A) WRA.

109 para 2 of sch 9 WRA.

110 EA (n 92) 37.

111 OFWAT, *Review of Barriers to Water Rights Trading- Final Report* (2009) 11. < <https://www.ofwat.gov.uk/future/markets/waterrights> > accessed 7 April 2014.

112 s 39A(8) and (9) (a) WRA.

113 s 27 WA.

114 Department for Environment Food and Rural Affairs and Welsh Government, 'Joint DEFRA and Welsh Government Summary of Responses and Government Response to the Consultation on the Water Act

restriction of compensation rights, but also the proposed transfer of abstraction licensing into the environmental permitting regime further limits a rights-based conception of accessing and using water.

6.4. Limiting an Administrative Rights-based Conception of Accessing and Using Water through Environmental Permitting

The precise effects of the transfer of abstraction licensing into the environmental permitting regime are yet to be determined. Clause 48(1) in connection with Part 1(6) of Schedule 8 of the Draft Water Bill 2013–14 (as amended by the Public Bill Committee) provides a power for the Secretary of State to make Regulations in relation to abstraction permits. Clause 48(8)(b), more specifically, enables the Secretary of State to address the ‘wasting of water whether by action or omission’ when making Regulations in relation to the ‘use of water resources’. The move from abstraction licences under Part II of the WRA 1991 to abstraction permits potentially further qualifies a rights-based conception of accessing and using water. Administrative rights to water granted through a permit appear to be less secure than rights granted under a licence. Under the current Environmental Permitting Regulations 2010 (EPRs) the EA is under a duty to periodically review permits,¹¹⁵ though permits for stand-alone water discharge activities can usually only be modified four years after the permit was first issued.¹¹⁶ Schedule 8, Part 1(9)(1) of the current draft Water Bill 2013–14¹¹⁷ provides an unspecified power for the Minister to include a provision in the so-called ‘Water Regulations’ made under the proposed Bill to require regulators to review abstraction permits ‘periodically’ or ‘in specified circumstances’, which may include periods of drought. These Water Regulations can also authorise or even require regulators to vary permits or their conditions.¹¹⁸ In contrast to this, once a licence has been granted under section 38 of the WRA 1991, the EA can only derogate from it in accordance with a specific statutory procedure.¹¹⁹ Moreover, regulations made under the Draft Water Bill 2013–14 may further strengthen stewardship conceptions of water use, because such Regulations can provide for plans that set overall limits, allocate rights to water as well as specify the ‘progressive improvement of standards or objectives’ relating to the use of water resources.¹²⁰ Moreover, the provision of permits can be restricted to those who are ‘fit and proper persons’ within the meaning of the Regulations.¹²¹ In addition, these Water Regulations can authorise regulators to serve notices upon holders of water abstraction permits for specific purposes, including the objective of tackling water scarcity. Such notices can require abstractors

2003: Withdrawal of Compensation on the Grounds of Serious Damage. A Consultation on the Principles to be used in Determining whether a Water Abstraction May Cause Serious Damage’, November 2012, <<http://wales.gov.uk/docs/desh/consultation/121102watercompensationresponseen.pdf>> accessed 10 April 2014.

115 reg 34(1) EPRs.

116 EA (n 92) 37; reg 20(4)(a) EPRs.

117 HL Bill 71, 8 January 2014.

118 sch 8, pt 1(9)(b) Water Bill 2013–14.

119 ss 52, 53, 57, 63 WRA 1991; Susan Wolf and Neil Stanley, *Environmental Law* (Longman 2011) 181.

120 sch 8, pt 1(3)(2) Water Bill 2013–14.

121 sch 8, pt 1(7) Water Bill 2013–14.

to remove, reduce or mitigate the effect, of an imminent risk of a significant waste of water or of significant damage to the environment.¹²²

6.5. Limiting Administrative Rights to Water through Private Law Conceptions of Stewardship

It is interesting, however, that not just administrative law powers can be deployed to qualify rights to water, but the statutory framework also seeks to promote the development of private law conceptions of stewardship. The Environmental Damage (Prevention and Remediation) Regulations 2009¹²³ impose civil liability on those whose actions cause damage to species and habitats protected under national as well as EU legislation, such as the EU Habitats Directive¹²⁴ and the Wild Birds Directive.¹²⁵ Under these Regulations appeals against determinations by the regulatory authority that an operator caused environmental damage can be based on the defence that the operator was not at fault or negligent *and* that the damage was caused by an activity in accordance with the conditions of a water abstraction licence.¹²⁶ Hence, the Environmental Damage (Prevention and Remediation) Regulations 2009 require the operator to show compliance with a distinct standard of due care. The operator has to establish that he/she was not at fault or negligent, in addition to demonstrating compliance with abstraction licence conditions. Similarly, section 48A WRA 1991 establishes a new tort of breach of statutory duty for damage or loss caused by one abstractor to another person, but holding an abstraction licence is no defence to a claim under section 48A WRA 1991.¹²⁷ These administrative law provisions illustrate that the regulatory regime provides scope for the development of a distinct conception of stewardship obligations, which involve to exercise due care in the use of water resources, and which go beyond mere compliance with the conditions of the abstraction licence.

Most significantly, farmers and their representatives¹²⁸ in both the water-rich and water-scarce case study regions of the North East and Anglia did not consider abstraction licences as the most significant factor for shaping their conceptions of a right to water. Farmers usually manage to stay comfortably within the limits of their abstraction licence, and abstraction above the allocation allowed under a licence is rare.¹²⁹ Pressures would only arise when in over-abstracted and/or over-licensed catchments at the stage of licence renewal, the EA might significantly reduce the amount of water to be allocated under the licence.¹³⁰ Occasionally, during specific

122 sch 8, pt I(21)(c)(i) Water Bill 2013–14.

123 SI 2009/153.

124 Council Directive (EEC) 92/43 (n 49).

125 Council Directive (EC) 2009/147 (n 101).

126 reg 19 (3)(d) in connection with sch 3(1)(e) of the Environmental Damage (Prevention and Remediation) Regulations 2009.

127 Peter Dzakula, 'Section 48 A of the Water Resources Act 1991' (2006) 22 Construct LJ 429; Woolley and others (n 89) 423.

128 Interview with farm lobby 1, 5 July 2012.

129 Interview with regulator 1, 6 July 2012; interview with regulator 2, 19 July 2012.

130 Interview with farm lobby 1, 5 July 2012; OFWAT and EA, *The Case for Change – Reforming Water Abstraction Management in England* 22 <http://www.ofwat.gov.uk/future/markets/waterrights/pap_pos20111205abstraction.pdf> accessed 7 April 2014.

periods of drought in Anglia farmers would have to adjust water use to limited abstraction volumes. In response to this, farmers have developed co-regulatory approaches for securing access to, and managing of, water resources, in particular through WAGs, a development discussed in the next section.

6.6. Qualifying Rights to Water through Co-regulation

Embedded in the institutional–legal framework of abstraction licensing are also co-regulatory practices of farmers, the EA and water companies that have a bearing on how farmers think about a right to water. Co-regulation involves here the specification and implementation of WRM measures jointly by the regulator, the EA and those subject to regulation, such as farmers and water companies. In particular, water sharing, organised through farmer WAGs, sometimes involving abstraction under a common licence, as well as regional multi-stakeholder fora qualify rights-based conceptions of accessing and using water. WAGs were particularly prevalent in Anglia¹³¹ rather than the North East case study region, because they seek to manage the risk of water scarcity in order to protect farmers' access to water.¹³² Through the negotiation of voluntary licence restrictions WAGs aim, for instance, to minimise the risk that the EA *imposes* limits on the amount of water farmers can abstract under their spray irrigation licences during drought periods.¹³³ Whether WAGs, however, promote savings in water use is not entirely clear. Water sharing seeks to bring into common use so far unused water resources available for abstraction under licences already granted, so that farmers who need water can access such additional resources.¹³⁴ Through their own water-sharing rules WAGs also aim to reduce conflict over water allocations between farmers. Moreover, they pursue internal and external educational objectives, for example by promoting knowledge about more efficient irrigation practices among farmers,¹³⁵ and by affirming rights of access to water for agriculture within public policy discourse.

Water sharing has been developed, for instance, by the Lincoln Water Transfer Company and the Lark Valley Abstractors Group.¹³⁶ The Lincoln Water Transfer Company is a formal arrangement for water sharing among a farmer group. This co-operative limited liability company holds a single collaborative transfer licence—a common licence—for transfer of 870,000 cubic metres of water from the River Trent into the Fosse Dyke canal and the drainage system adjoining the farmers' land. Water is allocated for use on any farmland identified in the licence.¹³⁷ Farmers retain their individual—and highly valued—licences of right,¹³⁸ but efficient use of water is promoted through the flexible allocation of water to those farmers who need it most. Economic incentives further buttress this allocation system. Farmers who do not need a water allocation in a given year, because they are growing, for instance, cereals rather

131 Interview with regulator 1, 6 July 2012.

132 Knox and others (n 64) 2.

133 s 57 WRA, Interview with regulator 3, 23 August 2012.

134 Interview with farmer 2, 6 July 2012.

135 Interview with farmer 3, 20 July 2012.

136 Knox and others (n 64) 7.

137 *ibid* 6.

138 E-mail from NFU to authors (12 December 2012).

than more water-hungry crops, such as potatoes or vegetables, only pay a small standing charge. If they were individual licence holders, rather than holders of the collective transfer licence, they would have to pay the EA 50% of the full annual licence charge.¹³⁹

The success of the common group water licence, as in the case of the Lincoln Water Company, relies on having suitable infrastructure, such as networks of drains and irrigation channels, to easily move water between all farmers in the group.¹⁴⁰ It also relies on individual farmers being able to trust each other to share the resource.¹⁴¹ There are further examples of infrastructure enabling water sharing among farmers, but again not at the expense of individual rights of access to water. Farmers already share reservoirs in parts of Anglia¹⁴² and sometimes apply together for grants to build group storage reservoirs from which they collectively abstract.¹⁴³ Some of this water sharing occurs on a commercial basis, that is the farmer who pays for the construction of the reservoir recoups some of the costs by selling water to other farmers, for example during summer low flows of rivers.¹⁴⁴

The Lark Valley Abstractors Group is an example of an alternative informal approach to water sharing. It promotes a stewardship conception of water use, because it is a vehicle through which farmers negotiate collectively with the EA temporary reductions in water abstraction under their individual licences in order to manage the risk of water scarcity during drought periods.¹⁴⁵ The actually available water is shared among members. But at the same time farmers retain their individual administrative rights to water abstraction under their licences. For instance, in 2012, the Lark Valley Abstractors Group in Anglia negotiated a 20% voluntary reduction in farmers' access to water, instead of risking enforced reductions under section 57 WRA 1991. Due to substantial rainfall in the area during the summer of 2012 it was, however, not necessary to put this arrangement into practice. A further example of such co-regulatory arrangements is water sharing between farmers and water companies, authorised by the EA. A recently established WAG in the proximity of the River Nar in West Norfolk took the initiative to ask Anglian Water to use one of their unused ground-water abstraction boreholes during periods of low flow in the River Nar in September 2011, with the EA authorising this.¹⁴⁶ There are also regional multi-stakeholder groups,¹⁴⁷ such as the Tweed Forum that seek to contribute to wider catchment management, species and habitat protection, but also the protection of water resources available for water abstraction.¹⁴⁸

139 *ibid*; EA, Abstraction Charges Scheme 2013/14, sch 2 <http://a0768b4a8a31e106d8b0-50dc802554e-b38a24458b98ff72d550b.r19.cf3.rackcdn.com/LIT_7698_e25503.pdf> accessed 7 April 2014.

140 Interview with farmer 2, 6 July 2012.

141 *ibid*.

142 Interview with River Trust like organisation, 28 August 2012.

143 *ibid*.

144 Interview with farm lobby 1, 5 July 2012.

145 Interview with regulator 2, 19 July 2012.

146 Interview with farm lobby 1, 5 July 2012.

147 Members of the Tweed Forum include statutory and non-statutory bodies, local stakeholder groups, the private sector and environmental NGOs. Tweed Forum, 'About Tweed Forum' (2011) <<http://www.tweedforum.org/about-tweed-forum>> accessed 7 April 2014.

148 Tweed Forum, 'Tweed Catchment Management Plan: Executive Summary' (2010) 5 <<http://www.tweedforum.org/catchment-management-planning/exec-summary>> accessed 11 April 2014.

To summarise, co-regulation through various types of stakeholder groups qualifies individual rights-based conceptions of accessing and using water. They also promote an understanding of the relational interdependence of water abstractions in a catchment and thereby a collective rights-based conception of water use, while also advocating 'more efficient' use of water in order to maintain such rights: 'When WAGs form, farmers come together to defend *their right to irrigate*,..., to foster a commitment among members *to use water efficiently*' [emphasis added].¹⁴⁹ The EA and DEFRA promote the establishment of WAGs, a further indicator of their importance.¹⁵⁰ But how the abstraction licensing framework shapes conceptions of a right to water is also influenced by perceptions of the natural spaces to which the legal provisions apply.

7. HOW PERCEPTIONS OF NATURAL SPACE SHAPE COLLECTIVE RIGHTS CONCEPTIONS OF ACCESSING AND USING WATER

Our pilot project also identified perceptions of 'natural' space, in particular of the farm and the catchment, as a second key interpretative frame in both case study regions that shapes how farmers think about a right to water. When farmers talked about water as flowing in interconnected channels such as in the Fens or in ground-water bodies, they associated with this understanding of the natural environment a conception of collective, rather than individual rights to water.¹⁵¹ Here, understanding access to water through the prism of its embeddedness in the natural environment is associated with a decline of the importance of a language of 'rights'. Instead, access to water was conceived of in terms of shares in a common water resource.¹⁵²

Different ways of thinking about the space of 'the farm' had a bearing on how a right to water was understood. Farmers suggested that regulators seemed to conceive of farms as clearly bounded, distinct parcels of land to which an individual administrative right to abstract water was attached. But this was just one specific way of thinking about the space of the farm. Sometimes 'the farm' consisted of linked parcels of land, because farmers growing crops needing significant amounts of water, such as potatoes and onions, would rent additional land, also in order to access more water.¹⁵³ Intensification of agriculture is promoting this trend. Expanding production beyond the boundaries of the core farm helps to pay for investment in expensive farming machinery as well as fertilizers and pesticides.¹⁵⁴ Conceiving the space of the

149 Knox and others (n 64) 2.

150 For instance, for the East Suffolk catchment within the Anglia river basin district, it recommends as 'key action for this catchment: establishment of the agricultural water abstractor group ESWAG – East Suffolk Water Abstractor Group'. EA, *Water for Life and Livelihoods, River Basin Management Plan, Anglia River Basin District* (2009) 48. <http://www.environment-agency.gov.uk/static/documents/Research/anglianswmidoc_1953860.pdf> accessed 7 April 2014.

151 Interview with farmer 2, 6 July 2012.

152 *ibid.*

153 There is also the option to spell out an agreement for water sharing between two farmers at the stage of applications for water abstraction licences. The farmer who is applying for the licence can give the name of another farmer with whom he is having an agreement to use his land, so that in effect the entitlement to use the water accrues to the farmer with whom the agreement is made rather than the applicant farmer (Woolley and others (n 89) 421).

154 Interview with farmer 3, 20 July 2012.

farm as a network of interconnected parcels of land was associated with a collective rights conception of water, because renting additional land—sometimes on the basis of bartering¹⁵⁵—enabled informal water sharing.¹⁵⁶ In contrast to this, the EA's attempts to promote farmer-to-farmer direct trading of entitlements to water under a licence, affirms a conception of individual administrative rights to water. The entitlement to water is derived from the licence bought by the farmer, and the idea of an individual right to that water is buttressed by the fact that a distinct commercial value is attached to the entitlement. In the case of simply renting additional land, the commercial value of the right to water is potentially less visible.¹⁵⁷

It is not just the natural space of the farm, but also the space of the catchment that can be conceived of in various ways. The catchment is a core conceptual category at the heart of water regulation. Integrated catchment management is a key aim of English water policy and the river basin is the main geographical unit for water management under the EU WFD.¹⁵⁸ A catchment is conventionally understood as a natural drainage area, for instance around a river, in which surface water from rain collects, a river basin being one example. But where exactly the boundaries around a catchment are drawn is also shaped by regulatory philosophies. Hence, 'the catchment' is not a pre-given, uncontested, natural space. The EA, for instance, has sub-divided river basins into a number of smaller sub-catchments, so-called WRMUs, in order to create natural spaces that are more amenable to bureaucratic regulatory control. One of the catchment abstraction management strategies (CAMS) in the North East case study region, for example, divides the catchment of the River Wear into six smaller WRMUs¹⁵⁹ in order to pinpoint more precisely water availability in different areas of the catchment.¹⁶⁰ Some farmers questioned the value of subdividing the catchment, because they thought that these smaller WRMUs were too small to see the knock-on effects—up- and down-stream—of some water management measures, such as impoundments.¹⁶¹

Where to draw the boundaries around a catchment will also be crucial for defining entitlements to water in the context of the planned reform of abstraction licensing in England and Wales. The White Paper 'Water for Life'¹⁶² discusses the introduction of markets in water, coupled with 'minimum regulation'. DEFRA is currently considering the creation of 'shares' in water that could be traded as one option. A 'share' would be less of a 'right' than current entitlements to abstract water under licences, since the size of the share may be reduced according to the overall amount of water

155 For instance, in return for the provision of services, such as ploughing. Interview with farmer 3, *ibid*.

156 Interview with farmer 2, 20 July 2012.

157 For EA-regulated water licence trading, farmers have to apply for a variation of their licence to the EA in order to obtain an additional volume of water that is already allocated, but unused under the licence of another farmer in the catchment. During drought periods and in case of summer low flows the EA now simply provides dispensation letters rather than formal licence variations, with abstraction allocation reverting back to formally licensed volumes at the end of the summer. In practice, there is limited licence trading (Interview with regulator 1, 6 July 2012).

158 See eg arts 3 and 4 of the EU WFD (n 48).

159 EA (n 92) 11.

160 Interview with regulator 2, 19 July 2012.

161 Interview with farmer 3, 20 July 2012.

162 DEFRA, *Water for Life* (Cm 8230, 2011), [2.11]–[2.14].

available in a given catchment at a particular time. A 'share' would thus also be a more flexible allocation of water than current allocations through licences under a statutory regime of regulation.¹⁶³

Most importantly, where to draw the boundaries in order to demarcate 'natural' spaces matters to farmers because this has had an effect on power relationships in the regulatory regime. Farmers were concerned that a lack of clearly defined aquifer or catchment areas would provide additional discretionary powers for the EA.¹⁶⁴ How and where to draw the boundaries around natural space was hotly contested during the 1995 drought in East Anglia:

On July 20th 1995, the then NRA [National Rivers Authority] placed a 100 per cent irrigation ban on those abstractors within 2 kilometres of the River Lark and a 50% on the rest of the aquifer area which was marked on a map with a line that was 150 metres wide in scale equivalent.¹⁶⁵

Farmers questioned whether the NRA's demarcation of the natural space that determined whose abstraction rights were limited within the catchment was really justified.¹⁶⁶ Hence, how the boundaries around natural spaces are drawn can affect the scope of a right to water. In the next, final section, we discuss the third interpretative frame of our eco-socio-legal perspective. Here we focus on how 'green' consumption and production standards shaped what farmers understood as a right to water and how this became qualified through stewardship practices.

8. HOW 'GREEN' PRODUCTION AND CONSUMPTION STANDARDS SHAPE CONCEPTIONS OF A RIGHT TO WATER

'Green' production and consumption standards are developed by the farming industry, independent certification bodies, such as the Soil Association, as well as supermarkets and manufacturers of food stuffs to whom farmers sell their produce (Table 1).

These standards can link farmer conduct to regulatory concerns about water conservation via product markets. They are also important because 'green' production standards seek to assure buyers of produce, including final consumers, that farmers have met quality and environmental performance requirements.¹⁶⁷ While they reinforce a *private* interest in maintaining access to a market;¹⁶⁸ with a green

163 Henry-Leveson Gower, Government Abstraction Reform and Water 'Rights', *Economic Rights and Regulatory Regimes: Is There Still a 'Right' to Water?*, Foundation for Law, Justice and Society Workshop, March 2013 <<http://www.fljs.org/content/government-and-key-stakeholders-debate-water-rights-and-climate-change>>accessed 7 April 2014.

164 Robin Upton, 'The Lark Valley Abstractors' in Tim O'Riordan and Michael Sayer (eds), *CLA Conference: Climate Change, Water Management and Agriculture*, CSERGE Working Paper PA 99-05 (1999) 56.

165 *ibid* 55.

166 *ibid*.

167 Alison Burrell, 'Good Agricultural Practices' in the Agri-Food Supply Chain' (2011) 13 *Env LR* 261; Thomas Herzfeld and Roel Jongeneel, 'Why do Farmers Behave as They Do? Understanding Compliance with Rural, Agricultural, and Food Attribute Standards' (2012) 29 *Land Use Pol* 256.

168 Herzfeld and Jongeneel, *ibid* 251.

Table 1. ‘Green’ production and consumption standards in relation to water use on the farm

Source	Name	Specific Measures Addressing Water Quantity
Farming industry	LEAF Marque ^a	Farm Water Management Plan and annual review Monitoring water efficiency and implementation of change Increased (winter) storage, rain harvesting and drainage re-use
	Red Tractor (Potatoes) ^b	Farm environment plan of management Accurate irrigation scheduling Use of soil moisture and water application technology Regular and even watering
	Red Tractor Beef and Lamb ^c	Management should comply with current legislation and good practice, including cross-compliance Water use related to animal welfare
	The Soil Association ^d	Strategies to minimise run off Monitor and assess water use for efficiency Clean and re-use water Comply with legislation on water and abstraction Water as an integral part of good environmental management for a healthy and diverse ecosystem and enhanced farm production A water management plan to minimise impacts on water demand; using water conservation techniques, and management practices to reduce or avoid impact Operate within the natural hydrology of your catchment Use only as much water as the catchment can sustain Have the least impact on water flow downstream
Buyer	Waitrose ^e	Responsible use of water includes maximising efficiency of use. Requires growers to adopt the LEAF standard (see above)

(Continued)

Table 1. (continued)

Source	Name	Specific Measures Addressing Water Quantity
	Walkers ^f	<p>Reduce the water impacts of key crops in water-stressed areas by 50% over five years</p> <p>Help growers to manage the economic and environmental pressures arising from water scarcity</p> <p>Encourage use of precision farming technology to improve irrigation scheduling and produce more using less water</p>

^aLinking Environment And Farming (LEAF), *Additional Guidance Notes for LEAF Marque Global Standard 2012*, 15 <http://www.leafuk.org/resources/000/690/510/LEAF_Marque_Standard_Additional_Guidance_Notes_2012_version_1.pdf> accessed 11 April 2014.

^bAssured Food Standards, *Red Tractor Assurance for Farms. Fresh Produce Scheme, Crop-specific Protocol, Potatoes* (2012) <http://assurance.redtractor.org.uk/resources/000/653/295/Potatoes_2012.pdf> accessed 7 April 2014.

^cAssured Food Standards, *Red Tractor Assurance for Farms. Beef & Lamb Scheme, Quick Guide* (2012) <http://assurance.redtractor.org.uk/resources/000/576/017/Quick_Guide_BL_V2.pdf> accessed 7 April 2014.

^dSoil Association, *Soil Association Organic Standards: Farming and Growing* (2012), Revision 17.1, February 2014, s 4.16 Managing Water <<http://www.soilassociation.org/LinkClick.aspx?fileticket=1-LqUg6illo%3d&tabid=353>> accessed 11 April 2014.

^eJohn Lewis Partnership Sustainability Report 2012, 69 <http://www.johnlewispartnership.co.uk/content/dam/cws/pdfs/our%20responsibilities/our_latest_report/Sustainability_report_downloads/JohnLewisPartnership_SustainabilityReport_2012.pdf> accessed 7 April 2014.

^fWalkers Crisps is a subsidiary of PepsiCo UK & Ireland. Its approach to water use is discussed in PepsiCo's Sustainability Report 'Performance with Purpose: Environmental Sustainability' <<http://www.pepsico.co.uk/purpose/environmental-sustainability>> accessed 7 April 2014.

production label providing a marketing edge for the product,¹⁶⁹ they also steer farmers towards a stewardship conception of accessing and using water. They prompt farmers to consider the impact of their water use on broader environmental and social systems.¹⁷⁰ Moreover, they can render farmers' practices in relation to water stewardship more transparent, in particular to certification bodies and commercial buyers of famers' produce. They can thus also help to hold farmers to account for water use. But accountable to whom, and for what exactly, are critical questions. Answers to these questions reflect whether farmers think that their individual right to water is now being qualified through stewardship obligations.

These 'voluntary', private 'green' production and consumption standards differ in the extent to which they promote stewardship. The Red Tractor standard for potato

169 Paul Martin and Miriam Verbeek, *Sustainability Strategy* (The Federation Press 2006) 94–95.

170 Soil Association (cross-reference d in Table 1) 85; PepsiCo's Sustainability Report (cross-reference f in Table 1). There is also reference to 'responsible use of water' in John Lewis Partnership Sustainability Report (cross-reference e in Table 1) 69. The charity LEAF, which addresses farmers, consumers and food businesses, refers to farmers as 'stewards of the countryside, with consumers enjoying nutritious food – confident that it has been produced in an environmentally and socially responsible way' (Linking Environment And Farming, 'LEAF - For Consumers' (2012) <<http://www.leafuk.org/leaf/consumers.eb>>).

production, in contrast to the LEAF Marque standard, prioritises quality attributes and market access over broader benefits derived from water conservation.¹⁷¹ Also farmers perceived differences in the significance of specific standards for qualifying a 'right' to water. The LEAF standards were especially acknowledged to foster awareness of the environmental impacts of water use on the farm.¹⁷² Supermarket standards were considered as most influential, particularly in the water-scarce region of Anglia where crops in need of significant irrigation, such as salad, vegetables, potatoes and onions are grown.¹⁷³ In practice, however, manufacturers of food stuffs and supermarkets also reinforce farmers' significant use of irrigation in order to achieve good product appearance. Hence, 'green' production and consumption standards reflect a problematic mix between economic and environmental motivations for water stewardship, as well as an inherent contradiction in 'green' production standards. For instance, Walkers Crisps aim to reduce the water impact of crops it sources from water-stressed areas by 50% over five years from 2012.¹⁷⁴ But in order to sell their potatoes to Walkers Crisps farmers do not just have to demonstrate reduced water use, but also have to achieve good skin finish, because 'nobody wants scabby potatoes'.¹⁷⁵ For achieving good skin finish, it is critical that the crop does not become too dry in the field:

Most farmers water crops for quality – skin finish and appearance – which is a processor or supermarket dictated term. We spend a lot of time and a lot of money throwing water about to get a nice skin finish, a good appearance, and no growth cracks on the product. Without the quality of skin finish, you can't sell the product.¹⁷⁶

This illustrates that water stewardship, in terms of efficient water use, is limited by the objective of maintaining access to markets for high-value crops like potatoes, onions or carrots.¹⁷⁷ And in order to maintain market access farmers need secure water supplies, protected through a right to water. Given the higher proportion of horticultural crops being grown in Anglia in comparison to the North East, 'green' production and consumption standards were perceived to be as particularly significant in Anglia for shaping conceptions of a right to water. Most interestingly, however, regulators¹⁷⁸ and farmers¹⁷⁹ in both case study regions thought that these standards can be more significant in influencing how farmers think about a right to water and its potential qualification through stewardship than abstraction licensing.

171 Burrell (n 167).

172 Interview with farmer 1, 5 July 2012.

173 Interview with farm lobby 2, 5 September 2012; EA (n 150) 9.

174 Pepsico's Sustainability Report (cross-reference f in Table 1).

175 Interview with farmer 1, 5 July 2012.

176 Interview with farmer 3, 20 July 2012.

177 Interview with farm lobby 1, 5 July 2012.

178 Interview with regulator 1, 6 July 2012.

179 Interview with farmer 3, 20 July 2012.

9. CONCLUSION: HOW DO CONCEPTIONS OF RIGHTS TO WATER MATTER?

This article has sought to develop an eco-socio-legal perspective in order to advance analysis of intersections between rights to water and stewardship practices. Our perspective recognises both the social world, captured through accounts of legal-institutional and economic contexts, and the natural world, reflected in accounts of geographical space, as relevant for explaining how rights to water can become qualified. We seek to avoid through this perspective either sociological or ecological determinism. We therefore consider a 'right to water' not merely as the outcome of interests staked and competing claims lodged in political struggles over access to and use of water.¹⁸⁰ Our perspective also differs from accounts in the literature on property rights and natural resource management that refer to the natural environment as an objective, structural constraint on the exercise of rights to water.¹⁸¹ In contrast to this, our eco-socio-legal perspective, which consists of three interlinked interpretive frames, suggests that the meaning of geographical space, here in particular the farm and the catchment, is a matter of subjective and situated perception that can vary among key stakeholders in water resource management.

Moreover, we have argued that a right to water is not just an abstract conceptual device, but its empirical content, in terms of key stakeholders' understandings of it, matters. Our eco-socio-legal perspective seeks to avoid reification of the idea of rights and instead seeks to facilitate empirical inquiry. We sought to render visible various types and degrees of intersections between rights and regulation, ranging from perceptions of a private property right to water and stewardship practices as conceptually distinct (discussed in Section 1) to structural links between administrative rights to water granted under statutory frameworks qualified through statutorily mandated stewardship practices (discussed in Section 4.3). Degrees of intersections can range from close links—achieved through a shared language of efficient water use—between administrative rights to water and stewardship practices understood in terms of business objectives. But the link between rights and regulation is less strong in the context of claims to private property rights in water-rich environments. Tracing types and degrees of intersections between rights and regulation on the basis of empirical inquiry enables to question, for instance, Morgan's more categorical view that rights have a stronger discursive power than regulation.¹⁸² In addition, we consider politics not merely as a context to the intersection between rights and regulation,¹⁸³ but as performed through the specific conceptions of rights and regulatory stewardship practices that are mobilised by key stakeholders. For instance, the mobilisation of a collective rights language by farmers constitutes them as a legitimate and potentially influential interest group in the water regulatory regime. Our research also opens up a range of further questions. The pilot study suggests that the economic organisation of the farm, also through 'green' production and consumption standards is more significant in shaping conceptions of a right to water as qualified

180 For an example of such a conflict perspective see David Kinnersley, *Coming Clean* (Penguin Books 1994) xi, xviii, 2.

181 See eg Lucy and Mitchell (n 5); Bosselmann (n 15).

182 Morgan (2007) (n 33), 15.

183 *ibid* 2, 7.

by stewardship practices than the institutional–legal framework of abstraction licensing. Further research is necessary in order to test this hypothesis, on the basis of a larger empirical data set.

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