

Including justice in institutional analysis - How do frameworks for institutional analysis consider ideas of justice?

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Abstract.

We propose to include dimensions of justice more explicitly into institutional and policy analysis of environmental governance. We investigate how alternative frameworks for the analysis of environmental institutions - the IAD framework by Elinor Ostrom, the Environmental Governance framework by Arild Vatn, and the Diagnostic Approach by Oran Young - address concerns of justice. More specifically, we ask: (1) Which dimensions and elements of justice are relevant for institutional analysis and design? (2) Do these dimensions appear in existing frameworks for institutional analysis? And (3) if not, can these frameworks be adapted to include core elements of justice? Based on the political philosophy literature on justice we develop a check-list of different dimensions and aspects of justice, based on which we analyze the different frameworks for institutional analysis. We find that the investigated frameworks, although not explicitly excluding questions of justice, do not fully exploit their potential to consider different dimensions and categories of justice.

1 Introduction: Global Environmental Governance and justice

Questions of justice, fairness and equity¹ are at the heart of democratic and legitimate environmental governance and law (Franck 1995). They gained particular momentum with the environmental justice movement in the 1960s. While notions such as environmental justice and climate justice receive increasing attention in public and political discourses, there is little discussion of the structure, outcomes and impacts of policies and institutions related to justice.

Nevertheless, “justice is unavoidable” (Shue 1992) and is treated as a key variable for legitimate and acceptable policies (Sunshine and Tyler 2003, Young 1999). Researchers have thought about the ideal solutions both for procedural and distributive justice in environmental policies; most recently with an emphasis on global climate governance (e.g. Gardiner 2004, 2010, Okereke 2008). Yet, institutional and policy analysis seem to provide no, or only a limited account of justice implications. This gap has been highlighted, for example, in the Earth System Governance Science Plan, which outlines a broad research agenda for the global social science community (Biermann et al. 2009). The authors of the Science Plan frame questions of justice in terms of *allocation and access* (Biermann et al. 2011: 6). They mark open research questions, such as the measurement of justice, trade-offs between justice and governance effectiveness, and the identification of successful overarching principles and instruments of justice across scales, but give only limited guidance on how to address them.

¹In this paper, we use the terms “justice”, “fairness” and “equity” as roughly synonymous, while being aware of the different connotations of each of the three terms and the different uses by different authors and in different disciplines and jurisdictional systems.

More concretely, Svarstad et al. (2011) critiqued Ostrom's IAD framework for not considering enough the notion of power and social construction and propose to include procedural and distributional elements of justice. However, the authors do not offer a solution as to how this could be achieved.

Overall, both scientific and political discourses reflect the need for increased attention to justice in institutional research, yet there is a considerable gap in conceptual work linking political-philosophical and applied science to institutional analysis. The aim of this paper is to fill some of these gaps. We investigate how alternative frameworks for the analysis of institutions address different elements of justice. More specifically, we ask: (1) Which elements of justice are relevant for institutional analysis and design? (2) Do these dimensions appear in existing frameworks for institutional analysis? And (3) if not, can these frameworks be adapted to include core elements of justice?

As a background to our analysis, we examine the justice literature coming out of political philosophy (section 2.1), the global climate justice discourse and more local issues in the context of the environmental justice movement (section 2.2). Based on this, we identify a set of dimensions and elements of justice (section 3) as a "checklist" to analyze different institutional analysis frameworks (IAFs). Our results (section 4) show that the investigated frameworks, although not explicitly excluding questions of justice, do not fully exploit their potential to consider different dimensions and categories of justice. In the conclusion (section 5), we highlight key issues when assessing justice in institutional analysis.

2 Background: The idea of justice

2.1 Theories of justice in political philosophy

The concept of justice has a central place in both ancient and modern political philosophy. It is a contested concept, which means that there are many different understandings, or *conceptions*, of justice (see Rawls 1973: 5). Justice concerns that part of morality which is *owed* to others. It has to be distinguished from other concepts such as charity which are ethically desirable but not related to specific rights of others (see e.g. Mill [1871]1998: V: 15). Justice, then, is about duties (or virtues) that are ethically required due to the rights of others, such as not do harm to other persons. Justice, therefore, always entails a *claim holder* who has certain *claims* (or rights) against (one or several, specific or "general") *claim addressees* or duty bearers (e.g. Stumpf 2011). To speak meaningfully about justice, we therefore need to answer the question: Who is entitled to what types of claims/rights and on what basis of reasons or justifications? Different conceptions of justice can be linked to different strands of ethical reasoning such as *deontology*, *consequentialism*, or *virtue ethics*.

"Justice" is not a thing, but is an *attribute* of "things" with evaluative and normative, i.e. conduct-guiding, meaning (Pogge 2006: 862f.) This attribute can apply to different *judicanda* which can be judged to be just or unjust: individual or collective actors, actions and omissions, institutions or states of the world (Pogge 2006: 863).

An important distinction that is frequently made regarding different *domains* of justice is that between a) *distributive* justice, which considers the right way to define who is entitled to what share of what kind of (socially desired but scarce) goods, b) *corrective* justice, that considers the rectification of harm/damage done to others, c) *retributive* justice, that refers to the right retribution of doing such harm, and d) *justice-in-exchange*, which refers to justice in voluntary exchanges (see e.g. Aristotle, EN 1130b ff., Pogge 2006: 865 with a slightly different terminology).

Another recurrent distinction is made between *procedural* and *substantial* justice (Dobson 1998: 70). Pogge (2006) argues that this distinction can be applied to all the “domains” of justice. Procedural justice is often associated with transparent, legitimate processes and fair bargaining positions. However, the mere presence of the relevant actors in decision-making procedures does not guarantee just or fair outcomes, as power relations can heavily impact on the outcomes (see also section 2.2.2).

Institutional and structural issues are particularly important for questions of justice. The design of political and societal structures is a fundamental precondition for the assignment of claims and the distribution of goods. Some argue that the (re)production, stability and order of the underlying structures and constitutional rules of a community are independent matters of justice which should be judged in addition to, for example, the distributional outcomes and procedural fairness. Faber and Petersen (2008) refer to this aspect as *political or structural justice*.

Sen (1979) pointed out that justice judgments can rest on different *metrics* (informational bases). The judgment could for instance be made on grounds of information about utility, primary goods (Rawls 1973), or capabilities (Sen 1979, 2009, Nussbaum 2000). *Instruments* of justice are those objects or actions that are employed to satisfy claims of justice (e.g. Anand and Sen 2000) and to score better on the justice metric: This could for instance be a (re)distribution of income, or an institutional reform.

The question of trade-offs between different justice goals, such as between inter- and intragenerational justice, or between justice and other societal goals, such as between justice and the effectiveness of environmental regimes (Baumgärtner et al. 2012) poses difficult questions both in terms of setting priorities between these different goals (“value side”) and in terms of the right allocation of instruments to achieve the respective goals (“production side”).

2.2 Environmental justice discourses

2.2.1 Justice in the literature on applied climate ethics

Climate justice has been treated mostly as a *global level* issue (Gardiner 2011). Authors particularly highlight the North-South discrepancies in framing mitigation solutions and adaptation finance (e.g. Ikeme 2003, Grasso 2011); and the inequalities between the developed and developing world in terms of uneven *distribution* of impacts of and vulnerability to climate change on the one hand, and *historical responsibility* and *ability-to-pay* on the other hand (e.g. Müller et al. 2009, Dellink et al. 2009).

Scholars have focused on the issue of *mitigation* (e.g. Ringius et al. 2002, Metz 2000), which is most often framed as a global commons problem (e.g. Singer 2006), always transnational and is almost exclusively about the *duty-bearers*. Work on who should bear the *cost of adaptation* only started to emerge recently (e.g. Paavola and Adger 2006, Dellink et al. 2009, Grasso 2010). Questions of global adaptation finance and just distribution of costs are closely linked to mitigation issues, as one predominant argument highlights the responsibility of those who emit most and thus cause climate change to not only pay for mitigation, but also for the resulting need to adapt to the adverse impacts of climate change.

Most authors distinguish between *procedural and distributive justice*. The former is mostly about the inclusion of parties in decision-making processes, while the latter and dimension focuses on normative principles for burden sharing in climate policy (Klinsky and Dowlatabadi 2009). Such applied principles include *historical and causal responsibility*, *ability to pay*, *putting the most vulnerable first* from a Southern perspective, and *utilitarian*

and efficiency proposals as well as grandfathering in the North (e.g. Ikeme 2003, Moellendorf 2012). The dominant approach across the literature is *actor-centered*, i.e. the key question is about which agents to hold accountable (e.g. Page 2008) or about how to guarantee *fair processes* including all actors concerned.

Thus far we have exclusively discussed questions of *intragenerational justice*, however in the context of climate change another intriguing issue is *intergenerational justice* (e.g. Page 1999), where future generations can be seen as claim holders. For example, Hans Jonas remarked that due to increased power of humankind to substantially change the global biosphere and impact the farther future, new ethical questions arise beyond the perspectives of traditional moral philosophy, which was mostly an ethics of the “here and now” (Jonas 1974).

2.2.2 Environmental justice at the local level

At the local level, environmental justice is mainly advocated by social movements. Their claims focus on socially marginalized minorities that often live in environmentally vulnerable territories or where natural resources necessary for their subsistence are excessively affected by environmental degradation. The theoretical perspective that illustrates the claims by local environmental justice is called environmentalism of the poor (Martinez-Alier 2002). This perspective assumes that the environmental impacts disproportionately affect different social groups and frames environmental justice as an issue of the (*re*) *distribution* of environmental burdens and natural resources.

These environmental justice movements share the perception that different social groups have different levels of *responsibility* regarding the depletion of natural resources and, more importantly, that social *inequality* defines levels of exposure to environmental risks (Acselrad 2004). In other words, their argument is based on the assumption that vulnerable groups are *excluded from the policy formulation process* and, therefore, are negatively *affected by decision making results* concerning environmental issues (Ikeme 2003).

The environmental justice movement is based on a few general principles (Acselrad et al. 2009, Bullard 2004). First, it opposes policies based on the displacement of risk and pollution. Instead of adopting the “not in my backyard” (NIMBY) strategy, they advocate for the “not in anybody’s backyard” (NIAMBY) approach (Bullard 2004). Consequentially, polluting activities should not be displaced from one country to the other. Instead, the responsible actors groups responsible for such activities would have to abolish pollution sources and promote changes in the production and consumption model. At the same time, Environmental Justice advocates argue for a “just transition”, which should be negotiated with workers of polluting industries so that the movement towards a cleaner society does not create unemployment among these workers (Acselrad et al. 2009, Bullard 2004).

The theoretical work on environmental justice at the local level was and is largely driven by real cases of protests against environmental injustices. The environmental justice movement began in the United States in the 1960s, starting with protests against location patterns of pollution sources and health hazardous facilities and their proximity to specific communities (*territory*), and later discussing also environmental issues in an urban context. In research organized by social movements in the 1980s, *ethnicity* was the variable that best explained the distribution of hazardous waste disposal sites in the United States (Acselrad, 2004, Bullard, 2004). Representatives of the environmental justice movement in Brazil argue that the displacement of socially excluded groups to environmentally sensitive areas without appropriate urban infrastructure during the urbanization in the 1950s can be interpreted as an environmental injustice in terms of *unequal access* to environmental resources (e.g. treated

water, clean air) or disproportionate distribution of environmental burdens and risks (such as floods, landslides and noise) (Maricato 1996, Oliveira 2004).

Authors like Williams (2004) and Fonseca (2011) indicate that the presence of local representatives in decision-making arenas does not necessarily imply procedural justice. They indicate cases where the presence of local representatives aims to legitimize decisions taken previously by those who have greater political and economic power. Especially in developing countries, the actors who hold economic power are often the decision makers in the political arena (Eversole 2003, Cleaver 2005, Sayago 2007, Tatagiba 2005).

3 Method: Checklist of dimensions and elements of justice

From our discussion of the justice literature coming out of political philosophy, the global climate justice discourse and more local issues in the context of the environmental justice movement, we identify the following elements and dimensions of justice that could be taken into account when addressing justice in institutional analysis (the list proceeds from a high level of generality to more specific issues):

Table 1: Dimensions and elements of justice. We consider different levels of specificity (low to high). More specific questions might not apply to the IAFs analyzed here, but are relevant for the analysis of case studies. IAF = Institutional Analysis Framework.

Dimension / element	Questions related to this dimension / element
Unit of analysis / judicandum	What units of analysis that are relevant to justice are addressed in the framework? Does it refer to individual or collective actors, actions and omissions, institutions or states of the world?
Norms and values, ethics	Does the IAF consider norms and values? Does the IAF refer to a particular ethical theory as background?
Procedural justice, power	Does the IAF refer to the inclusion or exclusion of particular actors? Does the IAF address (fairness in) the decision-making process? Does the IAF account for the power structures in the decision-making process?
Distributive justice	Does the IAF include distributive rules (allocations/outcomes)? Does the IAF refer to the distribution of rights, goods, income, etc. between different groups and individuals?
Corrective justice and retributive justice	Does the IAF refer to harms done by one actor to another? Does the IAF refer to interdependencies or externalities between actors?
Justice-in-exchange	Does the IAF capture (market) exchanges between actors? Does the IAF refer to rules for such exchanges?
Political / structural justice	Does the IAF refer to underlying structures / constitutional rules and norms? Does the IAF consider how these structures, rules and norms are (re)produced?
Principles of justice	Does the IAF invoke specific principles of justice? such as <ul style="list-style-type: none"> - Precautionary principle - No-harm principle - Equality - Historical and causal responsibility - Ability to pay - NIABY (Not in anybody's backyard)

Dimension / element	Questions related to this dimension / element
Scale	Does the IAF refer to different impacts on different spatial levels? Does the IAF refer to the notion of territory?
Metric	Does the IAF consider different performance standards? Does the IAF include tools to measure the distribution of impacts? Does the IAF generate data on income, utility, capabilities or other informational bases?
Trade-offs	Does the IAF address trade-offs between different (justice) goals? Does the IAF address trade-offs between regime effectiveness and justice?
Claim holder / beneficiary	Does the IAF specify who is entitled to certain claims?
Duty-bearer /claim addressee	Does the IAF specify who is responsible to ensure that the claims are fulfilled?
Instruments	Does the IAF make suggestions of how to make processes, outcomes, impacts more just?

Based on this checklist, we analyzed three IAFs and their predisposition and capacity to include dimensions and elements of justice: Elinor Ostrom’s Institutional Analysis and Development Framework (IAD), Arild Vatn’s framework for studying environmental governance systems, and Oran Young’s Diagnostic Approach.

4 Analysis: Justice in frameworks for institutional analysis

4.1 Elinor Ostrom’s Institutional Analysis and Development Framework (IAD)

For the Institutional Analysis and Development framework (IAD), Ostrom (2005, 2007, 2011) identified the common building blocks constituting the diversity of social behaviors (institutions) organizing human life. The level of abstraction is therefore high and the IAD is compatible with and in need of a variety of theories and models of human behavior. Subsequently we will describe the components of the IAD (see figure 1) and will highlight those which allow for consideration of justice concerns.

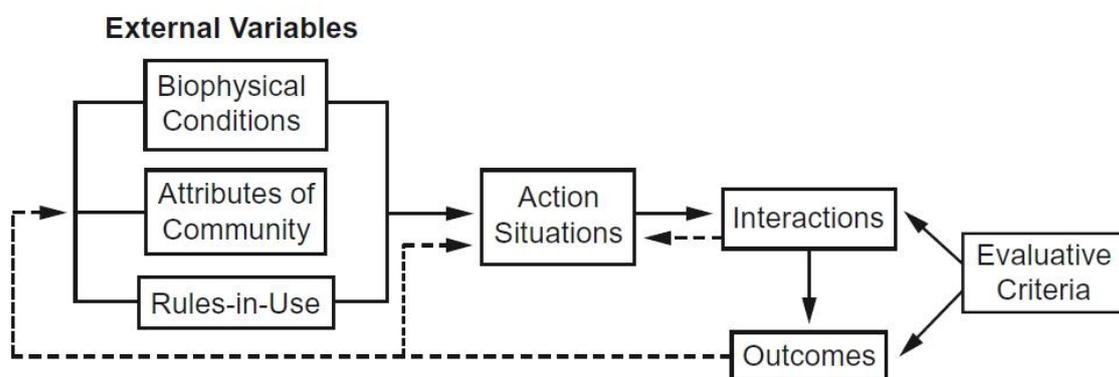


Figure 1: The institutional analysis and development framework. Source: Ostrom 2011.

Action situations are the core conceptual unit of the IAD. They can be described using the following variables: (1) the set of actors, (2) the specific positions to be filled by participants, (3) the set of allowable actions and their linkage to outcomes, (4) the potential outcomes that are linked to sequences of actions, (5) the level of control each participant has over choice, (6)

the information available to participants about the structure of the action situation, and (7) the costs and benefits assigned to actions and outcomes. These components need to be identified at the beginning of any institutional analysis using the IAD. If as part of such a study dimensions of justice are addressed, the action situation would provide information specifying the *judicandum/judicanda*.

Describing an action situation includes assumptions about the behavior of the actors involved. Traditionally these assumptions have rested on the *homo oeconomicus* model. However, the IAD also allows to employ alternative models of human behavior acknowledging that humans may follow different rationales influenced by *norms and values*.

An action situation generates interactions, which in turn lead to outcomes. The evaluation of such outcomes constitutes the most overt consideration of justice in the IAD. Ostrom (2005) recognizes many potential criteria for the evaluation of outcomes, but highlights (1) economic efficiency, (2) equity, including fiscal equivalence and redistributive equity, (3) accountability, (4) conformance to general morality, and (5) adaptability. Criteria 3 and 4 refer to broader ethical questions that could be considered in the context of *procedural justice*. ‘Accountability’ is seen as a form of responsibility, and relates explicitly to officials’ responsibility concerning the development and use of public facilities (Ostrom 2005). Whereas, ‘conformance to general morality’, relates to questions such as “Does cheating pay off in an institution?” or “Is keeping promises rewarded?” Criterion 2 corresponds to principles of *distributive and corrective justice*. Using the term ‘fiscal equivalence’, Ostrom refers to equity based on contributions and benefits regarding an individual’s effort (*merit-based principle and beneficiary pays principle, justice in exchange*), and the ‘ability to pay’. By ‘redistributive equity’, Ostrom implies the preferential treatment of those most vulnerable. Economic efficiency refers to the allocations of cost and benefits and is measured by the magnitude of the change in the flow of net benefits associated with an allocation or reallocation of resources. Efficiency is a strongly normative criterion, according to which the most desirable solutions are those that generate the greatest net benefit. Ostrom underlines the potential *trade-offs* between these criteria, particularly for efficiency and redistributive equity.

Ostrom considers action situations as the dependent variables, which are explained by three categories of independent variables: (1) Biophysical conditions, (2) community attributes, and (3) rules. Material and biophysical conditions seem to have little to do with justice. Yet, they may be important determinants for the analysis of justice particularly in the case of indivisible public goods and global commons. Community attributes refer to the culture of a community and include the norms of behavior generally accepted in the community (*norms and values*).

Most important for our study are ‘rules’. Rules are defined as shared understandings by participants about enforced prescriptions concerning what actions are required, prohibited, or permitted (Ostrom 2005). ‘Working rules’ are determined by ‘rules of law’ (rules that do emerge from a formal legal process), augmented by individual decisions and/or ‘rules in use’, (rules that have been established in nonconformance with existing central laws). A set of working rules “should offer an explanation of actions and results used by participants to order their relationship within an action arena” (Ostrom 2007). Ostrom (2005, 2007) offers several types of working rules: e.g. (1) Entry and exit rules (boundary rules), (2) position rules, (3) authority rules, (4) aggregation rules, (5) information rules, and (6) payoff rules. Exit and entry rules determine who may participate in an action situation and thus pertain to the dimension of *procedural justice*. Position rules create different positions for participants in an action situation, with different kinds of authority assigned to them. They can be analyzed as regards the dimension of *political justice*. Aggregation rules specify how collective choices

are taken, whereas information rules, define what kind of information is accessible to participants, both relate to ideas of *procedural justice*. Payoff rules assign rewards or sanctions for particular actions or outcomes, for example in market transactions, pointing to *justice-in-exchange*, but also *distributive and corrective justice*. Each rule in place might serve as a *judicandum* and thus be analyzed as to its justness. Ultimately no single classification can ever be useful for all purposes (Ostrom 2005: 186); this external variable thus leaves room for introducing other potentially justice-relevant rules.

The perspective of *scale* relates to the embeddedness and continuity of action situations, which are linked with other action situations as well as dependent on higher and lower level action situations. Particularly this latter – vertical – dimension is important for the analysis of justice at different scales. Justice at a local scale may have very different meanings than justice at a constitutional scale. Also, ideas of justice at one level may be embedded in a fixed understanding of justice at a higher level, such as Ostrom explains for any rules (Ostrom 2007). The operational level entails day-to-day actions and decision making of individual actors, whereas the collective choice level refers to public decision making levels constrained by collective-choice rules. The constitutional tier in turn influences these lower levels, where rules are made defining who is eligible to create collective-choice rules. This can be seen as an issue of *political justice* and *power*, raising the question of the legitimacy of the respective decision-making procedures.

The IAD is a broad conceptual framework, not designed to explicitly address justice. However, it provides multiple entry points for including aspects of justice. The clearest link is made through the evaluative criteria, where distributive justice features prominently. The notion of scale is very important for the IAD and combines well with the scale dependency of ideas of justice. This concept of scale employed may, but does not have to be spatial in nature, but may refer to political scales; as such it highlights the constitutional structures and rules as an important dimension.

There is room both in the evaluation of outcomes as well as in the rule typologies to include further principles of justice. Rule typologies might even be adapted to include specifications regarding claim holder / beneficiary and duty-bearer /claim addressee, which also may arise from the community attributes or the action situation itself. Power issues might be addressed when asking who creates what kind of rules. Yet, dimensions such as metric and instruments are too specific and it will most likely not be possible to include them at the general level of the framework.

4.2 Arild Vatn's Environmental Governance Framework

Vatn (2011) develops a framework for studying environmental governance systems; with the objective to guide the analysis of the environmental governance processes at global and local scales. Vatn builds his framework in different layers (figure 2). First, he defines the notion of a “resource regime”, representing the institutions governing access to resources and the types of interactions related to them (Vatn 2011: 136ff.). Second, he describes the “governance structure”, including economic and political actors and institutions governing the policy process in addition to the resource regime (Vatn 2011: 139ff.). Finally, the “environmental governance system” comprises technology, environmental resources and their attributes, patterns of interactions and outcomes (Vatn 2011: 142).

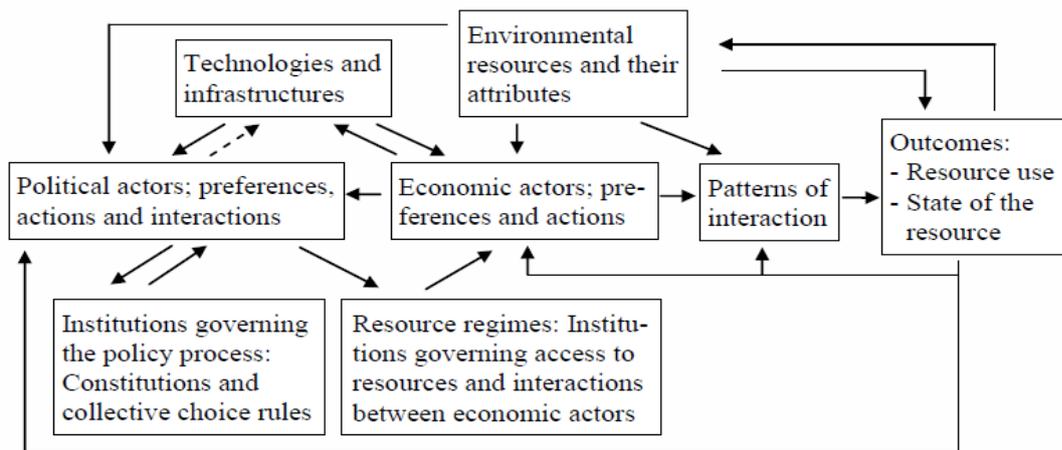


Figure 2: The framework for studying environmental governance systems. Source: Vatn (2011).

Vatn recognizes that environmental governance is intrinsically related to who gets access to the resources and “who has won in the battle over conflicting interests” (2011: 131), and thus recognizes the importance of power. However, the separation of political and economic actors may lead to overshadowing of power relations (see section 2.2.2). This overlay has the potential to generate procedural injustice and may lead also to problems of substantial justice when the rules of resource distribution and the rights associated do not take into account the most vulnerable populations, and benefit powerful actors.

To demonstrate how the framework may be used, the author analyzes the emergence of markets for environmental services as a result of the interaction between the framework components. Since “the creation of markets also demands to define who pays whom” (Vatn 2011: 146), the framework may be useful for analyzing justice-in-exchange. Vatn emphasizes that efficiency should not always be the main criterion to be pursued (Vatn 2011: 132). In criticizing the omnipresence of rational choice theory, the author makes room for moral and ethical dilemmas and a rationality based on norms and values (Vatn 2011: 133).

Vatn emphasizes four core issues of institutional analysis: (1) legitimacy of institutions, (2) distributions of rights and responsibilities among the actors, (3) transaction costs, and (4) influence of institutional structures on actor’s perceptions, interests and motivations (Vatn 2011: 134). The first and the second have strong implications for questions of justice.

Regarding legitimacy, Vatn distinguishes between legitimacy derived by following defined decision procedures and legitimacy by some ideal standard or “the better argument – to a set of general standards both about what are good processes and good outcomes” (Vatn 2011: 134). Thus, whereas the first form of legitimacy can be related to some formal version of procedural justice (“playing by the rules”), the second form of legitimacy relates to an ideal standard, which could very well be some conception of substantial (e.g. distributive) justice. Vatn also warns against the rhetoric use of ideal standards (such as justice ideals): “Any power would refer to ideal standards to defend positions and conclusions” (Vatn 2011: 134).

In describing resource regimes, Vatn distinguishes between rules of access, i.e. rules defining the bundle of property or use rights of certain actors, and rules governing interactions, i.e. defining rules for transfer of the resources to which an actor has access. The rules of access can be judged under the perspective of distributive justice, whereas rules of interaction can be judged under the perspective of justice-in-exchange (in the case of voluntary transfers) or corrective justice (in the case of involuntary “transfers”, e.g. of pollution). Turning to the broader governance structure, Vatn includes “rules governing the political process (typically

constitutional rules and collective choice rules)” (2011: 139), to be judged under the perspective of political justice.

In sum, Vatn essentially understands institutions as the result of a conflict of interests. The author thus recognizes the importance of power relations in institutional analysis. He also shows that multiple standards and values go beyond the rational choice theory. Rules of access and interaction offer main docking points for analyzing justice within the framework. Another docking point is the core issue “legitimacy of institutions”. The framework also addresses adequately the issue of justice-in-exchange. Furthermore, it allows including dimensions of procedural, distributive, corrective and political power.

Some dimensions of justice are not included in Vatn’s framework: 1) Vatn does not formally mention normative principles of justice. 2) Vatn positions political and economic actors in different categories, which may result in a dilution of liability for environmental and social damages. 3) Although Vatn asserts that “the framework could support analyses at different scales” (Vatn 2011: 143), little is said about the differences in interests, values and what form of analysis is needed to deal with environmental issues that affect distinct territorial configurations. 4) Vatn does not cite any metric to analyze or to measure justice issues.

Two adaptations might enhance the possibility to analyze justice. The first would be to merge the categories of political actors and economic actors into one category when used to analyze governance systems at the local level. It is important to recognize that, at the local level, actors with political and economic power are generally the same and this operation would avoid overshadowing of power relations. Alternatively the two categories could be kept separated, but allow for double-entries of the same actors in the two categories. When an actor appears in both categories, this could be seen as an indication of a possibly problematic power accumulation. The second operation would explicitly include principles of justice in the framework. Although increasing the normative content of the framework, the focus on principles of justice would reduce the level of abstraction and would provide the basis for further stressing differences on institutional analysis in accordance with the scale of the environmental problem.

4.3 Oran Young’s Institutional Diagnostics

As a third framework for institutional analysis we consider the approach of “institutional diagnostics” (Young 2008b). This approach is part of the “scientific legacy” of the project on “Institutional Dimensions of Global Environmental Change” (IDGEC) (Young et al. 2008). Young stresses the “need to devote more systematic consideration to the roles that regimes play in determining who gets what and the extent to which subjects regard regimes as fair or just in procedural terms” (Young 2008a: 22). The diagnostic approach presents a list of questions representing matters of high priority to the IDGEC community (Young 2008b: 121). The aim is to achieve a better understanding of a specific environmental problem, in order to tailor fitting institutional solutions. The queries are grouped into the “Four Ps”: Problems, Politics, Players, and Practices. The category “Problems” assesses the major characteristics of the problem and their implications for the regime. “Politics” is concerned with the basic features of the political setting, such as the distribution of power, the framing of discourses, and the pervasiveness of corrupt practices. “Players” concerns the characteristics of the actors involved, such as their basic motivational structures. “Practices” is concerned with the social practices or metapractices which a new regime has to be taken as given. In addition, Young gives a number of “best practice” guidelines for creating regimes.

Young states that “institutions have always been important as determinants of efficiency and equity in human affairs” (Young 2008b: 116, see also Breitmeier et al. 2011). Institutions and

their impacts therefore qualify as possible *judicanda* of the institutional diagnostics approach. However, the role institutions can play in the achievement of justice (and other) goals is limited by the extent to which institutions are indeed a causal factor and not mere “epiphenomena” reflecting relations of *power* (Young 2008b: 118). Power also arises as one of the important aspects of the group of queries “Politics” (Young 2008b: 126).

As one of the “practices” (i.e. social norms) in the international arena, Young refers to a specific *principle of justice*, namely the principle of *common but differentiated responsibilities* (2008b: 131, 133) as a metaprinciple that frames the negotiation process and the feasibility of certain institutional designs. Furthermore, Young refers to the *equal treatment of all states* on the basis of their sovereignty (2008b: 133). Here, it becomes clear that Young sees *nation states* as the basic *claim holders* (and not, for example, individuals inside those states).

Young stresses that “all parties are concerned acutely with the degree to which outcomes are equitable in the sense that the distribution of benefits and burdens conforms to some reasonable standard of fairness, and processes are legitimate”, and concludes that “regimes that fail to meet basic standards of equity seldom form” (Young 2008b: 138). *Just outcomes and procedures* are therefore seen as key variables for the successful *formation* of regimes. At the same time, equity is also named as a criterion of *performance* (Young 2008a: 17, 21, see also Mitchell 2008: 80), pointing to the question of the *metric* of justice while acknowledging that it is “extremely hard” to demonstrate the impact of institutions (Young 2008a: 19).²

Pointing to a possible *trade-off* between problem solving and distributive consequences of institutions, Young (2008a: 44) notes that “it is not necessary to ignore or even downplay the importance of institutions in terms of problem solving in order to consider the allocative or distributive consequences of institutional arrangements”. The distributive influence of environmental institutions could be quite specific (as the initial allocation of emission allowances) or rather implicit (as in the choice between private property and public or common property) Young (2008a: 44).

Summing up, although justice issues are not the focus of the “institutional diagnostics” approach, it offers some docking points. Justice enters into the approach both as a condition for successful regime formation and as a performance criterion. Young does not explicitly mention different types of justice, and does not refer to a specific ethical theory or any specific metric to assess justice outcomes. However, the structure of the framework – a set of questions – offers excellent possibilities to include justice issues more explicitly, by including questions in each of the four Ps. The following examples shall give an idea of how this could be done:

Problems: *Does the solution to the problem require extensive and unequally distributed burdens on different scales?* If so, the institutional design will require some sort of equitable burden-sharing.

Politics: *Does the dominant discourse on the problem allow for equity considerations?* If not, this will make it harder to reach consensus that is perceived as just by all.

Players: *Are the principal actors influenced by a sense of justice or do they use their power according to narrow self-interest? Do constituencies inside the principal states ask for just solutions, even if that means greater burdens for their own state?* An awareness of the justice

² Some more details about how to address justice outcomes and impacts of institutions are given by Mitchell (2008), another member of the IDGEC program.

implications of a problem by civil society within the powerful states can make it easier for these states to act according to justice norms. On the other hand, if powerful states are motivated mainly by self-interest narrowly defined, a just solution will be harder to achieve.

Practices: *Is there consensus on the equity principles applicable to this problem?* If so, this will make it easier to find a feasible institutional design. Many problems, however, are connected to conflicting equity norms. Then, the institutional design might have to include some forum or mechanism that allows to achieve a consensus on such norms or at least to settle the worst disputes.

5 Discussion

In this paper we inquired how frameworks for the analysis of environmental institutions address different elements of justice. None of the three frameworks was explicitly designed to address aspects of justice or relates to particular ethical theories. However, they all offer entry points for the analysis of justice. In the IAD framework by Ostrom, the clearest link to justice is in the evaluative criteria. In the Diagnostic Approach by Young, justice enters both as a condition of successful regime formation and as a performance criterion. In Vatn's framework, the clearest docking point to justice regards the rules of access and interaction.

Some entry points for dimensions of justice are accounted for in all three frameworks: (1) rules / institutions and their outcomes and impacts qualify as units of analysis or *judicanda*; (2) social norms are accounted for and could include norms of justice; (3) procedural justice is considered in terms of the inclusion and exclusion of actors; (4) distributive justice is included on the outcome (evaluative / performance) side in Ostrom's and Young's frameworks and linked to rules of access in Vatn's framework; (5) all frameworks are applicable at different scales.

Linkages to other aspects of justice appear just in one or two of the frameworks analyzed: (1) Power is treated by Vatn and Young. Vatn emphasizes that institutions are the result of power struggles. Young discusses how the distribution of power influences feasible institutional designs. (2) Political justice receives space in the frameworks by Ostrom and Vatn. In the IAD, constitutional structures and rules could be subject to political justice assessments, in Vatn's framework, such an assessment could be applied to the rules governing the political decision process. (3) Ostrom (efficiency vs. equity) and Young (environmental effectiveness vs. distributive consequences) concretely address potential trade-offs, whereas they are only implied in the general assumption of Vatn's framework as a "battle over conflicting interests". (4) Finally, principles of justice feature most prominently in the IAD, as part of both evaluative criteria and rule typologies. Young mentions the principles of common but differentiated responsibilities and equal treatment.

From a conceptual perspective, rules and evaluative / performance criteria are the most concrete entry points for including justice in frameworks for institutional analysis. Rules can determine both inclusion / exclusion of actors (procedural justice) and outcomes (distributive justice), and they can become the object of justice assessments (i.e. *judicanda*) themselves. On the evaluative side, outputs, outcomes and impacts can be assessed e.g. in terms of the distribution of costs (for instance of changed behavior, but also via indirect effects such as changed terms of trade) and the distribution of benefits (e.g. increase in environmental quality) (see e.g. Mitchell 2008).

All three frameworks are too broadly designed and abstract to include metrics or instruments of justice, or details on claim holders and duty bearers of justice claims. Such specific aspects

can only be addressed in combination with particular theories of justice. This in turn may lead to difficulties with the manifold interpretations of such theories and principles and the lack of a metric for justice.

Summing up, we found that all three investigated frameworks have a potential to include justice issues, but do not fully exploit this potential. Young's diagnostic approach would allow the easiest adaptations to better include dimensions of justice by adding questions to the list. In the cases of the IAD and the Environmental Governance Framework adaptations of the components should if at all be taken out carefully so not to distort the purpose of the framework, i.e. to represent common building blocks of institutions. We therefore highlight that it is unrealistic to propose a complete reformulation of these frameworks, which were not originally built to focus on justice issues.

6 Concluding remarks

Concluding, we would like to raise some issues that we consider of key importance when assessing justice in institutional analysis, discuss the limits of our paper and highlight open research questions.

First, we emphasize the dimension of power relations. To recognize the presence of power relations will help to explain political and economic inequalities between actors, strengthening the accuracy of the *judicanda* analysis. We indicated ways to address power in the analyzed frameworks (section 4). A more detailed inquiry into the relationship between different forms of power and justice is an important research task for institutional analysis.

Second, we point out that for any substantive assessment of justice, the institutional analyst has to be explicit and transparent about the ethical background and the principles of justice the analysis builds on. This in turn would allow an identification of who should be the claim holders and the duty bearers of justice claims in each governance network, according to this ethical perspective or principles of justice.

Third, an open question pertains to the metric of justice: To what extent is it possible to define "objective" standards of justice? If institutional analysis wants to take issues of justice, surely some kind of metric is needed. However, any "measurement" of justice would also have to be transparent about the ethical background and principles of justice on which it is based. In that sense, the metric can be inter-subjective at most.

A further research question could be to assess in greater detail the roles that (perceptions of) justice, fairness and equity play in the formation of institutions, as well as for their environmental effectiveness.

Due to the restricted time and limited scope of this study, we only proceeded at the theoretical level. This is clearly a limit of our analysis. Empirical analyses – analyzing concrete case studies using one of the frameworks – might be a promising way forward to identify additional potentials and shortcomings of the frameworks in terms of addressing justice, and to identify additional variables needed to address justice in institutional analysis in general.

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