

SPECIALIZATION TREND: WATER COURTS

BY

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Defining property rights is not useful unless there is an enforcement system, either public or private, that backs it up. While the definition of property rights as a solution to the tragedy of the commons has been carefully analyzed in the literature, the enforcement piece has been somewhat overlooked. With climate change, water is becoming scarcer and conflict is rising. As a result, the need for an efficient and fair enforcement system is more necessary than ever.

Given the complexity of water law and the backlog in the judicial system, introducing specialization in the resolution of water cases should be encouraged. Enforcement may take different forms: from administrative agency decisions to judicial decisions. This Article focuses on the judiciary, where specialization in the environmental arena has gained traction in recent decades in the United States and abroad. Specialization ensures faster resolution and better-quality decisions. To achieve those benefits, jurisdictions do not need to create a whole new system of courts necessarily. For example, in water, specialization in the judiciary can range from special masters assisting generalist judges in water cases or general judges who get assigned all water cases on the docket to full-fledged specialized courts. Some jurisdictions have already introduced some of these measures. Other jurisdictions feel an acute need for them. This Article offers water-scarce jurisdictions a portfolio of specialization strategies for their judiciaries to solve water disputes and, perhaps, other climate change induced disputes.

First, the Article covers how the literature has analyzed specialized tribunals across different legal areas, along with their advantages and disadvantages. Second, it establishes the need for specialized water courts and their procedural particularities. Factual and legal complexity of water disputes demands specialization both at

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the trial and at the appellate level. Third, the Article analyzes existing examples of water courts. The cases analyzed include Colorado, Southeastern Spain, South Africa, and Montana water courts. In addition, it includes examples of other forms of specialization. The Article concludes by highlighting the lessons and guidelines that can be learned from those specialized strategies and advocates for incremental measures towards specialization, both in institutional design and in procedural rules.

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I. INTRODUCTION

Definition of property rights is an essential solution to the tragedy of the commons¹ from which many of our natural resources suffer. The scholarship analyzing how property rights are created and how they evolve often takes for granted the enforcement of those rights.² Enforcement is key. Enforcement is a public good often, but not exclusively, provided by

¹ See generally Harold Demsetz, *Toward a Theory of Property Rights*, 57 AM. ECON. REV. 347 (1967).

² See, e.g., *id.* at 347 (discussing “the elements of an economic theory of property rights” but not addressing enforcement).

government. Enforcement takes many different forms: from ostracism in self-governed property rights systems to administrative agencies' resolutions and judicial decisions in formal property right systems.

This Article focuses on the last step in the enforcement of water rights: the courts. In particular, it analyzes whether the introduction of water courts is advisable in western United States. Currently, water rights are first enforced by administrative agencies, and the decisions of those agencies may be challenged in court. For example, a water rights holder may challenge a water agency's denial of a location change for their water right.³ Additionally, private parties may bring claims against other water rights holders to court. Presently water cases are heard by generalist state courts. However, water law cases may unduly burden the dockets of those generalist courts.⁴ Courts decide on many different areas and the complexity of the facts and the law in water law cases suggests that a different institutional design, one with specialized courts, may be more efficient.⁵ The gains in efficiency will come from a faster, more accurate resolution of cases.⁶

Specialized courts are quite common from a comparative perspective in areas as varied as corporate matters, tax issues, gender violence, administrative law, family law, or patents.⁷ One such area is environmental law. Forty-two countries have specialized environmental courts. For example, India created the Green Tribunal in 2010,⁸ New South Wales (Australia) has the Land and Environmental Courts that hear environmental and land use cases since 1979.⁹ Sweden, in 2011, replaced property and environmental courts for a system of Land and Environment Courts which also hears water cases.¹⁰

In the United States, the generalist judge is celebrated.¹¹ Judge Posner wrote in defense of the generalist judge in 1983.¹² While in 1990, the United States Judicial Conference qualified them as "exotic,"¹³ around that time the

³ See, e.g., *Eardley v. Terry*, 77 P.2d 362, 363 (Utah 1938); *Searle v. Milburn Irrigation Co.*, 133 P.3d 382, 384–386 (Utah 2006); *Eaton v. State Water Rights Bd.*, P.2d 722, 724 (Cal. Dist. Ct. App. 1959).

⁴ See *infra* section II.A.

⁵ *Id.*

⁶ Rochelle C. Dreyfuss, *Forums of the Future: The Role of Specialized Courts in Resolving Business Disputes*, 61 BROOK. L. REV. 1, 12 (1995).

⁷ Markus B. Zimmer, *Overview of Specialized Courts*, INT'L J. CT. ADMIN., Aug. 2009, at 1.

⁸ Eeshan Chaturvedi, *Green Courts: The Way Forward?*, CORNELL POL'Y REV. (Feb. 6, 2017), <https://perma.cc/YYG5-D4N6>; see also Domenico Amirante, *Environmental Courts in Comparative Perspective: Preliminary Reflections on the National Green Tribunal of India*, 29 PACE ENVTL. L. REV. 441, 441 (2012).

⁹ AMANDA KENNEDY, ENVIRONMENTAL JUSTICE AND LAND USE CONFLICT 54 (2017).

¹⁰ *Land and Environmental Courts*, SVERIGES DOMSTOLAR, <https://perma.cc/H2E9-JTRH> (last visited Apr. 13, 2019).

¹¹ Edward K. Cheng, *The Myth of the Generalist Judge*, 61 STAN. L. REV. 519, 520 (2008).

¹² Judge Posner defends functional specialization, but not subject-matter specialization. Richard A. Posner, *Will the Federal Courts of Appeals Survive Until 1984? An Essay on Delegation and Specialization of the Judicial Function*, 56 CAL. L. REV. 761, 762–63 (1983).

¹³ FED. COURTS STUDY COMM., REPORT OF THE FEDERAL COURTS STUDY COMMITTEE 12 (1990). However, even earlier in 1973, there was a report studying the feasibility of establishing

Vermont Superior Court Environmental Division¹⁴ and the Shelby County-Tennessee Environmental Court¹⁵ were created. Setting aside the specialization of administrative law judges such as the United States Environmental Protection Agency administrative law judges or the environmental appeals board,¹⁶ there are plenty of examples of specialized courts in the United States, such as bankruptcy courts or Federal Circuit Court of Appeals.¹⁷

Water law has not been immune to specialization at the judicial level. Water law is similar to environmental law¹⁸ and patent law because both the facts and the regulations are very complex. In fact, across the world, water issues have often prompted the establishment of environmental courts and tribunals.¹⁹ In the United States, only Colorado has a system of water courts.²⁰ These courts have been in place since 1969²¹ but, surprisingly, the literature about specialized courts has not paid much attention to these Colorado courts. In addition, some specialized courts, created to deal with the adjudication processes in the western states where water rights were not properly recorded, are becoming permanent courts of limited jurisdiction.²² While there are few examples, water courts are not frequent. However, voices advocate for them. For example, in California, when drought strikes, there are often claims of the need for water courts.²³

This Article analyzes whether water law courts are a sound reform to deal with water rights disputes in an era of climate change which will inevitably make water disputes more common. Water courts compete with general courts as a forum for dispute resolution, but they also compete with market mechanisms or with political deal-making as alternative ways to

environmental courts. U.S. DEP'T OF JUSTICE, LAND AND NAT. RES. DIV., REPORT OF THE PRESIDENT, ACTING THROUGH THE ATTORNEY GENERAL, ON THE FEASIBILITY OF ESTABLISHING AN ENVIRONMENTAL COURT SYSTEM (1973).

¹⁴ *Environmental Division*, VT. JUDICIARY, <https://perma.cc/34TC-ALPB> (last visited Apr. 13, 2019).

¹⁵ *History of Environmental Court*, SHELBY CTY., TENN., <https://perma.cc/F46T-6TMM> (last visited Apr. 13, 2019).

¹⁶ *About the Office of Office of Administrative Law Judges (OALJ)*, U.S. ENVTL. PROTECTION AGENCY, <https://perma.cc/L7VS-W9AZ> (last visited Apr. 13, 2019).

¹⁷ See generally Robert M. Howard, *Comparing the Decision Making of Specialized Courts and General Courts: An Exploration of Tax Decision*, 26 JUST. SYS. J. 119, 136 (2005).

¹⁸ Environmental regulation has reached the same, or maybe even surpassed the complexity of the Internal Revenue Code. Ellen R. Jordan, *Specialized Courts: A Choice?* 76 NW. U. L. REV. 745, 747, 750 (1981). If that was the case in 1981, it should be more so today.

¹⁹ GEORGE W. PRING & CATHERINE PRING, GREENING JUSTICE: CREATING AND IMPROVING ENVIRONMENTAL COURTS AND TRIBUNALS 9 (2009).

²⁰ *Water Courts*, COLO. JUDICIAL BRANCH, <https://perma.cc/3GKE-DTEX> (last visited Apr. 13, 2019).

²¹ *Id.*

²² In Montana, "SB 028 - Allow Water Disputes to be Appealed to the Water Court was passed in 2017." John Thorson, *A Permanent Water Court Proposal for a Post-General Stream Adjudication World*, 52 IDAHO L. REV. 17, 18-19 (2016), <https://perma.cc/JN2V-V2WV>.

²³ See, e.g., Gary Pitzer, *Does California Need A Water Court?*, WATER EDUC. FOUND., <https://perma.cc/Q9U9-5TZ5> (last visited Apr. 13, 2019).

solve water conflicts.²⁴ A better system of judicial decision making should reduce the overall social costs of water conflicts.

In order to assess the suitability of water courts, the Article starts by analyzing the comparative advantages and disadvantages of specialized courts in relation to the current system of generalist courts. Second, it looks at some examples of existing water courts in the United States and beyond, namely the Water tribunal of Valencia, the South Africa Water Court, Colorado Water Courts, and the Montana Water Court. Third, the Article describes the trend towards specialization in water law judicial decision making and distills the characteristics that a water court should have and how those could also inform the establishment of other specialized judicial institutions for other natural resources.

II. SPECIALIZED TRIBUNALS

Specialized courts are expected to make quicker decisions, reducing the workload of regular courts, and provide higher quality decisions, thus ensuring legal coherence and uniform judicial decisions.²⁵ Beyond these advantages that all scholars agree on, some works on specialized courts identify additional advantages.²⁶ The study *Greening Justice* about the potential for environmental courts lists visibility as an advantage.²⁷ The report understands environmental courts as a way to increase the public relevance of a subject because by creating these courts, the government shows that environmental issues are a topic of great importance.²⁸ The lessons offered here for specialized water courts can be translated to many other areas.

If all the above advantages were realized, private parties should favor specialized courts because they would greatly reduce the cost of doing business in the subject matter areas where those courts specialize.²⁹ Additionally, a trustworthy, respected judicial system is a key part of procedural environmental justice.³⁰ Some scholars consider specialized

²⁴ Bonnie G. Colby & Tamra Pearson D'Estree, *Economic Evaluation of Mechanisms to Resolve Water Conflicts*, 16 INT'L J. WATER RES. DEV. 239, 242–44 (2000).

²⁵ PRING & PRING, *supra* note 19, at 14–16.

²⁶ *Id.* The list of advantages includes expertise, efficiency, visibility, cost, uniformity, standing, government accountability, prioritization, creativity, alternative dispute resolution, issue integration, remedy integration, public participation, public confidence, problem solving, and judicial activism. Judicial activism is a double-edged sword because it can also be perceived as biased decision-making. Many of these listed advantages, cannot be claimed by specialized courts and are not exclusive to specialized courts. Instead, many of those, such as issue and remedy integration or recourse to alternative dispute resolution techniques depend heavily on the particular design of the court and the procedural rules that it must apply. *Id.*

²⁷ *Id.*

²⁸ *Id.* at xiii.

²⁹ *Id.* at 14–15.

³⁰ KENNEDY, *supra* note 9. In Sweden, the combination of technical experts and law-trained judges on the bench has contributed to the public confidence on the land and environmental

courts as increasing public confidence³¹ in the system, which in turn may enjoy greater legitimacy.³² Subpart A below will focus on the two advantages that encompass all the additional ones listed in the current scholarship on the topic: celerity and quality of adjudication³³

There are also costs to specialization beyond the costs of setting up a new court infrastructure. Specialized courts present a higher risk of capture because they may have fewer players—plaintiffs or defendants—and those players are often repeat players who will always face a small number of judges.³⁴ In addition, while judges would be experts, they may become siloed and ignore developments in other areas of the law which could be beneficial if incorporated in the specialized area the judge is assigned to.³⁵ Subpart B analyzes these costs. Finally, Subpart C will review the different institutional designs available to introduce specialization in the judiciary.

A. Benefits

1. Celerity

Celerity is probably the greatest advantage from a private party perspective.³⁶ Specialized courts are supposed to reach decisions faster because the judges know the subject area, and thus they do not need to be educated by parties and their experts as much as general judges.³⁷ Judges working on a particular subject area will not only know in detail the rules applicable to the specialized area, they will also be more educated on the technical aspects of the facts and regulations of that subject area.³⁸ While a specialized judge in, for example, environmental law, does not need to be a biologist or a chemist, sitting on environmental cases would make him an educated consumer of the technical and scientific issues. In addition, this is compounded with the fact that, at least initially, specialized courts are not as backlogged as general courts.³⁹ Nonetheless, evidence in favor of the celerity of specialized courts is mixed.⁴⁰

courts' decisions. See Ulf Bjällås, *Experiences of Sweden's Environmental Courts*, 3 J. CT. INNOVATION 177, 183 (2010).

³¹ PRING & PRING, *supra* note 19, at 16.

³² Cheng, *supra* note 11, at 549.

³³ Richard L. Revesz, *Specialized Courts and the Administrative Lawmaking System*, 138 U. PA. L. REV. 1111, 1115 (1990); see also PRING & PRING, *supra* note 19, at 14; Nuno Garoupa et al., *Assessing the Argument for Specialized Courts: Evidence from Family Courts in Spain*, 24 INT. J. L. POL'Y. & FAM. 54, 55 (2010).

³⁴ PRING & PRING, *supra* note 19, at 17–18.

³⁵ *Id.*

³⁶ Dreyfuss, *supra* note 6, at 14.

³⁷ PRING & PRING, *supra* note 19, at 14–15.

³⁸ *Id.* at 14.

³⁹ *Id.* at 15, 17.

⁴⁰ Garoupa et al., *supra* note 33, at 63–64. However, in some cases, decisions are reached faster. See Carolina Arlota & Nuno Garoupa, *Do Specialized Courts Make a Difference? Evidence from Brazilian State Supreme Courts*, 27 EUR. BUS. L. REV. 487, 495, 499 (2016); see

The results regarding speed may depend on the institutional design in addition to the expertise of the judges and how the legal community with cases before the new courts reacts to their establishment and activity.⁴¹ Celerity in reaching decisions translates into lower litigation costs, which improves access to justice.⁴² However, the positive effect on the length of time needed to obtain a judicial decision may be counterbalanced by an increase in the workload of those specialized courts. If adjudication before those specialized courts becomes attractive to litigants as a result of the increase in efficiency, parties may give up extra-judicial means of solving conflicts in favor of judicial adjudication.⁴³ Thus, as an efficient specialized court decreases the amount of time that it takes to decide a case, its docket may increase in the number of cases.⁴⁴ This could make the court less attractive than alternative systems of resolving conflicts. In fact, some specialized courts in the environmental arena promote the use of alternative dispute resolution methods to avoid backlog.⁴⁵ Finally, as it shall be seen next, if specialized courts provide better decisions, the predictability of the law in the subject area may increase⁴⁶ and reduce overall conflicts.⁴⁷

2. Quality of Adjudication

Specialization should translate into better opinions thanks to the knowledge and expertise of the bench. Defining better opinions is a difficult task⁴⁸ because the quality of a legal field and its trajectory is a moving target and it should be defined against some measure that captures the social impact. As Cheng put it, “even if expert judges cannot necessarily ensure *right* answers, their decisions are more likely to fall within the subset of better answers owing to their greater experience and understanding of a field.”⁴⁹ Specialized judges are likely to commit fewer accidental mistakes.⁵⁰

Dreyfuss suggests that expert judges will be able to choose between when it is acceptable to state a slightly inaccurate bright line rule that ensures administrative convenience and when it is not advisable to sacrifice accuracy.⁵¹ Other authors have measured quality of the legal doctrines announced by specialized courts by looking at citations by other courts,

also MARGARET S. WILLIAMS ET AL., FED. JUDICIAL CTR., PATENT PILOT PROGRAM: FIVE-YEAR REPORT 38–39 (2016), <https://perma.cc/KZW7-YSDZ>.

⁴¹ *Id.* at 39.

⁴² PRING & PRING, *supra* note 19, at 15.

⁴³ Dreyfuss, *supra* note 6, at 34.

⁴⁴ *Id.*

⁴⁵ Brian J. Preston, *Benefits of Judicial Specialization in Environmental Law: The Land and Environment Court of New South Wales as a Case Study*, 29 PACE ENVTL. L. REV. 396, 413 (2012); see also *infra* note 103 and accompanying text.

⁴⁶ Amirante, *supra* note 8, at 452.

⁴⁷ Rochelle Cooper Dreyfuss, *Specialized Adjudication*, 1990 BYU L. REV. 377, 382 (1990).

⁴⁸ Preston, *supra* note 45, at 423.

⁴⁹ Cheng, *supra* note 11, at 524.

⁵⁰ David P. Currie & Frank I. Goodman, *Judicial Review of Federal Administrative Action: Quest for the Optimum Forum*, 75 COLUM. L. REV. 1, 67 (1975).

⁵¹ Dreyfuss, *supra* note 47, at 378.

length, and rate of dissent. The evidence only shows that dissents are more common in specialized tribunals.⁵² The explanation given is that judges in the Brazilian state courts examined in the study are career judiciary judges and, as such, they see opinions as a way to enhance their reputation amongst the expert bench.⁵³ However, dissents may not really affect private parties unless those dissents open the door to more litigation if the decision by a specialized tribunal is reviewed by superior courts.

Additionally, other studies use rate of appeal and reversal by superior courts as a proxy for the quality of the decision making.⁵⁴ Using the rate of appeal implies that litigants will be more likely to accept the decision of an expert court.⁵⁵ Behind the use of the reversal rate is the belief that generalist lower courts will be reversed more often than expert courts because expert courts have mastered the legal doctrines and, thus, would choose the optimal answer.⁵⁶ Those two effects are not necessarily independent. After some time where superior courts have affirmed the majority of lower expert court decisions, litigants may appeal fewer cases because they anticipate that their chances of success would be slim. The Patent Pilot Project, which offered a natural experiment where some districts had expert judges and some others did not, found that “while pilot cases are a substantial percentage of all patent cases (76%), they are a smaller percentage of appeals (57%)”.⁵⁷ However, the same study concludes that the rate of reversal is no different for expert and non-expert judges.⁵⁸ A qualitative data point that suggests specialized courts are successful is the expansion of their jurisdiction in Sweden. Swedish environmental courts were renamed as Land and Environmental Courts when their jurisdiction expanded to incorporate control over land use planning decisions.⁵⁹

B. Costs

The two main costs that arise from a system of specialized judicial bodies are costs associated with their establishment and the potential for bias in their decisions.⁶⁰ Other costs may arise depending on the institutional

⁵² Arlota & Garoupa, *supra* note 40, at 499.

⁵³ *Id.*

⁵⁴ WILLIAMS ET AL., *supra* note 40, at 31.

⁵⁵ *Id.* at 32.

⁵⁶ *Id.* at 36.

⁵⁷ *Id.* at 32.

⁵⁸ *Id.* at 36.

⁵⁹ Bjällås, *supra* note 30, at 180.

⁶⁰ Richard Posner unpacks the different sides on what bias captures. He lists the following disadvantages of specialized courts compared to the federal appellate generalist courts: 1) the politicization of the specialized court because its work can be more controlled by the other branches, in part, because it is more predictable how someone appointed judges will lean on cases of the same subject; 2) the identification with the governmental program that they are trying to enforce; 3) the monopolistic nature of a smaller, subject-matter specialized court; 4) lack of geographical diversity; 5) reduction of cross-pollination; 6) boundary problems between areas of law; and 7) difficulty in managing a variable caseload. Some of these, such as four or six, depend on how the court is structured. Posner, *supra* note 12, at 783–89.

design adopted. Relatedly, some have also argued specialized courts may suffer a loss of prestige.⁶¹

1. Establishment and Operational Costs

First, establishing and running a new system of courts is costly. Costs will include new judges, new clerks, new administrative staff, and new headquarters as needed, etc. Local taxpayers will likely shoulder the costs even though the general public is not likely to use the specialized court system and there is a different group who will directly benefit from the new court. To the extent possible, part of the operating costs should be covered by the fees paid by those who received the benefits of the specialized courts. This being said, the public would indirectly benefit in two ways. First, if the establishment of this new court system reduces the workload of general courts, then it would allow general courts to decide their cases faster. Second, the higher quality of the judicial decisions should increase the overall societal benefit.

As stated in Part I, there are different ways to design a specialized system. It could be just a spin-off of the regular court system, having some judges assigned to be water judges, like the Patent Pilot Project⁶² or in Colorado. Such a system will likely reduce the overhead costs of the specialized courts. In general, the areas where specialized courts are established are areas where litigation is expensive because the complexity of the case translates into higher costs due to, for example, the need of expert witnesses. Hence, a specialized court opens the door to reducing the costs by offering cheaper access to justice thanks to tailored procedural rules and a lessened need for multiple experts.⁶³

2. Risk of Capture

These specialized courts can be captured by specialized interests because there would be fewer repeat players before the court. The institutional design could help mitigate this concern, via, for example, life tenure to insulate judges from re-election or re-appointment pressure. Similarly, the selection process can minimize this concern.⁶⁴ Furthermore, this concern is not as acute in every single area. Some areas are more prone to capture than others. For example, an area where an administrative agency is likely to be a repeat player raises concerns because judges may tend to favor the agency. It would be hard to disentangle judges' bias with the advantage that accumulated experience before the court may give to the agencies. Judge Posner believed that a specialized court populated by specialists would identify too much with the government program's goals

⁶¹ PRING & PRING, *supra* note 19, at 18; *see also* Cheng, *supra* note 11, at 554.

⁶² WILLIAMS ET AL., *supra* note 40, at 2.

⁶³ PRING & PRING, *supra* note 19, at 15.

⁶⁴ Dreyfuss, *supra* note 47, at 426.

they review because it would have been the focus of their careers.⁶⁵ However, it could also be the case that lawyers normally defending private parties against the agency are the potential judges, and thus would be more hostile to the government program. Judge Posner's point is broader, though: a specialist in a specialized court cannot be tempered in his or her legal interpretations.⁶⁶

This concern of favoring a particular side may also exist if instead of an agency there are some repeated, powerful players against opposing litigants which are likely to be not as knowledgeable or sophisticated.⁶⁷ If there is a leveled playing field, the concerns about capture should be mitigated. Capture may also arise from the existence of a specialized bar. However, even generalist courts could be perceived as captured by, instead of a specialized bar, a local bar. The bar may be specialized even before the specialized court is established or it may become specialized as a response to a new specialized court. Either way, scholars do not think the specialization of the bar is problematic.⁶⁸

In the United States, some of the specialized courts created by Congress have been considered captured and their decisions biased,⁶⁹ but there is no empirical evidence of this. Evidence from Brazilian and Spanish courts suggest that their specialized tribunals have not been captured.⁷⁰ The case study of Spanish courts is particularly relevant because it focuses on Administrative Law Judicial courts where one of the parties is always a public agency.⁷¹ The study examines medical malpractice cases, comparing the decisions of civil courts and administrative courts in similar cases; that is, it compares the results in malpractice cases where the tortfeasor is a private hospital and those where the injuring party is a public hospital. In

⁶⁵ Posner, *supra* note 12, at 785. This viewpoint is also shared by Judge Plager. S. Jay Plager, *The United States Courts of Appeals, the Federal Circuit, and the Non-Regional Subject Matter Concept: Reflections on the Search for a Model*, 39 AM. U. L. REV. 853, 858 (1989–1990); *see also*, Cheng, *supra* note 11, at 560. (“For example, Subpart I.D.1 suggests a possible correlation between specializing in criminal law and being a former prosecutor. If judges without a criminal law background avoid writing criminal opinions, and former criminal defense attorneys seldom become judges because of political unpopularity, then in essence only former prosecutors will direct the future of federal criminal law. Regardless of one’s political leanings, this lopsided situation is almost unquestionably undesirable.”).

⁶⁶ Posner, *supra* note 12, at 785.

⁶⁷ *See* Dreyfuss, *supra* note 47, at 380; Lawrence Baum, *Judicial Specialization, Litigant Influence, and Substantive Policy: The Court of Customs and Patent Appeals*, 11 L. & SOC’Y REV. 823, 827–28 (1977). *But see* Jeffrey W. Stempel, *Two Cheers for Specialization*, 61 BROOK. L. REV. 67, 93 (1995) (“Despite the wide adherence to the percolation and cross-fertilization arguments, there appears to be no dramatic evidence of specialized courts making erroneous decisions, deciding issues too quickly or too firmly, or basing their decisions on too narrow a base of fact, law or nonlegal information.”).

⁶⁸ Preston, *supra* note 45, at 426.

⁶⁹ Dreyfuss, *supra* note 47, at 392.

⁷⁰ *See* Arlota & Garoupa, *supra* note 40, at 498–99; Sofia Amaral-Garcia & Nuno Garoupa, *Do Administrative Courts Favour the Government? Evidence from Medical Malpractice in Spain*, 6 J. EUR. TORT L. 241, 258 (2015).

⁷¹ *See* Amaral-Garcia & Garoupa, *supra* note 70, at 242.

those cases, the courts seem to disfavor the government party.⁷² This result may be affected by the specific topic analyzed, medical malpractice, but it is still remarkable.⁷³

C. Institutional Design

1. Expertise

The benefits hinge on the expertise of the bench and expertise on the subject matter. In general, judges accumulate functional expertise as they sit on the bench. Judge Bazelon said that “substantive review of mathematical and scientific evidence by technically illiterate judges is dangerously unreliable”⁷⁴ He advocated for focusing on procedural grounds and letting the agencies come to their own conclusions regarding technical issues if appropriate procedures were followed.⁷⁵ A specialized court may be in a better position to decide substantively on those matters, thus needing to defer less to the agencies. Even if the deference was maintained in order to avoid a chilling effect on agency decision making, fewer expert-hours and fewer judge-hours would be needed to decide these cases.

Expertise can be preexisting or gained in a specialized court system. Preexisting experience implies that judges need to be selected from either the pool of judges who have presided on many cases of the area of law that the specialized court is going to tackle or from a pool of other legal professionals who work in the specialized area. Judges with experience may bring about the benefits of specialized courts faster, as they are experts in both the subject matter and the task of adjudicating disputes. Alternatively, legal professionals without particular expertise in the subject matter could be chosen. If that is the case, those newly minted specialized judges will accumulate expertise as they preside over cases in the particular subject matter.⁷⁶ If judges are not specialists in the subject matter,⁷⁷ they will at least be more familiar with the procedures and operation of a court and can learn the specialized area quickly. Judge turnover will also impact how much expertise accumulates in the court as an institution. Selection process has a huge impact on how much expertise, and which type of expertise, matters. Using non-experts on the subject matter helps avoid biases that a career in a particular area may cause.⁷⁸

⁷² Arlota & Garoupa, *supra* note 40, at 498–99; Amaral-Garcia & Garoupa, *supra* note 70, at 256.

⁷³ Amaral-Garcia & Garoupa, *supra* note 70, at 243.

⁷⁴ Ethyl Corp. v. U.S. Evtl. Prot. Agency, 541 F.2d 1, 67 (1976).

⁷⁵ *Id.*

⁷⁶ Isaac Unah, *Specialized Courts of Appeals’ Review of Bureaucratic Actions and the Politics of Protectionism*, 50 POL. RES. Q. 851, 858 (1997).

⁷⁷ Specialized courts have been staffed with specialist judges. Revesz, *supra* note 33, at 1111.

⁷⁸ Posner, *supra* note 12, at 785.

Bankruptcy judges offer a good illustration of expertise, as the bankruptcy bench is one of the most expert benches in the United States. Bankruptcy judges are appointed to the different districts by the active Circuit Courts of Appeals' judges in the jurisdiction.⁷⁹ Their appointment process varies across circuits but there are some commonalities. Most circuits have a merit selection panel which screens applicants and proposes the best candidates to the circuit's judicial council.⁸⁰ The latter will then submit nominations to the circuit judges who will vote for and appoint the district judges.⁸¹ The formal requirements, such as being a member of the bar in good standing, do not include a formal requirement to have expertise in bankruptcy law.⁸² However, in some circuits, the merit panels include bankruptcy judges or bankruptcy practitioners.⁸³ In addition, in a study consisting of interviews, many members mentioned knowledge of bankruptcy law and practice experience with debtors, creditors, and consumer and business clients as relevant to the selection process.⁸⁴ But the most frequently cited quality was judicial temperament, which, from the explanation, can be understood as a mix between skills and demeanor and the key to ensuring a trustworthy system.⁸⁵ The trust in the system is very important because "[n]inety-plus percent of citizens' exposure to federal court is bankruptcy court."⁸⁶ One dimension that can also affect trust is diversity on the bench, and it has been noted that bankruptcy courts have been more homogeneous than other federal courts.⁸⁷

So far, I have talked about judges only being legal professionals, but they could also be non-lawyers with a technical expertise in the subject matter. This is the case in Sweden where the regional Land and Environment Courts⁸⁸ have one law-trained judge, one environmental technical advisor, and two law expert members.⁸⁹ These four members have equal weight in the decisions.⁹⁰ The Swedish Environment Court of Appeals, in contrast, has four

⁷⁹ MALIA REDDICK & NATALIE KNOWLTON, INST. ADVANCEMENT AM. LEGAL SYS., A CREDIT TO THE COURTS: THE SELECTION, APPOINTMENT, AND REAPPOINTMENT PROCESS FOR BANKRUPTCY JUDGES 1, 2 (2013), <https://perma.cc/5RM4-BXMC>.

⁸⁰ *Id.* at 2-3.

⁸¹ Bankruptcy Amendments and Federal Judgeship Act, 98 Pub. L. No. 98-353, tit. I, § 120(1) (1984).

⁸² *Id.*

⁸³ Malia Reddick & Natalie Knowlton, A CREDIT TO THE COURTS: THE SELECTION, APPOINTMENT, AND REAPPOINTMENT PROCESS FOR BANKRUPTCY JUDGES 10 (2013), <https://perma.cc/V5QQ-NA42>.

⁸⁴ *Id.* at 15. In their study, from the twenty-five judges that they interviewed, all but two had been bankruptcy attorneys and on average had nineteen years of experience. *Id.* The Seventh Circuit has a tradition of not picking bankruptcy lawyers. *Id.*

⁸⁵ *Id.*

⁸⁶ *Id.* at 14.

⁸⁷ *See id.* at 22. Eighty-nine percent of the bankruptcy court's judges are Caucasian, while only 22% of Article III judges are. *Id.* In terms of gender diversity, bankruptcy courts do not fare much better, 27% are women, while on the Article III bench 30% are women. *Id.*

⁸⁸ PRING & PRING, *supra* note 19, at 31.

⁸⁹ Bjällås, *supra* note 30, at 180.

⁹⁰ *Id.*

law-trained judges.⁹¹ This choice reflects the fact that at the trial level, technical experts are key to disentangle complex facts, but that at the appellate level, harmonizing complex legal doctrines is paramount. Nonetheless, on appeal, one of the judges can be substituted by a technical expert in the substantive area of the case.⁹² Similarly, in India, the composition of the National Green Tribunal includes both experts and judicial members.⁹³ Another interesting case is the Israeli Water Court which sits on all matters referred to it by the Water Law and the Drainage and Floods Control Law of 1959.⁹⁴ In this court, a three-member panel, comprised of a district court judge who presides and two representatives of the general public, decides on cases. This composition reflects the public relevance of water for the society at large. Appeals to Water Court decisions are decided by the Supreme Court.⁹⁵

2. Connection with Other Areas of the Law

One critique of specialized courts is that they become siloed and that they are not permeable to the legal developments in other areas; instead, they suffer from tunnel vision or myopia.⁹⁶ In contrast, if cases are heard by general courts, judges may transplant legal doctrines from other areas.⁹⁷ It is hard to measure whether the potential loss of borrowing between areas of the law is significant. First, savvy lawyers for the parties may bring up doctrines from other legal areas in their documents and pleadings. Second, borrowing from other areas of law could also have unintended effects. It may be the case that doctrines do not translate well between even similar areas of law. For example, even between two quite similar natural resources like oil and groundwater, applying the same rule may not be always advisable. The rule of capture was applied to the allocation of rights over oil

⁹¹ *Id.* at 181.

⁹² *Id.*

⁹³ Chaturvedi, *supra* note 8; *see also* Amirante, *supra* note 8, at 463–64. The minimum composition of the Tribunal, as per section 4, will vary from twenty-one to forty-one members: a chairperson (judicial), ten to twenty full-time judicial members, ten to twenty expert members, all chosen by the Central Government. Amirante, *supra* note 8, at 463–64. In the Tribunal there will be a balanced mix of judges and technical experts, with strict qualifications. The “green judges” have to be holders of a Master in Science with a Doctorate Degree (in the fields of physical sciences and life sciences) or a Master of Engineering or Technology, and must have, as per section 5(2)(a) of the Act, a minimum of fifteen years of experience in a relevant field, including five years of practical experience in the field of environment and forest. *Id.* The experts may also come from the administrative field, with the requirement of “administrative experience of fifteen years including experience of five years in dealing with environmental matters in the Central or a State Government or in a reputed National or State level institution,” also including members from civil society organizations (NGOs and others). *Id.*

⁹⁴ Richard Laster & Dan Livney, *Israel: The Evolution of Water Law and Policy*, in *THE EVOLUTION OF THE LAW AND POLITICS OF WATER* 121, 126 (Joseph F. Dellapenna & Joyeeta Gupta, eds. 2008)

⁹⁵ *Id.*

⁹⁶ Cheng, *supra* note 11, at 526.

⁹⁷ Dreyfuss, *supra* note 6, at 17.

reservoirs.⁹⁸ Then, it was transferred to another underground resource, groundwater, and it has resulted in overexploitation of groundwater resources.⁹⁹

If lack of permeability is a relevant problem, it could be mitigated by creating specialized courts within the existing court system, much like the Colorado Water Courts or the Patent Pilot Program. In the former, state judges in each division may be assigned as water judges and keep sitting on other cases.¹⁰⁰ In the latter, judges in each district were assigned to be patent judges.¹⁰¹ The Colorado example solves the isolation of water judges and ensures permeability. The Patent Pilot Program design solves the isolation problem less so because, for a while, patent judges will only focus on those cases and, depending on the length of their assignment, their actual knowledge of other areas of the law may become outdated. However, if a specialized court also requires different procedures, a hybrid model may be hard to implement. Furthermore, if the new system of courts does not require expertise in the particular area of the law to be appointed as a judge, choosing practitioners from other areas may, at least temporarily, ensure certain permeability by doctrines from different legal areas.

In addition, if review by general judges exists at some point in the process, the lack of permeability may be somewhat cured. However, general judges may feel the need to defer to specialist judges. This is to an extent what happens today when general courts defer not to judges, but to appointed special masters,¹⁰² figures whose presence in litigation have grown significantly in the past decades.¹⁰³

Another expression of the connection between the specialized court and other areas of the law is whether the legal issues that the specialized court has the power to decide on, both in terms of expertise and geographical jurisdiction, are heavily interrelated with matters under the jurisdiction of other courts.¹⁰⁴ That is, whether the specialized court will frequently face questions that are under the jurisdiction of a general court and the process will need to be stayed while the general court decides on those issues. The need to stay a case while another court decides on the linked issue may wipe out the celerity benefit, and it may increase transaction costs for private parties because they will need to appear before two different courts.¹⁰⁵

⁹⁸ *Houston & T.C. Ry. Co. v. East*, 81 S.W. 279 (Texas 1904)

⁹⁹ *See Getty Oil Co. v. Jones*, 470 S.W.2d 618 (Tex. 1971) (applying the Accommodation of States Doctrine, an oil and gas doctrine, to groundwater).

¹⁰⁰ Thorsen, *supra* note 22, at 24.

¹⁰¹ WILLIAMS ET AL., *supra* note 40, at 2.

¹⁰² L. Elizabeth Sarine, *The Supreme Court's Problematic Deference to Special Masters in Interstate Water Disputes*, 39 *ECOLOGY L.Q.* 535, 540, 546 & n.82 (2012).

¹⁰³ Shira Scheindlin, *We Need Help: The Increasing Use of Special Masters in Federal Court*, 58 *DEPAUL L. REV.* 479, 479–80 (2009).

¹⁰⁴ *See Dreyfuss, supra* note 47, at 437.

¹⁰⁵ *See Garoupa et al., supra* note 33, at 55 tbl.1.

3. Courts' Structure

a. Separate or Hybrid Models

There is a continuum between lack of specialization in general courts and a full-fledged system of courts for just a particular area of the law. In fact, there is a previous step: there can be adjudicatory, independent bodies within an administrative agency that review the decisions of that agency or other agencies.¹⁰⁶ Those administrative law judges or courts have been left out in this Article. While they may guarantee a fair procedure and reduce the need for review before a court, there may still be cases going to court. Also, outside the continuum, there is another form of specialization: special masters.¹⁰⁷ Beyond the use of expert testimony, courts often resort to special masters to deal with the more difficult cases.¹⁰⁸ Special masters have a quasi-judicial role and help judges build the record.¹⁰⁹ The special master is often used in complex litigation.¹¹⁰

Along the continuum, first, even when cases are heard by general courts, some benches or judges become de facto specialized in particular areas either because those cases arise more often in certain jurisdictions or because those venues are chosen because of some perceived advantages.¹¹¹ This describes pretty well the situation of the Delaware Court of Chancery, a court at equity which has been a key part of Delaware's success in corporate governance.¹¹² While their docket does not exclusively include corporate

¹⁰⁶ See generally Daniel J. Gifford, *Adjudication in Independent Tribunals: The Role of an Alternative Agency Structure*, 66 NOTRE DAME L. REV. 965 (1991) (providing an overview of administrative law tribunals).

¹⁰⁷ In fact, special masters have been considered a better alternative than specialized courts. See *The Environmental Court Proposal: Requiem, Analysis, and Counterproposal*, 123 U. PA. L. REV. 676, 692, 696 (1975).

¹⁰⁸ Special masters are regulated under Rule 53 of the Federal Rules of Civil Procedure. This rule gives judges a lot of flexibility regarding the tasks that they may assign to the special masters—from addressing pre-trial issues for which the court does not have time to make findings of fact in non-jury issues or perform difficult damages calculations. They are often used when the case deals with a particularly technical area of the law. See David R. Cohen, *The Judge, the Special Master, and You*, LITIGATION Q.J., Summer 2014, at 33. It is important not to confuse this with the Special Masters, established by the National Vaccine Injury Compensation Program of 1986, which works in the United States Court of Federal Claims to administer the “no-fault compensation program whereby petitions for monetary compensation may be brought by or on behalf of persons allegedly suffering injury or death as a result of the administration of certain compulsory childhood vaccines” and who operate under a “philosophy of guidance, cooperative effort, informality, and reasonable speed in presenting and deciding the case.” *Vaccine Claims/Office of Special Masters*, U.S. COURT FED. CLAIMS, <https://perma.cc/G76G-WK9Z> (last visited Apr. 13, 2019).

¹⁰⁹ FED. R. CIV. P. 53(c).

¹¹⁰ See Cohen, *supra* note 108, at 33.

¹¹¹ WILLIAMS ET AL., *supra* note 40, at 38.

¹¹² Diane P. Wood, Speech, *Generalist Judges in a Specialized World*, 50 SMU L. REV. 1755, 1763 (1997).

cases, those make the lion share of it.¹¹³ De facto specialization has also occurred in the Eastern District of Texas for patent law.¹¹⁴

Second, there can be specialized judges in regular courts; that is, some judges could be assigned the cases in specific areas.¹¹⁵ Those judges could either already be experts on those areas or become experts as a result of repeated interaction with those areas. A version of this can be found in federal appellate courts where opinions in certain areas are assigned to particular judges even though federal judges have often been critics of specialization.¹¹⁶ Their areas of specialization are often explained by their background prior to sitting on the court.¹¹⁷ Those judges that write more opinions on certain areas still write in other areas as a result of random panel assignments.¹¹⁸ For example, Judge Ronald Gould on the United States Court of Appeals for the Ninth Circuit shows a clear preference for environmental opinions¹¹⁹ and Judge Stephen F. Williams on the United States Court of Appeals for the D.C. Circuit, formerly an oil-and-gas professor,¹²⁰ focuses on Federal Energy Regulatory Commission opinions.¹²¹

This hybrid system where general judges de facto specialize while remaining generalists would ensure that court procedure is homogeneous with other areas of the law and that judges are still permeable to lessons from other legal subjects. Apart from this assignment of specific specialized cases to specific judges, the hybrid system has been tried in a pilot project in patent law. Patent law is an area where the need for specialization can be considered acute. While there are already instances of specialization, namely the United States Court of Appeals for the Federal Circuit, there was a patent law pilot program to assess whether specialization within federal district courts would improve the current situation where judicial backlog negatively impacts innovation.¹²² Piggybacking on the existing court system should mitigate a concern often raised against specialized courts: their disconnection with the population because they may not be geographically

¹¹³ Omari Scott Simmons, *Branding the Small Wonder: Delaware's Dominance and the Market for Corporate Law*, 42 U. RICHMOND L. REV. 1129, 1163 n.151 (2008) ("Approximately 70% of the cases before the Delaware Court of Chancery are corporate matters.").

¹¹⁴ Until 2017, plaintiffs, mostly "patent-trolls," in patent infringement cases practiced forum shopping and brought those cases in the Eastern District of Texas. See WILLIAMS ET AL., *supra* note 40, at 29–30. The Supreme Court's decision in *TC Heartland LLC v. Kraft Foods Group Brands LLC*, put an end to this practice. 137 S. Ct. 1514, 1517 (2017).

¹¹⁵ See Bettina Boxall, *The Man with His Hand on California's Spigot*, L.A. TIMES (Oct. 7, 2011), <https://perma.cc/GS4Z-44UH> (providing an example of a specialized judge in a U.S. District Court).

¹¹⁶ For an empirical study proving the specialization via opinion writing, see generally Cheng, *supra* note 11.

¹¹⁷ *Id.* at 541.

¹¹⁸ *Id.* at 540.

¹¹⁹ *Id.* at 538.

¹²⁰ *Id.* at 542.

¹²¹ *Id.* at 540. The DC Circuit opinion specialization is assessed across agencies instead of across subject-matters. *Id.* at 547.

¹²² For the five-year report on the program, see generally WILLIAMS ET AL., *supra* note 40.

close¹²³ if their docket only warrants one, or a few at most, central specialized courts.

One final piece to take into account when designing a specialized court system is the need to clearly define the boundaries of its jurisdiction. In Israel, for example, it remains unclear in some cases where the Water Court has jurisdiction.¹²⁴

b. Levels

Judicial systems have several levels to ensure that there are instances of review. A specialized court system could replicate the general courts system. In some cases, though, such structure would not be justified. It would not be justified because it may not be necessary to have specialization at all levels.¹²⁵ Specialization is needed where complexity lies. In some legal areas, complexity may reside only on the facts that require experts to explain, because they are full of technicalities, scientific information, novel data, etc. If that is the case, specialization will be necessary only at the trial court level.¹²⁶ On the contrary, in other legal areas, the difficulty lies in the regulations or doctrines to be applied.¹²⁷ In this case, the specialization makes more sense at the appellate level because that level should be able to cure the mistakes of inferior courts when necessary.¹²⁸ Some areas, as shall be seen, suffer from both.

Having a specialized court system with different levels would allow judges to be promoted in the system and, thus, they may be concerned about their reputation and try to enact high-quality judicial decisions that will not be reversed.¹²⁹

c. Tenure and Promotion

State and federal judges offer different models for a judicial career. At the risk of simplification, there are three variables that, when combined, give different models of a judicial career: 1) who selects the judges, 2) what are the criteria of selection, and 3) how long is their term. How these are combined impacts how attractive a position is. First, judges can be selected by the public in an election, a commission of experts or of legislators, or the top executive—governor or president—with some input from the legislator.¹³⁰ Who selects them partially defines the criteria for selection.

¹²³ See Garoupa et al., *supra* note 33, at 55 tbl.1.

¹²⁴ Laster & Livney, *supra* note 94, at 127.

¹²⁵ Dreyfuss, *supra* note 47, at 428–29.

¹²⁶ *Id.* at 411.

¹²⁷ *Id.*

¹²⁸ *Id.*

¹²⁹ Garoupa et al., *supra* note 33, at 55.

¹³⁰ See e.g., *Judicial Selection in the States*, BALLOTPEDIA, <https://perma.cc/H8EP-5MNB> (last visited Apr. 13, 2019).

Beyond having a legal education and whatever other constitutional requirements are set for judges, and depending on the selection method, likely either their ideology or their expertise will matter the most. Judges can be appointed with life tenure or elected, appointed for a limited term, or even appointed but subject to retention election.¹³¹ For a specialized court, expertise should be the main criteria that most of the benefits hinge on. Hence, election is not advisable as the primary selection method. However, an election could be held to choose from a short list of experts nominated by a commission. Additionally, a general election would give many who will not be users of the specialized courts a say. But there may be cases where it is feasible that only those who will particularly use the specialized court system will vote. This is the model that the traditional courts of Southeastern Spain use.¹³²

The choice between life tenure and limited term will depend on other design variables. First, the risk of capture counsels against limited term.¹³³ Judges who will be out of the job in a few years may be willing to favor those potential future employers, and those employers will likely be either defendants or plaintiffs in the cases the judges sit on.¹³⁴ Second, if the system chosen is one where judges acquire experience once the specialized court exists, then cases will take longer to be decided at the beginning and the duration will decrease as the expertise of sitting judges' increases.¹³⁵ Inevitably, cases will require fewer judge hours as expertise increases.¹³⁶ For expertise to build up, judges need to serve for at least some period of time. Hence, if a limited term is the model chosen, in a collegial judicial body, the replacement should be staggered not to undo all the benefits from the gain in expertise. Life tenure would achieve the same goal while at the same time reducing the potential risk of capture.

Where the hybrid model is adopted, it would seem that there would be little choice as to the requirements for those judges because they will be regular state judges.¹³⁷ But there are other models available. Non-Article III judges, that is the judges who, contrary to federal judges, do not enjoy tenure and salary protection, offer other models. In fact, most specialized courts have not been granted Article III status. Non-Article III judges include, among others, judges of United States Bankruptcy Courts, the United States Tax Court, or the United States Court of Federal Claims. All of those judges serve for specified terms of office. In the case of the United States Bankruptcy Courts, the specialized courts are divisions of the ninety-four U.S. district courts, but the judges are chosen by the Courts of Appeals

¹³¹ See e.g., *How are Judges Selected?*, FINDLAW, <https://perma.cc/MC6H-N2JK> (last visited Apr. 13, 2019).

¹³² See discussion *infra* Part IV.

¹³³ Dreyfuss, *supra* note 47, at 377, 379, 422–23.

¹³⁴ See Stephan I. Vladeck & John C. Eastman, *Setting Term Limits for Supreme Court Would Bring Too Many Political Problems*, DALLASNEWS (Mar. 7, 2017), <https://perma.cc/5UYF-Y8E3> (discussing the downfalls of term limits).

¹³⁵ Dreyfuss, *supra* note 47, at 377–79.

¹³⁶ *Id.* at 378.

¹³⁷ See discussion *supra* Part II.C.3.a.

of each circuit for a term of fourteen years.¹³⁸ The appointment process varies slightly from circuit to circuit but there are Merit Selection Panels in all circuits. The judges are selected on the basis of merit and have been regarded as one of the most expert benches in the United States.¹³⁹

4. Procedure

While specialized courts may just use the general rules of civil or criminal procedure, they could also craft rules that better suit their specialized subject matter. A specialized procedure may reduce transaction costs even further and boost celerity.¹⁴⁰ In fact, celerity could be further advanced if the court was allowed to prioritize between cases depending on the imminent need. This can be particularly necessary in areas such as environmental law.¹⁴¹

A specialized procedure can also be problematic. Third parties not participating in the cases decided by specialized courts may still be affected by those decisions. If those decisions are reached using a trans-substantive procedure, those third parties affected may have more confidence in the decision.¹⁴² A procedure specifically designed for specialized courts could be perceived as biased in favor of certain interests and less open to considering all sides.¹⁴³ In fact, this was the perception of the specific procedures of the International Trade Commission which deviated from the procedures of district courts in order to reach quicker decisions.¹⁴⁴ Both the fairness of the procedure and the perception of fairness are important.

However, if due process requirements (notice, opportunity to be heard, compulsory process, and a neutral adjudicator)¹⁴⁵ are met, procedural particularities may help achieve the gains in efficiency and quality that the establishment of specialized courts aim to achieve. Environmental law, which broadly understood encompasses water issues, is an area where collaboration brings the best results.¹⁴⁶ This is shown by the hearings at the

¹³⁸ 28 U.S.C. § 152 (2018).

¹³⁹ See Reddick & Knowlton, *supra* note 83, at 1–3.

¹⁴⁰ See discussion *supra* Part II.A.

¹⁴¹ However, Ellen R. Jordan argues against this point in her 1981 article given the fundamental choices that we have to make in environmental law and the substantial unknowns. Jordan, *supra* note 18, at 765 (“Where no national consensus yet exists, however, as in environmental law and health and safety regulation, the far-reaching and irreversible nature of the choices to be made demands that decisions be reached deliberately and carefully. In those areas, the speed and efficiency of the specialist may be exactly the wrong prescription, since it is wisdom and deliberation, combined with a full hearing from all affected interests, which is needed.”). While this may have been true in the 80s and while we may agree that a consensus may never be reached, environmental disasters, the irreversibility of many environmental decisions, and the time pressure of many environmental issues suggests that swift adjudication could be positive.

¹⁴² Dreyfuss, *supra* note 6, at 15–16.

¹⁴³ *Id.* at 16.

¹⁴⁴ *Id.*

¹⁴⁵ *Id.* at 15.

¹⁴⁶ The recovery of the grizzly bears in the Yellowstone area was brought about state agencies, federal agencies, tribes, and stakeholder groups working together to ensure that the

Swedish Environmental Court of Appeals, which are described as “more like a general meeting than like an appellate court proceeding,”¹⁴⁷ with their lack of a requirement for parties to be represented by an attorney.¹⁴⁸ Thus, the trust in a specialized court may further reduce the costs for the parties, as they may not need either an attorney or their own expert to battle the other party’s expert.¹⁴⁹ Or, trust in a specialized court may allow the battle of the experts to occur in a “hottubbing” fashion, as Judge Brian Preston from the Land and Environment Court of New South Wales put it.¹⁵⁰ In that forum, experts are asked to give concurrent testimony to figure out the issues that they agree and disagree on and then only focus on the conflictive points.¹⁵¹ Finally, specialized courts could be more open to the use of alternative dispute resolution methods.¹⁵² The Land and Environment Court of New South Wales has been conceived as a one-stop-shop where disputes get solved with a portfolio of methods.¹⁵³ Such a portfolio also encourages innovative decision making on both procedural and substantive issues.¹⁵⁴

III. WHY WATER COURTS?

Specialized courts are justified either when the facts or the law in a particular area are complex.¹⁵⁵ The former, complex facts, justifies specialized trial courts and the latter, complex law, specialized appellate courts.¹⁵⁶ Water courts can be justified on both grounds—the technical knowledge required to deal with the facts and the complexity of the legal doctrines. In fact, many water cases have a lot in common with complex litigation¹⁵⁷—the number of parties, the need for experts, and the complexity

bears were not extinct. *See Story of the IGBC*, INTERAGENCY GRIZZLY BEAR COMMITTEE, <https://perma.cc/PE4Q-D62P> (last visited Apr. 13, 2019).

¹⁴⁷ Bjällås, *supra* note 30, at 182.

¹⁴⁸ *Id.*

¹⁴⁹ Jan Darpö, *Justice Through the Environmental Courts? Lessons Learned from the Swedish Experience*, in ENVIRONMENTAL LAW AND JUSTICE IN CONTEXT 176, 183 (Jonas Ebbesson & Phoebe Okowa eds., Cambridge University Press 2009).

¹⁵⁰ PRING & PRING, *supra* note 19, at 60.

¹⁵¹ *Id.* at 56.

¹⁵² *Id.* at 50.

¹⁵³ Preston, *supra* note 45, at 411, 412.

¹⁵⁴ *Id.* at 425.

¹⁵⁵ Dreyfuss, *supra* note 47, at 411.

¹⁵⁶ *Id.*

¹⁵⁷ William A. Hillhouse II & Barbara T. Andrews, *Management of the Complex Water Case*, 31 ROCKY MTN. MIN. L. INST. 24, § 24.01 (2017).

‘Complex litigation’ is the category of cases requiring more intensive judicial management. Complexity may be determined by multiple parties, multiple attorneys, geographically dispersed plaintiffs and defendants, numerous expert witnesses, complex subject matter, complicated testimony concerning causation, procedural complexity, complex substantive law, extensive discovery, choice of law, requisites of a class-certification order, complex damage determinations, diversity, and res judicata implications for plaintiffs not within the proposed class. Mass torts and class actions are examples of two types of well-known complex actions.

of the legal issues. Water rights are interdependent and the actions by one water right user may affect a myriad of other water right holders. This is also the case when a water agency makes a decision that affects more than one user in a stream.

The need for particular fact-finding is illustrated by the need for expert testimony,¹⁵⁸ such as engineers, biologists, hydrologists, or agricultural economists. The bench needs to be educated. Parties spend considerable funds in expert testimony. Justice Story, sitting in the United States Circuit Court for the District of Rhode Island in 1826, described *Tyler v. Wilkinson*¹⁵⁹ as “a very important case, complicated in facts and voluminous in testimony,”¹⁶⁰ *Tyler v. Wilkinson* “involved the right of certain mill owners to divert water from the Pawtucket River through a trench; the complainants were other mill owners who owned mills on the river, and who challenged this diversion as being injurious to their mills.”¹⁶¹ *Tyler v. Wilkinson* is a pretty average water case that tested the riparian system of water rights from the eastern United States. The complexity is compounded in the West by the scarcity of water resources. Another illustration, this time from California, comes from *Tulare Irrigation District v. Lindsay-Strathmore Irrigation District*, a 1935 case of the California Supreme Court.¹⁶² The long litigation that led to this decision had a transcript record of 26,936 pages and 678 exhibits.¹⁶³

The case was rendered very complex for the reason that respondents are many in number and own, or claim to own, a variety of water rights on approximately 200,000 acres of land. Some of the respondents are appropriators, some are riparian owners, and some are owners of overlying land, owning or claiming to own underground water rights. Sixteen of the respondents are corporations

Complex Litigation Resource Guide, NAT'L CTR. STATE COURTS, <https://perma.cc/Z6A2-MRJZ> (last visited Apr. 13, 2019).

¹⁵⁸ Hillhouse II & Andrews, *supra* note 157.

¹⁵⁹ 24 F. Cas. 472 (D. R.I. 1827).

¹⁶⁰ T.E. Lauer, *The Common Law Background of the Riparian Doctrine*, 28 MO. L. REV. 60, 60 (1963).

¹⁶¹ *Id.*

¹⁶² *Tulare Irrigation Dist. et al. v. Lindsay-Strathmore Irrigation Dist.*, 45 P.2d 972 (Cal. 1935)

¹⁶³ *Id.*

In *Lindsay-Strathmore Irrigation District v. Superior Court*, the contentions of petitioner there (defendant here) were sustained, and a writ of prohibition was issued restraining Judge Wallace from taking any further action in the case, and ordering a new trial. The case again proceeded to trial, this time before Judge Albert Lee Stephens. During the course of this trial, consuming over 200 court days, a reporter's transcript of 56 volumes, containing 26,936 pages, was compiled, and some 678 exhibits were introduced. The findings of fact and conclusions of law, covering 236 pages of the clerk's transcript, were filed May 16, 1925, and judgment was thereafter rendered on April 13, 1926, in favor of plaintiffs and interveners. Counsel consumed over five years in the preparation of briefs, which, without their accompanying supplements, total 1,957 pages. Now, some eighteen years after the action was commenced, the case comes before this court for the first time on its merits.

Id.

distributing appropriated water to their hundreds of stockholders; 1 respondent is an irrigation district, also distributing appropriated water to its landowners; 30 are individual appropriators, alleged to hold rights in the water as tenants in common; and 13 claim both as riparian owners and overlying landowners. Different questions of law were presented to the trial court and are now presented here, in reference to each class of respondent.¹⁶⁴

But beyond the technical complexity, water cases, like water management, call for boots on the ground. While all cases require judges to learn the facts, water is very much tied to the place and the context where it appears. There are many expressions of this link in water management. For example, in the regular administration of water, there are figures, like water commissioners, which administer the day-to-day decisions on certain streams.¹⁶⁵ A water management agency is not close enough to the end users of water. A water court must ensure closeness to the facts.¹⁶⁶ Thus, just a centralized institution would not be ideal. Some existing examples of water courts have different territorial divisions and often do site visits to clarify the facts.¹⁶⁷ This decentralized system at the trial level also increases access to justice, which is one effect that special courts can have when taking cases from general district courts.¹⁶⁸ Alternatively, in order to really understand the problem, the court could visit the sites as the Environmental Court of Appeal does in Sweden.¹⁶⁹

Regarding the legal complexity, a quote from the movie *Milagro Beanfield War* sums it up: “nobody even understands the water laws.”¹⁷⁰ Water law is complex because it combines historical doctrines from different origins with a thorough regulatory apparatus and must respond to

¹⁶⁴ *Id.* at 975

¹⁶⁵ “Local water users can petition for a water commissioner after the water rights in a basin have been verified by the Montana Water Court. The commissioner ensures that daily water allocations in the basin occur in accordance with the users’ rights. The local district court appoints the commissioner, and oversees his work.” MONT. WATERCOURSE AT THE MONT. WATER CTR., WHO DOES WHAT TO MONTANA’S WATER 24 (2014), <https://perma.cc/23DG-QKMA>. The figure of the water commissioner also appears in Colorado. This “boots on the ground” official is in charge of water distribution implementing the water court decrees. COLO. FOUND. FOR WATER EDUC., CITIZEN’S GUIDE TO COLORADO WATER LAW 17 (2004), <https://perma.cc/3WK6-WY6G>. These commissioners are employees of the state engineer and can become parties to litigation if individuals disagree with the decision. *Id.* Their role is described as: “[i]t is the primary job of the water commissioners to go into the field and distribute the waters of the state. This involves monitoring headgates, responding to calls for water, issuing orders to reduce and cease diversions.” *Id.*

¹⁶⁶ *Id.* at 12–13.

¹⁶⁷ *Id.* at 12, 17.

¹⁶⁸ *See, e.g.,* Darpö, *supra* note 149, at 192 (looking at Swedish environmental courts to conclude that increased access to justice can be achieved through “a broad consideration of issues at an early stage, when all actors have their say and all interests can be invoked”).

¹⁶⁹ Bjällås, *supra* note 30, at 182.

¹⁷⁰ *EL MILAGRO BEANFIELD WAR* (MCA Universal Home Video 1988) (when the developers are trying to find a strategy to get rid of Jose Mondragon and the opposition to their new project in Milagro, they believe he is misusing the water who does not belong to him. One of the Forest Service cops states this sentence) (at 22min 8”).

the intricacies of the water cycle.¹⁷¹ The physical nature of the subject regulated—water—thus often contributes to the complexity of these cases. Parties must resort to a water lawyer to help them navigate the legal doctrines, both when facing an administrative proceeding and when facing a court proceeding, whether or not the court allows self-representation.¹⁷²

Perhaps more illustrative of the fact that judges, at all levels, do not feel comfortable making the necessary judicial decisions, is the mechanisms they use to reduce the number of judge-hours that water law cases could take. They often appoint special masters to try the cases and make a recommendation to the court, or water law cases get assigned to a particular judge with more experience in water issues.¹⁷³

Special masters often make the whole litigation enterprise more expensive and private parties usually pay their compensation.¹⁷⁴ Special masters may gather facts, deal with expert testimony, and make recommendations to the court.¹⁷⁵ Particularly illustrative of the case complexity and the fact that judges are not comfortable with water law is the role of special masters in interstate compact disputes before the Supreme Court.¹⁷⁶ The Supreme Court does not get a factual record for original jurisdiction cases and it uses special masters to gather the facts.¹⁷⁷ The role of special masters has increased progressively¹⁷⁸ and there is no clear regulation about what powers those masters may exercise. In water cases, the Court tends to issue substantive opinions which hardly deviate from the masters' recommendations. In water and beyond, special masters tend to be those acquainted with the judges or Justices.¹⁷⁹ Focusing on Supreme Court masters, water law stands out. While, in general, the Justices appoint judges to perform the special master functions,¹⁸⁰ in interstate compact disputes they appoint mostly water law experts—attorneys or scholars—who have not been judges,¹⁸¹ showing expertise takes precedence over judicial experience.

The second mechanism that suggests the need for specialized courts, or at least illustrates the technicality of the field, is the assignment of water cases to particular judges within a jurisdiction. This is what happened in California. Many cases dealing with water rights were assigned to Judge

¹⁷¹ Hillhouse II & Andrews, *supra* note 157, at § 24.01.

¹⁷² *See, e.g., id.* at § 24.01 (explaining the litigation skills needed to for administrative and court proceedings).

¹⁷³ *See* Boxall, *supra* note 115.

¹⁷⁴ FED. R. CIV. P. 53.

¹⁷⁵ Sarine, *supra* note 102, at 550–51.

¹⁷⁶ *Id.* at 553–55.

¹⁷⁷ *Id.* at 550.

¹⁷⁸ Anne-Marie C. Carstens, *Lurking in the Shadows of the Judicial Process: Special Masters in the Court's Original Jurisdiction Cases*, 86 MINN. L. REV. 625, 627–28 (2002).

¹⁷⁹ Margaret G. Farrell, *The Function and Legitimacy of Special Masters*, 2 WID. L. SYMP. J. 235, 276 (1997).

¹⁸⁰ Carstens, *supra* note 178, at 645.

¹⁸¹ *Id.* at 648; *see also* Sarine, *supra* note 102, at 553 (from a sample of interstate water disputes—those happening between 1933 to 2011, 12 out of 16 special masters were non-judges).

Oliver Wanger, whose opinions have been described as scientific papers.¹⁸² He presided over hundreds of cases, among those the high-profile Delta cases where the flows from Northern California to Southern California were at stake. According to some, Judge Wanger is the person who most influenced California's water policy in the 1990s and 2000s.¹⁸³ He was perceived as a fair judge,¹⁸⁴ probably thanks to his combination of judicial skills and substantive water law knowledge. While this is true in California, in Colorado, judges sitting on water courts are just judges from the general court in the same division.¹⁸⁵ The substantive knowledge and experience—and the opportunity to accumulate experience—are similar to that of Judge Wanger. However, in the case of Colorado, no judge is singled out because they only deal with the water cases in their division, putting on their water judge hat instead of the general judge hat for that particular case; therefore, there are fewer opportunities to accumulate specialized water law experience.

A final illustration of the particularities of water law cases, both in terms of the science behind it and the law itself, is *Dividing the Waters*.¹⁸⁶ *Dividing the Waters* is an organization created in 1993 with links to the National Judicial College and the Federal Judicial Center. *Dividing the Waters* aims to “prepar[e] the judges of today and tomorrow—across the nation—to apply the law, science, good judgment, and wisdom in efficiently and effectively adjudicating water-related cases, to meet human and environmental needs.”¹⁸⁷ To do so it convenes a network of judges, special masters, and referees involved in water litigation and encourages every judge facing a water case to join the discussion.¹⁸⁸ It has received funding, among others, from foundations such as the Ford, Hewlett, and Bechtel foundations and state governments, which further highlights the relevance that these donors assign to water cases.¹⁸⁹ This program helps train judges on water issues via conferences, workshops, and webinars where they receive information from other judges and scholars.¹⁹⁰

Finally, in this analysis of “why” water courts, the “where” of water courts needs to be addressed. It is difficult to define, exactly, what a water issue *is*. However, that problem is common to any division of labor across the judiciary. Even at risk of oversimplification, water rights are regulated at

¹⁸² Boxall, *supra* note 115.

¹⁸³ *Id.*; see also Gosia Wozniacka, *Oliver Wanger Stepping Down as Federal Judge*, SFGATE (Sept. 25, 2011), <https://perma.cc/YF9U-8GNP>.

¹⁸⁴ Wozniacka, *supra* note 183 (quoting Bill Jennings of the California Sportfishing Protection Alliance).

¹⁸⁵ See COLO. REV. STAT. § 37-92-203 (2018).

¹⁸⁶ *Dividing the Waters*, NAT'L JUDICIAL COLL., <https://perma.cc/5GL3-P4YV> (last visited Apr. 13, 2019).

¹⁸⁷ *Id.*; see also *About DTW*, NAT'L JUDICIAL COLL., <https://perma.cc/2B82-MDM4> (last visited Apr. 13, 2019).

¹⁸⁸ *Dividing the Waters*, *supra* note 186.

¹⁸⁹ *About DTW*, *supra* note 187.

¹⁹⁰ *Conferences*, NAT'L JUDICIAL COLL., <https://perma.cc/EGU6-BK3X> (last visited Apr. 13, 2019).

the state level while water pollution is regulated at the federal level—although implemented under a cooperative federalism framework.¹⁹¹ This implies that water courts could be implemented at either the state or federal level. However, the focus in this piece would be at the state level where the trend toward specialized institutions is taking place in water and beyond. In particular, institutional innovation is happening and it is likely to continue in states where water is scarce and thus valuable. Furthermore, those states could act as laboratories and other states may learn from their successes.

IV. SOUTHEASTERN SPAIN WATER COURTS

Water Courts in southeastern Spain, namely the Council of Wise Men of the Plain of Murcia and the Water Tribunal of the Plain of Valencia, are consuetudinary institutions that have gained international attention.¹⁹² The institutions were declared part of the Intangible Cultural Heritage by the United Nations Educational, Scientific and Cultural Organization in 2009.¹⁹³ In scholarship, the institutions are well known, thanks to the work of Maas and Anderson,¹⁹⁴ which is cited in the famous work by Elinor Ostrom, *Governing the Commons*.¹⁹⁵ These courts have a long history and have been able to adapt to changing times. For example, the Valencian court may have Roman or Arab origins and has survived until today, surviving even during the Franco dictatorship years.¹⁹⁶ But these courts are not small, isolated institutions. The Council of Wise Men has jurisdiction over 23,313 members and the Water Tribunal over 11,691 members.¹⁹⁷ The lands served by the Valencian acequias are one of the most important areas producing fruits and vegetables in Spain.¹⁹⁸

¹⁹¹ *Regulatory Information by Topic: Water*, U.S. ENVTL. PROTECTION AGENCY, <https://perma.cc/N3DK-SX86> (last visited Apr. 13, 2019).

¹⁹² DANIEL SALA GINER, CONTESTACIÓ DE L'ACADEMIA DE NUMERO DE LA REAL ACADÈMIA DE CULTURA VALENCIANA AL DISCURS LLEGIT EN LA SEUA RECEPCIÓ PER L'ILM. SR. EN. JOSE BONET NAVARRO [RESPONSE BY THE NUMBERED ACADEMIC OF THE VALENCIAN CULTURE ACADEMY TO THE DISCOURSE BY MR. JOSE BONET NAVARRO] 81 (2014), <https://perma.cc/A6PM-ZYXF>.

¹⁹³ *Decision of the Intergovernmental Committee: 4.COM 13.70*, U.N. EDUC., SCI. CULTURAL ORG., <https://perma.cc/44AV-9GEW> (last visited Apr. 13, 2019) [hereinafter *UNESCO Decision*].

¹⁹⁴ ARTHUR MAAS & RAYMOND L. ANDERSON, . . . AND THE DESERT SHALL REJOICE: CONFLICT, GROWTH, AND JUSTICE IN ARID ENVIRONMENTS 22–23, 82–83 (1978).

¹⁹⁵ ELINOR OSTROM, *GOVERNING THE COMMONS* 73–74, 77 (James E. Alt & Douglass C. North eds., Cambridge Univ. Press 1990).

¹⁹⁶ *History of Valencia: History of the City*, INSTITUTO ESPAÑOL DE ARQUITECTURA Y URBANISMO, <https://perma.cc/A6GR-WWPC> (last visited Apr. 13, 2019) (discussing Roman and Arab roots in Valencia); see also *Francisco Franco*, HISTORY, <https://perma.cc/7JXW-286W> (last visited Apr. 13, 2019) (demonstrating that Francisco Franco was dictator of Spain from 1939 until he died in 1975).

¹⁹⁷ *UNESCO Decision*, *supra* note 193.

¹⁹⁸ RICARDO J. SERVER IZQUIERDO ET AL., CUESTIONES REFERENTES AL SECTOR CITRÍCOLA MÁS RELEVANTES PARA LA DEFINICIÓN DE LA POLÍTICA DE SEGUROS AGRARIOS: SITUACIÓN ACTUAL Y TENDENCIAS A CORTO Y MEDIO PLAZO (2009), <https://perma.cc/4XCM-58BT>; see also, INE, ENCUESTA SOBRE SUPERFICIES Y RENDIMIENTOS DE CULTIVOS DE ESPAÑA (2018), <https://perma.cc/3DXP-7CY9>.

These institutions are independent judicial tribunals even though they are formally part of the basin organizations that they serve in,¹⁹⁹ but they exercise judicial power.²⁰⁰ Understanding their strengths is helpful to identify the features that any form of specialized water courts should have. While the water courts existing in southeastern Spain cannot be immediately transplanted to the United States, there are features of its institutional role, procedure, and composition that may inspire reforms in the U.S. water courts or imbue future water courts. In fact, these water courts inspired the Spanish regulation of other irrigation communities where Irrigation Juries were established. This regulation was transplanted to Latin America.²⁰¹

To understand the role of these courts, the water allocation system of the area needs to be briefly described. The irrigation areas that these courts serve are organized in acequias, an institution that was transplanted to New Mexico, among other places.²⁰² The acequias are irrigation communities. Each acequia is formed by all those who receive water from a canal that diverts water from the river to the different fields.²⁰³ The Valencia Water Tribunal has jurisdiction over seven acequias²⁰⁴ and the Council of Wise Men in Murcia has jurisdiction over two large acequias, the heredamiento norte

¹⁹⁹ Víctor Fairén Guillén, *Breve examen del Tribunal de las Aguas de Valencia y de su proceso*, 691 ARBOR 1295, 1297 (2003).

²⁰⁰ Spanish Constitutional Court Decision STC 113/2004, of July 12, in relation to the Council of Wise Men, but also applicable to the Valencia Water Tribunal, declared its operation constitutional and providing due process:

[The Wise Men Council] presents the objective and formal elements that characterize a Judicial process. To verify this, it is sufficient to note that, according to the aforementioned Regulation, the Council of Wise Men solves “all questions of fact and lawsuits filed between the irrigators of the Community,” through application to the case of Ordinances and Customs of the Huerta de Murcia . . . And all this, in addition, in public session and through a verbal procedure, that although brief and summary, guarantees the principles of hearing, contradiction and evidence . . . , and that allows the parties to obtain “in the same session in which you consider[the demand] or in the next, at the latest” . . . , a decision on the merits on the claims deducted for all purposes of *res judicata* In these conditions, there is no doubt that the jurisdictional activity of the Council fully satisfies the fundamental right of art. 24.1 Spanish Constitution [due process].

Id.; see also CONSTITUTIONAL COURT OF SPAIN, HISTORY OF THE COURT: AMENDMENTS TO THE LAW ON THE CONSTITUTIONAL COURT (2016), <https://perma.cc/Q62X-GUHX> (For the Wise Men Council, the condition of judicial tribunal was given by a reform of the Judiciary Organic Act from 1999. Before it was considered an administrative organ, and thus its decisions were reviewable by the administrative law courts (setting aside specialized courts, the Spanish judiciary has four equal branches: civil, criminal, labor, and administrative courts)).

²⁰¹ *Las Comunidades de Regantes y el Tribunal de las Aguas de Valencia*, EL TRIBUNAL DE LAS AGUAS DE VALENCIA, <https://perma.cc/E72H-KNRN> (last visited Apr. 13, 2019) [hereinafter VALENCIA WATER TRIBUNAL]; see also MAGNO TULLIO SANDOVAL, LEGISLACIÓN DE AGUAS EN AMÉRICA CENTRAL, CARIBE Y MÉXICO 27, 79, 121, 161, 167 (1975).

²⁰² José A. Rivera & Thomas F. Glick, *Acequias and Their Iberian Origins: Iberian Origins of New Mexico's Community Acequias*, N.M. OFF. STATE HISTORIAN, <https://perma.cc/M45T-8NFF> (last visited Apr. 13, 2019).

²⁰³ VALENCIA WATER TRIBUNAL, *supra* note 201.

²⁰⁴ *Las Acequias*, TRIBUNAL DE LAS AGUAS DE LA VEGA DE VALENCIA, <https://perma.cc/92PD-DDP3> (last visited Apr. 13, 2019) (explaining that the acequias under the jurisdiction of the Valencia Water Tribunal are: Quart and Benàger-Faitanar, Tormos, Mislata, Mestalla, Favara, Rascanya and Rovella, all of which get water from the Turia River).

and the heredamiento sur.²⁰⁵ The amount of water assigned to the acequia is owned in common by the irrigators.²⁰⁶ The acequias' regulations ("ordenanzas") are dated from time immemorial and were initially oral until they were codified.²⁰⁷ According to those ordinances, each irrigator receives water according to the amount of land he possesses.²⁰⁸ When water quantities are low or insufficient, water is proportionally apportioned depending on the amount available.²⁰⁹ The "ordenanzas" establish the rights and duties of the irrigator, such as the right to receive water at a certain time periodically or the duty to clean up the canals.²¹⁰

Each acequia has an elected head, the Sindic, and a board that administers the water.²¹¹ The Sindic must be one of the irrigators with a good reputation and it is automatically a member of the Water Tribunal.²¹² The board is composed by irrigators of the different parts of the acequia canals: upstream or closer to the uptake, middle, and downstream.²¹³ In addition, there are the "wardens," a figure similar to the commissioners in certain U.S. Western states, who enforce the Sindic's instructions and monitor the irrigators for cheating.²¹⁴ If the irrigators are cheating, the warden must inform the Board and pursue an action against the irrigator before the tribunal.²¹⁵

Even though Spain adopted a unitary judicial system with the arrival of democracy in the late 1970s, a system which is not familiar with special courts, the Council of Wise Men and the Water Tribunal are the exception.²¹⁶ Their decisions cannot be appealed to the general judicial system.²¹⁷ Their exceptionality is even more striking in the fact that there are no written regulations about the water courts' procedure and operation²¹⁸—an anomaly

²⁰⁵ *Acequias de la Huerta de Murcia*, ACEQUIAS DEL CONSEJO DE HOMBRES BUENOS, <https://perma.cc/62FX-MEZR> (last visited Apr. 13, 2019).

²⁰⁶ VALENCIA WATER TRIBUNAL, *supra* note 201.

²⁰⁷ *Id.* For more information about the ordinances, see Daniel S. Giner, *El Tribunal de las Aguas de la Vega de Valencia* (Water Tribunal of the Valencian Meadow) 231, 231–47 (2013).

²⁰⁸ VALENCIA WATER TRIBUNAL, *supra* note 201.

²⁰⁹ *Id.*

²¹⁰ *Id.*

²¹¹ *Id.*

²¹² *Id.*

²¹³ *Id.*

²¹⁴ *Id.*

²¹⁵ *Id.*

²¹⁶ SPANISH CONST., art. 122, Dec. 27, 1978 (Spain); *see also* L.O.P.J art. 19 (1985) (Spain).

²¹⁷ Julia A. Hudson-Richards & Cynthia A. Gonzales, *Water as a Collective Responsibility: The Tribunal de las Aguas and the Valencian Community*, 38 J. ASS'N. SPANISH & PORTUGUESE HIST. STUD. 1, 95 (2013).

²¹⁸ Jose Bonet Navarro, Unitat de Fur i Tribunal de les Aigües. Un exemple de resistència valenciana. Discurs llegit el dia 17 de desembre de 2014 en la seua recepció com a acadèmic de número Per I Contestació De L'acadèmic de Número de la Real Academia de Cultura Valenciana [Unity of Forum and the Valencian Water Tribunal. An example of Valencian resistance. Speech read on Dec. 17, 2014 in his admittance as member of the Royal Academy of Valencian Culture] 55 (2014), <https://perma.cc/DK64-6PLG>.

for any judicial system in a functioning democracy. However, the ordinances of each acequia are written.²¹⁹

In Valencia, the court is composed of one judge from each of the nine acequias, and they select a president and a vice-president among themselves.²²⁰ The President and the Vice-President must be from opposite sides of the river.²²¹ These judges are the *Sindics*.²²² These farmers-judges (*Sindics*) have knowledge of the irrigated agriculture and the geography of the area, which justifies their factual expertise,²²³ but they are laymen when it comes to the law.²²⁴ In addition to their expertise, the judges are supposed to be irrigators of high morals.²²⁵ They are neither lawyers, nor officers of the court.²²⁶ Just farmers judging farmers. Many local farmers would otherwise feel coerced if they had to resort to the ordinary judicial system; which, in turn, is not knowledgeable about the acequias' ordinances.²²⁷

If there is a dispute between two users, the *Sindic* of the acequia where the conflict occurs will try to mediate before a case even makes it to the court.²²⁸ If an agreement is not achieved, then the *Sindic* will send the matter to the court.²²⁹ If there is a case between the community and one of the users, the *Sindic* will decide the amount due by the individual reported by the warden as having violated the ordinances. If the user refuses to pay, then the matter will be decided by the court.²³⁰ Hence, as in other specialized courts, alternative dispute resolution mechanisms are built into the pre-trial phase.²³¹

Southeastern Spanish water courts judge mostly cases where the parties, both plaintiff and defendants, are irrigators or the acequias themselves.²³² If the acequia brings an action against one of its members, the warden is generally the representative of the acequia's interest in court.²³³ The warden's role before the court is a hybrid between a prosecutor and an attorney general.²³⁴ There may also be disputes between two acequias. In

²¹⁹ VALENCIA WATER TRIBUNAL, *supra* note 201.

²²⁰ TRIBUNAL DE LAS AGUAS DE LA VEGA DE VALENCIA, <https://perma.cc/Y6G9-NW56> (last visited Apr. 13, 2019); *see also* VALENCIA WATER TRIBUNAL, *supra* note 201; Victor Fairén Guillén, *El Principio de la Unidad Jurisdiccional y el Tribunal de las Aguas de Valencia*, 85 REVISTA DE ADMINISTRACION PUBLICA 9, 21 (1978).

²²¹ VALENCIA WATER TRIBUNAL, *supra* note 201; *see also* Fairén Guillén, *supra* note 220, at 21.

²²² Fairén Guillén, *supra* note 220, at 21.

²²³ Bonet Navarro, *supra* note 218, at 61–62.

²²⁴ *Id.* at 63–64; *see also* Fairén Guillén, *supra* note 220, at 21.

²²⁵ Fairén Guillén, *supra* note 199, at 1300.

²²⁶ Hudson-Richards & Gonzales, *supra* note 217, at 95.

²²⁷ Fairén Guillén, *supra* note 220, at 19.

²²⁸ Fairén Guillén, *supra* note 199, at 1315.

²²⁹ *Id.*

²³⁰ VALENCIA WATER TRIBUNAL, *supra* note 201.

²³¹ *Id.*

²³² Ricardo Juan Sanchez, *La legitimacion en el proceso seguido ante el tribunal de las aguas*, in EL TRIBUNAL DE LAS AGUAS DE VALENCIA. CLAVES JURIDICAS 271, 281 (Jose Bonet Navarro & Maria Jose Mascarell Navarro eds., 2014).

²³³ *Id.*

²³⁴ *Id.* at 279. Sometimes other officials from the acequia may bring an action and represent the acequia before the court. Those officials depend on that acequia's ordinance. *Id.*

addition, non-members may be brought before the court, for example, if they have entered into a contract to use water from the “acequia”²³⁵ or somehow affect the acequia (for example, by dumping used water into the canal).²³⁶ The most common cases are about stealing water during a drought,²³⁷ lack of maintenance of the canals, re-irrigating another farmer’s field to destroy his or her crop,²³⁸ and irrigating out of schedule.²³⁹

The court holds trials every Thursday in front of the lateral door of the Valencia Cathedral.²⁴⁰ Still today, they wear robes and sit in wicker chairs.²⁴¹ The proceedings are all oral²⁴² and there is no written account of them. Even the notification about an upcoming trial is made orally by the warden.²⁴³

The procedural rules are pretty similar to the rules in criminal procedures in Spain. There is an initial phase where the investigation of the facts and damages takes place.²⁴⁴ The *Sindic* of the acequia where the potential violation occurred is in charge of gathering the evidence.²⁴⁵ He will visit the site, sometimes accompanied by observers, a sort of experts.²⁴⁶

Then, there is the trial on the Thursday following the alleged violation.²⁴⁷ The trials are organized by acequia where the case arose and following the order the acequias take water from the river.²⁴⁸ In the second phase, the trial, the *Sindic* from the acequia where the case occurred does not take part in the deliberations of the case, and the judge presiding the court must be from one of the acequias on the opposite bank of the river.²⁴⁹ The trial starts with

²³⁵ Fairén Guillén, *supra* note 199, at 1300. Often, these non-members are corporations. See Sanchez, *supra* note 232, at 281.

²³⁶ Sanchez, *supra* note 232, at 282.

²³⁷ José-Antonio Espín-Sánchez, *Institutional Inertia: Persistent Inefficient Institutions in Spain*, 77 J. ECON. HIST. 692, 720 (2017). See generally Javier Donna & Jose-Antonio Espin-Sanchez, *The Illiquidity of Water Markets: Efficient Institutions for Water Allocation in Southeastern Spain* (Aug. 16, 2018), <https://perma.cc/T5AR-BXPM>.

²³⁸ VALENCIA WATER TRIBUNAL, *supra* note 201.

²³⁹ *Id.*

²⁴⁰ Valencia Tourism Found., *The Water Court*, TRAVEL VALENCIA, <https://perma.cc/CL2U-KJRE> (last visited Apr. 13, 2019).

²⁴¹ *Id.*

²⁴² UNESCO Decision 4.COM 13.70, *supra* note 193 (inscribing the Irrigators’ tribunals of the Spanish Mediterranean coast: The Council of Wise Men of the plain of Murcia and the Water Tribunal of the plain of Valencia on the Representative List of the Intangible Cultural Heritage of Humanity).

²⁴³ Alicia Armengot Vilaplana, *Los Principios del Procedimiento ante el Tribunal de las Aguas de Valencia* [Procedural Principles Before the Valencian Water Tribunal], in *EL TRIBUNAL DE LAS AGUAS DE VALENCIA. CLAVES JURIDICAS* 307, 319 (Jose Bonet Navarro & Maria Jose Mascarell Navarro eds., 2014).

²⁴⁴ Fairén Guillén, *supra* note 199, at 1301. However, the maximum length of a trial is 21 days. While the infractions happened from Thursday of previous week to Thursday before noon are to be judged that week, if the irrigator who allegedly violated the ordinances is not there, he or she has two more opportunities to appear before the tribunal. If they do not appear, the irrigator will be condemned. See VALENCIA WATER TRIBUNAL, *supra* note 201.

²⁴⁵ Fairén Guillén, *supra* note 199, at 1301.

²⁴⁶ *Id.*

²⁴⁷ *Id.* at 1301–02.

²⁴⁸ *Id.* at 1302.

²⁴⁹ *Id.*

the argument of the warden or the plaintiff.²⁵⁰ The warden's testimony is believed to be true unless the defendant brings enough evidence against it.²⁵¹ After the plaintiff, the defendant takes the floor and makes his case.²⁵² There is no cross-examination. Only the members of the tribunal can question.²⁵³ Then, the evidence is brought in. It can be documents, witnesses, or expert witnesses. The latter are often those observers who visited the alleged violation site soon after the incident occurred, otherwise evidence could be lost and, if not, in order to protect the evidence, the land may not be worked on.²⁵⁴ In some cases, the tribunal may order a new expert opinion.²⁵⁵ If that is the case, the trial occurs the week after.²⁵⁶ It may also be decided that all or at least two members of the tribunal have to visit the city.²⁵⁷ The members of the tribunal then deliberate, in front of the watching public in the Cathedral square, but in secret as nobody can hear the discussion.²⁵⁸

The tribunal decides whether to acquit or declare the defendant guilty that same Thursday and the *Sindic* from its *acequia* will be the one imposing the specific sanction according to the *acequia's* ordinances.²⁵⁹ The tribunal does not offer any reasoning for its decision.²⁶⁰ The decision is oral and it is succinctly recorded in the Secretariat.²⁶¹

Normally the Water Tribunal does not specify the sanction. Once the Tribunal has found one of the water users guilty, the specific sanction is determined by its *acequia*.²⁶² The sanctions are specified in the different *acequias'* ordinances but there is room for discretion.²⁶³ The sanctions are based on what the violator would make in a day in the field²⁶⁴ or are still measured in an old medieval currency.²⁶⁵ Still, there have been few cases of disagreement with the amount decided by the *acequia's* board. If there was a disagreement, the Water Tribunal would be tasked to decide on it or otherwise all the advantages of the quick and fair procedure would be lost by going to the general judiciary to get the judgment executed.

²⁵⁰ *Id.*

²⁵¹ *Id.*

²⁵² *Id.*

²⁵³ *Id.*

²⁵⁴ *Id.*

²⁵⁵ *Id.*

²⁵⁶ *Id.*

²⁵⁷ *Id.* at 1304.

²⁵⁸ *Id.*

²⁵⁹ *Id.* They are neither lawyers, nor officers of the court. Just farmers judging farmers. These farmers would otherwise feel coerced if they had to resort to the ordinary judicial system which, in turn, is not knowledgeable about the *acequias'* ordinances.

²⁶⁰ *Id.*

²⁶¹ *Id.* at 1305.

²⁶² *Id.* at 364.

²⁶³ Vicenta Cervello Donderis, *La naturaleza de las sanciones del Tribunal de las Aguas*, in EL TRIBUNAL DE LAS AGUAS DE VALENCIA. CLAVES JURIDICAS 129, 142–45 (Jose Bonet Navarro & Maria Jose Mascarell Navarro eds., 2014).

²⁶⁴ Bonet Navarro, *supra* note 218, at 60.

²⁶⁵ Maria Jose Mascarell Navarro, *Las sentencias del Tribunal de las Aguas*, in EL TRIBUNAL DE LAS AGUAS DE VALENCIA. CLAVES JURIDICAS 329, 363 (Jose Bonet Navarro & Maria Jose Mascarell Navarro eds., 2014).

The authority of the Water Tribunal is never questioned and the sanctions are complied with voluntarily.²⁶⁶ The fairness and expeditiousness of the decisions has translated into a great respect of this institution, which in turn has decreased the amount of enforcement needed.²⁶⁷ Very rarely, the defendant needs to be compelled to comply with the decision. If need be, he will be compelled by withdrawing his right to use water from the acequia until he complies.²⁶⁸ In addition, the decisions are not appealable. There is no possibility of review before another judicial court which does not seem to bother either scholars²⁶⁹ or the water users²⁷⁰ given the particular nature of these consuetudinary courts.

Not only is this a fast and fair judicial process, it is also a cheap one. The costs that the losing party has to cover are minimal. It has to cover the expenses for the site visits and the expenses of the notification by the warden.²⁷¹

The courts are not perceived as biased in favor of the interests of the acequia or community.²⁷² In fact, its impartiality has never been questioned. The success of these institutions has prompted the Spanish legislator to include Irrigation Juries in the internal organization of irrigation communities in the modern Water Act.²⁷³ While it seems that a traditional institution such as this may have little to teach to the more complex water systems in the United States, the current systems in Montana and Colorado seem to actually offer some similarities with these courts. The interaction between the water courts and the wardens or inspectors is similar to the interaction between the water commissioners and the water or district courts in practice. If a water court wants to be adopted or the procedures made more swift and efficient, reducing the need for a lawyer and choosing expert judges may be the way to go.

²⁶⁶ Fairén Guillén, *supra* note 199, at 1300. But even the Syndics can be judged. *See* VALENCIA WATER TRIBUNAL, *supra* note 201.

²⁶⁷ Mascarell Navarro, *supra* note 265, at 369.

²⁶⁸ Fairén Guillén, *supra* note 199, at 1306. In order to prevent him from using the water, the Sindic from his acequia and the warden paint two white lines in the diversion point of the defendant indicating he is not supposed to be using water. *Id.*

²⁶⁹ Fairén Guillén, *supra* note 199, at 1306; *see also* S.T.S., Aug. 11, 2004 (R.J. No. 193) (Spain) (relating to the Council of Wise Men, but also applicable to the Valencia Water Tribunal). *See generally* Fairén Guillén, *supra* note 199; Jose Bonet Navarro, *La Jurisdiccion del Tribunal de las Aguas de Valencia*, in EL TRIBUNAL DE LAS AGUAS DE VALENCIA. CLAVES JURIDICAS, 215 (Jose Bonet Navarro & Maria Jose Mascarell Navarro eds., 2014).

²⁷⁰ *Id.*

²⁷¹ *See* VALENCIA WATER TRIBUNAL, *supra* note 201.

²⁷² For an account of the *auctoritas* (prestige, power of command) of the court, see Mascarell Navarro, *supra* note 265, at 369.

²⁷³ Consolidated Water Act, art. 84.6 (B.O.E. 2001, 176).

V. COLORADO WATER COURTS

The Colorado Water Court system was created by the 1969 Water Right Act²⁷⁴ to settle water rights claims based on priority and deal with the complexities of water rights.²⁷⁵ What Colorado calls their Water Court is a hybrid between the role that a state engineer or a water agency plays in other states and courts. As shall be seen, it conflates in a single institution almost all the functions: adjudication of existing water rights, grant of new water rights, changes in water rights, and disputes among users. This hybrid model is not unheard of and could be considered a sort of “one-stop shop.” Sweden’s Environmental Courts are in charge of the permit system for pollution activities.²⁷⁶ In fact, Swedish water courts, which were merged into the Environmental Courts, were in charge of granting permits.²⁷⁷

There are seven water divisions in the state of Colorado which roughly correspond to the different basins in the state.²⁷⁸ Each water court deals with “water matters.”²⁷⁹ Water matters include “cases of diligence for conditional water rights, changes of water rights, exchanges, augmentation plans, and appeals from state or division engineer enforcement orders.”²⁸⁰ It also allows the water court to review the rules about water promulgated by the state engineer.²⁸¹ If there are issues beyond its jurisdiction but that affect a water matter, the water court can hear them.²⁸² Any appeal from the water court goes directly to the Colorado Supreme Court.²⁸³ However, not all water issues are delegated to the court. Other enforcement functions relating to water are located within the executive branch. For example, water commissioners are in charge of water distribution implementing the water court decrees.²⁸⁴

Each of the seven divisions has a water judge, a division engineer, a water clerk, and a water referee.²⁸⁵ Water judges for each division are designated by the Colorado Supreme Court each year prior to January 10²⁸⁶ from the pool of judges from the state district courts within the division.²⁸⁷ Normally the judge appointed will be reappointed²⁸⁸—thus accumulating

²⁷⁴ Water Right Determination and Administration Act of 1969, COLO. REV. STAT. § 37-92-101 (WEST 2018).

²⁷⁵ *Colorado Courts at a Glance*, COLO. JUDICIAL BRANCH, <https://perma.cc/Z256-5JWE> (last visited Apr. 13, 2019).

²⁷⁶ Bjällås, *supra* note 30, at 179, 180, 183.

²⁷⁷ 13 ch. 13 § Water Act (SFS 1983:291) (Swed.), <https://perma.cc/R6P9-3RCB>.

²⁷⁸ COLO. REV. STAT. ANN. § 37-92-201 (West 2017).

²⁷⁹ GEORGE VRANESH ET AL., VRANESH’S COLORADO WATER LAW, REVISED EDITION 162 (1999).

²⁸⁰ *Id.*

²⁸¹ *Id.* at 164.

²⁸² *Id.* at 165.

²⁸³ *Id.*

²⁸⁴ *See supra* note 165 and accompanying text.

²⁸⁵ COLO. REV. STAT. ANN. § 37-92-203(2) (West 2017); *see also* VRANESH ET AL., *supra* note 279, at 165–68.

²⁸⁶ COLO. REV. STAT. ANN. § 37-92-203(2).

²⁸⁷ VRANESH ET AL., *supra* note 279, at 166.

²⁸⁸ *Id.*

experience—but there is no rule establishing this preference. The potential rotation of the judges assigned to the court should prevent capture by the special interests. Water judges still have a general docket assigned, but the water matters must take priority.²⁸⁹ Additional water judges may be appointed if the workload so requires.²⁹⁰

The division engineer is responsible for administering water rights in his or her respective division.²⁹¹ A division engineer is the chief Colorado Division of Water Resources official for each division.²⁹² When an application for a water right is referred to a water referee, the referee usually consults with the division engineer.²⁹³ After that consultation, the division engineer submits a “Summary of Consultation” or “Consultation Report” to the water court with his recommendations.²⁹⁴

A water referee is both an investigator who gathers facts²⁹⁵ and a mediator of sorts—it is his job to serve as an impartial forum to assist the parties in achieving an outcome that satisfies all sides.²⁹⁶ The referee’s position is aimed at reducing the workload of the judge. But the water judge may decide it is not necessary to appoint a referee and cover the referee’s investigative functions himself.²⁹⁷

A water referee is someone who has training and experience sufficient to qualify them to issue opinions and decisions regarding water rights.²⁹⁸ Water referees are appointed by the water judge in a division based on a list of no less than three qualified people.²⁹⁹ The list is given to the water judge by the executive director of the Colorado Department of Natural Resources.³⁰⁰ A water judge may appoint as many referees as the division work load requires.³⁰¹ Additionally, the needs of administrative functions are factored into the appointments.³⁰² The referee does not need to be a lawyer;³⁰³ however, referees can rule initially on water right applications, changes of water rights, determinations of abandonment, etc.³⁰⁴

A water judge is not required to use a water referee in the resolution of a water dispute, but applications are typically referred to a water referee.³⁰⁵ Once an application has been referred to a water referee, the referee has the

²⁸⁹ COLO. REV. STAT. ANN. § 37-92-203(2).

²⁹⁰ *Id.* § 37-92-203(4), (5).

²⁹¹ *Id.* § 37-92-203(2) (West 2017).

²⁹² *Non-Attorney’s Guide to Colorado Water Courts*, COLO. SUPREME CT. WATER CT. COMMITTEE (July 2014), <https://perma.cc/UC9Q-QTJH> [hereinafter *Colorado Guide*].

²⁹³ *Id.*

²⁹⁴ *Id.*

²⁹⁵ COLO. REV. STAT. ANN. § 37-92-203(5).

²⁹⁶ *Colorado Guide*, *supra* note 292.

²⁹⁷ COLO. REV. STAT. ANN. § 37-92-203(5).

²⁹⁸ COLO. REV. STAT. ANN. § 37-92-203(6).

²⁹⁹ COLO. REV. STAT. ANN. § 37-92-203(5).

³⁰⁰ *Id.*

³⁰¹ *Id.*

³⁰² *Id.* § 37-92-203(6).

³⁰³ VRANESH ET AL., *supra* note 279 at 167.

³⁰⁴ COLO. REV. STAT. ANN. § 37-92-203(2) (West 2017).

³⁰⁵ *Id.*

authority to investigate, make a ruling on an application, and issue a ruling for consideration by the water judge.³⁰⁶ A referee is charged with the duties of determining the truth of application and opposing statements and becoming fully advised on the subject matter of those statements.³⁰⁷ Resolving an issue may require the referee to hold status conferences with the parties via telephone.³⁰⁸ Given how important actual ground knowledge is, site visits are also appropriate.³⁰⁹ If the referee is of the opinion that a referral cannot be resolved between the parties within an 18-month period, the referee may re-refer the issue to the water judge.³¹⁰ If a ruling by a referee is protested, there will be a trial de novo before the water court.³¹¹

The costs associated with the services of a water referee, including salaries, expenses, and other compensation, are paid out of funds appropriated to the Colorado Supreme Court.³¹² In some cases, mostly those particularly complex, the water judge may decide to not employ a referee, but instead a special master, whose cost will be shouldered by the parties.³¹³ Sometimes the referee can be appointed as a master if the parties agree. This appointment could save time and money, but the agreement of the parties is important because, otherwise, the whole case may need to be heard again by the water judge.³¹⁴

While a procedure before a water judge looks very much like any other procedure before a court in Colorado, the existence of the referee as the first stop in the process contributes to lower transaction costs and, to an extent, has procedural and evidentiary rules tailored to the needs of water cases. For example, the briefs are limited to thirty pages.³¹⁵ In addition, at the status conference with the referee, the parties may decide to appoint a single expert instead of using each party its own expert. The latter often leads to a battle of the experts.³¹⁶ There is even a suggested guide on how to conduct meetings with the experts to avoid the battle.³¹⁷ It is also a more collaborative environment than a court proceeding would be. For example, rule 6 reads: "If the parties are able to reach a resolution of the application, and the referee finds it to be supported by the facts and the law, the referee shall work with the parties to fashion an appropriate proposed ruling and proposed decree for filing with the water judge for approval."³¹⁸

While it is hard to find data that allows for comparison between the water courts in Colorado and generalist courts, there is some dated data on

³⁰⁶ *Id.* § 37-92-303(1).

³⁰⁷ *Id.* § 37-92-302(4).

³⁰⁸ Colorado Guide, *supra* note 292.

³⁰⁹ *Id.*

³¹⁰ *Id.*

³¹¹ VRANESH ET AL., *supra* note 279 at 167.

³¹² COLO. REV. STAT. ANN. § 37-92-203(6) (West 2017).

³¹³ COLO. R. CIV. P. 53(a); VRANESH ET AL., *supra* note 279, at 167.

³¹⁴ VRANESH ET AL., *supra* note 279, at 168.

³¹⁵ COLO. R. CIV. P. ch. 36 Rule 8.

³¹⁶ COLO. R. CIV. P. ch. 36 Rule 6(j).

³¹⁷ COLO. R. CIV. P. ch. 36 Rule 11 (committee comment).

³¹⁸ COLO. R. CIV. P. ch. 36 Rule 6(m).

how the Colorado Water Court compares with an administrative agency.³¹⁹ In that comparison, it seems that Colorado Water Courts do not fare particularly well and impose more transaction costs than some alternative administrative systems.³²⁰ The issue may well be that judges are not that well versed in water law and that they need to rely on the division engineer for technical issues, who would be in-house if a water agency were in charge.

In a Colorado Water Court, from the moment where the application for a change in water rights is filed to the moment where the decision is reached, takes an average twenty-nine months, while in New Mexico, where the proceedings are before the state engineer, it takes 4.3 months.³²¹ Colby also measures the “policy-induced transaction costs” which she defines as including attorney’s fees, engineering and hydrologic studies, court costs, and fees paid to state agencies, and excluding the price and the costs of implementation once the transfer has been approved if they are not induced by state policies.³²² She finds that these costs in Colorado averaged \$187, while in New Mexico, only \$54.³²³ In fact, Colorado has expensive filing fees.³²⁴ Today, the filing fee in Colorado for a change in water right is \$447,³²⁵ double the filing fee for an application for a new water right, while in New Mexico the fee to change one of the defining characteristics of a water right, such as the point of diversion, is \$200.³²⁶ However, Colorado’s fees are cheaper than other states such as Montana, which has a filing fee for a change in water right of \$700 to \$900³²⁷ or California where it costs more than \$1,000.³²⁸ Hence, the water court unitary system of water rights administration in Colorado seems to fare relatively well compared to other states when it comes to transfers on water rights fees, but it seems that transaction costs in a court system are higher. However, this data does not illuminate the discussion when the choice is about a general court or a water court. Colorado Water Courts reduce the functions of a state engineer, more than the docket of the state courts. There is no data about how it compares

³¹⁹ See Bonnie G. Colby, *Transactions Costs and Efficiency in Western Water Allocation*, 50 AM. J. AGRIC. ECON. 1184, 1188 (1990) (showing the high costs of transferring water rights in Colorado compared to New Mexico and Utah).

³²⁰ See *id.* at 1191 (suggesting Colorado has higher costs because judicial proceedings are the first stage for water right transfers).

³²¹ *Id.* at 1188. The data mentioned is from the study by Bonnie Colby. See BONNIE G. COLBY ET AL., *WATER TRANSFERS AND TRANSACTIONS COSTS: CASE STUDIES IN COLORADO, NEW MEXICO, UTAH AND NEVADA* (1989).

³²² Colby, *supra* note 319, at 1184.

³²³ *Id.* at 1188.

³²⁴ Bonnie G. Colby et al., *Procedural Aspects of State Water Law: Transferring Water Rights in the Western States*, 31 ARIZ. L. REV. 697, 716 (1989).

³²⁵ *Filing Fees, Surcharges, and Costs in Colorado State Courts*, COLO. JUDICIAL BRANCH, <https://perma.cc/LZ6Y-Q7UC> (last visited Apr. 13, 2019).

³²⁶ *Water Rights Applications Forms*, N.M. OFF. STATE ENGINEER INTERSTATE STREAM COMM’N, <https://perma.cc/5KVX-EC2L> (last visited Apr. 13, 2019).

³²⁷ *Application to Change an Existing Irrigation Water Right*, MONT. DEP’T NAT. RESOURCES & CONSERVATION, <https://perma.cc/P2R6-GYFQ> (last visited Apr. 13, 2019).

³²⁸ *Fiscal Year 2016–17 Fee Schedule Summary*, CAL. WATERBOARDS, <https://perma.cc/3D8S-LHDY> (last visited Apr. 13, 2018).

when reviewing a ruling by the state engineer, which, but for the existence of water courts, would have been reviewed by a general court. Nonetheless, some of the features of the Colorado court are fit to inspire other water courts. Among those, I would highlight the tailored procedural rules, the figure of the water referee, and the collaborative bent of the first procedural steps to try to let the parties to agree.

VI. SOUTH AFRICA WATER COURT

Another, more recent example of water courts comes from South Africa, the country which has recently been in the news as dire restrictions were imposed in Cape Town as it approached the terrifying scenario of zero water.³²⁹ South Africa is also well known for having a constitutional human right to water.³³⁰ The Water Tribunal, which substituted the preexisting water court, was established by the National Water Act of 1998.³³¹

While independent and subject to similar rules of the judiciary,³³² the Water Tribunal is closer to an administrative court as the decisions can be appealed on matters of law to the High Courts, which function as appellate courts.³³³ The Water Tribunal's nature has been an a source of confusion and the Department of the Environment has argued both ways depending on its interests: at times the tribunal is an administrative body whose decisions can be reviewed by the courts, at others is a judicial body whose decisions are not reviewable.³³⁴ Some have discussed whether it can solve only cases on the merits or also cases where procedural issues are challenged.³³⁵

This Tribunal hears the appeals of directives and decisions made by water management agencies, catchment management agencies, or other responsible authorities on matters covered by the National Water Act, Act 36 of 1998.³³⁶ These issues can include denial, suspensions, withdrawal, or reinstatement of licenses to use water;³³⁷ claims for compensation under the

³²⁹ Norimitsu Onishi & Somini Sengupta, *Dangerously Low on Water, Cape Town Now Faces 'Day Zero'*, N.Y. TIMES (Jan. 30, 2018), <https://perma.cc/ZC2W-FKM4>.

³³⁰ See S. AFR. CONST., First Amendment Act of 1997, ch. 2 § 27(1)(b); see also DD Tewari, *A Detailed Analysis of Evolution of Water Rights in South Africa: An Account of Three and a Half Centuries from 1652 AD to Present*, 35 WATER SA 693, 702 (2009). For a judicial analysis of the right to water, see *Mazibuko v. City of Johannesburg 2010 (4) SA 1 (CC) (S. Afr.)* (also known as “the Phiricase”), See also, CB Soyapi, *Water Security and the Right to Water in South Africa: an Overview*, POTCHEFSTROOM ELECTRONIC L.J., Jan. 2017, at 1, 6–7, <https://perma.cc/2KA4-3APR>.

³³¹ National Water Act 36 of 1998 §§ 146–149 (S. Afr.).

³³² WATER TRIBUNAL, MANUAL FOR THE PURPOSES OF SECTION 14 OF THE PROMOTION OF ACCESS TO INFORMATION ACT, 2000 (Act No. 2 OF 2000) 5 (2005), <https://perma.cc/96ED-ZLH8>.

³³³ *The South African Judicial System*, S. AFR. JUDICIARY, <https://perma.cc/AA7C-88A8> (last visited Apr. 29, 2019).

³³⁴ Ed Couzens et al., *Water Security and Judicial and Administrative Confusion in South Africa: The Trustees of the Time Being of the Lucas Scheepers Trust*, GAUTENG 2015 ZAGPPHC 211, April 17, 2015, at 10–11.

³³⁵ *Id.* at 17.

³³⁶ *Water & Sanitation*, S. AFR. DEPT. WATER & SANITATION, <https://perma.cc/DS27-DB48> (last visited Apr. 19, 2019).

³³⁷ National Water Act 36 of 1998 §§ 49, 53–54 (S. Afr.), <https://perma.cc/WYN5-YGND>.

National Water Act;³³⁸ claims against apportionment;³³⁹ or the temporary transfer of water use authorization.³⁴⁰ It is important to note that the tribunal cannot review the inaction of the agencies, which judicial bodies can.³⁴¹

Its nature is well reflected in its composition. The Tribunal has six members: a chairperson, a deputy chairperson, and three additional members, plus a registrar.³⁴² The administrative support is provided by the Environmental Affairs Department, which reinforces the idea of its hybrid nature.³⁴³ The chairperson is appointed by the Minister of Justice on the recommendation of the Judicial Service Commission.³⁴⁴ The deputy chairperson and additional members are appointed by the Minister on the recommendation of the Water Research Commission.³⁴⁵ The chairperson must be knowledgeable of the law while the other members must be well versed in any discipline related to water management.³⁴⁶ The interdisciplinarity of its members is important to deal with real water issues. However, in some instances, the lack of legal expertise seems to have tipped the balance when a High Court reviews the cases.³⁴⁷

As other examples reviewed here demonstrate, procedural rules tailored to the specific subject matter, water management, are often adopted in specialized courts and enhance the gains on celerity.³⁴⁸ The Water Tribunal is governed by its own rules of procedure.³⁴⁹ It shares two procedural rules with the other water courts already analyzed: parties do not need to be represented by a lawyer³⁵⁰ and the tribunal may do inspections of the site of the dispute.³⁵¹ In addition, the Water Act establishing the tribunal also

³³⁸ *Id.* § 22(8).

³³⁹ *Id.* § 19(8).

³⁴⁰ *Id.* § 23(1).

³⁴¹ See Keri Ellis, *A Critical Assessment of South Africa's Water Tribunal and its Emerging Jurisprudence*, IUCN ACAD. ENVTL. L. (July 5, 2011), <https://perma.cc/KBZ3-G4W8> (click "A Critical Assessment of South Africa's Water Tribunal and its Emerging Jurisprudence").

³⁴² *Water & Sanitation*, *supra* note 336.

³⁴³ *Id.*

³⁴⁴ WATER TRIBUNAL, *supra* note 332.

³⁴⁵ *Id.*

³⁴⁶ *Id.*

³⁴⁷ Couzens et al., *supra* note 334, at 10 ("In the Makhanya case an appeal was made to the High Court to overturn a decision of the Water Tribunal, which had upheld a decision made by the Department of Water Affairs and Forestry. It appeared that the Water Tribunal had sat with only one member, who was not legally trained, and that he had decided that one of the factors which was to be considered outweighed all of the others. The High Court ruled that this factor had not so outweighed the others, ruled that the decision was palpably wrong, and ruled that, in the circumstances and relying on PAJA, the appropriate remedy was to substitute its own decision for that of the Tribunal instead of returning the matter to the Tribunal for reconsideration.").

³⁴⁸ See generally WATER TRIBUNAL, *supra* note 332 (outlining specific procedures for bringing claims under the National Water Act).

³⁴⁹ *Water Tribunal Rules*, DWA.GOV.ZA (Sept. 23, 2005), <https://perma.cc/FD7H-LP55>.

³⁵⁰ *Id.* art. 8 (3).

³⁵¹ *Id.* art. 13.

envisions mediation as a way to solve disputes.³⁵² The tribunal is seen in South Africa as a “far cheaper, simpler option” than generalists courts.³⁵³

However, as John Thorson pointed out, the South Africa Water Tribunal also illustrates the need to insulate water courts from administrative and political forums.³⁵⁴ The tribunal was put in hiatus in mid-2012 by the Environmental Affairs Minister and there were “amendments to the Act ‘in the offing.’”³⁵⁵ The Environmental Affairs Department apparently wanted to give the tribunal greater power and make its appointments similar to those of other courts.³⁵⁶ The amendment introduced in 2014 though was aimed at reducing the tribunal jurisdiction to review water issues related to mining, leaving those mostly within the jurisdiction of the Minister and making the Water Tribunal the last resort.³⁵⁷ Nonetheless, the Water Tribunal is still the arbiter in some of South Africa Water Wars.³⁵⁸ Its decisions of reversing a ruling by the Department of Water Affairs and suspending a water use license to develop the Makhado mine made national headlines.³⁵⁹

While the amendment did not pass, the Minister stalled appointments for some time, even though she received parliamentary questions about it.³⁶⁰ Only after a court battle started, did she appoint new members in 2015.³⁶¹ The hiatus created backlog³⁶² and there are still talks of discontinuing the tribunal.³⁶³ Given the water issues faced by South Africa, a stable administrative structure is needed and the presence of a quasi-judicial body to cheaply review the decisions of the administration may build trust in the system among the people.³⁶⁴

³⁵² National Water Act 36 of 1998, §150.

³⁵³ Couzens et al., *supra* note 334, at 16 (quoting a media comment made on the case, *Escarpment Environment Protection Group and Langkloof Environmental Committee v. Department of Water Affairs*).

³⁵⁴ Thorson, *supra* note 22, at 35–36 (discussing how politics caused the water courts to be dormant for several years).

³⁵⁵ *Makhanya v. Goede Wellington Boerdery* 2013 (1) All SA 526 (SCA) at 46 para. (S. Afr.).

³⁵⁶ Couzens et al., *supra* note 334, at 14.

³⁵⁷ *Id.* at 18.

³⁵⁸ See Keith Schneider, *As Drought Grips South Africa, A Conflict Over Water and Coal*, YALEENVIRONMENT360 (May 16, 2016), <https://perma.cc/5M6W-HQU3> (reporting that “the South Africa Water Tribunal reversed a January [2016] ruling by the Department of Water Affairs and suspended COAL South Africa’s water use license to develop the Makhado mine”).

³⁵⁹ *Id.*

³⁶⁰ Couzens et al., *supra* note 334, at 18–19.

³⁶¹ *Id.*

³⁶² S. AFRICAN WATER CAUCUS DEP’T OF WATER AND SANITATION TASK TEAM, REPORT ON THE STATE OF THE DEPARTMENT OF WATER AND SANITATION 21, <https://perma.cc/DP5F-PEEL>.

³⁶³ *Id.* at 21. *But see* Couzens et al., *supra* note 334, at 20 (Some voices internal to the Department of Environmental Affairs envisioned the expansion of the jurisdiction of the Tribunal in 2015: “At this briefing it was advised by the ‘Deputy Director General’, that ‘[w]ith regard to the appeal process, [the] Water Tribunal would deal with all appeals in all the other sectors as well, and not just the water ones’” (citations omitted)).

³⁶⁴ This point was also made by the court in *Escarpment Env’t Prot. Grp. v. Dep’t of Water Affairs* 6 (Water Tribunal) (unreported) case no. WT 24/11/2009, appeal ruling of 22 July 2011, <https://perma.cc/R7XW-ZJU2>; *see also* Couzens et al., *supra* note 334, at 10–11 (discussing opposing arguments that a decision of the Water Tribunal should not be set aside by a court on the basis that the decision was not administrative but was judicial and thus not subject to

VII. MONTANA

Montana Water Courts were created in 1979,³⁶⁵ aimed at adjudicating all water rights existing before 1973³⁶⁶ in the Big Sky state.³⁶⁷ Prior to the introduction of water permits in 1973, the rights were in disarray. At most, some rights had been adjudicated in district court decrees.³⁶⁸ Hence, as such, the Montana Water Court was not established to perform the roles that we usually associate with a court. It was established neither to decide conflicts between two users nor to decide disputes between users and a water agency like the Department of Natural Resources and Conservation (DNRC). It is also an institution that differs from the Colorado Water Courts. As seen, Colorado has a system where the water courts deal with adjudication, even though most of it was done a long time ago; administer water rights, for example approving the changes in those water rights when there is a transfer; and adjudicate disputes between users.³⁶⁹

The Water Court in Montana deals with the definition, not the enforcement of property rights.³⁷⁰ It can define some of the characteristics of a right to use water in a prior appropriation state.³⁷¹ The court always defines the priority date but it not always defines the volume.³⁷² However, the Water Court is not the only institution that defines property rights. DNRC decisions can also impact the definition.³⁷³ Whenever a water right holder applies for a change, perhaps because they want to sell their water right, the DNRC can accept or bring new historical evidence and change some of the definitional characteristics of the water right, weakening the certainty of those water rights.³⁷⁴

The enforcement of water rights though, is the power of water commissioners and generalists courts.³⁷⁵ Water commissioners are appointed

review; and that the court was not entitled to set aside the Tribunal's decision because it was an administrative decision but not all administrative steps had been followed). The Federation for a Sustainable Environment also sees the dismantling of water institutions as one of the challenges to deal with water crisis. *Summary of Water Related Challenges in South Africa 2018*, FED'N SUSTAINABLE ENV'T (May 3, 2018), <https://perma.cc/FY2P-YTPU>.

³⁶⁵ MONT. LEGISLATIVE ENVTL. POLICY OFFICE WATER POLICY INTERIM COMM., A SHORT HISTORY OF THE WATER COURT 4 (2015), <https://perma.cc/DN2B-6CYN>.

³⁶⁶ *Id.* at 1–2, 4.

³⁶⁷ *Id.* at 2–3.

³⁶⁸ *Id.* at 2.

³⁶⁹ See discussion *supra* Part V.

³⁷⁰ See LAND USE & NAT. RES. CLINIC AT THE UNIV. OF MONT. SCH. OF LAW, WATER RIGHTS IN MONTANA: HOW OUR LEGAL SYSTEM WORKS TODAY, HOW MONTANA COMPARES TO OTHER STATES, AND IDEAS FOR MONTANA'S FUTURE, A REPORT FOR THE MONTANA SUPREME COURT 6–7 (2014), <https://perma.cc/LX8K-JP8Z> (describing how the Montana Water Court implements the Water Use Act).

³⁷¹ *Id.* at 5–6, 9.

³⁷² *Id.* at 9–11.

³⁷³ See *id.* at 8, 10–11 (describing the Department of Natural Resources & Conservation's role implementing the Water Use Act, particularly in changing a water right).

³⁷⁴ DEP'T OF NAT'L RES. & CONSERVATION, WATER RIGHTS IN MONTANA 34, 36–37 (Apr. 2014), <https://perma.cc/3BF6-3J7U>.

³⁷⁵ *Id.* at 42.

in an adjudicated basin if users representing 15% of the rights in a basin petition a district court.³⁷⁶ Water commissioners deal with the everyday administration of the water, implementing the water court decrees and the older district court decrees.³⁷⁷ The commissioners are usually users of the basins they work at, or someone from the community with knowledge of water issues and agriculture.³⁷⁸ If there are disputes between two users or between a user and the commissioner, the dispute goes before the district court³⁷⁹—a district court that likely does not have the expertise, neither from the legal nor from the technical side, to deal with the water issues raised.

Structurally, the Montana Water Court combines a totally specialized court with a hybrid model where judges wear two hats, the generalist one and the water one. The Montana Water Court has a Chief Water Judge and, since 2011, an Associate Water Judge screened by a Judicial Nomination Commission where citizens participate.³⁸⁰ The judge is appointed by the Chief Justice of the Montana Supreme Court and confirmed by the Montana Legislature every four years.³⁸¹ The selection system combines technocracy, given the role of the supreme court and the background of some members of the Judicial Nomination Commission, and indirect democracy, given the participation of citizens in the Commission and the role of the legislature. Even though there is no requirement that the Chief and Associate Water Judges need to be experts in water issues, because the only requirement is that they must have the qualifications to be district court judges, in practice the lawyers appointed have been professionals with a background in water law.³⁸² Both the selection method and the expertise should translate into trust and respect for this specialized institution if it were to adjudicate conflicts. In addition to the Chief and Associate Judges, there are four water judges, one from each water division.³⁸³ The divisions are drawn according to the drainage basins in the state.³⁸⁴ In each water division, a current or retired district court judge acts as a water judge for the drainage basin where he sits, similarly to the Colorado model of water courts.³⁸⁵ Those water divisions were envisioned as chambers closer to the facts; however, the Water Court rarely uses the water judges,³⁸⁶ except on cases where there could be some

³⁷⁶ *Id.* at 41.

³⁷⁷ *Id.* at 41–42.

³⁷⁸ DEP'T OF NAT'L RES. & CONSERVATION, *supra* note 374, at 3.

³⁷⁹ *Id.* at 42.

³⁸⁰ *Id.* at 6; see *Judicial Nomination Commission*, MONT. JUDICIAL BRANCH, <https://perma.cc/KMP8-HK9H> (last visited Apr. 13, 2019). The Judicial Nomination Commission is composed of seven members: four lay-members (non-attorney) appointed by the governor, one district court judge elected by other district court judges, two lawyers appointed by the Montana Supreme Court who must be from different sides of the state. They serve for a four-year term and review the candidates to any judicial vacancy in the state. *Id.*

³⁸¹ DEP'T OF NAT'L RES. & CONSERVATION, *supra* note 374, at 6.

³⁸² MONT. CODE ANN. § 3-7-221 (2017); see, e.g., Michael Wright, *State's Chief Water Judge Reappointed*, BOZEMAN CHRON. (July 14, 2017), <https://perma.cc/W5VD-35RS>.

³⁸³ DEP'T OF NAT'L RES. & CONSERVATION, *supra* note 374, at 6.

³⁸⁴ *Id.*

³⁸⁵ *Id.*; COLO. FOUND. FOR WATER EDUC., *supra* note 165, at 12.

³⁸⁶ DEP'T OF NAT'L RES. & CONSERVATION, *supra* note 374, at 6.

conflict of interest.³⁸⁷ The Chief Water Judge assigns the cases to either the water judges, the associate water judge or the water masters.³⁸⁸ The Court has preferred to ensure the closeness to the facts by entrusting its collection to water masters given the lack of water law background of the district court judges. Montana Water Court water masters are not the equivalent of a special master in generalist courts, who is a contractor of the court and paid by the parties; they are instead lawyers employed by the Court with a background in water law and science.³⁸⁹

The Water Court is expected to complete the lengthy adjudication by 2028.³⁹⁰ While there is no sunset clause for the Montana Water Court, it could run out of work.³⁹¹ Instead of dismantling it, the court could become a permanent institution. There will not be many capital costs associated with establishing a permanent court as the court already has a staffed courthouse. It is a court with only two judges which should be enough to deal with the water cases that arise.

The Montana Water Court could substitute the district courts in water cases because it is an institution where the judges are well versed in water law and have the experience and the in-house resources available to deal with technical issues. The Montana Water Court could be the enforcement body that it is not today. Instead the district courts are the ones dealing with an overloaded docket, which includes water cases even though the judges lack water expertise. In fact, the district courts often rely on the water courts for help. For example, in a case in the Teton River, the district court borrowed one of the water masters of the Water Court.³⁹² In that situation, the water master operated in a similar way to the special masters in civil courts.³⁹³ This data point suggests the need for specialization. It can be argued that the lack of use of the water judges in the four divisions somehow weakens the system as it is. If the Water Court would delegate to those water judges, who are also district court judges, the adjudication of water rights, then, they will be better positioned to decide on cases about water rights. While this is true, adjudication of old water rights is a lengthy, technical, and expensive process and relying on non-experts may not be ideal. Idaho offers a precedent about converting a court focused on adjudication into a permanent institution dealing with water conflicts. In Idaho, the Court that adjudicated the Snake River basin starting in 1987 was not dissolved once its assigned task was completed. Instead, it took over the

³⁸⁷ Interview with Chief Water Judge Russ McElyea and Associate Water Judge Douglass Ritter (June 30, 2017) (notes on file with author).

³⁸⁸ DEP'T OF NAT'L RES. & CONSERVATION, *supra* note 374, at 6.

³⁸⁹ See Donald Duncan MacIntyre, *The Adjudication of Montana's Waters—A Blueprint for Improving the Judicial Structure*, 49 MONT. L. REV. 211, 250 (1988); MONT. CODE ANN. § 3-7-301 (2017).

³⁹⁰ WATER POLICY INTERIM COMM., STUDY OF THE FUTURE OF THE WATER COURT 6, <https://perma.cc/HL3M-DJWK>.

³⁹¹ MacIntyre, *supra* note 389, at 235; see also WATER POLICY INTERIM COMM., *supra* note 390.

³⁹² Interview with Chief Water Judge Russ McElyea and Associate Water Judge Douglass Ritter (June 30, 2017) (notes on file with author).

³⁹³ *Id.*

water adjudications of Northern Idaho and since 2010 it has exclusive jurisdiction over appeals from the Idaho Department of Water Resources, which before were decided by district courts.³⁹⁴

In fact, the Montana Water Court has recently expanded its functions. This past legislative session, Senate Bill 28³⁹⁵ was passed allowing the Water Court to review some DNRC decisions, in particular the application for new water rights and change in water rights decisions.³⁹⁶ The effects of this function expansion are still unknown. Hypothetically, it may seem that the court will likely be biased in favor of the DNRC because it will be always a party and it would be more sophisticated than individual users. However, while the DNRC and the Montana Water Court interact during adjudication, there seems to be some competition between the two institutions which may counteract the potential bias.

VIII. CONCLUSION

Specialization is not an anomaly anymore in judicial systems around the world. Judicial specialization can take many forms, from special masters in general courts that help general judges navigate the maze of a particular area of the law, to full-fledged specialized courts that are independent of the general judicial system.

Decision making in water conflicts presents the technical and scientific factual complexity and convoluted legal doctrines that makes it a good candidate for judicial specialization. In fact, specialization trends can be spotted all throughout the western United States, where water is scarce. Examples abound. District Judge Oliver Wanger decided many of the California water war cases.³⁹⁷ The Montana Water Court may become a permanent judicial body.³⁹⁸ All over, water special masters abound. For example, California state courts keep a list of those who could be candidates to serve as such.³⁹⁹ These examples both confirm the specialization trend and suggest that there is a need for it. While the particular institutional form chosen will depend on contextual issues of the particular judicial system, a pure generalist court may fall short when judging water cases.

Given that the conflict over water is likely to increase in the future, a planned institutional response may be necessary. While appeals procedures within water agencies could be a good idea and a quasi-judicial body could be in charge, water is too prone to political turmoil and the independence of said body could be contested, as was the case in South Africa, destroying the benefits it could bring. Focusing on specialization at the judicial level, some

³⁹⁴ Thorson, *supra* note 22, at 18.

³⁹⁵ SB0028, 65th Legislature, (Mont. 2017), <https://perma.cc/84MX-R2K5>.

³⁹⁶ *Id.*

³⁹⁷ See *supra* note 182–185 and accompanying text.

³⁹⁸ Thorson, *supra* note 22, at 18.

³⁹⁹ Telephone conversation with Judge Oliver Wanger, former District Judge for the United States District Court for the Eastern District of California (June 21, 2018) (notes on file with author).

changes are more demanding than others, both in terms of setup costs and in terms of political agreement. A new court system may be expensive, unpopular, and unnecessary in those jurisdictions where the volume of water cases is small. But specialization within the judiciary seems to be occurring informally and should be institutionalized.

Whatever form specialization takes, this Article has reviewed certain procedural features that could increase the efficiency and fairness of water cases. Procedurally, the use of experts is the most costly and time-consuming aspect of adjudication or litigation. Any form of specialization should make it easier, and more cost-effective, because at least the judge or a water master will be a more educated consumer of both hydrology and water doctrines. However, beyond that, procedural rules could be adapted to the particular intricacies of water cases. One measure stands out: reducing the risk of a battle of the experts. One way to reduce this risk is having in-house experts, like the Swedish Land and Environment courts or the Valencia water courts.

Whiskey is for drinking, and water is for fighting, as Mark Twain supposedly said.⁴⁰⁰ While collaborative solutions to water problems exist⁴⁰¹ and hopefully will be the norm, fights are likely to get more frequent and more brutal with the increasing occurrence and growing intensity of droughts due to climate change.⁴⁰² Any institutional change that can ensure that water disputes do not consume too much time and too much money should be considered. Examples abound. The specialization trend should not stop.

⁴⁰⁰ “*Whiskey is for Drinking, Water is for Fighting!*”, U.S. BUREAU RECLAMATION, <https://perma.cc/PQ4R-ZF7Q> (last visited Apr. 13, 2019).

⁴⁰¹ For examples of collaborative governance in water cases, see Cheryl de Boer et al., *Collaborative Water Resource Management: What makes up a supportive governance system?* 26 ENVTL POL’Y & GOVERNANCE 229, 230 (2016); see also Esther Conrad et al., *Diverse Stakeholders Create Collaborative, Multilevel Basin Governance for Groundwater sustainability*, 72 CAL. AG. 44 (2018); Cameron Holley, *Crafting Collaborative Governance: Water Resources, California’s Delta Plan, and Audited Self-Management in New Zealand*, 45 ENVTL L. Rep. (Envtl. L. Inst.) 10324 (2015).

⁴⁰² Bobby Magill, *Climate Change Altering Droughts, Impacts Across U.S.*, CLIMATE CENT. (June 22, 2017), <https://perma.cc/5KP7-NH98>.